



**Wireless • Wiring Devices •  
Circuit Protection • Cable Management**

CATALOGUE NO. 48

# MK Catalogue



[www.mkelectric.co.uk](http://www.mkelectric.co.uk)

technical hotline +44 (0)1268 563720

### **MK Electric**

The Arnold Centre  
Paycocke Road  
Basildon  
Essex SS14 3EA

**Telephone** 01268 563000  
**UK Sales Fax** 01268 563405  
**Email** [mkorderenquiries@honeywell.com](mailto:mkorderenquiries@honeywell.com)

### **WEBSITE**

For further information and other literature items please visit  
[www.mkelectric.co.uk](http://www.mkelectric.co.uk)

To find out more about Honeywell ED&S visit  
[www.electrical.honeywell.com](http://www.electrical.honeywell.com)

### **TECHNICAL SERVICES**

For advice on product selection, help  
with system planning, technical guidance, quotations and  
technical literature

**Telephone** +44 (0)1268 563720  
**Fax** +44 (0)1268 563064  
**Email** [mk.technical@honeywell.com](mailto:mk.technical@honeywell.com)

### **CUSTOMER SERVICES**

For assistance regarding orders and deliveries

### **UK TRADE CUSTOMERS**

**Telephone** 01268 563404  
**Fax** 01268 563405

### **UK RETAIL CUSTOMERS**

**Telephone** 01268 563081  
**Fax** 01268 563316

### **R.O.I. CUSTOMERS**

**Sales Telephone** +353 1 429 6530  
**General Telephone** +353 1 429 6500  
**Sales Fax** 1 800 504 757 or +353 1 686 5484  
**General Fax** 1 800 504 757 or +353 1 686 5484  
**Email** [ireland.sales@honeywell.com](mailto:ireland.sales@honeywell.com)

Our total commitment to customer  
service reflects the growing needs of  
specifiers, distributors and installers

## Range

## Product pages

## Technical Data

## Wiring Devices

### Wireless

<b>MK Astral, advanced lighting system</b> A versatile and intelligent system incorporating Zensys RF communications technology	24-30	388-416
<b>Echo</b> Wireless, batteryless, self-powered technology	31-41	417-422

### White

<b>Logic Plus</b> Widest selection of wiring devices in one range	42-60	423-456
<b>Sensors</b> A range of energy saving and lighting management products	61-64	457-467
<b>Heating Controls</b> A range of temperature control products for domestic heating applications	65-66	468-474
<b>Ceiling Accessories</b> Lampholders, pendant sets and ceiling switches	67-70	475-477
<b>Link</b> Plug-in connection and distribution system for lighting	72-76	478-479
<b>Clearshave Plus</b> Shaverlights and luminaires for bathrooms	77-79	480-481

### Decorative

<b>Decorative Introduction</b>	80-81	N/A
<b>Aspect</b> Range of slimline, flawless profile devices	82-109	423-456, 482-483
<b>Edge</b> Function and style with very slim profile frontplate	110-145	423-456, 482, 484-487
<b>Alloy</b> A range of wiring devices with modern styling and finishes	147-152	423-456, 482
<b>Albany Plus</b> Satin Gold and Brushed Chrome devices	153-174	423-456, 482

### Modular

<b>Grid Plus</b> Modular switching and monitoring system	175-193	488-493
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### Lighting Controls

<b>High Power Dimmer</b> Range of dimmers to control large lighting loads	194-196	494-496
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Range	Product pages	Technical Data
<b>Boxes and Ancillary Products</b>		
<b>Boxes</b> Wide selection of surface and flush mounted, metal and PVC boxes	197-201	N/A
<b>Ancillary Products</b> A selection of miscellaneous wiring devices	202-206	N/A
<b>Surface</b>		
<b>Metalclad Plus</b> Tough, impact resistant surface mounted devices	208-219	423-456
<b>Portable Power</b>		
<b>Duraplug</b> Durable, strong and reliable accessories	220-223	498-500
<b>Plugs and Adaptors</b> High quality plugs and adaptors	224-225	501
<b>Ingress Protected</b>		
<b>IP Solutions Introduction</b>	226	N/A
<b>Masterseal Plus</b> Comprehensive range of IP66 weatherproof devices	227-233	502-513
<b>MK Shield</b> Ingress protected wiring devices for domestic or small commercial applications	234-236	514-515
<b>MK Splashguard</b> Splashproof wiring devices for domestic applications	237-239	N/A
<b>Commando Safetyswitch</b> Impact resistant switches for indoors or outdoors	240-243	516-517
<b>Commando Plugs and Sockets</b> Comprehensive selection of industrial plugs and connectors	244-259	518-532
<b>Commando Combination Units</b> RCD protection with high impact PBT units	260-263	533-534
<b>Commando Modular Combi</b> Factory built modular system for industrial and service applications	264-270	535-536
<b>Circuit Protection</b>		
<b>Sentry</b> Consumer units and a wide variety of modular protection and control products	271-291	538-566
<b>Sentrysocket</b> RCD protected switchsockets with active and passive control circuits	292-293	568-569

Range

Product pages

Technical Data

## Cable Management

### Perimeter and Distribution

<b>Cable Management Overview</b> An introduction and technical overview to MK cable management	N/A	572-573
<b>Prestige 3D Introduction</b>	294	N/A
<b>Prestige 3D Dado and Skirting</b> The new three compartment dado trunking system for compliance with Cat 6 structured cabling	295-300	574-583
<b>Prestige 3D Antibac Blue</b> Antibacterial solution for power and data distribution in environments where hygiene is priority.	301-307	574-583
<b>Prestige 3D Compact</b> 3 compartment trunking with a smaller footprint for more confined installations	309-314	574-583
<b>Prestige 3D Aluminium</b> Unbeatable strength with gently curved aesthetics	315-320	574-583
<b>Prestige 2com</b> Two compartments provide maximum data capacity around radiused bends	323-328	585-591
<b>Prestige Poles and Posts</b> Poles and Posts for supplying multi-services to work stations	330-331	592-593
<b>Powerlink Plus</b> Busbar trunking system with flush fitting accessories	333-343	594-601
<b>Pinnacle</b> Versatile angular bench trunking system	344-349	602-606
<b>Pinnacle Pillar</b> Multi compartment trunking for perimeter locations	350	607
<b>Premier</b> Integrated trunking system with snap fit mouldings	352-357	608-615
<b>Norwich</b> Durable and popular trunking system	358-359	616-620
<b>Ega Industrial</b> Heavy duty trunking in a variety of sizes	360-361	622-627
<b>Ega Cornice</b> Trunking for wall/ceiling junctions	362-363	628-631

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Range	Product pages	Technical Data
<b>Conduit and Mini</b>		
<b>Egatube Conduit</b> High impact conduit with a comprehensive range of fittings	364-374	632-637
<b>Egatube Oval Conduit</b> Oval conduit	373	N/A
<b>Egaflex Conduit</b> Corrugated flexible conduit	374	N/A
<b>Ega Mini Trunking</b> Wide selection of mini trunking profiles and fittings	375-379	638-640
<b>Alarm and Communication</b>		
<b>Red Alert</b> Trunking for alarm circuit identification	380-383	638-640
<b>Ega Communication</b> Unobtrusive low profile trunking	384	638-640
<b>Full Product Index</b>		
	641-693	N/A
<b>Superswitch Range Highlights</b>		
	694-695	N/A
<b>Cablelink Plus Range Highlights</b>		
	696-697	N/A
<b>Ex-Or Highlights</b>		
	698-699	N/A
<b>Friedland Highlights</b>		
	700-701	N/A
<b>Abbreviation Key</b>		
	702	N/A
<b>Standard Conditions of Sale</b>		
	703	N/A
<b>Sustainable Opportunities Policy</b>		
	704	N/A



# MK Electric is the UK's choice

Energy Savings | Health & Safety | Sustainability | Quality & Reliability



## Part of the Honeywell Global Family

As part of Honeywell's global operation, MK Electric can literally draw upon a world of technologies to develop the best products and solutions. While the bulk of MK's manufacturing and distribution is handled in the UK to serve the UK, this global access ensures MK's customers have access to the latest ideas and manufacturing advancements from around the world to deliver state-of-the-art, cost-effective products.

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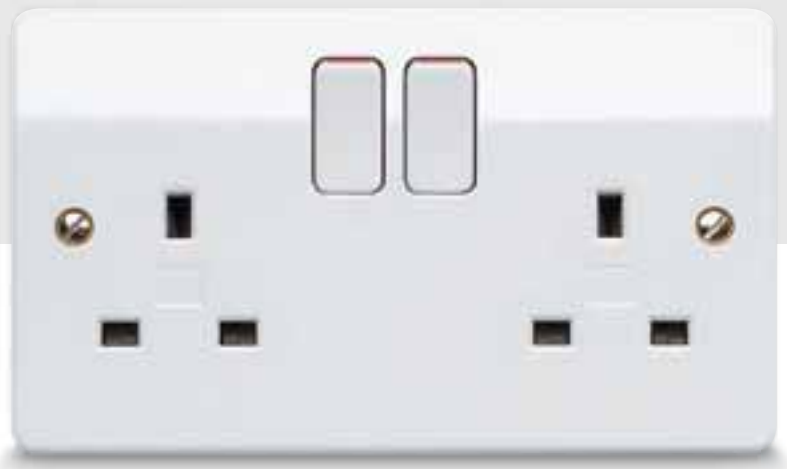
Innovation has been the driving force behind Honeywell since 1885, and as Chairman and CEO of Honeywell since 2002, David M. Cote has continued the company's commitment to developing energy-saving, sustainable products that improve the quality of life.

David M. Cote  
Chairman and CEO of Honeywell



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# Serving the UK for more than 90 years



As part of Honeywell's global operation, the brands in the Electrical Devices & Systems (ED&S) division — MK Electric, Friedland, Ex-Or and Homexpert by Honeywell — are able to utilise ideas and manufacturing advancements from around the world to deliver state-of-the-art, cost-effective products both locally and worldwide.

Key to its strategy of growth, Honeywell ED&S continues to focus on Energy Efficiency and Smart Buildings. All ED&S products are built to maximize energy efficiency. Some, such as Ex-Or Managed Lighting Systems, or Honeywell LED Utility Lighting, directly contribute to the conservation of energy. Others, such as MK Electric's Prestige 3D cable management products, are manufactured using recycled materials.

Headquartered in the UK, the ED&S division has key manufacturing facilities in the UK, Germany, Saudi Arabia, Malaysia and India, sales offices across Europe and the Middle East, that distributes to over 100 countries and employs more than 3,000 people worldwide.

UK operations feature 5 locations, employs over 1,000 people, and is one of the few businesses to retain manufacturing sites in the UK for the UK market.

**Honeywell**



**Friedland**  
by Honeywell

**Ex-Or**  
by Honeywell

**homexpert**  
by Honeywell

Sockets | Wireless | Home Automation | LED Utility Lighting | Switches  
Circuit Protection | Thermostats | Cable Management | Anti-Microbial  
Sensors | Lighting Management | Power Distribution | Security Lighting | Chimes



## MK Electric Sensors

MK Sensors are designed to deliver energy savings and lighting usage management in a wide range of commercial applications.

## Ex-Or MLS Digital Managed Lighting

The Ex-Or MLS Digital Managed Lighting System has been designed to provide optimum lighting conditions and maximum flexibility for office lighting projects of any size.

The Ex-Or MLS Digital offers considerably more benefits than stand-alone lighting control options and time-of-day lighting management systems. It can provide a fully integrated lighting and lighting management scheme far more effectively than similar specification luminaires driven by a conventional time-of-day lighting management system.

Lighting represents, on average, up to 40% of a building's total energy consumption; and also the largest opportunity for energy savings.

## Honeywell LED Utility Lighting

For saving money, saving time and saving the environment, choose Honeywell LED Utility Lighting. The amazing energy efficiency delivers direct savings to your bottom line, and the reduced maintenance needs — the lamps last up to six times longer than fluorescent lamps — save both time and money. Honeywell LED Utility lighting is the essence of endurance.



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ED&S Lighting Controls and LED technologies can offer savings of up to 30% on energy consumption in commercial buildings.

## Energy Savings



- Installing Honeywell LED Utility Lighting in place of existing fluorescent luminaires resulted in a 70% load reduction for Manchester University.
- MK's Energy Saving Switches are used to cut energy costs in many hotels, student accommodation and other residential applications.
- Southampton City Council has reduced the energy consumption at its six-storey city centre car park by 35% following the installation of lighting control systems from Ex-Or.
- In a typical office, MK or Ex-Or Sensors installed in a corridor can save up to 80%\* of the energy used to light that area.
- In a typical warehouse, MK or Ex-Or Sensors installed in toilets can save up to 90%\* of the energy used to light that area.
- In a typical school, MK or Ex-Or Sensors installed in classrooms can save up to 45%\* of the energy used to light those areas.



The UK's choice  
for energy savings,  
sustainability and  
safety

\* Source: E Source Energy Business Intelligence

As MK Electric nears its 100th anniversary the business is still evolving and innovating to meet the ever changing demands of our customers and the market place. MK Electric has led the market in Quality, Reliability, Safety and Responsibility since 1919.



MK MASTERSEAL PLUS™: MK ELECTRIC HAS ALWAYS BEEN AT THE FOREFRONT OF TECHNICAL INNOVATION, NOT LEAST IN THE IP ENVIRONMENT



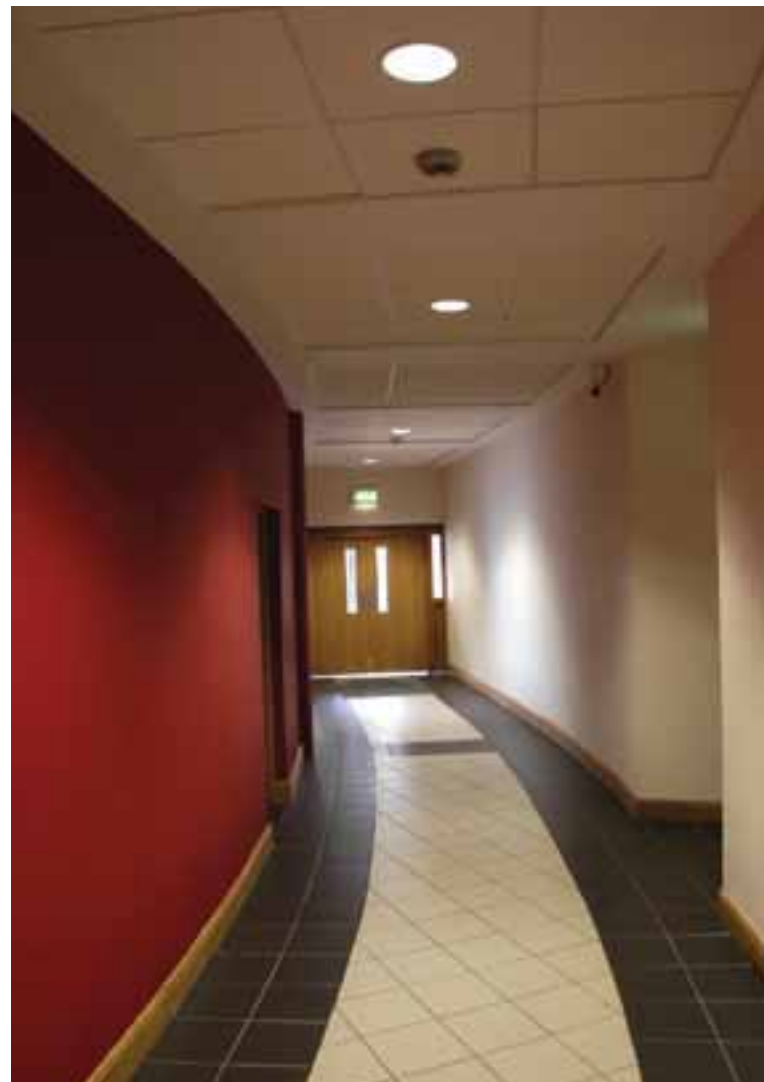
As the UK's market leader in the supply of electrical wiring accessories, our aim is to lead the way in considering Sustainable Development in all activities. Our objectives are to provide innovation for the built environment, whilst preserving the natural environment. We will achieve this by reducing our environmental impact, undertaking a number of initiatives.

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From product form and function, to exceptional customer service, wide distribution and sustainable sourcing to manufacturing techniques, we understand that each of these elements is equally important to our customers.



Quality, Reliability, Safety and Responsibility are embedded at all levels of the company. These, and our unrivalled product portfolio, see us well equipped to face the challenges that lie before us. As ever, our customers are at the centre of everything we do, and MK and Honeywell solutions and technologies are delivering new products and processes which are more energy efficient and less harmful to the environment, this is what we call our 'Sustainable Opportunities'.



MK SENSORS: PRESENCE DETECTION FOR ENERGY EFFICIENT LIGHTING CONTROL

Responding to our customers' and market feedback, we are constantly striving to develop ever more innovative products underpinned by excellent customer service levels.



ECHO™: WIRELESS, BATTERYLESS, SELF-POWERED

## Quality and Reliability

At MK we pride ourselves on using superior manufacturing techniques in all our manufacturing sites. All MK products are manufactured from superior quality materials to ISO 9002 certification.

Whilst other manufacturers may make claims on reliability MK products are truly reliable, we demonstrate this with comprehensive product guarantees of up to 20 years\*.

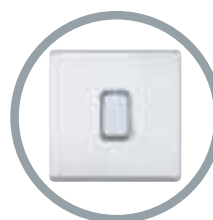
MK's operating systems work towards continuous improvement, ensuring the standards are maintained and improved. The latest statistics (2008) showed that less than 1 product per 1,000,000 sold was found to be faulty (that is less than 0.001%). The MK investigation response team have a target of 5 working days to deal with any issues and bring the case to a resolution.

All MK products undergo rigorous testing to ensure maximum Quality, Reliability and Safety. Each product undergoes 100% electrical and visual testing at the point of manufacture.

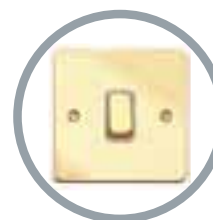
British Standards require a socket outlet to be tested to 25,000 socket insertions – the MK test laboratory has tested MK sockets to over 1,000,000 plug insertions with no reported faults, or issues with wear and tear. Similarly, British Standards require a switch to be tested to 25,000 switches, the MK test laboratory has tested MK switches to over 1,000,000 on-off switch operations with no reported faults, or issues with wear and tear.

## MK Quality and Reliability

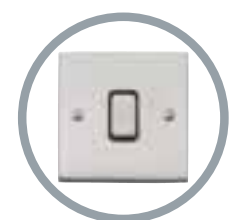
Less than 1 in 1,000,000  
field faults



ASPECT



EDGE



ALLOY

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- **Quality** – Manufactured to ISO 9002 certification, using superior manufacturing techniques
- **Reliability** – Comprehensive 20 year product guarantee, 10 years for Electronic Devices, Circuit Protection and Cable Management\*
- **Safety** – 100% factory tested, each product undergoes up to 200 individual tests, for a ‘fit and forget’ installation every time
- **Responsibility** – Innovation for the Built Environment – Preservation of the Natural Environment

## Safety

### MK Sockets – The Safest Available

MK’s sockets have a “child resistant shutter system”, which is designed to inhibit access to the electricity supply, unless all three pins of a British plug are in position.

By choosing our safety sockets, you can be sure that you are giving your building the ultimate in electrical protection.

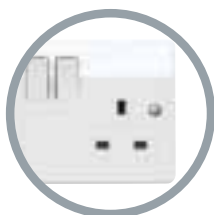
All electrical sockets manufactured to the British Standard must incorporate a shutter mechanism. British Standards require that a minimum safety level is achieved in the design and manufacture of electrical accessories. MK’s socket design offers the maximum safety benefit and is the most difficult shutter mechanism to defeat unless correctly being used with a British plug.

All standard 13A MK sockets incorporate the 3-pin operated shutter system.

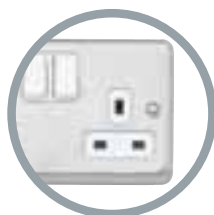
**3-PIN “CHILD RESISTANT SHUTTER SYSTEM”**  
MK safety shutter only opens when pressure is applied simultaneously through the three pins, considerably reducing misuse



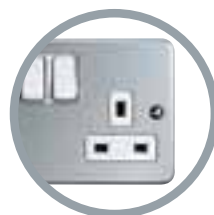
MASTERSEAL PLUS



LOGIC PLUS



ALBANY PLUS



METALCLAD PLUS

All Logic Plus products are made from Urea, which has inherent anti-microbial properties

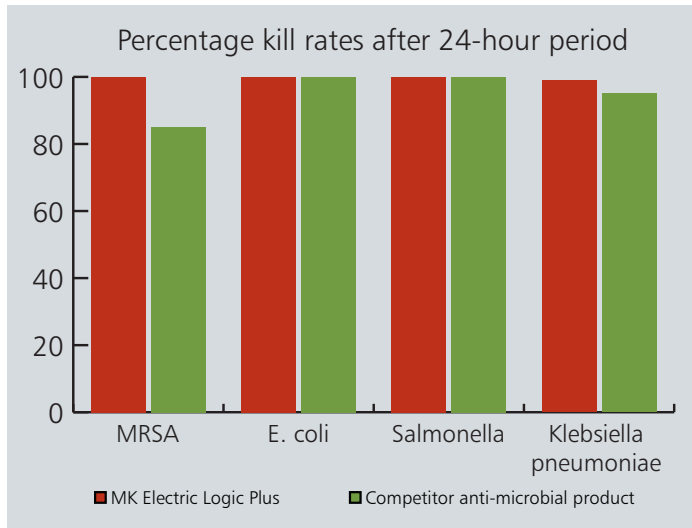
\*See individual ranges for exceptions

## Safety

### Anti-Microbial Products

The issues around the cleanliness within health establishments such as hospitals, surgeries and dentists etc. continue to be raised by health professionals, government departments, the media and the general public.

In 2008, MK Electric commissioned independent testing on the Logic Plus range and a competitor's 'Anti-Microbial' range by a reputable independent UKAS accredited laboratory. The laboratory tested the products, after cleaning with disinfectant (the Government's 'Deep Clean' policy targeted all hospitals to adopt a deep clean program, which includes cleaning all fixtures and fittings). The organisms MRSA, E-Coli, Salmonella and Klebsiella Pneumoniae were applied to the products. Results were collected at 0 minutes, 4 hour, 8 hour and 24 hour intervals.



Source: MK commissioned report, 2008

### The Results

**MRSA** Logic Plus has a kill rate of 99.9% compared to the competitor's Anti Microbial product with only 86.4%.

Both products had an equal 99.9% kill rate for **E-Coli** and **Salmonella**.

**Klebsiella Pneumoniae** Logic Plus has a kill rate of 98.9%, compared to the competitor's Anti Microbial product with 95.4%.

The Logic Plus range is produced using Urea Formaldehyde, a high grade thermoset material, which has similar inherent properties to antimicrobial additives, which inhibit the growth of infectious diseases such as MRSA, E-Coli, Salmonella and Klebsiella Pneumoniae. In addition, Logic Plus products are scratch-free thanks to high quality mould tools, which means there are no dirt traps for bacteria to breed. Whilst cleanliness is key to fighting these infections, and not replaced by the use of MK's Logic Plus products, the independent results show that the range is more effective than a competitor's Anti-Microbial products at killing MRSA organisms and contributes beneficially to any hygiene regime.





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## Responsibility

MK Electric, and the wider Honeywell business, has teams of engineers and technology specialists working to develop new products for our customers and processes for our business.

Honeywell's Energy Efficiency Technologies help our Global customer's better meet the growing demand for electricity while curbing fossil fuel emissions. 50% of Honeywell's \$37 billion product portfolio is geared towards delivering energy savings and efficiency – from building management and process solutions systems to biofuel technologies and turbocharged engine platforms.

To Honeywell, environmental stewardship means acting in a way that is both productive and sustainable. We design products that help conserve energy, reduce waste, and protect our homes, offices and public buildings. We help other companies become more efficient and productive with our products and solutions.

Honeywell solutions and technologies expand sustainable capacity and improve the efficiency of products and processes, fostering what we call our 'Sustainable Opportunity'.

MK will reduce its environmental impact in the following areas:

Climate Change

Waste Minimisation

Supply Chain Partnerships

Product Innovation



MK SENSORS: ENERGY SAVING SOLUTIONS FOR LIGHTING CONTROL



ALL MK MANUFACTURING SITES ARE WORKING UNDER ENVIRONMENTAL MANAGEMENT SYSTEMS TO REDUCE THEIR IMPACT ON THE ENVIRONMENT



Sustainability is a term which is widely used, but rarely defined. This has resulted in many companies claiming to be 'sustainable'; to manufacture 'sustainable' products; to be conducting business in a 'sustainable' way.

But what does this really mean? How does a business prove to be Sustainable and how does a business offer Sustainable Opportunities?

When considering which products to specify, procure or install you may be asking yourself a number of questions to try to establish if the product can be considered to be from a sustainable source. Put simply, when considering if a product is sustainable you should be asking yourself the following questions:

#### **SUSTAINABILITY**

**Where does it come from?**

**Who made it?**

**What is it made of?**

**What is it packaged in?**

**What will happen to it at the end of its life?**

### **Where does it come from?**

74% of MK products are manufactured in the UK.

In the example of the MK Logic Plus 2 Gang Switch Socket Outlet for the UK market, it is estimated that the components and product travel a distance of 16 times less when manufactured in one of MK's UK facilities, compared to one produced in a Far Eastern facility. With over 70,000 less miles travelled from the UK manufactured socket there is a clear reduction in the products' carbon footprint when compared to one of its Far Eastern manufactured counterparts.

Where ever possible MK Electric manufacture within, or close to, a local market. This not only keeps the transportation of components and finished products to a minimum, but also allows us to react quickly to changes in the market requirements. Products come off the production line and are delivered direct to our UK warehouse within 24 hours. Far Eastern manufactured products can often spend over 3 months in transit, negating any opportunity for late changes in production to meet a specific market or customer demand.



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## Who made it?

All MK Electric factories operate to the Health, Safety and Environmental Management Standards implemented globally by Honeywell. In addition all MK Electric Operating Sites, and Global Supply Chains are accredited to the following third party assessed international standards:

- ISO 9001**      **Quality**
- OHSAS 18001**    **Health & Safety**
- ISO 14001**      **Environment**

For products sourced outside of the UK and for other global markets we operate an 'Ethical Trading Policy'. Non EU suppliers are subject to the MK Electric 'Social Responsibility in Supply Chains' audit and development program. Our team of Supplier Development Engineers, manned by country nationals, visit ALL suppliers and factories in Developing or Non EU countries. We have robust processes in place to identify potential areas for concern, including Child Labour, Conditions of Employment (such as wages, working times etc), Health and Safety, Supply Chain Management and Environmental issues. These regular site visits result in the development of continuous improvement plans, and the early identification of any link in our Supply Chain not meeting the high standards required.



## MK Electric

"We consider the well being of workers in our international supply chains to be a priority. As a condition of supply we ensure that all goods made on our behalf are produced in conditions that are safe, decent and that support working people in maintaining a reasonable standard of living".



PRESTIGE 3D EXTRUDED LENGTHS ARE MANUFACTURED FROM 90% RECYCLED MATERIAL\*

## What is it made of?

MK Electric aims to maximise the use of recycled materials in its products. The company's long term policy of sourcing recycled PVCu for Cable Management means that systems such as Prestige 3D offer the most recycled content of comparable systems on the market. Across the entire Cable Management range, the recycled content of extrusions is 90%\*.

The use of recycled PVCu, which is made from waste, off-cuts and bar lengths collected from fabricators in the window industry, supports MK's commitment to sustainability in two ways; it diverts over 5,000 tonnes of material destined for landfill and prevents the equivalent tonnage of new virgin material being produced with the associated savings in energy, providing a 94% saving in carbon dioxide emissions compared to production of virgin PVC polymer.

The RoHS Directive and the UK RoHS regulations came into force on 1 July 2006, and were updated again in 2008, and are concerned with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment. These Regulations implement EU Directive 2002/95 which bans the placing on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants. After consultation it was established that a vast majority of

products within the MK portfolio fell outside of the scope of the regulations, that is they were not effected by this new regulation. However, at MK our product development engineers are working to ensure our products carry the lowest possible risk to health and the environment. As such, MK Electric are working towards making all products voluntarily RoHS compliant.

The REACH Regulations (Registration, Evaluation, Authorisation and restriction of Chemicals), which came into force in June 2007, are also concerned with the use of Chemicals in products and their effect on health and the environment. All MK products have been confirmed as being REACH compliant, and contain no 'Substance of Very High Concern'.



\* Based on 2008 consumption

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**Cardboard:** over 80% is sourced from 100% recycled material

**Wood:** no use of virgin wood, all pallets are 'second use'

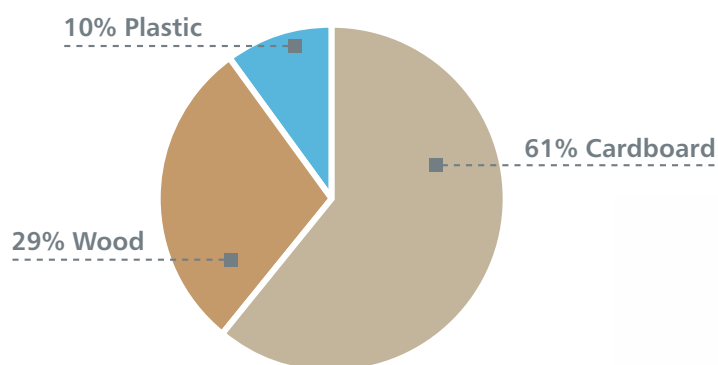
**Plastic:** up to 10% recycled content

**Approximately 550 tonnes of packaging recovered and 520 tonnes of packaging recycled**

## What is it packaged in?

MK Electric, Ackermann, Friedland and Superswitch, collectively put approximately 1500 tonnes of packaging materials onto the market each year. This includes cardboard used in boxes and cartons, wood used in pallets and plastic used in individual product bags.

### Packaging brought to market each year



MK Electric is subject to and complies with the Producer Responsibility (Packaging Waste) Regulations and the Packaging Essential Requirements Regulations. As such, 67% of cardboard packaging is recovered at the end of its life and 92% of that is recycled.

MK Electric is working to further reduce packaging and increase recycling.





### MK Packaging Policy

- Eliminate excessive or unnecessary packaging of its products.
- Maximise the recycled content of packing materials.
- Design packaging to aid recycling.
- Utilise reusable packaging where possible.
- Eliminate the use of ink with a heavy metal content.
- Minimise the use of solvent based adhesives.
- Avoid false or ambiguous environmental claims on packaging.
- Follow the principle of the Government's green claims code.
- Provide packaging disposal information to the consumer.
- Identify packaging materials through the use of appropriate identification symbols.
- Identify plastics with the use of the SPI identification symbol.
- Obtain pallets from suppliers whose wood is obtained from sustainable source.
- Reuse repaired pallets and provide broken pallets for recycling.
- Consider plant health requirements when importing / exporting wood packaging.

### What will happen to it at the end of its life?

MK aim to make it as easy as possible to recycle products and packaging at the end of their life. MK products do not fall within the scope of the Waste Electrical and Electronic Equipment Regulations (WEEE). However, key materials used in the manufacture of MK products can be recovered or recycled where facilities exist:

- Ferrous and non ferrous metals
- Polycarbonate, nylon, PVC

Innovative snap together modular designs make products easier to separate, enabling quick dismantling and eliminating additional fastening components.

All packaging components carry material identification marks indicating recyclability.

The Quality and Reliability of MK products ensure they have a longer life in use, which means the replacement and recycling of the products happen less often, offering a more sustainable installation.



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## MK Electric – The Sustainable Choice

- MK have a comprehensive range of energy saving products to help our customers save energy and reduce their carbon footprint

### Where does it come from?

- 74% of MK products are manufactured in the UK, keeping product miles and carbon emissions to a minimum

### Who made it?

- Manufacturing outside of the UK is conducted under an 'Ethical Trading Policy'
- All Global Supply Chains are accredited to ISO 9001 (Quality), OHSAS 18001 (Health & Safety), ISO 14001 (Environment)

### What is it made of?

- MK's PVCu Cable Management extrusions are manufactured from 90% recycled content\*
- Logic Plus has inherent anti-microbial properties with kill rates on MRSA of 99.9%
- All MK products are voluntarily RoHS compliant, even though technically out of scope
- All MK products have been confirmed as REACH compliant – that is they do not contain 'substances of very high concern'

### What is it packaged in?

- 67% of cardboard packaging is recovered at the end of its life; 92% of that is recycled
- 100% of wood, over 80% of cardboard and up to 10% of plastic used in packaging is from reuse or recycled sources

### What will happen to it at the end of its life?

- Key materials used in the manufacture of MK products can be recovered or recycled where facilities exist
- All packaging components carry material identification marks indicating recyclability
- Quality and Reliability mean products have a longer life in use and need replacing less often (product guarantee is up to 20 years)
- All products undergo rigorous testing to ensure maximum Quality, Reliability and Safety – products are tested to exceed British Standards

Pioneering Continuous Improvement Programs ensure we are constantly striving to provide the best products and services to our customer, in most efficient way.

\* Based on 2008 consumption

## Honeywell's Environmental Values: a Comprehensive Commitment

Honeywell is dedicated to protecting the environment with a comprehensive and contemporary commitment. This is one of the central tenets of how Honeywell does business throughout the world.

# Honeywell



Honeywell design products that help conserve energy, reduce waste, and protect homes and offices. Honeywell helps other companies become more efficient and productive with their products and solutions. Corporate-wide core processes identify and address risk and promote a culture of safety excellence.

Honeywell values its standing as a respected and responsible global business leader. Honeywell recognises that environmental stewardship is behaviour expected of corporate leaders today. It is a pillar of their reputation with the customers they serve.

Honeywell assists communities and companies in meeting the challenges posed by climate change policies and requirements by reducing the consumption of fossil fuels.

In January 2005, Honeywell received the Landfill Methane Outreach Program "Project of the Year" award for 2004 from the U.S. Environmental Protection Agency for an innovative landfill gas recovery initiative, resulting in substantial greenhouse gas reductions.

On May 16, 2007, Honeywell joined former President Bill Clinton and mayors of the world's large cities to announce a global Energy Efficiency Building Retrofit Program, a project of the Clinton Climate Initiative. The program is a global effort to help cities around the world improve the energy efficiency of buildings and decrease greenhouse gas emissions. Buildings are a major global consumer of energy and Honeywell is working with participating cities to identify and implement conservation and opportunities in their facilities. The Clinton Climate Initiative is assisting partner cities (including London, Paris, Barcelona,



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Honeywell embraces its obligation of environmental stewardship through the pursuit of technology that is building a world that's safer and more secure ... more comfortable and energy efficient ... more innovative and productive.

Madrid, Rome, Moscow, Mumbai, New York, Beijing, Hong Kong and more) to develop and implement large scale projects resulting in substantial reductions in energy usage and greenhouse gas emissions.

The Clinton Climate Initiative is also helping to create the first universal measurement tool to help enable cities to track their own carbon footprint and monitor the effectiveness of carbon reduction programs.

Honeywell, and its businesses, will continue to develop products and technologies that improve efficiency and lower greenhouse gas emissions. In 2007 Honeywell established 5-year greenhouse gas and energy efficiency objectives for its internal operations. By 2012 Honeywell will reduce its greenhouse gas emissions by 30%, and will increase its energy efficiency by 20%, both from a 2004 baseline year.

MK, and the whole UK Electrical Devices and Systems business, have joined the Prince of Wales' May Day Network, the UK's largest group of businesses committed to taking action on climate change. The May Day Network will share best practice and promises to play a powerful role in reducing the UK's carbon emissions.

Over 1300 businesses of all sizes from all sectors are working to realise the benefits from taking action on climate change. As part of the Prince's May Day Network, Business in the Community is working with sectors to pool their efforts in tailored collaborative initiatives.





## range introduction

**Let there be light**

MK Astral™, the advanced lighting system from MK Electric, brings out the best in your environment and is the ideal lighting and blind control solution if you are looking to enhance the ambience and atmosphere in any room or residence.

Used in conjunction with the Dianemo system, MK Astral™ can be part of a full Home Control solution.

Providing sophisticated and inspirational lighting control, MK Astral™ is an extremely versatile and intelligent system, which incorporates the award winning Z-Wave® RF communications technology from Zensys (now part of Sigma Designs), ensuring the ultimate in both reliability and flexibility.

With the freedom to create the perfect lighting scenes for home or business environments, MK Astral™ is the obvious choice for those who value ease and confidence of operation.

**Z-Wave®**

Products that speak Z-Wave® work together better

## features and benefits

**Wireless**

Innovative technology, easy to install and programme

- MK Astral™ communicates via a 2 way RF signal
- Wireless technology offers end user flexibility and peace of mind

**MESH**

Offers the most reliable wireless communication system

- MK Astral™ devices link together in a network to form a MESH
- Signals can be routed around obstacles

**Interoperable**

Expandable system beyond lighting and blind control

- Z-Wave® has been adopted by more than 160 companies
- Integrate to other systems using a Smart Interface with RS232 connectivity
- Fully compatible with the Dianemo Home Control solution

**Energy Saving**

Control lighting to reduce energy usage

- When in standby mode MK Astral™ mains powered devices are designed to consume <1 watt

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wireless | wiring devices

**Convenience**

Control any light from any point in your home – they do not need to be wired together

**Reliability**

Mains powered devices form a MESH network - multi communication paths are established to give the most reliable RF performance

**Flexibility**

Ideal for retrofit and new build - can be installed into existing lighting circuits, no need for additional wiring

**Confidence**

All devices are transmitters and receivers – the user gets positive acknowledgement that his instructions have been received at all target devices

**Atmosphere**

Differing ways to control the lighting are offered - Scene and Group control give the freedom to create the perfect lighting scenarios, with dramatically differing effects

**Occupancy simulation**

A standard security feature – simply set your lights to repeat the last 24 hours of activity at the push of a single button

**Rapid installation and connection**

Uses standard installation practices - fits a 35mm BS back box and has familiar electrical connections

**Blinds**

Include DC powered blinds into any lighting scene

**Choice of lamps**

Compatible with most types of lamps - including standard incandescent, halogen and compact fluorescent\*

**Extensive solutions**

Uses Zensys, a proven RF platform – allows unparalleled control over curtains, blinds etc using equipment from over 180 manufacturers

**Great looks**

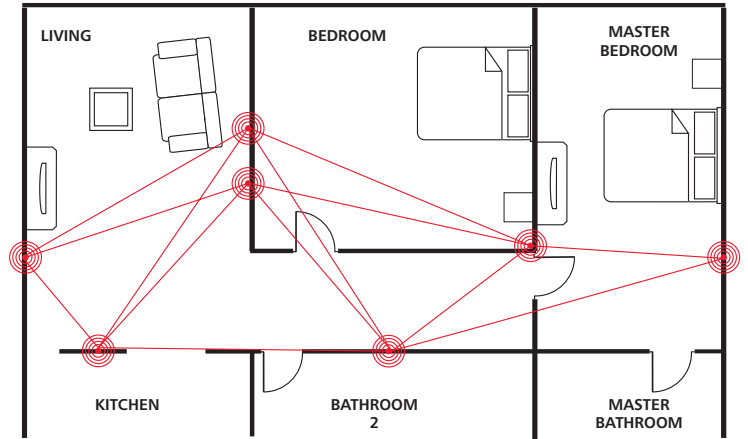
Numerous faceplate finishes are available to match your décor and taste and blends effortlessly with the ergonomically designed remote control, the use of multi coloured LEDs extend across all products to give clear common and informative indications to the user

*\*neutral or Low Energy Lighting Adaptor may be required*

**Reliable RF Technology**

The RF we use within our products is 2 way and MESH based. This means that all our devices are linked together in a robust network, to give the most reliable RF performance.

**Remember** - If a RF signal cannot reach its target device it will automatically re-route through other devices in the network.



Remote Control



1 Gang Battery Controller Module with White (WHI) Fascia



1 Gang Switch Module with Brushed Stainless Steel (BSS B) Fascia



2 Gang 300W Dimmer Module



2 Gang Dimmer Polished Brass (PBR B) Fascia

## Future proof your home automation

The Dianemo® System, integrated with MK Astral™ advanced lighting and blind controls, offers a cost effective, future proof, flexible home control system that can be integrated into any internal or external space, along with a host of other products and services.



- The Dianemo system allows easy to use control of even the most sophisticated home entertainment equipment
- Security control is fully integrated into the Dianemo system
- Control the room environment from wherever you are
- Access your Dianemo system from anywhere at any time
- The Dianemo system works with a wide range of communication protocols, IP, Z-Wave, RS232, RS485, infra-red (IR) and WiFi.
- Media Managers' control all aspects of the Dianemo system and these can be easily added into any new device allowing easy control of all new equipment.
- The system architecture is designed to easily accommodate new technologies as they come along.



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## Product Selector

When selecting products for your installation – follow these 6 easy steps

**step 1** **Select the Primary Controller**  
We recommend a Remote Control, though this could be a Battery Controller

**step 2** **Select the Switching and Dimming Modules you require**  
We offer a range of these modules in both 1 and 2 Gang versions with various power ratings

**step 3** **Select any additional Controllers you require**  
In addition to the Remote Control, we offer Mains and Battery Powered Controllers in both 1 and 2 Gang versions

**step 4** **Select the aesthetic faceplates to suit your requirements**  
These are supplied in a wide range of colours in both plastic and metal aesthetic finishes

**step 5** **Extend the system beyond lighting control**  
Choose from PIRs, Plug-Through Switches and Dimmers, Blind Controllers or other interfaces to create a more complete home automation system.

**It is important to be fully conversant with the wiring requirements and loading capabilities of the MK Astral™ system before placing your order – if unsure please get in contact.**

## Remote Control and Battery Controllers

## Mains Controller Modules



**LRC14ULBS**  
REMOTE CONTROL

**LIB1UCHA**  
1 GANG BATTERY CONTROLLER

**LIB2UCHA**  
2 GANG BATTERY CONTROLLER

Select the appropriate 1 Gang or 2 Gang Dimmer Fascia for your Battery Controller Module.

Operating Frequency  
868.4 MHz

**LIM1UC**  
1 GANG MAINS CONTROLLER MODULE

**LIM2UC**  
2 GANG MAINS CONTROLLER MODULE

Select the appropriate 1 Gang or 2 Gang Dimmer Fascia for your Mains Controller Module.

Operating Frequency  
868.4 MHz  
MOUNTING BOXES ARE REQUIRED FOR MAINS CONTROLLER MODULES, SWITCH MODULES AND DIMMER MODULES  
MOUNTING BOXES:  
Flush 35mm

## Switch Modules

## Dimmer Modules

## Fluorescent Dimmer Modules

(AVAILABLE  
EARLY 2012)



LSM11UC



LSM12UC



LDM31UC



LDM32UC



LDM61UC



LFD51UC



LFD52UC

**LSM11UC**  
1 GANG  
10AX SWITCH MODULE

1

**LSM12UC**  
2 GANG  
10AX SWITCH MODULE

1

Select the appropriate  
1 Gang or 2 Gang Switch Fascia for  
your Switch Controller Module.

Suitable for use with the following load  
types and maximum load ratings only.

GLS / Tungsten filament  
25 - 2400W

Tungsten halogen  
25 - 2000W

Fluorescent tubes with ferro-magnetic  
ballast and power factor correction  
18 - 1800W

Maximum load capacitance  
140µF

Fluorescent tubes with electronic  
ballast\*  
(eg 30 x 18W tubes/ballasts)  
18 - 540W

Compact fluorescent (low energy)  
lamps\*  
25 - 750W

ELV Tungsten halogen ferro-magnetic  
or electronic transformers\*  
25 - 1500VA

\* requires Neutral connection to switch

BS EN 60669-2-1  
BS EN 61000-6-1 / 3  
ETSI EN 301489-1 / 2  
ETSI EN 300220-1 / 2

**LDM31UC**  
1 GANG 300W  
DIMMER MODULE

1

**LDM32UC**  
2 GANG 300W  
DIMMER MODULE

1

**LDM61UC**  
1 GANG 600W  
DIMMER MODULE

1

Select the appropriate  
1 Gang or 2 Gang Dimmer Fascia for  
your Dimmer Controller Module.

Suitable for use with the following load  
types and maximum load ratings only.

**1G 300W Dimmer**  
GLS Tungsten filament Tungsten  
Halogen 25-300W

12V ELV Tungsten halogen with  
wirewound or electronic transformers  
35-300VA

**1G 600W Dimmer**  
GLS Tungsten filament Tungsten  
Halogen 25-600W

12V ELV Tungsten halogen with  
wirewound or electronic transformers  
35-600VA

**2G 600W Dimmer**  
GLS Tungsten filament Tungsten  
Halogen  
25-300W/channel

12V ELV Tungsten halogen with  
wirewound or electronic transformers  
35-300VA/channel

Not suitable for any other load type.  
Do not use different types of lamp on  
the same load circuit.

**LFD51UC**  
1GANG 6AX  
FLUORESCENT DIMMER

1

**LFD52UC**  
2GANG 6AX  
FLUORESCENT DIMMER

1

Select the appropriate  
1 Gang or 2 Gang Dimmer Fascia for  
your Dimmer Controller Module.

Rated switching current per output  
channel is 6AX

Each channel can support up to 10  
analogue dimmable ballasts of 0-10V or  
1-10V type, used to drive Fluorescent or  
LED loads

Suitable for use with source type ballasts  
only.

Not suitable for any other load type.

Do not use different types of lamp on  
the same load circuit.

If your lighting control point has  
no neutral wired to it and you are  
switching

- Compact Fluorescent and LED lamps  
- Low energy, fluorescent or LED  
lighting with separate ballasts

You may need to fit a Low Energy  
Lighting Adapter. Please call Technical  
Services at +44 (0) 1268 563720 for  
further information.

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Switch  
Fascias

Dimmer  
Fascias  
also used for Battery  
and Mains Controllers

1 GANG

2 GANG

1 GANG

2 GANG



### FINISHES – METAL

THE FINAL SUFFIX REPRESENTS THE COLOUR OF INSERTS. W = WHITE INSERTS, B = BLACK INSERTS

BRUSHED STAINLESS STEEL (BSS)	LSF21BSSW	1	LSF22BSSW	1	LDF21BSSW	1	LDF22BSSW	1
	LSF21BSSB	1	LSF22BSSB	1	LDF21BSSB	1	LDF22BSSB	1
LACQUERED BRUSHED STEEL (LBS)	LSF21LBSW	1	LSF22LBSW	1	LDF21LBSW	1	LDF22LBSW	1
	LSF21LBSB	1	LSF22LBSB	1	LDF21LBSB	1	LDF22LBSB	1
POLISHED BRASS (PBR)	LSF21PBRB	1	LSF22PBRB	1	LDF21PBRB	1	LDF22PBRB	1
POLISHED CHROME (POC)	LSF21POCB	1	LSF22POCB	1	LDF21POCB	1	LDF22POCB	1
<b>FINISHES – PLASTIC</b>								
TITANIUM (TTA)	LSF11TTA	1	LSF12TTA	1	LDF11TTA	1	LDF12TTA	1
CHARCOAL (CHA)	LSF11CHA	1	LSF12CHA	1	LDF11CHA	1	LDF12CHA	1
CHAMPAGNE (CHM)	LSF11CHM	1	LSF12CHM	1	LDF11CHM	1	LDF12CHM	1
WHITE (WHI)	LSF11WHI	1	LSF12WHI	1	LDF11WHI	1	LDF12WHI	1

## Accessories

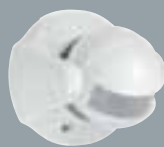
## PIR Detector

Blind  
Controller  
ModulePlug-Through  
Switch/Dimmer  
Module

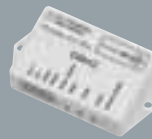
## Interfaces

(AVAILABLE  
EARLY 2012)

LRC130



LPIR1U



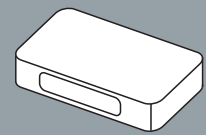
LDBC1U



LPTSM1U



LPTDM1U



LS11UWHI

**LRC130**

ALTERNATIVE BUTTONS  
FOR REMOTE CONTROL (PACK  
CONTAINS 30 VARIATIONS)

**1****LPIR1U**

PIR DETECTOR

**1**

868.4MHz

Up to 50m RF range (open field)  
Can control a group of up to 5  
devices

6 to 12m Range detection range  
100° field of view

Adjustable time on period 5sec to  
12 min

Low battery indicator

Supplied with batteries and wall  
fixings

Battery-powered 3 x AA supplied

For indoor use only

Please note the PIR unit cannot be  
associated to the 2nd Gang of a 2  
Gang Product; only 1 PIR can be  
associated to any group

**1****LDBC1U**

DC BLIND CONTROLLER

**1**

868.4MHz

Up to 50m RF range (open field)

DC powered

On board independent control of  
blind

Stop at any point between fully open  
and fully close

Self calibrating in use

For indoor use only

Suitable for use with 8 to 30V DC  
Powered Blinds

5A rated load

Please note the power supply and  
motor required to power the DC blind  
is provided with the blind and not the  
Astral controller.

LDBC1U can be included into lighting  
scenes

**1****LPTSM1U**1 GANG  
600W SWITCH MODULE**1****LPTDM1U**1 GANG  
400W DIMMER MODULE

Suitable for use with GLS,  
Incandescent, Tungsten Filament or  
Mains Halogen Lighting

Max load for switch: 600W

Max load for dimmer: 400W

Can be controlled from: MK Astral™  
devices when included into a  
system; on product control via push  
button

Allows operation of plug in stand  
and table lamps

Load status indicator

Mains powered

Internal fuse protection against  
overload or short circuit

Low standby power consumption

Up to 30m RF range (open field)

Responds to system All Off  
commands

Can be included into lighting scenes

**1****LS11UWHI**

SMART INTERFACE

**1****1****Apple iOS Interface Option:**

WiFi to Z-Wave Interface for use  
with WiFi Routers in conjunction  
with the iPhone, iPad or iPod Touch.

Use with the MK Astral App to  
control individual MK Astral devices  
and user designated scenes.

All devices can be allocated to  
rooms and appropriately named.

Can instigate Holiday Mode.

Used in Conjunction with  
downloadable MK Astral App from  
iTunes App store

**RS232 Interface Option:**

RS232 Interface to allow control  
of Z-Wave devices by third party  
computer based product with RS232  
communications port.

Used in conjunction with 3rd Party  
generated software - not supplied by  
MK Electric.



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range introduction

features and benefits

Imagine switch technology and automated systems that need no wiring, use no batteries and are effortless to install and commission. Echo™ is an innovative range of entirely wireless, batteryless and self-powered switches and controls which can work together offering even more convenience and energy saving opportunities.

Echo™ enables you to create your own automated control system for a domestic or commercial environment. With the ability to incorporate a range of transmitters from switches, temperature sensors and presence detectors, alongside a range of receivers, the installer can create a flexible system which can deliver safety, comfort, cost savings and energy efficiency for the building owner or user.

The MK Echo™ portfolio is enabled by EnOcean technology. EnOcean based products make use of the energy generated by slight changes in pressure, light levels or temperature, to provide self-powered, batteryless and wireless solutions. This technology is used by many world leading manufacturers, products from these companies can be used together to provide solutions for energy efficient buildings which are more flexible and cost efficient to design, build and operate.

To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk).

**Wireless**

Instant installation and location flexibility, reducing disruption and cost.

**Batteryless**

Low maintenance and low running costs makes Echo™ a very versatile and sustainable option.

**Self-powered**

Uses innovative technology to 'harvest' energy.

**Automated systems**

Gives the user control over their local environment ensuring maximum comfort and convenience.

**Energy savings**

With additional local control, alongside the use of temperature sensors and presence detectors, users can create an energy efficient environment.

**Be it a functional building, office, home or hotel suite, Echo™ is the future of switch technology and automation systems.**



WIRELESS



BATTERYLESS



SELF-POWERED

### Application Example: Hotel Bedroom

In this example the installer is able to create an automated system to enable the control of lights, curtains and temperature to ensure comfort for the guest, whilst delivering energy efficiency and cost savings for the hotel without disturbing the fabric of the room. In addition, with wireless transmitters, the layout and positioning is completely flexible and can be changed quickly without disruption.

The guest is able to easily control their local environment from a number of locations within the room. A 2 channel transmitter by the entry doorway enables control of both the bedroom and living area lighting. An additional 4 channel transmitter next to the bed gives further control of not only the bedroom and living area lighting, but also the curtains and an all off function. There is additional control in the bathroom and on the balcony.

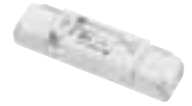
The hotel is able to control all lighting, heating and cooling by the card switch transmitter, ensuring guests do not leave lighting or air conditioning on when they leave the room. The hotel is also able to ensure a safe environment; the presence detector can be programmed to turn low level lighting on when a guest enters the room during the hours of darkness. In addition the presence detector can be programmed to turn lighting off, or dim to a low level when no presence is detected in the room but the card switch is still in place. Door contacts ensure the air conditioning is not in use whilst the balcony doors are open, offering further energy savings. The temperature sensor can also help control energy costs; in a cold environment a reduction in temperature by just two degrees during the hours of sleep can have a big impact on the overall energy bill.

The KNX gateway enables each Echo-controlled hotel room to be linked to a central computer, where a facilities manager can remotely monitor and control each hotel room, and the overall system.

To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk).



SWITCH RECEIVER



MOTOR CONTROLLER

PLUG-THROUGH DIMMER  
RECEIVER

4 CHANNEL TRANSMITTER

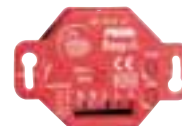
- 1 - LIVING AREA LIGHTS
- 2 - BEDROOM LIGHTS
- 3 - PLUG-THROUGH LIGHT
- 4 - ALL OFF



1 CHANNEL TRANSMITTER



SWITCH RECEIVER



2 CHANNEL TRANSMITTER

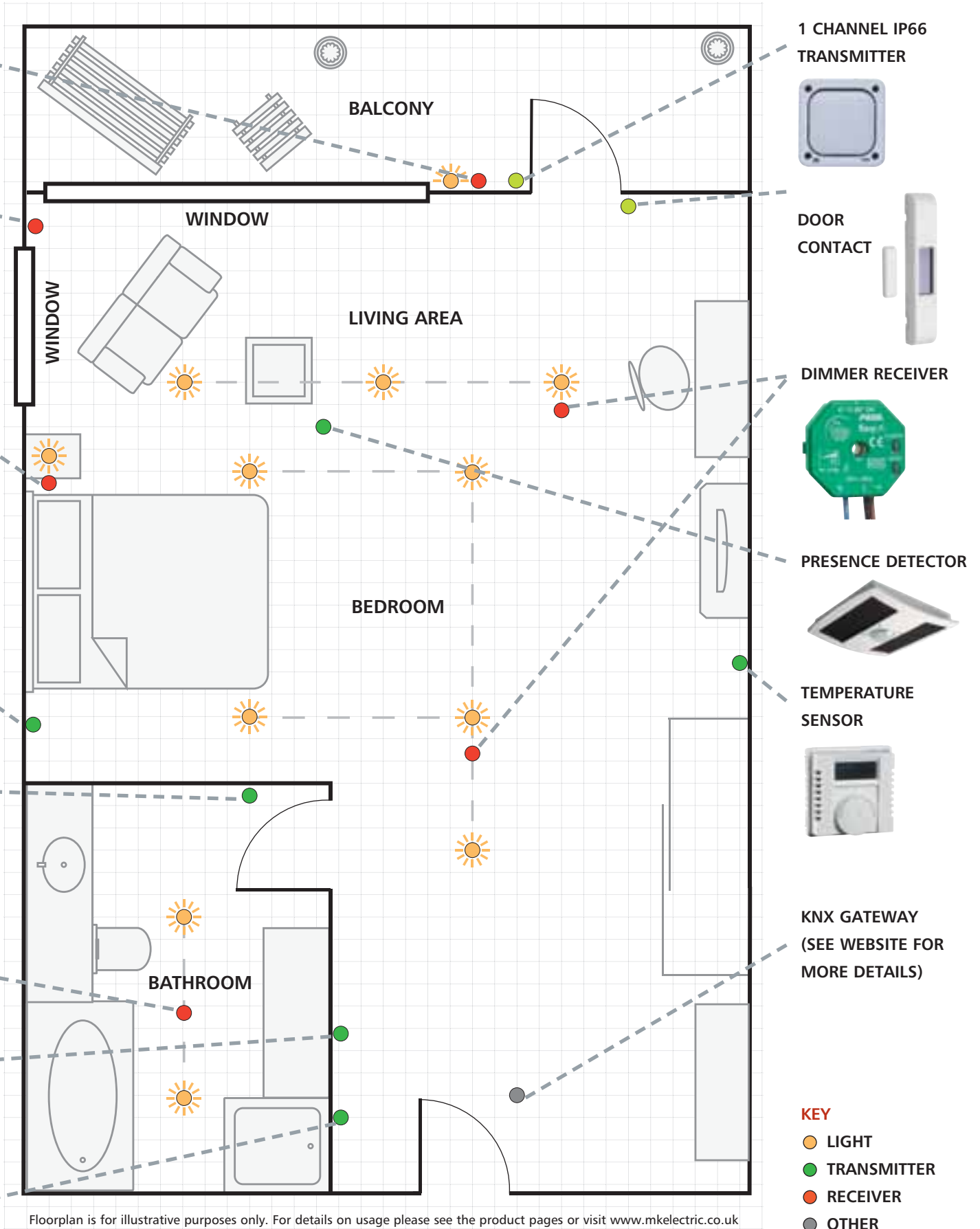
- 1 - BEDROOM LIGHTS
- 2 - LIVING AREA



CARD TRANSMITTER

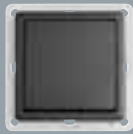
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## Modular Transmitters

	1 CHANNEL MODULAR TRANSMITTER	2 CHANNEL MODULAR TRANSMITTER	MODULAR CARD SWITCH TRANSMITTER	MODULAR WALL TEMPERATURE SENSOR TRANSMITTER
--	-------------------------------------	-------------------------------------	---------------------------------------	--



### FINISHES

WHITE	<b>K5786WHI</b> <b>1</b>	<b>K5789WHI</b> <b>1</b>	<b>K5744CWHI</b> <b>1</b>	<b>K5744WHI</b> <b>1</b>
BLACK	<b>K5786BLK</b> <b>1</b>	<b>K5789BLK</b> <b>1</b>	<b>K5744CBLK</b> <b>1</b>	<b>K5744BLK</b> <b>1</b>
ALUMINIUM	<b>K5786ALU</b> <b>1</b>	<b>K5789ALU</b> <b>1</b>	<b>K5744CALU</b> <b>1</b>	<b>K5744ALU</b> <b>1</b>

ONLY COMPATIBLE WITH THE K5422G KNX GATEWAY OR A DEDICATED SEPARATE RECEIVER. SEE WEBSITE FOR DETAILS.

For use with K5776, K5779 frames and K5412 locator

For use with K5776, K5779 frames and K5412 locator

For use with K5776, K5779 frames and K5412 locator

For use with K5776, K5779 frames and K5412 locator.

OPERATING FREQUENCY:  
868.3Mhz  
IP RATING:  
IP2 x D  
DIMENSIONS:  
55 x 55mm  
ETSI EN 301489-1/3  
ETSI EN 300220-1/2

OPERATING FREQUENCY:  
868.3Mhz  
IP RATING:  
IP2 x D  
DIMENSIONS: 55 x 55mm  
ETSI EN 301489-1/3  
ETSI EN 300220-1/2

OPERATING FREQUENCY:  
868.3Mhz  
IP RATING:  
IP2 x D  
DIMENSIONS:  
55 x 55mm  
ETSI EN 301489-1/3  
ETSI EN 300220-1/2

OPERATING FREQUENCY:  
868.3Mhz  
IP RATING:  
IP2 x D  
DIMENSIONS:  
55 x 55mm  
ETSI EN 301489-1/3  
ETSI EN 300220-1/2

**MOUNTING SWITCH TRANSMITTERS:** All can be mounted directly to the wall surface – screws supplied. All can be mounted to back boxes – screws supplied. Logic Plus and Aspect type transmitters can also be mounted using supplied adhesive pads





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## Modular Frames

1G FRAME GLOSSY FINISH    2G FRAME GLOSSY FINISH

1G FRAME GLASS FINISH    2G FRAME GLASS FINISH

					
FINISHES			FINISHES		
WHITE	<b>K5776WHI</b> 1	<b>K5779WHI</b> 1	GLASS, BLACK	<b>K5776GLAB</b> 1	<b>K5779GLAB</b> 1
BLACK	<b>K5776BLK</b> 1	<b>K5779BLK</b> 1	GLASS, GREEN	<b>K5776GLAG</b> 1	<b>K5779GLAG</b> 1
ALUMINIUM	<b>K5776ALU</b> 1	<b>K5779ALU</b> 1	GLASS, ALUMINIUM	<b>K5776GLAA</b> 1	<b>K5779GLAA</b> 1
			GLASS, GROOVED ALUMINIUM	<b>K5776GLAGA</b> 1	<b>K5779GLAGA</b> 1

For use with K5412 locator and K5786, K5789, K5744, K5744C transmitters.

Surface mount installation only.

DIMENSIONS:  
83 x 83mm

For use with K5412 locator and K5786, K5789, K5744, K5744C transmitters.

Surface mount installation only.

DIMENSIONS:  
83 x 154mm

For use with K5412 locator and K5786, K5789, K5744, K5744C transmitters.

Surface mount installation only.

DIMENSIONS:  
85 x 85mm

For use with K5412 locator and K5786, K5789, K5744, K5744C transmitters.

Surface mount installation only.

DIMENSIONS:  
85 x 157mm

## TRANSMITTERS

## Logic Plus

1 CHANNEL  
TRANSMITTER2 CHANNEL  
TRANSMITTER

## FINISHES

WHITE	K4786WHI	1	K4789WHI	1
GRAPHITE	K4786GRA	1	K4789GRA	1

OPERATING FREQUENCY:  
868.3Mhz  
IP RATING:  
IP2 x D  
DIMENSIONS:  
86 x 86mm  
BS EN 60669-1 :  
BS EN 60669-2-1 :  
ETSI EN 301 489-1 + -3 :  
ESTI EN 300 220-3

OPERATING FREQUENCY:  
868.3Mhz  
IP RATING:  
IP2 x D  
DIMENSIONS:  
86 x 86mm  
BS EN 60669-1 :  
BS EN 60669-2-1 :  
ETSI EN 301 489-1 + -3 :  
ESTI EN 300 220-3

## Albany Plus

1 CHANNEL  
TRANSMITTER2 CHANNEL  
TRANSMITTER

## FINISHES

BRUSHED STAINLESS STEEL	K4766BSS*	1	K4767BSS*	1
LACQUERED BRUSHED STEEL				
SILVER ANODIZED ALUMINIUM				
BRUSHED CHROME	K4766BRC*	1	K4766BRC*	1
POLISHED CHROME	K4766PCR*	1	K4766PCR*	1
SATIN GOLD	K4766SAG*	1	K4767SAG*	1
PORCELAIN WHITE				
LUSTROUS IVORY				
LUSTROUS BLACK				
POLISHED BRASS				
TEXTURED IRON				
DESERT BRONZE				
ANTIQUE BRASS				
TEXTURED COPPER				

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterix, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

LEAD TIMES: Please  
contact our Customer  
Services Department on:  
01268 563 404

OPERATING FREQUENCY:  
868.3Mhz  
IP RATING:  
IP2 x D  
DIMENSIONS:  
86 x 86mm  
BS EN 60669-1 :  
BS EN 60669-2-1 :  
ETSI EN 301 489-1 + -3 :  
ESTI EN 300 220-3

OPERATING FREQUENCY:  
868.3Mhz  
IP RATING:  
IP2 x D  
DIMENSIONS:  
86 x 86mm  
BS EN 60669-1 :  
BS EN 60669-2-1 :  
ETSI EN 301 489-1 + -3 :  
ESTI EN 300 220-3

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## Aspect

## Edge

 1 CHANNEL  
TRANSMITTER

 2 CHANNEL  
TRANSMITTER

 1 CHANNEL  
TRANSMITTER

 2 CHANNEL  
TRANSMITTER


<b>K23476BSS*</b>	<b>1</b>	<b>K23477BSS*</b>	<b>1</b>	<b>K13476BSS*</b>	<b>1</b>	<b>K13477BSS*</b>	<b>1</b>
<b>K23476LBS*</b>	<b>1</b>	<b>K23477LBS*</b>	<b>1</b>	<b>K13476LBS*</b>	<b>1</b>	<b>K13477LBS*</b>	<b>1</b>
				<b>K13476SAA*</b>	<b>1</b>	<b>K13477SAA*</b>	<b>1</b>
<b>K23476BRC*</b>	<b>1</b>	<b>K23477BRC*</b>	<b>1</b>	<b>K13476BRC*</b>	<b>1</b>	<b>K13477BRC*</b>	<b>1</b>
<b>K23476POC*</b>	<b>1</b>	<b>K23477POC*</b>	<b>1</b>	<b>K13476POC*</b>	<b>1</b>	<b>K13477POC*</b>	<b>1</b>
<b>K23476SAG*</b>	<b>1</b>	<b>K23477SAG*</b>	<b>1</b>	<b>K13476SAG*</b>	<b>1</b>	<b>K13477SAG*</b>	<b>1</b>
<b>K23476WHIW</b>	<b>1</b>	<b>K23477WHIW</b>	<b>1</b>	<b>K13476WHIW</b>	<b>1</b>	<b>K13477WHIW</b>	<b>1</b>
<b>K23476LIVW</b>	<b>1</b>	<b>K23477LIVW</b>	<b>1</b>	<b>K13476LIVW</b>	<b>1</b>	<b>K13477LIVW</b>	<b>1</b>
<b>K23476LBKB</b>	<b>1</b>	<b>K23477LBKB</b>	<b>1</b>	<b>K13476LBKB</b>	<b>1</b>	<b>K13477LBKB</b>	<b>1</b>
<b>K23476PBR*</b>	<b>1</b>	<b>K23477PBR*</b>	<b>1</b>	<b>K13476PBR*</b>	<b>1</b>	<b>K13477PBR*</b>	<b>1</b>
<b>K23476TIRB</b>	<b>1</b>	<b>K23477TIRB</b>	<b>1</b>	<b>K13476TIRB</b>	<b>1</b>	<b>K13477TIRB</b>	<b>1</b>
<b>K23476DBZB</b>	<b>1</b>	<b>K23477DBZB</b>	<b>1</b>	<b>K13476DBZB</b>	<b>1</b>	<b>K13477DBZB</b>	<b>1</b>
<b>K23476ABSB</b>	<b>1</b>	<b>K23477ABSB</b>	<b>1</b>	<b>K13476ABSB</b>	<b>1</b>	<b>K13477ABSB</b>	<b>1</b>
<b>K23476TCOB</b>	<b>1</b>	<b>K23477TCOB</b>	<b>1</b>	<b>K13476TCOB</b>	<b>1</b>	<b>K13477TCOB</b>	<b>1</b>

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

OPERATING FREQUENCY:  
868.3 Mhz  
IP RATING:  
IP2 x D  
DIMENSIONS:  
86 x 86mm  
BS EN 60669-1 :  
BS EN 60669-2-1 :  
ETSI EN 301 489-1 + -3 :  
ESTI EN 300 220-3

OPERATING FREQUENCY:  
868.3 Mhz  
IP RATING:  
IP2 x D  
DIMENSIONS:  
86 x 86mm  
BS EN 60669-1 :  
BS EN 60669-2-1 :  
ETSI EN 301 489-1 + -3 :  
ESTI EN 300 220-3

OPERATING FREQUENCY:  
868.3 Mhz  
IP RATING:  
IP2 x D  
DIMENSIONS:  
86 x 86mm  
BS EN 60669-1 :  
BS EN 60669-2-1 :  
ETSI EN 301 489-1 + -3 :  
ESTI EN 300 220-3

OPERATING FREQUENCY:  
868.3 Mhz  
IP RATING:  
IP2 x D  
DIMENSIONS:  
86 x 86mm  
BS EN 60669-1 :  
BS EN 60669-2-1 :  
ETSI EN 301 489-1 + -3 :  
ESTI EN 300 220-3

**MOUNTING SWITCH TRANSMITTERS:** All can be mounted directly to the wall surface – screws supplied. All can be mounted to back boxes – screws supplied. Logic Plus and Aspect type transmitters can also be mounted using supplied adhesive pads

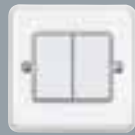
## TRANSMITTERS

## Metalclad Plus

## Masterseal Plus

## Other

## Presence Detector

1 CHANNEL  
TRANSMITTER2 CHANNEL  
TRANSMITTER1 CHANNEL  
TRANSMITTER2 CHANNEL  
TRANSMITTERREMOTE  
CONTROL  
TRANSMITTERWINDOW  
CONTACT  
TRANSMITTERSENSOLUX  
SOLAR-  
PRESENCE  
DETECTOR

## FINISHES

## ALUMINIUM

K3786ALM 1

K3787ALM 1

K5417R

1 K5421

1 K5754 1

## GREY

K55400GRY 1

K55406GRY 1

## WHITE

K3786WHI 1

K3787WHI 1

K55400WHI 1

K55406WHI 1

## BLACK

K55400BLK 1

K55406BLK 1

ONLY COMPATIBLE WITH THE K5435R RECEIVER OR THE K5422G KNX GATEWAY. SEE WEBSITE FOR DETAILS.

Provides interlock functionality for use with multi-function receivers and blind controllers.

Solar powered.

Solar powered with optional backup battery.

OPERATING FREQUENCY:  
868.3 Mhz

IP RATING:  
IP2 x D

DIMENSIONS:  
86 x 86mm

BS EN 60669-1 ;  
BS EN 60669-2-1 ;  
ETSI EN 301 489-1 + -3 ;  
ESTI EN 300 220-3

OPERATING FREQUENCY:  
868.3 Mhz

IP RATING:  
IP2 x D

DIMENSIONS:  
86 x 86mm

BS EN 60669-1 ;  
BS EN 60669-2-1 ;  
ETSI EN 301 489-1 + -3 ;  
ESTI EN 300 220-3

OPERATING FREQUENCY:  
868.3 Mhz

IP RATING:  
IP66

DIMENSIONS:  
95 x 95 x 57mm

BS EN 60669-1 ;  
BS EN 60669-2-1 ;  
ETSI EN 301 489-1 + -3 ;  
ESTI EN 300 220-3

OPERATING FREQUENCY:  
868.3 Mhz

IP RATING:  
IP66

DIMENSIONS:  
95 x 95 x 57mm

BS EN 60669-1 ;  
BS EN 60669-2-1 ;  
ETSI EN 301 489-1 + -3 ;  
ESTI EN 300 220-3

OPERATING FREQUENCY:  
868.3 Mhz

IP RATING:  
IP2 x D

DIMENSIONS:  
50 x 82 x 21mm

BSEN 60669-1 ;  
BS EN 60669-2-1 ;  
ETSI EN 301 489-1 + -3 ;  
ESTI EN 300 220-3

OPERATING FREQUENCY:  
868.3Mhz

IP RATING: IP40

DIMENSIONS:  
110 x 19 x 15mm  
and 23 x 14 x 6mm

EN 301489-1/3  
EN 300220-1/2

OPERATING FREQUENCY:  
868.3Mhz

IP RATING: IP50

DIMENSIONS:  
108 x 108 x 26.8mm  
EN 301489-1/3  
EN 300220-1/2



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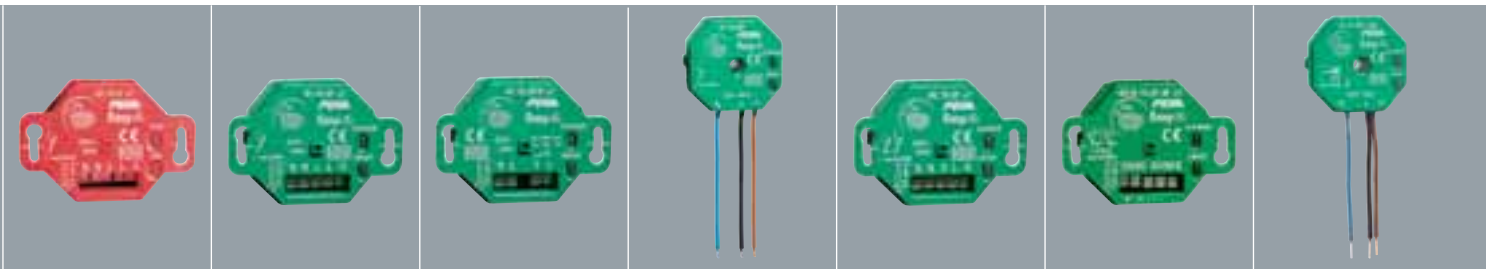
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## RECEIVERS

### 1 Channel Switch Receivers

### 2 Channel Switch Receivers

### 1 Channel Dimmer Receiver



**K5434R** 1 CHANNEL SWITCH RECEIVER



**K5432R** 1 CHANNEL MULTI-FUNCTION SWITCH RECEIVER



**K5431R** 1 CHANNEL VOLT-FREE, MULTI-FUNCTION SWITCH RECEIVER



**K5437R** 1 CHANNEL MULTI-FUNCTIONAL SWITCH RECEIVER LEADED



**K5433R** 2 CHANNEL MULTI-FUNCTION SWITCH RECEIVER



**K5430R** 2 CHANNEL 24VDC MULTI-FUNCTION SWITCH RECEIVER



**K5436R** 1 CHANNEL MULTI-FUNCTIONAL DIMMER RECEIVER LEADED



Provides basic on/off functionality only.

SUPPLY:  
230V / 50Hz

LOAD RATINGS:  
GLS/Incandescent: 2500W  
Halogen: 1200W  
Inductive: 600VA  
Electronic Ballasts: 3 units

Operating Frequency:  
868.3MHz

DIMENSIONS:  
Depth: 27mm

EN 60669-2-1  
EN 301489-1/3  
EN 300220-1/2

Multi-functional device providing: single button, stairwell, time-delay, fan, scene operating modes and interlock functions for use with window contact.

SUPPLY:  
230V / 50Hz

LOAD RATINGS:  
GLS/Incandescent: 2500W  
Halogen: 1200W  
Inductive: 600VA  
Electronic Ballasts: 3 units

Operating Frequency:  
868.3MHz

DIMENSIONS:  
Depth: 27mm

EN 60669-2-1  
EN 301489-1/3  
EN 300220-1/2

Multi-functional device providing: single button, stairwell, time-delay, fan, scene operating modes and interlock functions for use with window contact.

SUPPLY:  
230V / 50Hz

LOAD RATINGS:  
GLS/Incandescent:  
1200W @ 230Vac  
50W @ 30Vdc  
Halogen: 600W @ 230Vac

Operating Frequency:  
868.3MHz

DIMENSIONS:  
Depth: 27mm

EN 60669-2-1  
EN 301489-1/3  
EN 300220-1/2

Multi-functional device providing: single button, stairwell, time-delay, fan, scene operating modes and interlock functions for use with window contact.

SUPPLY:  
230V / 50Hz

LOAD RATINGS:  
GLS/Incandescent: 2500W  
Halogen: 1200W  
Inductive: 600VA  
Electronic Ballasts: 3 units

Operating Frequency:  
868.3MHz

DIMENSIONS:  
Depth: 27mm

EN 60669-2-1  
EN 301489-1/3  
EN 300220-1/2

Multi-functional device providing: single button, stairwell, time-delay, fan, scene operating modes and interlock functions for use with window contact.

SUPPLY:  
230V / 50Hz

LOAD RATINGS (per channel):  
GLS/Incandescent: 500W  
Halogen: 100W  
Inductive: 100VA  
Electronic Ballasts: 1 unit

Operating Frequency:  
868.3MHz

DIMENSIONS:  
Depth: 27mm

EN 60669-2-1  
EN 301489-1/3  
EN 300220-1/2

Multi-functional device providing single button, pulsed and time-delay operating modes

SUPPLY:  
24Vdc

LOAD RATINGS (per channel):  
300mA @ 24Vdc  
Operating Frequency:  
868.3MHz

DIMENSIONS:  
Depth: 27mm

EN 60669-2-1  
EN 301489-1/3  
EN 300220-1/2

Multi-functional device providing: soft start, turn-on memory, switch, stairwell and scene operating modes.

SUPPLY:  
230V / 50Hz

LOAD RATINGS:  
60-210W

Suitable for use with GLS/Incandescent/Halogen lamps and 12V low voltage lighting powered by dimmable electronic transformers only.

Operating Frequency:  
868.3MHz

DIMENSIONS:  
Depth: 27mm

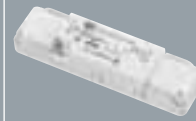
EN 60669-2-1  
EN 301489-1/3  
EN 300220-1/2

## RECEIVERS

## Plug-Through Receiver

## Alternative Receivers

## Presence Detector Receiver



**K5427S**  
PLUG-THROUGH SWITCH

1

**K5428D**  
PLUG-THROUGH DIMMER

1

**K5438R**  
DC MOTOR CONTROLLER

1

**K5439R**  
AC MOTOR CONTROLLER

1

**K5418R**  
SMALL LOAD SWITCH RECEIVER  
400 WATT

1

**K5420R**  
10AX SWITCH RECEIVER/REPEATER

1

**K5435R**  
SENSOLUX  
1 CHANNEL ENERGY CONTROLLER RECEIVER

1

Multi-functional device providing: single button, stairwell, time-delay, fan, scene operating modes and interlock functions for use with window contact.

SUPPLY:  
230V / 50Hz

LOAD RATINGS:  
GLS/Incandescent: 2500W  
Halogen: 1250W  
Inductive: 600VA  
Electronic Ballasts: 3 units

Operating Frequency:  
868.3MHz

DIMENSIONS:  
130 x 68 x 48mm

EN 60669-2-1  
EN 301489-1/3  
EN 300220-1/2

Multi-functional device providing: soft start, turn-on memory, switch, stairwell and scene operating mode.

SUPPLY:  
230V / 50Hz

LOAD RATINGS:  
60-420W

Suitable for use with GLS/Incandescent/Halogen lamps and 12V low voltage lighting powered by dimmable electronic transformers only

Operating Frequency:  
868.3MHz

DIMENSIONS:  
130 x 68 x 48mm

EN 60669-2-1  
EN 301489-1/3  
EN 300220-1/2

Multi-functional device providing: blind control, scene and interlock functions for use with window contact.

SUPPLY:  
24Vdc

LOAD RATINGS:  
1A

Operating Frequency:  
868.3MHz

DIMENSIONS:  
Depth: 27mm

EN 60669-2-1  
EN 301489-1/3  
EN 300220-1/2

Multi-functional device providing: blind control, scene and interlock functions for use with window contact.

SUPPLY:  
230V / 50Hz

LOAD RATINGS:  
600VA

Operating Frequency:  
868.3MHz

DIMENSIONS:  
Depth: 27mm

EN 60669-2-1  
EN 301489-1/3  
EN 300220-1/2

OPERATING FREQUENCY:  
868.3MHz

IP RATING: IP2 x D

DIMENSIONS:  
47.4 x 34.6 x 28.9mm

BSEN 60669-1 ;  
BS EN 60669-2-1 ;  
ETSI EN 301 489-1 + -3 ;  
ESTI EN 300 220-3

OPERATING FREQUENCY:  
868.3MHz

IP RATING: IP2 x D

DIMENSIONS:  
175.5 x 50.3 x 32.25mm

BSEN 60669-1 ;  
BS EN 60669-2-1 ;  
ETSI EN 301 489-1 + -3 ;  
ESTI EN 300 220-3

For use with K5754 Sensolux Presence detector only

SUPPLY:  
230V / 50Hz

LOAD RATINGS:  
GLS/Incandescent: 2300W  
Halogen: 1250W  
Fluorescent Lamps: 1000VA  
Inductive: 600VA  
Electronic Ballasts: 5 unit

Operating Frequency:  
868.3MHz

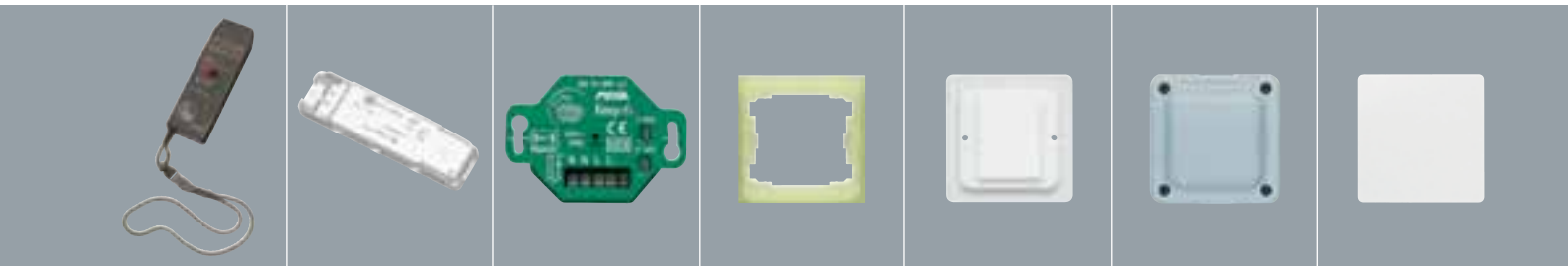
DIMENSIONS:  
45 x 38 x 23mm

EN 60669-2-1  
EN 301489-1/3  
EN 300220-1/2

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Accessories



**K541R**  
FIELD STRENGTH  
INDICATOR

1

**K5414R**  
1 LEVEL REPEATER

1

REPEATS SIGNAL ONCE.  
WILL NOT REPEAT A  
PREVIOUSLY REPEATED  
TELEGRAM.

**K5440R**  
2 LEVEL REPEATER

1

WILL REPEAT A  
PREVIOUSLY REPEATED  
TELEGRAM.

**K5412L**  
LUMINOUS LOCATOR  
FRAME FOR USE  
WITH MODULAR  
TRANSMITTERS

1

**K4710P**  
SURFACE MOUNTED  
PATTERN FOR USE  
WITH LOGIC PLUS  
TRANSMITTER

1

**K5500GRY**  
**K5500WHI**  
**K5500BLK**  
IP66 ENCLOSURE FOR  
USE WITH RECEIVERS,  
CHECK INDIVIDUAL  
RECEIVER DIMENSIONS

1

1

1

**KPAD**  
ADHESIVE PAD FOR  
USE WITH LOGIC PLUS  
SWITCH TRANSMITTER  
AND ASPECT SWITCH  
TRANSMITTER

1

Can be operated as  
either a level 1 or level 2  
repeater in the system to  
extend RF range.

Operating Frequency:  
868.3MHz

DIMENSIONS:  
Depth: 27mm  
EN 60669-2-1  
EN 301489-1/3  
EN 300220-1/2

**MOUNTING SWITCH TRANSMITTERS:** All can be mounted directly to the wall surface – screws supplied. All can be mounted to back boxes – screws supplied. Logic Plus and Aspect type transmitters can also be mounted using supplied adhesive pads



## range introduction

Logic Plus™ wiring devices from MK Electric have been designed to perfectly complement modern interiors, offering an unobtrusive and sophisticated look totally in keeping with today's design. Technically, they exceed British Standard requirements with patented features that make these products the most advanced and safest available.

Logic Plus™ products are made from a high grade thermoset material which has an inherent antimicrobial property. In recent independent tests, the Logic Plus™ products were equal to, or exceeded, competitor 'Anti-Bac' products when tested for resistance to MRSA, E.Coli, Salmonella and Klebsiella pneumoniae.

They are easy to install and available through our extensive distributor network.

The range is backed by MK's quality and reliability and provides the largest selection of wiring devices in any single range.

Echo™ is an innovative range of entirely wireless, batteryless and self powered switches, only available from MK Electric and in finishes to complement the Logic Plus™ range. Please see page 31 for details.

## features and benefits

**Total safety**

3-pin operated 'child resistant shutter system', which is designed to inhibit access to the electricity supply, unless all 3 pins of a standard British 13A plug are in position. Logic Plus™ products include an inherent antimicrobial property as a result of the high grade thermoset material used to manufacture.

**Unrivalled quality and reliability**

Products are made from the very best materials and production processes. All products are 100% tested.

**Quick and easy to install**

Features to ensure a quick and easy installation come as standard across the range, including in-line terminals, funnel entrances to terminals, backed out and captive screws and clear terminal markings.

**Outstanding range**

Extensive selection of wiring devices providing a total solution.

**20 year guarantee**

Gives total peace of mind to you and your customers.  
(10 year guarantee for electronic devices)

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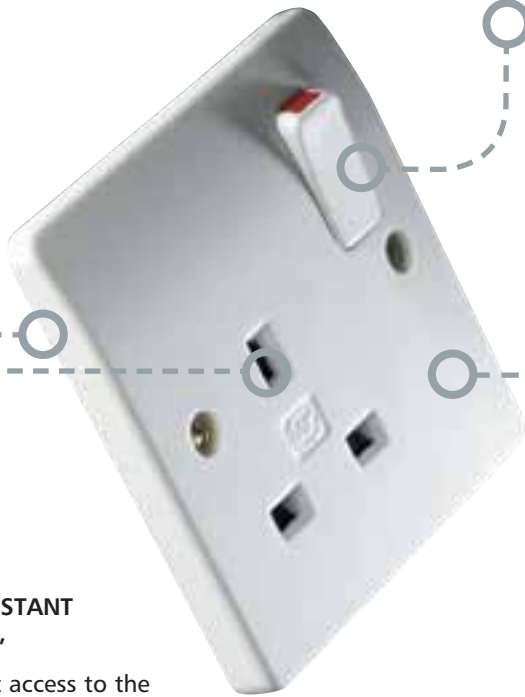
white | wiring devices

**CONTOURED TO BLEND INTO THE WALL**



**3-PIN "CHILD RESISTANT SHUTTER SYSTEM"**

Designed to inhibit access to the electricity supply, unless all 3 pins of a standard British 13A plug are in position



**DOUBLE POLE SWITCHING**

Switches both live and neutral (neutral makes first, breaks last) means added safety for the user

**OPTIONAL NEON INDICATOR SHOWS WHEN SWITCH IS ON**

**3mm MINIMUM SWITCH CONTACT GAP**

**HIGH GLOSS, HIGH QUALITY THERMOSET MATERIAL**

Inherent antimicrobial properties, resists scratching, maintains appearance

**TERMINAL MARKINGS**

Clearly marked on all rear mouldings

**TERMINAL SCREWS**

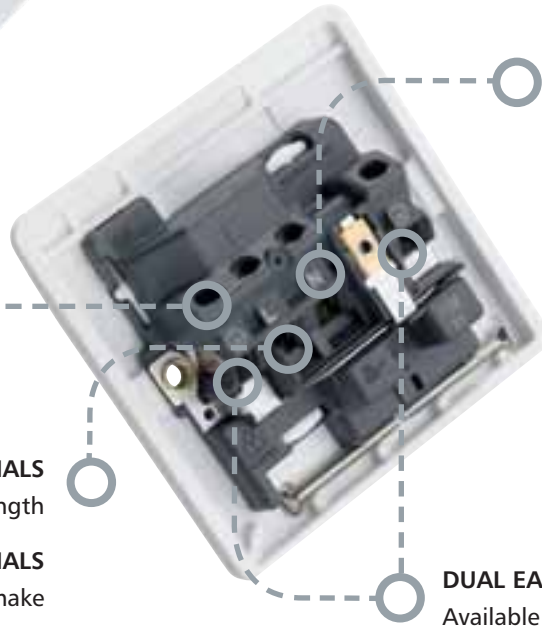
Backed out and held captive within the terminal housing

**IN-LINE TERMINALS**

Allow wire to be cut stripped to the same length

**FUNNEL ENTRANCE TO TERMINALS**

Terminals are upwards facing to make installation easier



**DUAL EARTH TERMINALS**

Available for installations that require high integrity earthing

Comprehensive range of Part M compliant products including socket outlets with outboard rockers, wide rocker switches and graphite coloured frontplates

Combined TV, FM, DAB, satellite and telephone sockets save on installation time and space

Simple but effective screwless cord grip on connection units – securely holds the cable



## Specification Notes



The 3 pin operated safety shutter makes Logic Plus™ sockets the safest available



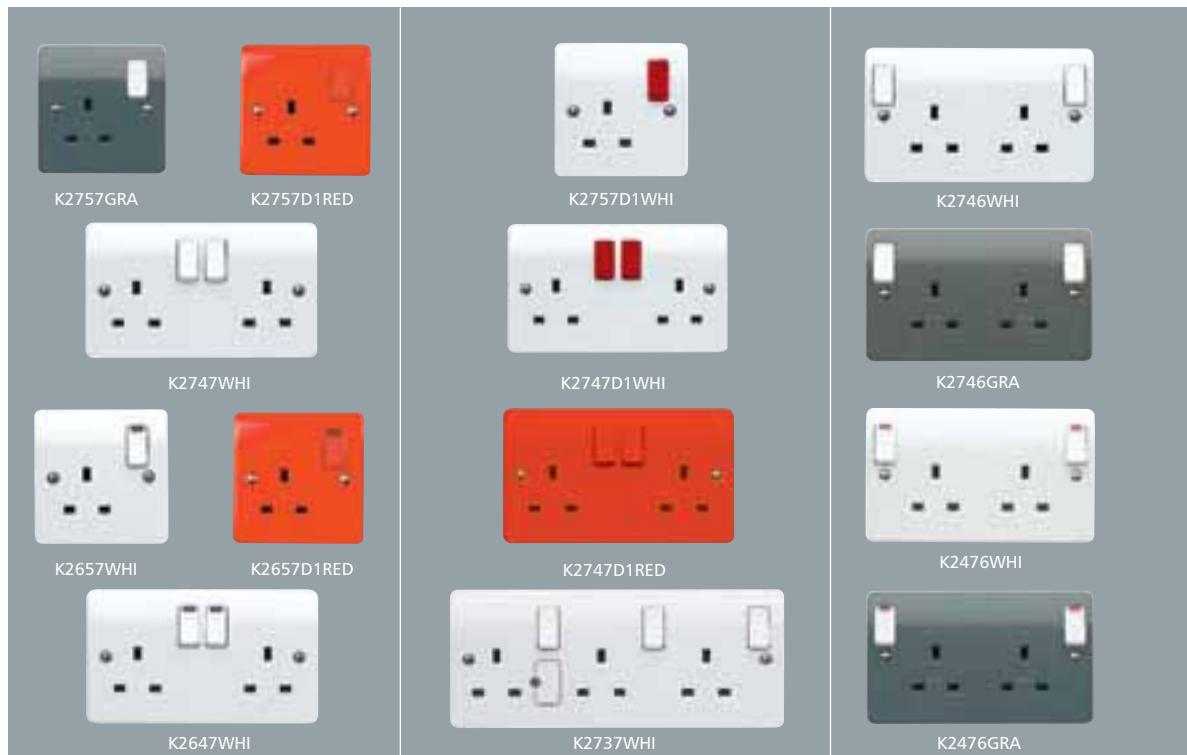
Many sockets are fitted with two earth terminals to provide high integrity earthing



Terminals are grouped in-line with terminal screws backed out ready for easy wiring. Clear marking on dark background makes the terminals easily identifiable

## Switchsocket Outlets

13 AMP  
FLUSH



<b>K2757WHI</b>	<b>10</b>
<b>K2757GRA</b>	<b>10</b>
1 GANG DP WITH DUAL EARTH TERMINALS	
<b>K2757D1RED</b>	<b>5</b>
1 GANG DP WITH RED FRONTPLATE, RED ROCKER AND DUAL EARTH TERMINALS	
<b>K2747WHI</b>	<b>50</b>
2 GANG DP	
<b>K2657WHI</b>	<b>10</b>
<b>K2657GRA</b>	<b>10</b>
1 GANG DP WITH NEON AND DUAL EARTH TERMINALS	
<b>K2657D1RED</b>	<b>5</b>
1 GANG DP WITH RED FRONTPLATE, RED ROCKER, NEON AND DUAL EARTH TERMINALS	
<b>K2647WHI</b>	<b>5</b>
2 GANG DP WITH NEONS	
<b>MOUNTING BOXES:</b>	<b>3 GANG: K2153WHI</b>
FLUSH 25mm	<b>DIMENSIONS:</b>
1 GANG: 861ZIC	1 GANG: 86 x 86mm
2 GANG: 862ZIC	2 GANG: 86 x 146mm
FLUSH 35mm	3 GANG: 86 x 206mm
(for extra wiring space)	<b>FIXING CENTRES:</b>
1 GANG: 866ZIC	1 GANG: 60.3mm
2 GANG: 886ZIC	2 GANG: 120.6mm
3 GANG: K863	3 GANG: 180.9mm
<b>SURFACE</b>	BS 1363 Pt 2: 1995
1 GANG: K2140WHI	
2 GANG: K2142WHI	

<b>K2757D1WHI</b>	<b>10</b>
1 GANG DP WITH RED ROCKER AND DUAL EARTH TERMINALS	
<b>K2757D2WHI</b>	<b>10</b>
1 GANG DP WITH GREEN ROCKER AND DUAL EARTH TERMINALS	
<b>K2747D1WHI</b>	<b>5</b>
2 GANG DP WITH RED ROCKERS	
<b>K2747D1RED</b>	<b>5</b>
2 GANG DP WITH RED FRONTPLATE AND RED ROCKERS	
<b>K2737WHI</b>	<b>5</b>
3 GANG DP WITH DUAL EARTH TERMINALS	

**High integrity earthing**  
K2757, K2657 and K2737 are fitted with two earth terminals to provide a double earth facility for use when installations require a high integrity protective connection as specified within BS 7671: 2008.  
**K2737**  
13A fuse protects all three outlets

WITH OUTBOARD  
ROCKERS  
13 AMP  
FLUSH

<b>K2746WHI</b>	<b>10</b>
2 GANG DP WITH OUTBOARD ROCKERS AND DUAL EARTH TERMINALS	
<b>K2746GRA</b>	<b>10</b>
2 GANG DP WITH OUTBOARD ROCKERS AND 'CLEAN EARTH' FACILITY	
<b>K2476WHI</b>	<b>10</b>
2 GANG DP WITH OUTBOARD ROCKERS AND NEONS	
<b>K2476GRA</b>	<b>10</b>
2 GANG DP WITH OUTBOARD ROCKERS AND NEONS	
<b>K2476CEWHI</b>	<b>10</b>
2 GANG DP WITH OUTBOARD ROCKERS, NEONS AND 'CLEAN EARTH' FACILITY	

**K2746CE** is provided with facility for 'clean earth' connection.  
**DIMENSIONS:**  
86 x 146mm  
**FIXING CENTRES:**  
120.6mm  
BS 1363 Pt 2: 1995

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## Combination Plates

RCD PROTECTED  
13 AMP  
FLUSH

FILTERED  
13 AMP  
FLUSH

13 AMP  
FLUSH



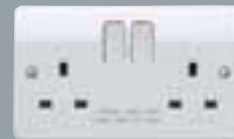
K2746D1WHI



K6211WHI



K6300WHI



K1816WHI



K2741WHI



K2746D1RED



K6231WHI



K6303WHI



K1826WHI



K2740WHI



K2746D2WHI



K6233WHI



K1800WHI

**K2746D1WHI** 10  
**K2746D1RED** 10  
 2 GANG DP  
 WITH RED OUTBOARD ROCKERS  
 AND DUAL EARTH TERMINALS  
**K2476D1WHI** 10  
**K2476D1RED** 10  
 2 GANG DP  
 WITH RED OUTBOARD ROCKERS, NEONS  
 AND DUAL EARTH TERMINALS  
**K2746D2WHI** 10  
 2 GANG DP  
 WITH GREEN OUTBOARD ROCKERS AND  
 DUAL EARTH TERMINALS

**K6211WHI** 1  
 2 GANG  
 10mA RATED TRIPPING CURRENT  
 ACTIVE CONTROL CIRCUIT  
**K6231WHI** 1  
 2 GANG  
 30mA RATED TRIPPING CURRENT  
 ACTIVE CONTROL CIRCUIT  
**K6233WHI** 1  
 2 GANG  
 30mA RATED TRIPPING CURRENT  
 PASSIVE CONTROL CIRCUIT

**K6300WHI** 1  
 1 GANG  
 30mA RATED TRIPPING CURRENT  
 ACTIVE CONTROL CIRCUIT  
**K6303WHI** 1  
 1 GANG  
 30mA RATED TRIPPING CURRENT  
 PASSIVE CONTROL CIRCUIT

**K1816WHI** 1  
 2 GANG DP  
 SPIKE  
**K1816KOWHI** 1  
 2 GANG DP  
 SPIKE WITH  
 TAMPERPROOF SCREW  
**K1826WHI** 1  
 2 GANG DP  
 SPIKE AND RFI  
**K1826KOWHI** 1  
 2 GANG DP  
 SPIKE AND RFI WITH  
 TAMPERPROOF SCREW  
**K1800WHI** 5  
 REPLACEMENT FILTER CASSETTE

**K2741WHI** 1  
 2 GANG DP  
 COMBINATION PLATE WITH  
 4 X EURO APERTURE  
**K2740WHI** 1  
 4 GANG DP  
 COMBINATION PLATE WITH  
 TV/FM/DAB/SAT X 2 QUAD,  
 TV, TELEPHONE AND  
 4 X EURO APERTURE

For sockets complying with Medical  
 Electrical Installation Guidance Notes  
 (MEIGaN), see page 158

MOUNTING BOXES:  
 FLUSH: 862ZIC (25mm)  
 FLUSH: 886ZIC (35mm for extra  
 wiring space)  
 SURFACE: K2142WHI

K2746 and K2746D1 are fitted with  
 two earth terminals to provide  
 a double earth facility for use when  
 installations require a high integrity  
 protective connection as specified  
 within BS 7671: 2008.

MOUNTING BOXES:  
 FLUSH: 886ZIC – 35mm deep  
 SURFACE: K2140WHI – 30mm deep  
 Earth pin operated shutter.

These a.c. and pulsating d.c. fault current sensitive products have up to 15mm thick  
 frontplates and are suitable for boxes with 30mm min. depth and supply voltages  
 of 240V 50Hz.

A 25mm deep box (862ZIC) can be used but conduit entry is restricted.

Refer to Sentrysocket section, page 292, for more information on active and passive  
 control circuits.

DIMENSIONS: 86 x 146mm  
 FIXING CENTRES: 120.6mm  
 BS 7288: 1990

All units are a.c. and pulsating d.c. fault current sensitive devices.  
 Maximum total load 13A

MOUNTING BOXES:  
 FLUSH: 886ZIC  
 SURFACE: K2172WHI

**K1816** provides filtering to reduce  
 voltage spikes only.

**K1826** provides two way filtering  
 to reduce voltage spikes and radio  
 frequency interference on the mains.  
 Protected by thermal cut-out.

BS 5733: 2010

MOUNTING BOXES:

FLUSH 35mm  
 2 GANG: 857ZIC\*  
 4 GANG: 853ZIC\*  
 FLUSH 47mm  
 2 GANG: 858ZIC\*  
 4 GANG: 854ZIC\*

\*Provides segregation between  
 power and TV/FM/SAT/DAB/Euro  
 Module sections

## Switchsocket Outlets

NON STANDARD  
13 AMP  
FLUSH



K1257WHI



K1246WHI



K1257D1WHI



K1246D1WHI

**K1257WHI** 10  
1 GANG DP

**K1246WHI** 10  
2 GANG DP

**K1257D1WHI** 10  
1 GANG DP  
WITH RED ROCKER

**K1246D1WHI** 10  
2 GANG DP  
WITH RED ROCKERS

**K1246D1RED** 10  
2 GANG DP  
WITH RED FRONTPLATE  
AND RED ROCKERS

### MOUNTING BOXES:

FLUSH 25mm  
1 GANG: 861ZIC  
2 GANG: 862ZIC  
FLUSH 35mm (for extra wiring space)  
1 GANG: 866ZIC  
2 GANG: 886ZIC

SURFACE  
1 GANG: K2140WHI  
2 GANG: K2142WHI

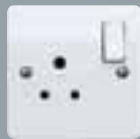
These products are provided with facilities for 'clean earth' connection and are suitable for non standard plugs with 'T' shaped earth pin.

DIMENSIONS: 1 gang: 86 x 86mm  
2 gang: 86 x 146mm

FIXING CENTRES: 1 gang: 60.3mm  
2 gang: 120.6mm

BS 1363 Pt 2: 1995 where relevant

ROUND PIN  
FLUSH



K2891WHI



K2893WHI



K2493WHI

**K2891WHI** 10  
1 GANG  
5A DP SHUTTERED

**K2893WHI** 10  
1 GANG  
15A DP SHUTTERED

**K2493WHI** 10  
1 GANG  
15A DP SHUTTERED  
WITH NEON

### MOUNTING BOXES:

FLUSH:  
861ZIC (25mm)  
866ZIC (35mm for extra wiring space)

SURFACE:  
K2140WHI

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS 546: 1950

## Socket Outlets

13 AMP  
FLUSH



K780WHI



K781WHI



K781RED

**K780WHI** 10  
1 GANG

**K781WHI** 10  
2 GANG

**K781RED** 10  
2 GANG  
WITH DUAL EARTH TERMINAL

### MOUNTING BOXES:

FLUSH 25mm  
1 GANG: 861ZIC  
2 GANG: 862ZIC  
FLUSH 35mm (for extra wiring space)  
1 GANG: 866ZIC  
2 GANG: 886ZIC

SURFACE  
1 GANG: K2140WHI  
2 GANG: K2142WHI

K781 is fitted with two earth terminals to provide a double earth facility for use when installations require a high integrity protective connection as specified within BS 7671: 2008.

DIMENSIONS:  
1 gang: 86 x 86mm  
2 gang: 86 x 146mm

FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm

BS 1363: Pt2: 1995

ROUND PIN  
FLUSH



K770WHI



K771WHI



K772WHI

**K770WHI** 10  
1 GANG  
2A SHUTTERED

**K771WHI** 10  
1 GANG  
5A SHUTTERED

**K772WHI** 10  
1 GANG  
15A SHUTTERED

### MOUNTING BOXES:

FLUSH:  
861ZIC (25mm)  
866ZIC (35mm for extra wiring space)

SURFACE:  
K2140WHI

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS 546: 1950

15 AMP  
127V  
FLUSH  
(NON UK)



K2251WHI



K2252WHI

**K2251WHI** 10  
1 GANG  
SHUTTERED

(NON UK)

**K2252WHI** 5  
2 GANG  
SHUTTERED  
(NON UK)

### MOUNTING BOXES:

FLUSH 25mm  
1 GANG: 861ZIC  
2 GANG: 862ZIC

FLUSH 35mm (for extra wiring space)  
1 GANG: 866ZIC  
2 GANG: 886ZIC

SURFACE  
1 GANG: K2140WHI  
2 GANG: K2142WHI

DIMENSIONS:  
1 gang: 86 x 86mm  
2 gang: 86 x 146mm

FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm

SASO 2203:2003



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## Socket Outlets

16 AMP  
2P + E  
FLUSH  
(NON UK)



K4150WHI

K4152WHI

## Three Pole Fan Isolator

10 AMP  
FLUSH



K4857WHI

K4859WHI

K4858

## Shaver Socket Outlet

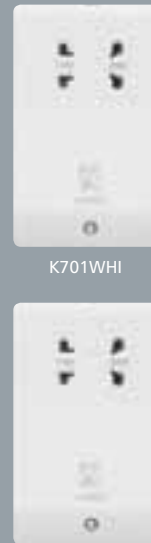
FLUSH



K700WHI

## Shaver/Toothbrush Supply Units

FLUSH



K701WHI

K706WHI

### K4150WHI

1 GANG  
16A 250V  
SHUTTERED  
(NON UK)

### K4152WHI

2 GANG  
16A 250V  
SHUTTERED  
(NON UK)

10

### K4857WHI

WITH SWITCHLOCK  
AND PADLOCK

### K4859WHI

WITHOUT SWITCHLOCK

### K4858

SWITCHLOCK  
FOR FAN ISOLATOR

### K2000

PADLOCK

5

10

10

10

1

### K700WHI

SHAVER SOCKET OUTLET  
200-250 VOLTS 50/60Hz  
FUSED

Incorporates a self-resetting  
overload device, limiting  
current to 20VA.

10

### K701WHI

SHAVER/TOOTHBRUSH  
SUPPLY UNIT  
DUAL VOLTAGE  
115/230V OUTPUT  
(220/240V 50/60Hz INPUT)

### K706WHI

SHAVER/TOOTHBRUSH  
SUPPLY UNIT  
DUAL VOLTAGE  
115/230V OUTPUT  
(120/130V 50/60Hz INPUT)  
(NON UK)

1

1

#### MOUNTING BOXES:

FLUSH: (35mm)  
1 GANG: 866ZIC  
2 GANG: 886ZIC

SURFACE:  
1 GANG: K2031WHI  
2 GANG: K2172WHI

These products are not suitable for  
installation in 25mm boxes

DIMENSIONS:  
1 gang: 86 x 86mm  
2 gang: 86 x 146mm

FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm

IEC 60884-1: 2006

#### MOUNTING BOXES:

FLUSH:  
3995ZIC

SURFACE:  
K2160WHI

For local isolation of fans with or  
without timers for repair or routine  
maintenance.

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS EN 60947-3: 1992

#### MOUNTING BOXES:

FLUSH:  
861ZIC

SURFACE:  
K2140WHI

**Must not be installed in a  
bathroom or shower room.**

Designed for wiring onto  
lighting circuits

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS 4573: 1970

#### MOUNTING BOXES:

FLUSH: 878ZIC  
SURFACE: K2172WHI

This design incorporates a double  
wound isolating transformer rated  
20VA at 230 or 115 volts it meets  
BS EN 61558 making it safe for use  
in bathrooms. Insertion of a shaver/  
toothbrush plug automatically  
switches on by energising the  
primary side of the isolating  
transformer – removal automatically  
switches off. The transformer is  
protected against overload by an  
automatic solid  
state overload device with  
automatic resetting.

DIMENSIONS: 146 x 86mm  
FIXING CENTRES: 120.6mm  
BS EN 61558-2-5: 1998

## Features and Benefits



A screwless cord grip automatically clamps and securely holds the cable in connection units with base and front flex outlets



Switched units are double pole with neutral pole contacts 'making' before and 'breaking' after live contacts. Rockers with built-in indicators are available



When servicing or repairing appliances, fuse carriers remain attached to the frontplate when opened and can be padlocked for safety



An optional tamperproof screw on fuse carriers is particularly useful for appliances in public areas



In-line terminals, backed out captive terminal screws and clear marking make wiring up easy

## Connection Units

### SWITCHED FLUSH



**K330WHI** 10  
**K330GRA** 10  
 DP WITH FLEX OUTLET  
 IN BASE AND THICK FRONTPLATE

**K370WHI** 10  
**K370GRA** 10  
 DP WITH NEON, FLEX OUTLET  
 IN BASE AND THICK FRONTPLATE

**K370D1WHI** 10  
 DP WITH NEON, FLEX OUTLET  
 IN BASE, THICK FRONTPLATE  
 AND RED ROCKER

**K1030WHI** 10  
 DP WITH FRONT FLEX OUTLET

**MOUNTING BOXES:**  
 K1030, K1040, K1060 and K1070  
 FLUSH: 866ZIC (35mm)  
 SURFACE: K2031WHI

K330 and K370  
 FLUSH: 866ZIC (35mm)  
 SURFACE: K2140WHI

All units are fitted with a 13A fuse-link to BS 1362. See page 206 for spare fuse-links.

The fuse carrier can be locked in the open position by removing the fuse and using K2000 fuse carrier padlock.

### UNSWITCHED FLUSH



**K1040WHI** 10  
 DP

**K1040KOWHI** 10  
 DP WITH TAMPERPROOF SCREW

**K1060WHI** 10  
 DP WITH NEON

**K1060D1WHI** 10  
 DP WITH NEON AND RED ROCKER

**K1070WHI** 10  
 DP WITH FRONT FLEX OUTLET  
 AND NEON

**K1070D1WHI** 10  
 DP WITH FRONT FLEX OUTLET,  
 NEON AND RED ROCKER

**K2000** 1  
 PADLOCK (FOR FUSE CARRIER)

**K1030 and K1070** front flex outlet products cannot be mounted directly onto MK Cable Box K2131WHI. A mounting frame K2134WHI will have to be used between the product and the box.

Base entry frontplates are 12.5mm deep

**DIMENSIONS:**  
 86 x 86mm

**FIXING CENTRES:**  
 60.3mm

BS 1363 Pt 4: 1995

**K337WHI** 10  
 WITH FLEX OUTLET  
 IN BASE AND THICK FRONTPLATE

**K337KOWHI** 10  
 WITH FLEX OUTLET  
 IN BASE, THICK FRONTPLATE  
 AND TAMPERPROOF SCREW  
 FOR FUSE CARRIER

**K377WHI** 10  
 WITH FLEX OUTLET  
 IN BASE, NEON AND  
 THICK FRONTPLATE

#### MOUNTING BOXES:

FLUSH:  
 866ZIC (35mm)

SURFACE:  
 K2140WHI

All units are fitted with a 13A fuse-link to BS 1362. See page 206 for spare fuse-links.

Base entry frontplates are 12.5mm deep

The fuse carrier can be locked in the open position by removing the fuse and using K2000 fuse carrier padlock

**DIMENSIONS:** 86 x 86mm

**FIXING CENTRES:** 60.3mm

BS 1363 Pt 4: 1995

## Dual Switch

## DP Switches

20 AMP  
FLUSH



K5208WHI



K5207WHI

20 AMP  
FLUSH



K5403WHI



K5423WHI



K5423WHWHI



K5423D1WHI

32 AMP  
FLUSH



K5105WHI

50 AMP  
MOULDED  
FLUSH



K5205WHI



K5215CKWHI

50 AMP  
METAL



K5230WHI



K5012WHI

**K5208WHI**  
**K5207WHI**  
WITH NEON

10  
10

**K5403WHI**  
WITH FLEX OUTLET IN BASE  
**K5423WHI**  
WITH FLEX OUTLET IN BASE  
AND NEON  
**K5423WHWHI**  
WITH FLEX OUTLET IN BASE,  
NEON AND MARKED  
'WATER HEATER'.  
**K5423D1WHI**  
WITH FLEX OUTLET IN BASE,  
NEON AND RED ROCKER

10  
10  
10  
10

**K5105WHI**  
WITH NEON  
**K5105GRA**  
WITH NEON

10  
10

**K5205WHI**  
**K5215WHI**  
WITH NEON  
**K5215CKWHI**  
WITH NEON  
AND MARKED 'COOKER'  
**K5215SHWHI**  
WITH NEON  
AND MARKED 'SHOWER'

1  
1  
1  
1

**K5230WHI**  
WITH NEON  
SURFACE MOUNTED  
**K5012WHI**  
WITH NEON  
FLUSH MOUNTED

1  
1

FOR CONTROLLING DUAL  
IMMERSION HEATERS

MOUNTING BOXES:

FLUSH:  
866ZIC (35mm)

SURFACE:  
K2140WHI

Only mounting boxes with an earth  
terminal should be used.

These products are marked 'on' and  
'off' against the one-way DP switch  
and 'sink' and 'bath' against the  
two-way SP switch.

DIMENSIONS: 86 x 86mm  
FIXING CENTRES: 60.3mm

BS EN 60669-1: 1999

MOUNTING BOXES:

FLUSH:  
866ZIC (35mm)

SURFACE:  
K2140WHI  
K2031WHI (for extra wiring space)

Base entry frontplates are  
12.5mm deep.

All switches are complete with  
earth terminals.

Not recommended for switching  
large banks of PCs.

DIMENSIONS:  
86 x 86mm  
FIXING CENTRES:  
60.3mm

BS EN 60669-1: 1999

MOUNTING BOXES:

FLUSH:  
866ZIC (6mm<sup>2</sup> conductors)  
877ZIC (10mm<sup>2</sup> conductors)

SURFACE:  
K2140WHI (6mm<sup>2</sup> conductors)  
K2031WHI (10mm<sup>2</sup> conductors)

Supplied with 8 self-adhesive  
plastic identification labels marked  
hob, fan, oven, water heater,  
shower, air conditioner, cooker and  
washing machine.

Not recommended for switching  
large banks of PCs.

DIMENSIONS: 86 x 86mm  
FIXING CENTRES: 60.3mm

BS EN 60669-1: 1999

MOUNTING BOXES:

FLUSH:  
886ZIC (6mm<sup>2</sup> conductors)  
878ZIC (10mm<sup>2</sup> conductors)

SURFACE:  
K2172WHI

**K5205WHI** and **K5215WHI**  
Supplied with 8 self-adhesive  
plastic identification labels marked  
hob, fan, oven, water heater,  
shower, air conditioner, cooker and  
washing machine.

Not recommended for switching  
large banks of PCs.

DIMENSIONS: 86 x 146mm  
FIXING CENTRES: 120.6mm

BS EN 60669-1: 1999

**K5230**

Supplied with mounting box. Earth  
terminal fitted on base of box.

Not recommended for switching  
large banks of PCs.

DIMENSIONS: 150 x 89 x 50mm

KNOCKOUTS: 8 x 20mm

TERMINAL CAPACITY:  
16mm<sup>2</sup> conductors

BS EN 60669-1: 1999

**K5012**

Not supplied with mounting box.  
FLUSH: 5120ALM

Supplied with earth terminals.  
Not recommended for switching  
large banks of PCs.

DIMENSIONS: 178 x 165mm

BS EN 60669-1: 1999

## Cooker Connection Unit

FLUSH



K5045WHI

## Cooker Controls

45 AMP  
MOULDED  
FLUSH



K5060WHI



K5061WHI

45 AMP  
MOULDED  
SURFACE



K5040WHI



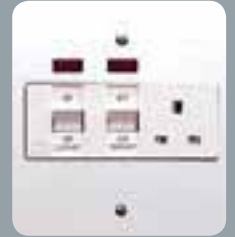
K5041WHI

45 AMP  
METAL  
FLUSH



K5011WHI

45 AMP  
METAL  
SURFACE



K5001WHI

**K5045WHI****10****K5060WHI**

45A  
DP MAIN SWITCH  
AND 13A  
SWITCHSOCKET OUTLET

**K5061WHI**

45A  
DP MAIN SWITCH  
AND 13A  
SWITCHSOCKET OUTLET  
WITH NEONS

**1****K5040WHI**

45A  
DP MAIN SWITCH  
AND 13A  
SWITCHSOCKET OUTLET

**K5041WHI**

45A  
DP MAIN SWITCH  
AND 13A  
SWITCHSOCKET OUTLET  
WITH NEONS

**1****K5011WHI**

45A  
DP MAIN SWITCH  
AND 13A  
SWITCHSOCKET OUTLET  
WITH NEONS

**1****K5001WHI**

45A  
DP MAIN SWITCH  
AND 13A  
SWITCHSOCKET OUTLET  
WITH NEONS

**1**

## MOUNTING BOX

FLUSH:  
877ZIC (46mm)

Supplied complete with terminal block, each terminal of which will accommodate up to two 10mm<sup>2</sup> conductors.

Moulded cover plate, cable clamp included.

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS 5733: 2010

## MOUNTING BOXES:

FLUSH:  
886ZIC (Up to 6mm<sup>2</sup> conductor)  
878ZIC (Up to 10mm<sup>2</sup> conductor)

Rotary operated shutter.

DIMENSIONS:  
86 x 146mm

FIXING CENTRES:  
120.6mm

BS 4177: 1992

Supplied complete with mounting box and cable restraint.

Fitted with earth terminals.

Rotary operated shutter.

DIMENSIONS:  
86 x 146 x 60mm

BS 4177: 1992

## MOUNTING BOX

FLUSH:  
512OALM

Fitted with earth terminals.

Rotary operated shutter.

DIMENSIONS:  
178 x 165mm

BS 4177: 1992

Supplied complete with mounting box.

Fitted with earth terminals.

Rotary operated shutter.

DIMENSIONS:  
156 x 144 x 67mm

KNOCKOUTS:  
5 x 25mm.  
Two in each of top and bottom,  
one in back.

BS 4177: 1992

## PLATESWITCHES

### Neon Locator

### Side Access, Captive Terminal Screws

### Top Access, Backed out and Captive Terminal screws

 10 AMP  
FLUSH

 10 AMP  
FLUSH

 20 AMP  
FLUSH

 10 AMP  
FLUSH


K3041



K4870GRA



K4871WHI



K4872WHI



K4872GRA



K4875WHI



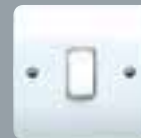
K4873WHI



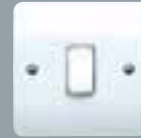
K4874WHI



K4879WHI



K4870D2WHI



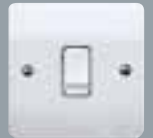
K4871D2WHI



K4872D2WHI



K4878BWHI



K4878PWHI

**K3041**  
NEON PLATESWITCH  
LOCATOR  
200-250V, 50Hz.  
TUNGSTEN GLS LAMPS ONLY

5

**K4870WHI**  
**K4870GRA**  
1 GANG SP  
ONE-WAY

**K4871WHI**  
**K4871GRA**  
1 GANG SP  
TWO-WAY

**K4872WHI**  
**K4872GRA**  
2 GANG SP  
TWO-WAY

 10  
10

**K4875WHI**  
1 GANG  
INTERMEDIATE

**K4876WHI**  
1 GANG DP  
ONE-WAY

**K4873WHI**  
3 GANG SP  
TWO-WAY

**K4874WHI**  
4 GANG SP  
TWO-WAY

**K4879WHI**  
6 GANG SP  
TWO-WAY

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**K4870D2WHI**  
1 GANG SP  
ONE-WAY

**K4871D2WHI**  
1 GANG SP  
TWO-WAY

**K4872D2WHI**  
2 GANG SP  
TWO-WAY

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**K4878BWHI**  
1 GANG SP  
TWO WAY  
PUSH SWITCH WITH BELL SYMBOL  
PUSH TO MAKE OR BREAK

**K4878PWHI**  
1 GANG SP  
TWO WAY  
PUSH SWITCH MARKED 'PRESS'  
PUSH TO MAKE OR BREAK

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Neon Plateswitch Locator is for use with any 1, 2 and 3 gang Logic Plus™ plateswitches.

Used for location of switches in dark situations.

FIXING CENTRES: 60.3mm

BS 5733: 2010

MOUNTING BOXES:

FLUSH:  
1, 2 & 3 GANG: 3995ZIC  
4 & 6 GANG: 862ZIC

SURFACE:  
1, 2 & 3 GANG: K2160WHI  
4 & 6 GANG: K2161WHI

These switches do not have to be derated when used with fluorescent or inductive loads.

**K4871, K4872, K4873, K4874, K4879**

These switches can be wired as either one-way or two-way.

DIMENSIONS:  
1, 2 & 3 gang: 86 x 86mm  
4 & 6 gang: 86 x 146mm

FIXING CENTRES:  
1, 2 & 3 gang: 60.3mm  
4 & 6 gang: 120.6mm

BS EN 60669-1: 1999

**20A VERSIONS**  
**K4870, K4873, K4874, K4875, K4871 & K4872** are all available as 20A SP versions. Use suffix D2WHI when ordering.

**K4867WHI**  
is 20A DP 1 way version of K4871.

**K4868WHI**  
is 20A DP 1 way version of K4872.

MOUNTING BOXES:

FLUSH:  
3995ZIC

SURFACE:  
K2160WHI

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS EN 60669-1: 1999

## PLATESWITCHES

Top Access, Backed out and Captive Terminal screws

WITH WIDE ROCKERS

10 AMP

FLUSH

Architrave Switches

10 AMP

FLUSH

Lockable Fire Alarm Isolator Switch

20 AMP DP

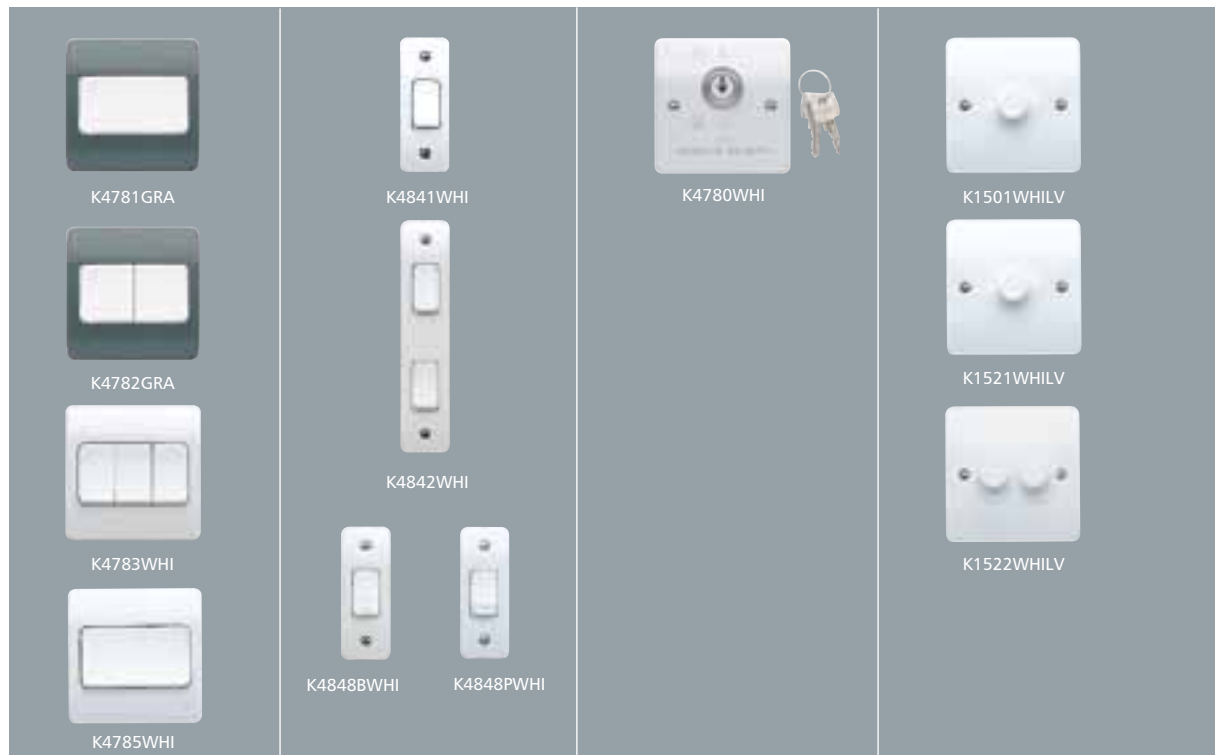
FLUSH

Intelligent Dimmer Switches

230V a.c. 50Hz  
TUNGSTEN FILAMENT  
AND LOW VOLTAGE  
HALOGEN LIGHTING  
FLUSH



Wide rocker plateswitches are not only a stylish alternative to standard plateswitches, but with the fixing screws hidden, the rocker cap acts as an additional barrier to prevent unwanted tampering in public areas. They are also very practical and easy to use for the young and elderly alike.

**K4781WHI**

**K4781GRA**  
1 GANG SP TWO-WAY  
WITH WIDE ROCKER

**K4782WHI**  
**K4782GRA**  
2 GANG SP TWO-WAY  
WITH WIDE ROCKERS

**K4783WHI**  
3 GANG SP TWO-WAY  
WITH WIDE ROCKERS

**K4785WHI**  
**K4785GRA**  
1 GANG SP INTERMEDIATE  
WITH WIDE ROCKER

MOUNTING BOXES:  
FLUSH: 3995ZIC

SURFACE:  
K2160WHI  
K2140WHI (for extra wiring space)

These switches do not have to be derated when used with fluorescent or inductive loads.

DIMENSIONS: 86 x 86mm  
FIXING CENTRES: 60.3mm

BS EN 60669-1: 1999

**20A DP VERSIONS**

**K4787WHI** is 20A DP 1 way version of K4781.

**K4788WHI** is 20A DP 1 way version of K4782.

BS EN 60669-1: 1999

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**K4841WHI**

1 GANG SP  
TWO-WAY

**K4842WHI**  
2 GANG SP  
TWO-WAY

**K4848BWHI**  
1 GANG SP PUSH SWITCH  
WITH BELL SYMBOL  
PUSH TO MAKE OR BREAK

**K4848PWHI**  
1 GANG SP PUSH SWITCH  
MARKED 'PRESS'  
PUSH TO MAKE OR BREAK

MOUNTING BOXES:

FLUSH:  
1 GANG: 3921ZIC  
2 GANG: 3922ZIC

SURFACE:  
1 GANG: K2151WHI  
2 GANG: K2152WHI

These switches do not have to be derated when used with fluorescent or inductive loads.

**K4841, K4842** These switches can be wired as either one-way or two-way.

DIMENSIONS:  
1 gang: 86 x 32mm;  
2 gang: 146 x 32mm

FIXING CENTRES:  
1 gang: 60.3mm;  
2 gang: 120.6mm

BS EN 60669-1: 1999

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**K4780WHI**

20A DP LOCKABLE FIRE ALARM  
ISOLATOR SWITCH

MOUNTING BOXES:  
866ZIC

DIMENSIONS: 86 X 86MM  
FIXING CENTRES: 60.3MM  
BS 60669-2-4: 2005

The isolator has primarily been introduced for use in Alarm Systems that must comply with  
BS 5839-12002+A2:2008

1

**K1501WHILV**

1 GANG SINGLE  
TWO WAY 60W/VA-500W/400 VA

**K1521WHILV**  
1 GANG SINGLE  
TWO WAY 40W/VA-300W/240 VA

**K1522WHILV**  
1 GANG DOUBLE  
TWO WAY 2 x 40W/VA-300W/240 VA

MOUNTING BOXES:

WITH/WITHOUT PATRESS  
(Patress is supplied with K1501, K1521)

**K1522**  
FLUSH: 861ZIC/866ZIC  
SURFACE: K2140WHI

**K1501, K1521**

FLUSH:  
with patress: 16mm deep min 3995ZIC  
without patress: 25mm deep min 861ZIC  
SURFACE: K2160WHI/K2140WHI

Dimmers comply with BS EN 55015 (CISPR 15) for RFI suppression.

Micro controller based circuitry to provide electronic soft-start and overload protection. Suitable for use with good quality electronic or wire wound transformers. Can also be used with good quality mains voltage halogen lamps incorporating GU10 bases. Please check with lamp manufacturer to determine suitability.

DIMENSIONS: 86 x 86mm  
FIXING CENTRES: 60.3mm

Conforms to BS EN 60669-2-1,  
BS EN 55015

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## Standard Dimmer Switches

230V a.c. 50Hz  
TUNGSTEN FILAMENT  
FLUSH



K1511WHI



K1531WHI



K1532WHI



K1533WHI

## Dimmer Switches

230V a.c. 50Hz  
COMPACT  
FLUORESCENT  
FLUSH



K1525WHI

## Dimmer Switches (NON UK)

200-250V a.c.  
50 or 60Hz  
FLUSH



K1541WHI



K1561WHI



K1631WHI



K1661WHI

## Blank Plates

FLUSH



K3825WHI



K3827WHI



K3828WHI



K5033WHI

## Flex Outlet Frontplate

FLUSH



K1090WHI

**K1511WHI**  
1 GANG SINGLE  
ONE WAY 65-450W

**K1531WHI**  
1 GANG SINGLE  
ONE WAY 40-250W

**K1532WHI**  
1 GANG DOUBLE  
ONE WAY 2 x 40-250W

**K1533WHI**  
1 GANG DOUBLE  
TWO WAY 2 x 40-250W

**K1534WHI**  
1 GANG SINGLE  
TWO WAY 40-250W

**K1535WHI**  
1 GANG SINGLE  
TWO WAY 65-450W

### MOUNTING BOXES:

FLUSH: 861ZIC-25mm deep. With pattress: 3995ZIC-16mm deep min  
SURFACE: K2140WHI-30mm deep. With pattress: K2160WHI-16mm deep min  
Only suitable for tungsten filament lamps.

**NOT suitable for fluorescent lamps or low voltage lighting.**

DIMENSIONS: 86 x 86mm  
FIXING CENTRES: 60.3mm  
Conforms to BS EN 60669-2-1 and BS EN 55015

**K1525WHI**  
1 GANG SINGLE  
TWO WAY 11-300W  
240VA FOR COMPACT  
FLUORESCENT LAMPS ONLY

### MOUNTING BOXES:

FLUSH:  
With pattress: 16mm deep min 3995ZIC  
Without pattress: 25mm deep min 861ZIC

SURFACE: K2160WHI/K2140WHI

**Dimmers comply with BS EN 55015 (CISPR15) for RFI suppression.**

Micro controller based circuitry to provide electronic starting and overload protection for dimmable compact fluorescent lamps. This product is designed to start at full brightness regardless of dimmer setting automatically adjusting to the desired level after a short period

Max number of lamps (4)  
DIMENSIONS: 86 x 86MM  
FIXING CENTRES: 60.3MM  
Conforms to BS EN 60669-2-1, BS EN 55015

**K1541WHI**  
1 GANG SINGLE  
ONE WAY  
75-500W 50Hz

**K1561WHI**  
1 GANG SINGLE  
TWO WAY  
100-1000W 50Hz

**K1631WHI**  
1 GANG SINGLE  
ONE WAY  
40-250W 60Hz

**K1641WHI**  
1 GANG SINGLE  
ONE WAY  
75-500W 60Hz

**K1661WHI**  
1 GANG SINGLE  
TWO WAY  
100-1000W 60Hz

**K1539WHI**  
FAN CONTROLLER  
1 GANG SINGLE ONE WAY  
300 VA 50Hz

### MOUNTING BOXES:

FLUSH: 861ZIC-25mm deep min  
SURFACE: K2140WHI-30mm deep

DIMENSIONS: 86 x 86mm  
FIXING CENTRES: 60.3mm

**K3825WHI**  
1 GANG MOULDED  
ARCHITRAVE

**K3827WHI**  
1 GANG MOULDED

**K3828WHI**  
2 GANG MOULDED

**K5033WHI**  
METAL

### K3825WHI

For use with 3921ZIC and K2151WHI MOUNTING BOXES:

### K5033WHI

For use with 5120ALM deep metal box.

DIMENSIONS:  
K3825WHI: 86 x 31mm  
K3827WHI: 86 x 86mm  
K3828WHI: 86 x 146mm  
K5033WHI: 178 x 165mm

FIXING CENTRES:  
K3825WHI: 60.3mm  
K3827WHI: 60.3mm  
K3828WHI: 120.6mm  
K5033WHI: 133mm  
BS 5733: 2010

**K1090WHI**  
FLEX OUTLET FRONTPLATE.  
UNFUSED  
20 AMP RATING

Complete with three pairs of terminals, each suitable for 2 x 2.5mm<sup>2</sup> conductors and a 1.5mm<sup>2</sup> flexible cord. A cord-grip is also fitted. Frontplate thickness is 12.5mm. Hole diameter is 11mm.

DIMENSIONS:  
86 x 86mm  
FIXING CENTRES:  
60.3mm  
BS 5733: 2010

## MODULAR POWER AND MULTIMEDIA

Euro Modular  
FrontplatesEuro Power  
Modules

## FRONTPLATES



K181WHI



K182WHI



K184WHI



K5830WHI



K5831WHI



K5832WHI



K5833WHI



K5834WHI



K5837WHI

**K181WHI**

1 GANG EURO FRONTPLATE  
ONE MODULE  
APERTURE SIZE 25 X 50MM

10

**K182WHI**

1 GANG EURO FRONTPLATE  
TWO MODULE  
APERTURE SIZE 50 X 50MM

10

**K182GRA**

1 GANG EURO FRONTPLATE  
TWO MODULE  
APERTURE SIZE 50 X 50MM

10

**K184WHI**

2 GANG EURO FRONTPLATE  
FOUR MODULE  
APERTURE SIZE 100 X 50MM

10

**K184GRA**

2 GANG EURO FRONTPLATE  
FOUR MODULE  
APERTURE SIZE 100 X 50MM

10

**K185WHI**

3 GANG EURO FRONTPLATE  
SIX MODULE  
APERTURE SIZE 150 X 150MM

1

## MOUNTING BOXES:

Suitable for flush boxes to  
BS 4662: 2006 and surface boxes  
to BS 5733: 2010

Refer to appropriate module for  
minimum box depth.

**K185WHI**

MOUNTING BOX: 35mm  
VTS8035 (For use with Pinnacle  
and Premier cable management  
systems)

K2153WHI 30mm

FIXING CENTRES: 1 gang: 60.3mm  
2 gang: 120.6mm

BS 5733: 2010 where applicable

Note: No grid required, modules  
just clip into place

**K5830WHI**

**K5830BLK**  
UK 1 GANG EURO 2 MODULE  
13A 250V SHUTTERED

10

**K5831WHI**

**K5831BLK**  
GERMAN 2P+E  
16A 250V SHUTTERED  
EURO 2 MODULE (NON UK)

10

**K5832WHI**

**K5832BLK**  
AMERICAN 2P+E  
15A 127V SHUTTERED  
EURO 2 MODULE (NON UK)

10

**K5830**

MOUNTING BOX: 35mm minimum  
46mm (for extra wiring space)  
DIMENSIONS: 50 x 50mm  
BS 1363: Pt2: 1995

**K5831**

MOUNTING BOX: 46mm  
DIMENSIONS: 50 x 50mm  
IEC 60884-1: 2006

**K5832**

MOUNTING BOX: 35mm  
46mm (for extra wiring space)  
DIMENSIONS: 50 x 50mm  
SASO 2203: 2003

**K5833WHI**

**K5833BLK**  
UK 1 GANG EURO 2 MODULE  
5A 250V SHUTTERED

10

**K5834WHI**

**K5834BLK**  
FRENCH/BELGIAN 2P+E  
16A 250V SHUTTERED  
EURO 2 MODULE (NON UK)

10

**K5837WHI**

**K5837BLK**  
USB CHARGING MODULE  
EURO 2 MODULE

1

**K5833**

MOUNTING BOX: 35mm minimum  
46mm (for extra wiring space)  
DIMENSIONS: 50 x 50mm  
BS 546: 1950

**K5834**

MOUNTING BOX: 46mm  
DIMENSIONS: 50 x 50mm  
NF C61-341

**K5837**

MOUNTING BOX: 35mm  
46mm (for extra wiring space)  
DIMENSIONS: 50 x 50mm

Features 2 charging sockets each  
delivering 1A charging current  
at 5Vdc (total 2A max). Allows  
charging of portable devices via  
USB 2.0 type A plug.

IEC 60950-1  
IEC 61000-6-1/3



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## Euro Datacom Modules

RJ11/12



K5887WHI



K5887BLK

RJ45 CAT 6



K5846WHI



K5846sBLK



K5864WHI

RJ45 CAT 5E



K5844WHI



K5845WHI



K5845BLK

TELEPHONE



K5820WHI



K5821WHI



K5821BLK

BNC



K5801WHI

**K5887WHI**  
**K5887BLK**  
RJ11/12  
ONE MODULE 25 X 50MM



**K5846WHI**  
**K5846BLK**  
RJ45 CAT 6  
ONE MODULE 25 X 50MM  
**K5846sWHI**  
**K5846sBLK**  
RJ45 CAT 6 SCREENED  
ONE MODULE 25 X 50MM  
**K5864WHI**  
RJ45 CAT 6 ANGLED  
ONE MODULE 25 X 50MM



**K5844WHI**  
RJ45 CAT 5E ANGLED  
ONE MODULE 25 X 50MM  
**K5845WHI**  
**K5845BLK**  
RJ45 CAT 5E  
ONE MODULE 25 X 50MM



**K5820WHI**  
**K5820BLK**  
TELEPHONE MASTER  
ONE MODULE 25 X 50MM  
**K5821WHI**  
**K5821BLK**  
TELEPHONE SECONDARY  
ONE MODULE 25 X 50MM



**K5801WHI**  
BNC 50Ω  
ONE MODULE 25 X 50MM



Suitable for both RJ11 and RJ12 jacks  
RJ11; 4 wire  
RJ12; 6 wire  
MOUNTING BOXES:  
Minimum box depth 25mm  
FCC68  
EN 41003

Cat 6 performance.  
Suitable for both 568A and 568B wiring schemes.  
MOUNTING BOXES:  
Minimum Box Depth 35mm  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

Enhanced Cat 5 performance.  
Suitable for both 568A and 568B wiring schemes.  
Supplied with cable tie and cable anchors to secure wires in the connectors.  
MOUNTING BOXES:  
Minimum box depth 25mm standard  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

MOUNTING BOXES:  
Minimum depth 25mm  
BS 6312 Pt 2

50 Ohm crimp connector suitable for use with RG58, URM43, URM76 and Beldon 9907 type co-axial cables.  
MOUNTING BOXES:  
Minimum box depth 25mm

Mains operated products and extra low voltage modules must not be installed within the same frontplate.  
Refer to BS 7671: 2008 for details.

## Euro Multimedia Modules

TV CO-AXIAL OUTLETS  
FOR DIGITAL TV  
SCREENED  
NON ISOLATED

AUDIO & HD



K5850WHI K5850BLK



K5851WHI K5851BLK



K5855WHI K5855BLK



K5852WHI



K5852DABWHI



K5853WHI



K5853DABWHI



K5854DABWHI



K5807WHI



K5805WHI



K5806WHI



K5809WHI



K5809BLK

**K5850WHI** 5  
**K5850BLK** 5  
 SINGLE OUTLET (IEC MALE)  
 ONE MODULE 25 X 50MM

**K5851WHI** 5  
**K5851BLK** 5  
 SINGLE OUTLET (IEC FEMALE)  
 ONE MODULE 25 X 50MM

**K5855WHI** 5  
**K5855BLK** 5  
 SINGLE F-TYPE SATELLITE SOCKET  
 ONE MODULE 25 X 50MM

Fully screened non isolated TV outlets containing a combination of single, TV/FM Diplexer and TV/FM/SAT Triplexer for use within digital TV systems and interactive TV services. Single outlets for connection to a single TV, FM or Satellite co-axial aerial lead.

MOUNTING BOXES:  
Min box depth 32mm

DIMENSIONS:  
1 Module 25 x 50mm  
2 Module 50 x 50mm

BS 3041: 1997  
IEC 169-2: 1965  
BS EN 50083 & BS 5733: 2010  
where applicable

These products are fully compatible with Labgear TV distribution systems and are approved for use in "Sky Homes" and "Homes On" specifications

**K5852WHI** 5  
**K5852BLK** 5  
 TWIN OUTLET  
 TV/FM DIPLEXER  
 TWO MODULE 50 X 50MM  
 (IRELAND ONLY)

**K5852DABWHI** 5  
**K5852DABBLK** 5  
 TWIN OUTLET TV-FM/DAB DIPLEXER  
 TWO MODULE 50 X 50MM

**K5853WHI** 5  
**K5853BLK** 5  
 TRIPLE OUTLET  
 TV/FM/SATELLITE TRIPLEXER  
 TWO MODULE 50 X 50MM  
 (IRELAND ONLY)

TV/FM diplexer units for connection to a single co-axial aerial lead with combined TV and FM signals.  
 TV/FM/SAT triplexer units for connection to a single co-axial aerial lead with combined TV, FM and Satellite signals

### PERFORMANCE

SINGLE OUTLETS  
 TV/FM IEC MALE OR FEMALE  
 DC-950MHz  
 SAT F-TYPE  
 DC-1.75GHz

**K5853DABWHI** 5  
**K5853DABBLK** 5  
 TRIPLE OUTLET TV-FM/DAB-SAT  
 TRIPLEXER TWO MODULE 50 X 50MM

**K5854DABWHI** 5  
**K5854DABBLK** 5  
 QUAD OUTLET TV-FM/DAB-2XSAT  
 TWO MODULE 50 X 50MM

### TV/FM/SAT PRODUCTS

OUTLET TV  
 DIPLEXER  
 5-65MHz  
 470-862MHz  
 87.5-108MHz  
 N/A

### TV/FM/DAB/SAT PRODUCTS FOR DIGITAL RADIO

OUTLET TV  
 DIPLEXER  
 5-65MHz  
 470-862MHz  
 87.5-230MHz  
 N/A

**K5807WHI** 5  
**K5807BLK** 5  
 FEMALE HDMI OUTLET

K5807 Female HDMI Outlet is HDMI 1.1, 1.2 and 1.3 compatible, HDCP compliant.  
 Data Rate: Up to 2.25 Gbps  
 Scan: Up to 1080p/1920x1200  
 Input Connector:  
 1 x HDMI Female (Type A)  
 Output Connector:  
 1 x HDMI Female (Type A)  
 Supports high resolution input:  
 PC: VGA, SVGA,  
 SXVGA (1280x1024) and UXGA (1600x1200, 1920x1200)  
 HDTV: 480p, 720p, 1080i and 1080p  
 HDMI input cable should be no larger than 20m.  
 Weight of product: 16g  
 Dimensions: 50 x 50 x 20mm

**K5805WHI** 5  
**K5805BLK** 5  
 AUDIO BINDING POST SET  
 FOR SINGLE LOUD SPEAKER

**K5806WHI** 5  
**K5806BLK** 5  
 RCA TO SCREW TERMINATION SET  
 1 RED AND 1 BLACK

**K5809WHI** 5  
**K5809BLK** 5  
 TRIPLE RCA TO SCREW  
 TERMINATION SET  
 1 YELLOW, 1 WHITE, 1 RED

WEIGHT: 23g  
 DIMENSIONS:  
 50 x 25 x 28mm

OUTLET TV  
 FM  
 SAT1

TRIPLEXER  
 5-65MHz  
 470-862MHz  
 87.5-108MHz  
 950-2300MHz

OUTLET TV  
 FM  
 SAT1  
 SAT2

TRIPLEXER  
 5-65MHz  
 470-862MHz  
 87.5-230MHz  
 950-2300MHz  
 5-2300MHz

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## LJU6C Datacom Frontplates

## LJU6C Datacom Modules

### BLANKS

### FRONTPLATES

### RJ11/12

### RJ45 CAT 6

### RJ45 CAT 5E

### BLANKS



K180WHI



K188WHI



K188BLK



K186WHI



K186BLK



K172WHI



K5787WHI



K5746WHI



K5746BLK



K5746sWHI



K5746sBLK



K5745WHI



K5745BLK



K170WHI



K170BLK

**K180WHI**  
TWO MODULE  
BLANK 50 X 50MM

10

**K188WHI**  
**K188BLK**  
ONE MODULE  
BLANK 25 X 50MM

10

10

**K186WHI**  
**K186BLK**  
HALF MODULE  
BLANK 12.5 X 50MM

10

10

**K172WHI**  
1 GANG TWIN  
LJU6C FRONTPLATE  
TWO MODULE  
APERTURE SIZE 22 X 37MM

10

**K5787WHI**  
RJ11/12  
ONE MODULE

5

**K5746WHI**  
**K5746BLK**  
RJ45 CAT 6  
ONE MODULE

5

5

**K5746sWHI**  
**K5746sBLK**  
RJ45 CAT 6  
SCREENED  
ONE MODULE

5

5

**K5745WHI**  
**K5745BLK**  
RJ45 CAT 5E  
ONE MODULE

5

5

**K170WHI**  
**K170BLK**  
ONE MODULE BLANK

10

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MOUNTING BOXES:  
Minimum depth 16mm  
BS 5733: 2010 where  
applicable

MOUNTING BOXES:  
suitable for flush boxes to  
BS 4662: 1970 and surface  
boxes to BS 5733: 2010  
Refer to appropriate module  
for minimum box depth.

FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm  
BS 5733: 2010 where  
appropriate

Note: No grid required,  
modules just clip into place

Suitable for both RJ11 and  
RJ12 jacks.  
RJ11: 4 wire  
RJ12: 6 wire  
MOUNTING BOXES:  
Minimum box depth 25mm  
FCC68  
EN41003

Cat 6 performance.  
Suitable for both 568A and  
568B wiring schemes.  
MOUNTING BOXES:  
Minimum Box Depth 35mm  
ISO/IEC 11801  
EN 50173  
EN 50173  
TIA 568  
EN 41003

Enhanced Cat 5 performance.  
Suitable for both 568A and  
568B wiring schemes.  
MOUNTING BOXES:  
Minimum box depth 25mm  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

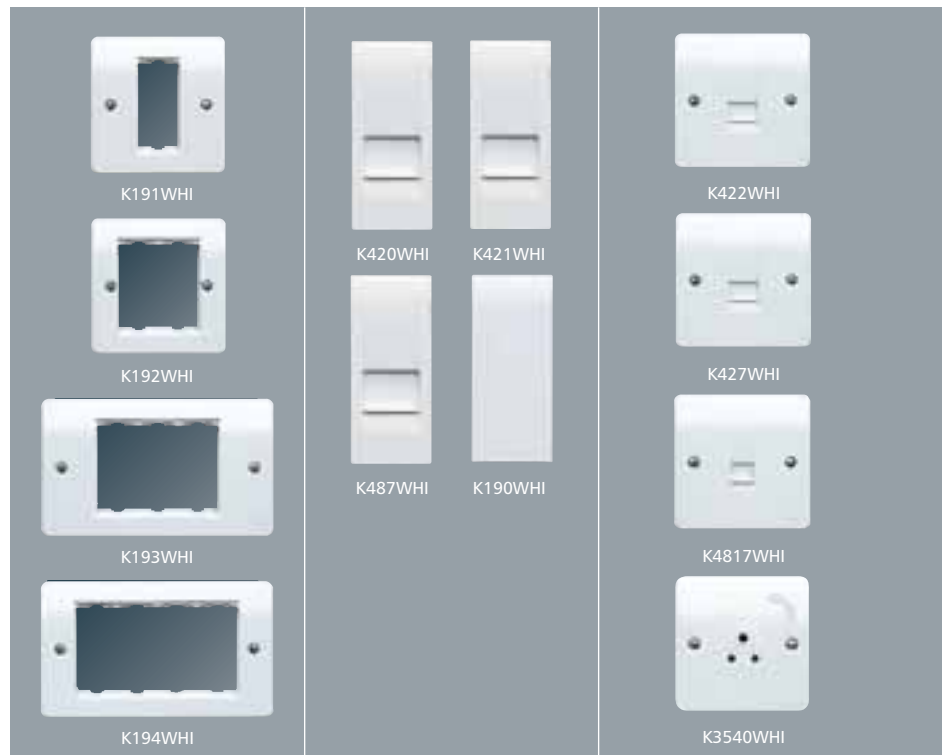
MOUNTING BOXES:  
Minimum box depth 16mm  
BS 5733: 2010 where  
appropriate

### MK Modular Frontplates

### MK Modular Datacom Modules

### Telephone Socket Outlets

#### FLUSH



#### **K191WHI**

1 GANG  
ONE MODULE

#### **K192WHI**

1 GANG  
TWO MODULE

#### **K193WHI**

2 GANG  
THREE MODULE

#### **K194WHI**

2 GANG  
FOUR MODULE

5

#### **K420WHI**

TELEPHONE OUTLET  
MASTER ONE MODULE

5

#### **K421WHI**

TELEPHONE OUTLET  
SECONDARY ONE MODULE

5

#### **K487WHI**

RJ11  
TELEPHONE/DATA SOCKET

5

#### **K190WHI**

BLANK  
ONE MODULE

10

#### **K422WHI**

1 GANG  
TELEPHONE MASTER

10

#### **K427WHI**

1 GANG  
TELEPHONE SECONDARY

10

#### **K4817WHI**

1 GANG  
RJ11 TELEPHONE SOCKET

5

#### **K3540WHI**

3 PIN WITH  
TELEPHONE SYMBOL (NON UK)

10

#### **400NAT**

IDC INSERTION TOOL

10

10

10

10

10

#### MOUNTING BOXES:

Suitable for flush boxes to BS 4662: 1970 and surface boxes to BS 5733: 2010

See Modules for correct box depth.

BS 5733: 2010 where applicable

#### MOUNTING BOXES:

**K420 and K421** are approved under OFTEL approval No.NS/G/23/L/100005 for direct and indirect connections between a termination point of a public telecommunications system and any piece of approved telecommunications apparatus.

BS 6312 Pt 2

**K487** FCC 68

**K190** Minimum depth 16mm

BS 5733: 2010 where applicable

#### **K422 and K427**

Are approved under OFTEL approval No. NS/G/23/L/100005 for direct and indirect connections between a termination point of a public telecommunications system and any piece of approved telecommunications apparatus.

BS 6312 Pt 2

**K4817** FCC 68

**K3540**

Accepts standard BS 546 2A 2 pin and earth plug where 2 pins are used for telephone circuits and the earth pin is used to ensure correct polarity.

BS 546: 1950 where relevant

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## TV/FM and Satellite Co-Axial Socket Outlets

FOR DIGITAL AND INTERACTIVE SERVICES  
SCREENED, NON ISOLATED  
FLUSH

## TV/FM and Satellite Co-Axial Socket Outlets with Telephone Outlet

FOR DIGITAL AND INTERACTIVE TV SERVICES  
FLUSH



K3550WHI



K3551WHI



K3555WHI



K3552WHI



K3552DABWHI



K3553WHI



K3553DABWHI



K3554DABWHI



K3557WHI



K3561WHI



K3561DABWHI



K3562WHI



K3563WHI



K3563DABWHI



K3564DABWHI



K3565DABWHI



K3566DABWHI

- K3550WHI** 10  
SINGLE OUTLET  
(IEC MALE)
- K3551WHI** 10  
SINGLE OUTLET  
(IEC FEMALE)
- K3555WHI** 10  
SINGLE OUTLET  
F-TYPE SATELLITE SOCKET
- K3552WHI** 10  
TWIN TV/FM  
DIPLEXER

Fully screened non isolated TV outlets containing a combination of single, TV/FM Diplexer, TV/FM/SAT Triplexer and secondary telephone outlets for use within digital TV systems and interactive TV services.

- K3552DABWHI** 10  
TWIN TV/FM  
DAB DIPLEXER
- K3553WHI** 10  
TRIPLE TV/FM/SAT  
TRIPLEXER
- K3553DABWHI** 10  
TRIPLE TV/FM DAB/SAT  
TRIPLEXER
- K3554DABWHI** 10  
QUAD TV/FM DAB/SATX2  
QUADPLEXER

Single outlets for connection to a single TV, FM or Satellite co-axial aerial lead.  
TV/FM diplexer units for connection to a single co-axial aerial lead with combined TV and FM signals.

- K3557WHI** 10  
SINGLE OUTLET (IEC MALE)  
WITH TELEPHONE SECONDARY
- K3561WHI** 5  
TRIPLE TV/FM/SAT TRIPLEXER  
WITH TELEPHONE SECONDARY

TV/FM/SAT triplexer units for connection to a single co-axial aerial lead with combined TV, FM and Satellite signals

- K3561DABWHI** 5  
TRIPLE TV/FM DAB/SAT TRIPLEXER  
WITH TELEPHONE SECONDARY
- K3562WHI** 5  
TWIN TV/FM DIPLEXER  
WITH SINGLE TV (IEC MALE)  
AND TELEPHONE SECONDARY
- K3563WHI** 5  
TRIPLE TV/FM/SAT TRIPLEXER  
WITH SINGLE TV (IEC MALE)  
AND TELEPHONE SECONDARY

Telephone Secondary outlet for use with interactive TV digital services.

**K3562** and **K3563** outlets with additional single TV (male) outlet for secondary distribution of TV signal

- K3563DABWHI** 5  
TRIPLE TV/FM/DAB/SAT TRIPLEXER  
WITH SINGLE TV (IEC MALE)  
AND TELEPHONE SECONDARY
- K3564DABWHI** 5  
QUAD TV/FM DAB/SATX2 QUADPLEXER  
WITH TELEPHONE SECONDARY
- K3565DABWHI** 5  
QUADPLEXER + RJ45  
AND TELEPHONE SECONDARY
- K3566DABWHI** 5  
QUADPLEXER  
WITH TELEPHONE SECONDARY  
AND SINGLE TV (IEC MALE)

**MOUNTING BOXES:**  
Minimum box depth 32mm  
1 gang: Flush: 866ZIC  
Surface: K2181WHI  
2 gang: Flush: 886ZIC  
Surface: K2183WHI

**DIMENSIONS:**  
1 gang: 86 x 86mm  
2 gang: 86 X 146mm

**FIXING CENTRES:**  
1 gang: 60.3mm  
2 gang: 120.6mm

**PERFORMANCE**  
SINGLE OUTLETS  
TV/FM IEC MALE OR FEMALE  
DC-950MHz  
SAT F-TYPE  
DC-950MHz

**TV/FM/SAT PRODUCTS**  
OUTLET TV  
DIPLEXER 5-65MHz  
470-862MHz  
87.5-108MHz  
N/A

**TV/FM/DAB/SAT PRODUCTS FOR DIGITAL RADIO**

OUTLET TV  
DIPLEXER 5-65MHz  
470-862MHz  
87.5-230MHz  
N/A

OUTLET TV  
FM SAT1  
TRIPLEXER 5-65MHz  
470-862MHz  
87.5-108MHz  
950-2300MHz

OUTLET TV  
FM SAT1 SAT2  
TRIPLEXER 5-65MHz  
470-862MHz  
87.5-230MHz  
950-2300MHz  
5-2300MHz

BS 3041: 1997  
IEC169-2: 1965  
BS EN 50083 where applicable  
BS 5733: 2010 where applicable  
BS 6312 Pt2

## TV/FM and Satellite Co-Axial Socket Outlets

NON ISOLATED  
FLUSH



K3520WHI



K3523WHI



K3525WHI



K3525D1WHI

**K3520WHI**  
SINGLE OUTLET  
**K3523WHI**  
TWIN OUTLET  
**K3525WHI**  
SINGLE F TYPE  
SATELLITE SOCKET  
**K3525D1WHI**  
TWIN F TYPE  
SATELLITE SOCKET

10

10

10

10

### MOUNTING BOXES:

FLUSH:  
861ZIC (25mm)

SURFACE:  
K2140WHI

Single outlet for connection to a single TV or FM co-axial aerial lead.  
Twin outlet for connection to each of two separate TV/FM, co-axial aerial leads.

DIMENSIONS: 86 x 86mm  
FIXING CENTRES: 60.3mm

BS 5733: 2010  
where applicable

BS 3041: 1977  
IEC 169-2: 1965

ISOLATED  
FLUSH



K3521WHI



K3522WHI

**K3521WHI**  
SINGLE OUTLET  
**K3522WHI**  
TWIN OUTLET  
WITH FM/TV DIPLEXER

10

10

### MOUNTING BOXES:

FLUSH:  
861ZIC (25mm)

SURFACE:  
K2140WHI

Provides safety isolation rated at 2000V a.c. between aerial lead and socket.  
Single outlet for connection to a single TV or FM co-axial aerial lead.

Twin outlet with TV/FM diplexer for connection to single co-axial aerial lead with combined TV & FM signals.

DIMENSIONS: 86 x 86mm  
FIXING CENTRES: 60.3mm

BS 5733: 2010 where applicable  
BS 3041: 1977 IEC 169-2: 1965

## Grid Plus Frontplates



K3631GRA



K3632WHI



K3633GRA



K3634WHI

**K3631WHI**  
**K3631GRA**  
1 MODULE  
**K3632WHI**  
**K3632GRA**  
2 MODULE  
**K3633WHI**  
**K3633GRA**  
3 MODULE  
**K3634WHI**  
**K3634GRA**  
4 MODULE

10

10

10

10

10

10

10

10



K3636WHI



K3638WHI



K3639WHI

**K3636WHI**  
**K3636GRA**  
6 MODULE  
**K3638WHI**  
**K3638GRA**  
8 MODULE

1

1

1

1

**K3639WHI**  
12 MODULE

1

All modules from the Grid Plus range can be used with these frontplates.

### DIMENSIONS:

1 & 2 MODULE: 86 x 86mm  
3 & 4 MODULE: 86 x 146mm  
6 & 8 MODULE: 146 x 146mm  
12 MODULE: 206 x 146mm  
BS 5733: 2010

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## range introduction

## features and benefits

MK Sensors are designed to deliver energy savings and lighting usage management in a wide range of commercial applications. Lighting represents, on average, up to 40% of a building's total energy consumption; and also the largest opportunity for energy savings.

The MK Sensor range deploys three main types of sensor technology – namely PIR, Microwave and Ultrasonic – in a variety of devices configured for ceiling or corner mounting; as well as long range detection.

Most products in the MK Sensors range have a built-in photocell, providing occupancy and light level detection. The range is also complemented by a host of accessories and ancillaries – such as programmers and controllers – which combine to make the range easy to install, easy to understand and easy to use.

- **Built in photocell provides light level detection**
- **Sensors can be installed for absence detection**
- **6A and 10A products**
- **Easy to install and program**
- **Flush and surface mounted variants available**
- **Ideal for most interior environments**



Product featured is a Superior PIR.

To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)



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## Simple Fit Sensors

## Standard PIRs

## Superior PIRs

## BattenFit Sensors

IP65



K5015



K5016



K4010



K4011



K4015



K4017



K4041 / K4042  
K4043 / K4044



K4046 / K4047  
K4048 / K4049

**K5015** 1  
SIMPLE FIT PHOTOCELL WITH PIR  
FLUSH MOUNTED  
6A

**K5016** 1  
SIMPLE FIT PHOTOCELL WITH PIR  
SURFACE MOUNTED  
6A

**K4010**  
SLIM FLUSH, 6A

**K4011**  
SURFACE, 6A

**K4015** 1  
SLIM FLUSH, 6A

**K4016** 1  
SURFACE, 6A

**K4017**  
DUAL CIRCUIT, FLUSH, 6A

**K4018**  
DUAL CIRCUIT, SURFACE, 6A

**K4019**  
SLIM FLUSH  
9 X DSI BALLASTS

**K4020**  
SURFACE  
25 X DSI BALLASTS

**K4041** 1  
BATTENFIT SENSOR  
2A SWITCHING

**K4042** 1  
BATTENFIT SENSOR  
2A SWITCHING PCELL

**K4043** 1  
BATTENFIT SENSOR  
REGULATING PCELL DSI

**K4044** 1  
BATTENFIT SENSOR  
REGULATING PCELL DALI

**K4046** 1  
BATTENFIT SENSOR  
2A SWITCHING  
IP65

**K4047** 1  
BATTENFIT SENSOR  
2A SWITCHING PCELL  
IP65

**K4048** 1  
BATTENFIT SENSOR  
REGULATING PCELL DSI  
IP65

**K4049** 1  
BATTENFIT SENSOR  
REGULATING PCELL DALI  
IP65

DIMENSIONS:  
Flush: 76 x 86mm  
Surface: 86 x 86mm x 54.5mm

DIMENSIONS:  
Slim: 65 x 115mm  
Surface: 100 x 72mm

DIMENSIONS:  
Slim: 65 x 115mm  
Surface: 100 x 72mm

DIMENSIONS:  
121 x 40 x 29mm

DIMENSIONS:  
150 x 40 x 29mm

### Microwave Digital Sensors

### Ultrasonic

### Long Range Detector

### Universal Photocell

### Accessories



K4025



K4032



K4030



K4031



K4035



K4036



K4039 / K4040



K4045



K4050



K4051




K4052



K4053


**K4025BLU**   
CEILING MOUNTED, FLUSH,  
DSI, BLUE, 6A

**K4025YEL**   
CEILING MOUNTED, FLUSH,  
DSI, YELLOW, 6A


**K4025RED**   
CEILING MOUNTED, FLUSH,  
DSI, RED, 6A


**K4025GRN**   
CEILING MOUNTED, FLUSH,  
DSI, GREEN, 6A

**K4032**   
CORNER MOUNTED  
20M RANGE, SURFACE, 10A


**K4033**   
CORNER MOUNTED  
20M RANGE, SEMI FLUSH, 10A


DIMENSIONS:  
Ceiling: 100 x 72mm  
Corner: 74 x 95mm


**K4030**   
CORNER MOUNTED,  
SURFACE, 10A


**K4031**   
CORNER MOUNTED,  
SEMI FLUSH, 10A


DIMENSIONS:  
Ceiling: 100 x 72mm  
Corner: 74 x 95mm

**K4035**   
CORNER MOUNTED,  
30M RANGE, FLUSH MOUNTED

**K4036**   
CORNER MOUNTED,  
30M RANGE, BOX MOUNTED

**K4037**   
CORNER MOUNTED,  
60M RANGE, FLUSH MOUNTED

**K4038**   
CORNER MOUNTED,  
60M RANGE, BOX MOUNTED

**K4039**   
BOX MOUNTED,  
SINGLE CIRCUIT CONTROL UNIT,  
10A

**K4040**   
BOX MOUNTED,  
DUAL CIRCUIT CONTROL UNIT,  
10A

DIMENSIONS:  
Flush: 170 x 120 x 80mm  
Surface: 125 x 175 x 145mm  
OPERATING VOLTAGE:  
230V 50Hz  
MATERIAL:  
Zinc & Polycarbonate

**K4045**   
SLIMLINE FLUSH, 6A

DIMENSIONS:  
65 x 115mm


**K4050**   
HAND-HELD PROGRAMMER

**K4051**   
TWO BUTTON HAND-HELD CONTROLLER

**K4052**   
MULTIFUNCTION HAND-HELD CONTROLLER

**K4053**   
DIGITAL PROGRAMMER

**K4054**   
PLASTERBOARD FIXING KIT

**K4034**   
WALL MOUNTING KIT FOR K4030  
AND K4032

DIMENSIONS:  
K4050: 75 x 58 x 18mm  
K4051 & K4052: 120 x 56 x 22mm  
K4053: 150 x 35 x 35mm

BATTERIES REQUIRED:  
K4050: 2 x CR 2032  
K4051 & K4052: 2 x AAA  
K4053: 3 x AAA

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## range introduction

A range of temperature control products for domestic heating applications. The products are used typically where a gas boiler is installed, and maintain the space temperature in a room, or a whole house at the desired level.

## features and benefits

### Attractive designs

Curved lines, low profile appearance and neutral colour let the units blend with their environment.

### Ease of Installation

A range of features allow installation to be quick and easy, including wiring knock-outs and trunking guides, large wiring terminals with captive washers.

### Easy to programme

Electronic Timeswitches and Programmers feature a built-in start-up programme, all models have clear and easy to follow User Guides.

## Room Thermostat



KT6360BWHI

## Electronic Timeswitches



KST6100AWHI



KST6100CWHI

## Electronic Programmings



KST6400AWHI

## Programmable Thermostats



KCMR701AWHI



KCMR707AWHI

**KT6360BWHI** **1**  
LINE VOLTAGE SPDT  
THERMOSTAT WITH NEON LAMP

Mains voltage room thermostat to give automatic temperature control of domestic wet central heating systems.

Can be used to directly switch a circulating pump or boiler, or to operate spring return and motor open/motor close zone valves.

Can switch electrical heating loads up to 10A.

All products conform to standards: BS EN 60730-1, BS EN 60730-2-7, BS EN 55014-1, BS EN 55014-2

**KST6100AWHI** **1**  
1 DAY TIMER,  
SINGLE OUTPUT WITH  
LCD DISPLAY

**KST6100AWHI**  
24 hour timeswitch with two ON/OFF switching times per day.

Suitable for combi boilers, added zones or any application where small electrical loads need switching.

**KST6100CWHI**  
Single channel timeswitch with up to three ON/OFF switchings per day, ideal for combi installations or as a zone control on larger systems.

All products conform to standards: BS EN 60730-1, BS EN 60730-2-7, BS EN 55014-1, BS EN 55014-2

**KST6400AWHI** **1**  
1 DAY CH+DHW PROGRAMMER,  
DUAL OUTPUT WITH  
LCD DISPLAY

**KST6400AWHI**  
Fully featured electronic programmer offering 24 hour programming with up to three ON/OFF switchings, which can be set independently for heating and hot water.

All products conform to standards: BS EN 60730-1, BS EN 60730-2-7, BS EN 55014-1, BS EN 55014-2

**KCMR701AWHI** **1**  
1 DAY PROGRAMMABLE  
THERMOSTAT WITH SPDT OUTPUT  
AND OK BUTTON

**KCMR701AWHI**  
A 24 hour programmable room thermostat to control heating systems, includes 4 independent temperature levels and built-in memory to retain the user program indefinitely.

**KCMR707AWHI** **1**  
7 DAY PROGRAMMABLE  
THERMOSTAT WITH SPDT OUTPUT  
AND OK BUTTON

**KCMR707AWHI**  
A 7 day programmable room thermostat to control heating systems, includes 'Holiday Button' for energy saving and built-in memory to retain the user program indefinitely.

All products conform to standards: BS EN 60730-1, BS EN 60730-2-7, BS EN 55014-1, BS EN 55014-2

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## range introduction

## features and benefits

MK Electric offers a comprehensive range of white ceiling accessories for all requirements. Included in the range are enhanced 'safety' lampholders.

Unlike most other 'safety' lampholders, when the lamp is removed it automatically shields the contact by means of a specially designed shutter and it remains that way until a lamp is replaced.

Therefore when no lamp is in place contact pins are totally isolated, preventing any danger of electrocution.

### **Ease of installation**

Pendant sets incorporate a heat resistant lampholder (1150WHI), and ceiling rose with a transparent base and clear terminal markings for ease of identification. Terminals are grouped in line with neutral, loop-in and earth terminals (1161WHI).

### **Safety**

Shockguard Plus has a specially designed shutter that automatically shields the lamp contacts, therefore eliminating the danger of electrocution.

### **Reliability**

All products are 100% tested before delivery for confidence, so a 'fit and forget' installation can be achieved. Fully compliant with the relevant British Standards BS 7895 for bayonet lampholders with enhanced safety and BS EN 61184.

### **Durability**

Manufactured from the highest quality materials to give a high gloss finish, which is both scratch and colour fade resistant.

## Ceiling Switches

6 AMP  
SURFACE



**3191WHI**  
6A SP ONE-WAY

5

**3191D1WHI**  
6A SP ONE-WAY  
WITH 2m WHITE CORD  
AND 1X GRAPHITE BANGLE

5

**3192WHI**  
6A SP TWO-WAY

5

**3192D1WHI**  
6A SP TWO-WAY  
WITH 2m WHITE CORD  
AND 1X GRAPHITE BANGLE

5

Supplied with mounting blocks.  
Earth terminal is riveted in base of mounting blocks.

**3191** and **3192** are supplied with 1.5m switch cord.

**3190** is supplied with 2m of red switch cord and 2 acorns.

BANGLE DIAMETER: 50mm

These switches do not have to be derated when used with fluorescent or inductive loads.

FIXING CENTRES: 50.8mm

BS EN 60669-1: 1999



**3190RCWHI**  
6A SP TWO-WAY

5

PULL TO MAKE OR PULL TO BREAK  
(MOMENTARY SWITCH ACTION)

**3190RCD1WHI**  
6A SP TWO-WAY  
WITH 3M RED CORD  
AND 2X RED BANGLE

5

Supplied with mounting blocks.

WITHOUT  
MOUNTING BLOCKS  
FLUSH



**3131WHI**  
6A SP TWO-WAY

5

**3151WHI**  
16A DP ONE-WAY

5

Mounting blocks are not supplied.  
Use 2051WHI or 2056WHI.

Suitable for installation in small circular conduit boxes to BS 4568 Pt 2: 1970. See page 368.

Ceiling switch cords are 1.5m minimum length.

These switches do not have to be derated when used with fluorescent or inductive loads.

FIXING CENTRES: 50.8mm

BS EN 60669-1: 1999

50A  
FLUSH



**3164WHI**  
50A DP ONE-WAY  
WITH NEON  
FITTED WITH  
CEILING SWITCH CORD  
OF 1.5m MINIMUM LENGTH

5

**8329SSWHID1T9**  
2m WHITE CORD WITH JOINT  
UNION AND GRAPHITE BANGLE

5

MOUNTING BOXES:  
SURFACE Moulded  
2140WHI, 2180WHI  
2031WHI (extra wiring space)  
FLUSH Steel  
877ZIC (for full load applications)  
SURFACE Metal  
2211ALM, 2213ALM  
Fitted with a mechanical 'OFF'  
indicator. The switch fully complies with the 16th Edition IEE Wiring Regulations with respect to safety isolation for maintenance purposes and provides a full 3mm contact gap when 'OFF'.  
DIMENSIONS: 86 x 86mm  
BANGLE DIAMETER: 50mm  
FIXING CENTRES: 60.3mm  
BS EN 60669-1: 1999

## Mounting Blocks and Cords



**2051WHI**  
MOUNTING BLOCK  
FOR 6A OR 16A  
SWITCHES

10

**2056WHI**  
MOUNTING BLOCK  
WITH NEON  
FOR 6A OR 16A  
SWITCHES

5

**8329SSWHI**  
1.5M WHITE CEILING SWITCH CORD  
COMPLETE WITH ACORN  
AND ONE PIECE JOINT UNION

10

**9420SS**  
2M RED CEILING SWITCH CORD  
COMPLETE WITH TWO RED ACORNS  
AND ONE PIECE JOINT UNION

1

**2051WHI and 2056WHI**

Earth terminal riveted in base.

DIAMETER: 83mm

FIXING CENTRES: 50.8mm

BS EN 60669-1: 1999

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## Ceiling Roses

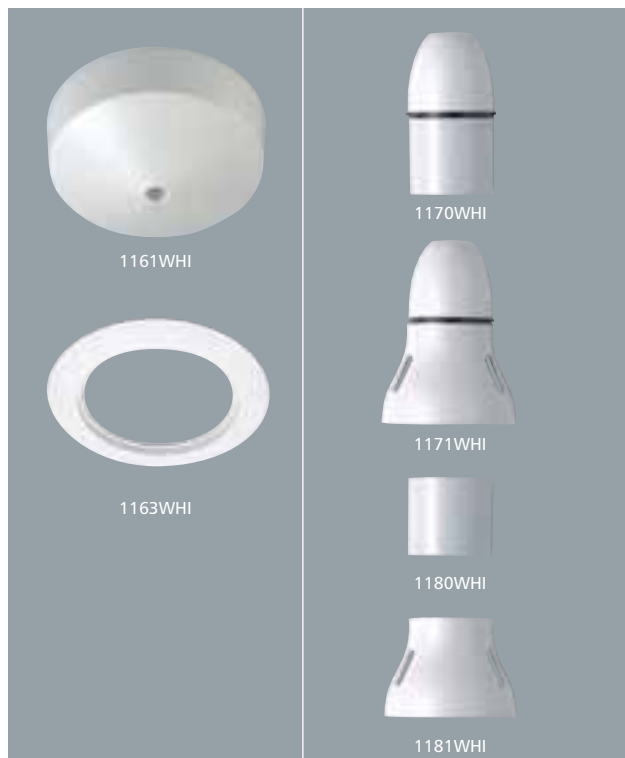
## Lampholders



Unlike most 'safety' lampholders, when a lamp is removed Shockguard Plus automatically seals the contact by means of specially designed shutter and it remains that way until the lamp is replaced. This means that with no bulb in place there is no danger of electrocution from exposed contacts, as the contact pins are fully shielded.



The MK Ceiling Rose has a transparent base, precut aperture and clear markings for ease of installation. Terminal layout allows cables to be cut to the same length and the earth terminal is positioned for easier cable access.



**1161WHI**  
FOUR TERMINALS  
LINE, NEUTRAL,  
LOOP-IN AND EARTH

**1163WHI**  
CEILING ROSE HALO

10

**1170WHI**  
BC PENDANT LAMPHOLDER  
WITH AUTOMATIC CORDGRIP

**1171WHI**  
BC PENDANT LAMPHOLDER  
WITH AUTOMATIC CORDGRIP  
AND PROTECTIVE SKIRT

**1180WHI**  
SKIRT FOR MK LAMPHOLDER  
LIST NO. 1170WHI

**1181WHI**  
SKIRT FOR MK LAMPHOLDER  
LIST NO. 1171WHI

10

10

10

10

Incorporate tunnel type terminals, and knockouts which accommodate 3 x 2.5mm<sup>2</sup> cables and allow for off centre cable entries, transparent terminal block and equal length wire stripping.

Suitable for fittings of up to 5kgs. Heavier fittings must be installed using independent support eg. ceiling hook.

The ceiling roses are suitable for mounting over BS 4568 Pt 2 circular conduit boxes.

DIAMETER (Cover): 84mm

DEPTH (Cover): 34mm

BS 67: 1987

The Ceiling Rose Halo gives a neat finish should the ceiling be damaged.

All MK lampholders are heat resistant to category T2 of BS EN 61184 and are therefore capable of operation with lamp cap temperatures up to 210°C.

BS EN 61184: 1997 T2 Rated.

## Lampholders

## Pendant Sets

Batten  
Lampholders

## SG TYPE



1150WHI



1186WHI

1189WHI

## SG TYPE



1146WHI

1149WHI

## SG TYPE



1172WHI



1152WHI



1174WHI



1154WHI



1179WHI

**1150WHI**  
BC PENDANT  
SG TYPE LAMPHOLDER

10

**1186WHI**  
150mm PENDANT SET

10

**1189WHI**  
230mm PENDANT SET

10

**1146WHI**  
SG TYPE  
150mm PENDANT SET

10

**1149WHI**  
SG TYPE  
230mm PENDANT SET

10

**1172WHI**  
BC ANGLED

10

**1174WHI**  
HEAT RESISTANT TAILS,  
LIVE, NEUTRAL, LOOP-IN  
AND EARTH TERMINALS

10

**1179WHI**  
SURFACE MOUNTING  
PATTRESS BLOCK

10

**1152WHI**  
SG TYPE  
ANGLED BATTEN LAMPHOLDER  
HEAT RESISTANT TAILS,  
LIVE, NEUTRAL, LOOP-IN  
AND EARTH TERMINALS

10

**1154WHI**  
SG TYPE  
BATTEN LAMPHOLDER  
HEAT RESISTANT TAILS,  
LIVE, NEUTRAL, LOOP-IN  
AND EARTH TERMINALS

10

Shockguard SG Type lampholders automatically shield contacts by means of a shutter when the lamp is removed.

All MK SG Type lampholders are heat resistant to category T2 of BS EN 61184 and are therefore capable of operation with lamp cap temperatures up to 210°C.

BS EN 61184: 1997  
BS 7895: 1997

**1186WHI** and **1189WHI** incorporate a lampholder (1170WHI), heat resisting PVC insulated and sheathed flexible 0.75mm<sup>2</sup> two core circular cable complying with BS 6500: 2000 (Table 29) and a ceiling rose fitted with line, neutral, loop-in and earth terminals (1161WHI).

This assembly will support a light fitting of up to 3kgs.

**1146WHI** and **1149WHI** incorporate a SG lampholder (1150WHI), heat resisting PVC insulated and sheathed flexible 0.75mm<sup>2</sup> two core circular cable complying with BS 6500: 2000 (Table 29) and a ceiling rose fitted with line, neutral, loop-in and earth terminals (1161WHI).

This assembly will support a light fitting of up to 3kgs.

All MK lampholders are heat resistant to category T2 of BS EN 61184 and are therefore capable of operation with lamp cap temperatures up to 210°C.

**1174WHI** also incorporates heat resistant wires connecting the terminals in the base to the lampholder. It has terminals mounted in the base and knockouts which accommodate 3 x 2.5 mm<sup>2</sup> cables and allow for off centre cable entries.

BS EN 61184: 1997 T2 Rated.

**1179WHI** pattress block is for use with angled batten lampholders 1172WHI and 1142WHI.

Shockguard SG Type lampholders automatically shield contacts by means of a shutter when the lamp is removed.

All MK SG Type lampholders are heat resistant to category T2 of BS EN 61184 and are therefore capable of operation with lamp cap temperatures up to 210°C.

**1152WHI** and **1154WHI** also incorporate heat resistant wires connecting the terminals in the base to the lampholder.

BS EN 61184: 1997 T2 Rated.  
BS 7895: 1997



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## the monarch, dubai

With its distinctive blue glass skin, Monarch Dubai and The Monarch Office Tower are a striking landmark on the Dubai skyline. Inside the twin towers the interiors of the hotel with its 236 luxury rooms and suites, and the 37 storey building of office space with each floor at approximately 12,000 square feet, are no less impressive.

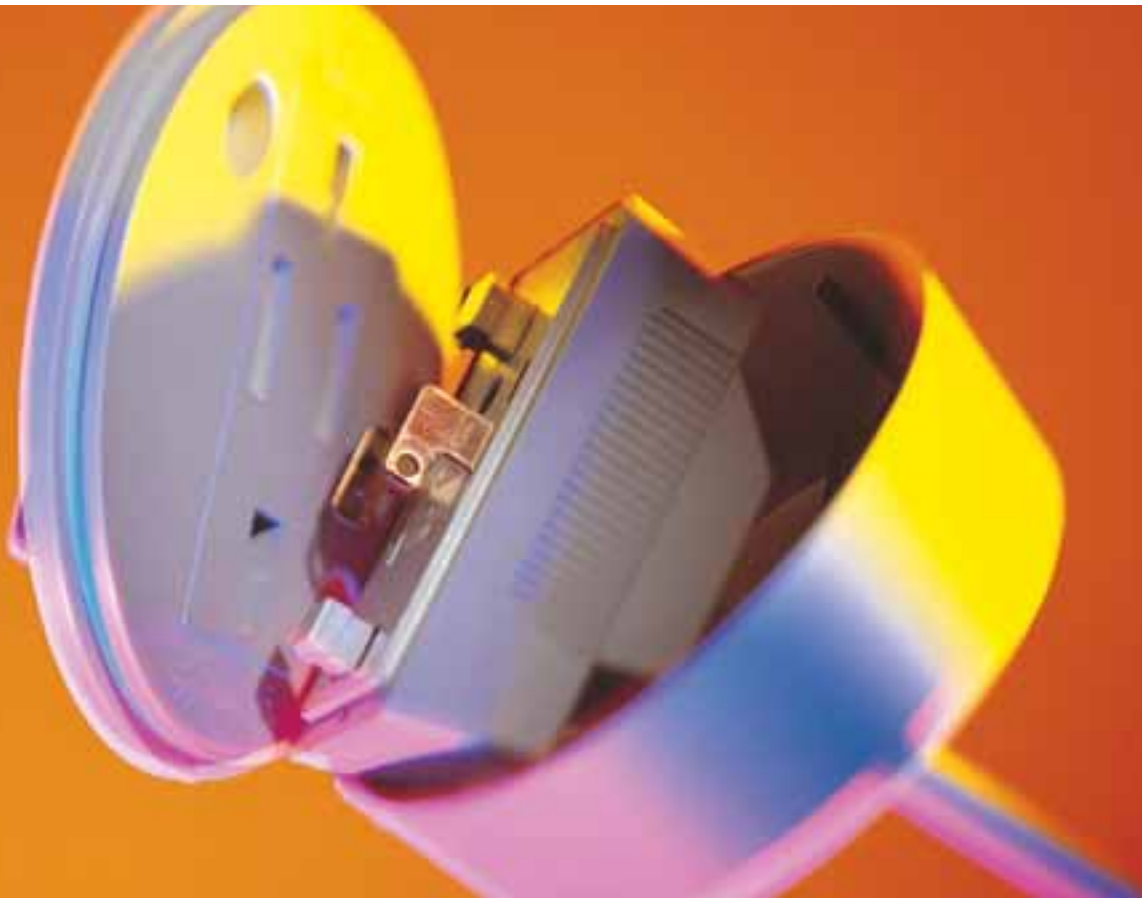
MK's Edge range, manufactured in a unique dark brass finish, was an essential component in creating the overall look of sumptuous quality. Given a material sample by the project's interior design team, MK was able to quickly produce a finished example that achieved the levels of elegance and sophistication required for this prestigious development.

Impressed by the speedy response and the factory-ready sample the interiors team gave the go-ahead to specify the customised product range throughout.

Available on a worldwide basis, the MK Design Service is supported by a dedicated team to ensure the seamless delivery of your chosen products.

To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)





### range introduction

The MK Link connection and distribution system brings plug-in convenience and versatility for lighting installations.

It is a modular plug and socket interface that provides electrical connection in one easy click-in action. Luminaires can be plugged in without circuit isolation. All live contacts are inaccessible and the earthing connection is made before any other.

### features and benefits

- **Live contacts are inaccessible**
- **Earth Contact – first to make, last to break**
- **Mechanical and Electrical Connection in one 'click-in' action**
- **Strong load grips support up to 5kg**

## 3 Pin Accessories

3 PIN PLUGS  
6 AMP



K3230WHI



K3220WHI



K3212WHI

3 PIN CEILING ROSES  
6 AMP



K3240WHI



K3240WHI

## 3 Pin Pre-wired

3 PIN PLUGS  
6 AMP



K3232WHI



K3233WHI

3 PIN CEILING ROSES  
6 AMP



K3242WHI



K3243LSF

**K3230WHI**  
WHITE 3 PIN PLUG  
WITH CORD GRIP

10

**K3220WHI**  
CIRCULAR (BESA)

10

**K3212WHI**  
ARCHITRAVE  
WITH TRUNKING CLAMP

10

**K3240WHI**  
CEILING ROSE (BESA)  
WITH 3 PIN PLUG

10

**K3241WHI**  
SURFACE MOUNTING  
CEILING ROSE WITH 3 PIN PLUG

5

**K3232WHI**  
3 PIN PLUG FITTED WITH  
2M WHITE PVC FLEX

10

**K3233WHI**  
3 PIN PLUG FITTED WITH  
3M WHITE PVC FLEX

5

**K3242WHI**  
CEILING ROSE AND 3 PIN PLUG  
FITTED WITH 2M PVC FLEX

10

**K3243WHI**  
CEILING ROSE AND 3 PIN PLUG  
FITTED WITH 3M PVC FLEX

5

**K3242LSF**  
CEILING ROSE AND 3 PIN PLUG  
FITTED WITH 2M LSF FLEX

10

**K3243LSF**  
CEILING ROSE AND 3 PIN PLUG  
FITTED WITH 3M LSF FLEX

5

DIMENSIONS:  
57 x 25 x 25mm

TERMINALS:  
Phase, neutral and earth terminals  
will each accept 1 x 0.75,  
1 x 1.00mm<sup>2</sup> conductors.

NOTE:  
K3230 can be used with the 4 pin  
socket outlets in this range.

WARNING:  
Plugs **must only** be wired to  
loads, luminaires or appliances.

BS 6972 & BS 5733

DIMENSIONS:  
K3220: 74mm dia. & 7mm depth  
K3212:

86 x 33 x 6mm & 7mm depth  
FIXING CENTRES:  
K3220: 50.8mm diagonal BESA  
K3212: 60.3mm

MOUNTING BOXES:  
K3220: Conduit BESA Egatube boxes  
or surface K3203WHI circular box

TERMINALS:  
Phase, neutral, earth & 'loop in'  
terminals will each accept  
5 x 0.75, 5 x 1.00, 4 x 1.50, 3 x 2.50  
or 2 x 4.00mm<sup>2</sup> conductors

NOTE: only 3 pin plugs can be used  
with these sockets  
BS 6972 & BS 5733

DIMENSIONS:  
K3240: 75mm dia. x 44mm &  
7mm fitting depth  
K3241: 80mm dia. x 58mm surface

FIXING CENTRES:  
K3240: 50.8mm diagonal BESA  
K3241: Slotted screw holes (No.8),  
50.8mm centres, can be mounted on  
a BESA box

MOUNTING BOXES:  
K3240: Conduit BESA Egatube boxes  
or surface K3203WHI circular box

TERMINALS:  
Phase, neutral, earth and 'loop in'  
terminals will each accept 5 x 0.75,  
5 x 1.00, 4 x 1.50, 3 x 2.50, or  
2 x 4.00mm<sup>2</sup> conductors

BS 6972 & BS 5733

**K3232WHI & K3233WHI**  
incorporate K3230WHI fitted  
with the respective length of  
heat resisting PVC insulated and  
sheathed flexible 0.75mm three  
core circular cable complying with  
BS 6500: 2000 (Table 29).

**K3242WHI & K3243WHI**  
incorporate K3240WHI fitted  
with the respective length of  
heat resisting PVC insulated and  
sheathed flexible 0.75mm three  
core circular cable complying with  
BS 6500: 2000 (Table 29).

**K3242LSF & K3243LSF**  
incorporate K3240WHI fitted  
with the respective length of low  
smoke zero halogen insulated and  
sheathed flexible 0.75mm three  
core circular cable to BS 6972 &  
BS 5733.

### GENERAL SPECIFICATION

Rated voltage for all plugs, sockets and pre-wired assemblies 250V 50Hz  
Rated load current for all plugs, sockets and pre-wired assemblies 6A  
Static suspension load for plugs, sockets and pre-wired assemblies 5kg max.

## 4 Pin Accessories

### 4 PIN PLUGS 6 AMP



K4230WHI

### 4 PIN SOCKETS 6 AMP



K4214WHI



K4220WHI

### 4 PIN CEILING ROSES 6 AMP



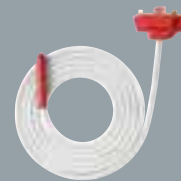
K4240WHR



K4240WHR

## 4 Pin Pre-wired

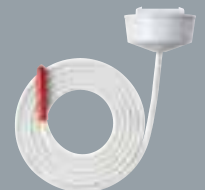
### PREWIRED 4 PIN PLUGS 6 AMP



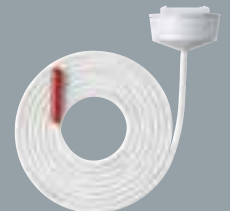
K4232WHR



### PREWIRED 4 PIN CEILING ROSES



K4242WHR



K4243LSF

**K4230WHI**  
WHITE 4 PIN PLUG WITH  
CORD GRIP

10

**K4214WHI**  
ONE GANG 4 PIN SOCKET  
OUTLET

10

**K4220WHI**  
CIRCULAR (BESA) 4 PIN  
SOCKET OUTLET

10

**K4240WHR**  
CEILING ROSE (BESA) WITH  
RED 4 PIN PLUG

10

**K4232WHR**  
RED 4 PIN PLUG WITH 2M  
WHITE PVC FLEX.

10

**K4233WHR**  
RED 4 PIN PLUG WITH 3M  
WHITE PVC FLEX

5

**K4242WHR**  
CEILING ROSE WITH RED  
4 PIN PLUG AND 2M PVC FLEX

10

**K4243WHR**  
CEILING ROSE WITH RED  
4 PIN PLUG AND 3M PVC FLEX

5

**K4242LSF**  
CEILING ROSE WITH RED  
4 PIN PLUG AND 2M LSF FLEX

10

**K4243LSF**  
CEILING ROSE WITH RED  
4 PIN PLUG AND 3M LSF FLEX

5

**DIMENSIONS:**  
57 x 35 x 44mm

**TERMINALS:**  
Phase, neutral, earth and auxiliary  
terminals will each accept  
1 x 0.75, 1 x 1.00mm conductors

**NOTE**  
K4230 cannot be used with the  
3 pin socket outlets in this range

**WARNING**  
Plugs must only be wired to loads,  
luminaires or appliances

BS 6972 & BS 5733

**DIMENSIONS:**  
K4214: 86 x 86 x 9mm & 5mm depth  
K4220: 74mm dia. & 7mm depth

**FIXING CENTRES:**  
K4214: 60.3mm  
K4220: 50.8mm diagonal (BESA)

**MOUNTING BOXES:**  
K4214: Surface K2160WHI,  
flush dryline QFB1WHI or  
flush solid 861ZIC  
K4220: Conduit BESA Egatube boxes  
or surface K3203WHI circular box

**TERMINALS:**  
Phase, neutral, earth, auxiliary &  
'loop in' terminals will each accept  
5 x 0.75, 5 x 1.00, 4 x 1.50,  
3 x 2.50 or 2 x 4.00mm conductors

**NOTE:** 3 and 4 pin plugs can be  
used with the 4 pin socket outlets in  
this range.

BS 6972 & BS 5733

**DIMENSIONS:**  
FIXING CENTRES:  
50.8mm diagonal (BESA)

**MOUNTING BOXES:**  
Conduit BESA Egatube boxes or  
surface K3203WHI circular box

**TERMINALS:**  
Phase, neutral, earth, auxiliary &  
'loop in' terminals will each accept  
5 x 0.75, 5 x 1.00, 4 x 1.50,  
3 x 2.50 or 2 x 4.00mm conductors

BS 6972 & BS 5733

#### GENERAL SPECIFICATION

Rated voltage for all plugs, sockets and pre-wired assemblies 250V 50Hz  
Rated load current for all plugs, sockets and pre-wired assemblies 6A  
Static suspension load for plugs, sockets and pre-wired assemblies 5kg max.

**K4232WHR & K4233WHR**  
incorporate K4230WHI fitted  
with the respective length of  
heat resisting PVC insulated and  
sheathed flexible 0.75mm four core  
circular cable complying with  
BS 6500:2000 (Table 29)

BS 6972 & BS 5733

**K4242WHR & K4243WHR**  
incorporate K4240WHR fitted  
with the respective length of  
heat resisting PVC insulated and  
sheathed flexible 0.75mm four core  
circular cable complying with  
BS 6500:2000 (Table 29)

**K4242LSF & K4243LSF**  
incorporate K4240WHR fitted  
with the respective length of low  
smoke zero halogen insulated and  
sheathed flexible 0.75mm four core  
circular cable to BS 6972 &  
BS 5733

Mounting Boxes

ARCHITRAVE  
MOULDED  
FLUSH

STEEL  
FLUSH

SQUARE  
MOULDED  
FLUSH

STEEL  
FLUSH

CIRCULAR  
SURFACE



K2151WHI



3921ZIC



QFB1WHI



QFB/IG1



K2160WHI



861ZIC



K3203WHI



2ECR1WHI



2ECR3WHI

**K2151WHI**  
1 GANG  
ARCHITRAVE BOX

10

**3921ZIC**  
1 GANG  
ARCHITRAVE BOX

10

**QFB1WHI**  
1 GANG  
DRY LINING BOX

20

**QFB/IG1**  
1 GANG  
DRY LINING BOX  
WITH INTUMESCENT GASKET

20

**K2160WHI**  
1 GANG 16mm  
MOULDED BOX

10

**K2151WHI**  
Earth terminal fitted in base.  
DIMENSIONS:  
87 x 33 x 16mm  
FIXING CENTRES:  
60.3mm  
BS 5733:1995

With earth terminal  
DIMENSIONS:  
75 x 27 x 27mm  
FIXING CENTRES:  
60.3mm  
KNOCKOUTS:  
3 x 16mm  
BS 4662:1970

**QFB1**  
All round flange for flush fit. One piece moulded lug automatically snaps into place. No rear projections. Clamp device on cable entry. Will accommodate partition thicknesses between 6mm and 16mm. Earth terminal facility.

**K2160WHI**  
Earth terminal fitted in base of boxes.  
DIMENSIONS:  
K2160: 87 x 87mm  
FIXING CENTRES: 60.3mm  
BS 5733: 1995

**QFB/IG1**  
Pre-fitted with intumescent gaskets to give fire protection, in accordance with BS 476 Pt 22: 1987. In a fire situation, a chemical reaction will occur with the intumescent material. The void behind the wiring device will be filled, providing protection against the passage of fire.

BS 4662: 1970 where applicable.

**861ZIC**  
1 GANG  
ONE ADJUSTABLE LUG

10

With earth terminal  
DIMENSIONS:  
75 x 75mm  
FIXING CENTRES:  
60.3mm  
KNOCKOUTS:  
12 x 20mm  
BS 4662:1970

**K3203WHI**  
CIRCULAR SURFACE  
MOUNTING BOX

10

**2ECR13WHI**  
**2ECR13BLK**  
20mm LOOP-IN

25

**2ECR1WHI**  
**2ECR1BLK**  
20mm BACK OUTLET

25

**2ECR3WHI**  
**2ECR3BLK**  
20mm TWO WAY

25

**2ECR8WHI**  
**2ECR8BLK**  
20mm TWO WAY AND  
BACK OUTLET

10

10

**K3203WHI**  
DIMENSIONS: 85mm dia x 31mm  
FIXING CENTRES: 50.8mm BESA  
**CONDUIT BOXES**  
20mm Loop-in boxes have  
4 x 20mm knockouts on underside.

MATERIAL: PVC-U

LID FIXING CENTRES:  
50.8mm

PILLAR THREAD SIZE:  
M4 (Brass inserts)

All boxes contain a moulded recess for earth terminal.

**GENERAL SPECIFICATION**

Rated voltage for all plugs, sockets and pre-wired assemblies 250V 50Hz  
Rated load current for all plugs, sockets and pre-wired assemblies 6A  
Static suspension load for plugs, sockets and pre-wired assemblies 5kg max.

See pages 368 for the full selection of circular conduit boxes.

## Distribution Boxes



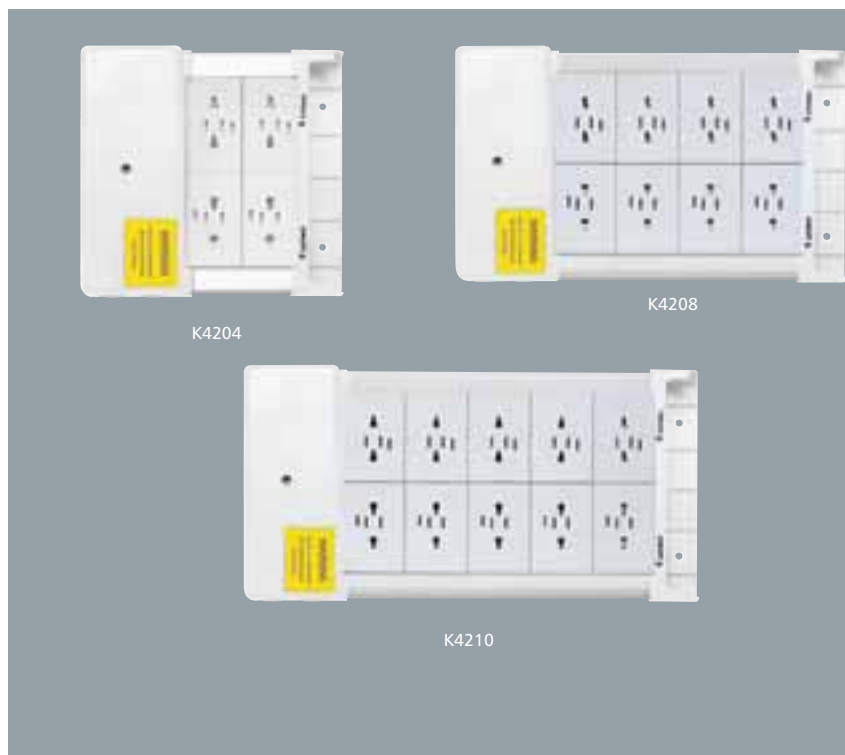
Fixing of the distribution box to lighting trunking is made easy through the choice of cable entry points.



The distribution box can be suspended on drop rods utilising Caddy Clips.\*



The distribution box can be fitted directly to the wall or ceiling using the pilot holes provided in the base.



**K4204**  
4 GANG 6A  
4 PIN SOCKET  
LIGHTING DISTRIBUTION BOX

**1** **K4208**  
8 GANG 6A  
4 PIN SOCKET  
LIGHTING DISTRIBUTION BOX

**1** **K4210**  
10 GANG 6A  
4 PIN SOCKET  
LIGHTING DISTRIBUTION BOX

### DIMENSIONS:

K4204: 80 x 222 x 237mm  
K4208: 80 x 222 x 400mm  
K4210: 80 x 222 x 465mm

### MOUNTINGS:

Provision for screw (No. 8) fix to walls or trunking and slots for \*Caddy Clips on top, bottom and back faces.

Conduit entries with snap fit blanks; 20 & 25mm in top, bottom and back faces. Outlets can be wired as 1 or 2 banks.

### TERMINAL CAPACITY:

3 x 6mm rated at 16A.  
Each socket is rated at 6A.

Extruded aluminium body with VO rated plastic terminal housing. Both 3 & 4 pin plugs can be used with the distribution box 4 pin socket outlets.

BS 5733

\*Caddy Clip is a registered trade mark of Erico Europa (UK) Ltd. Reading.

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white | wiring devices



## range introduction

Tungsten and fluorescent lamps make the Clearshave range the obvious choice for bathrooms.\*

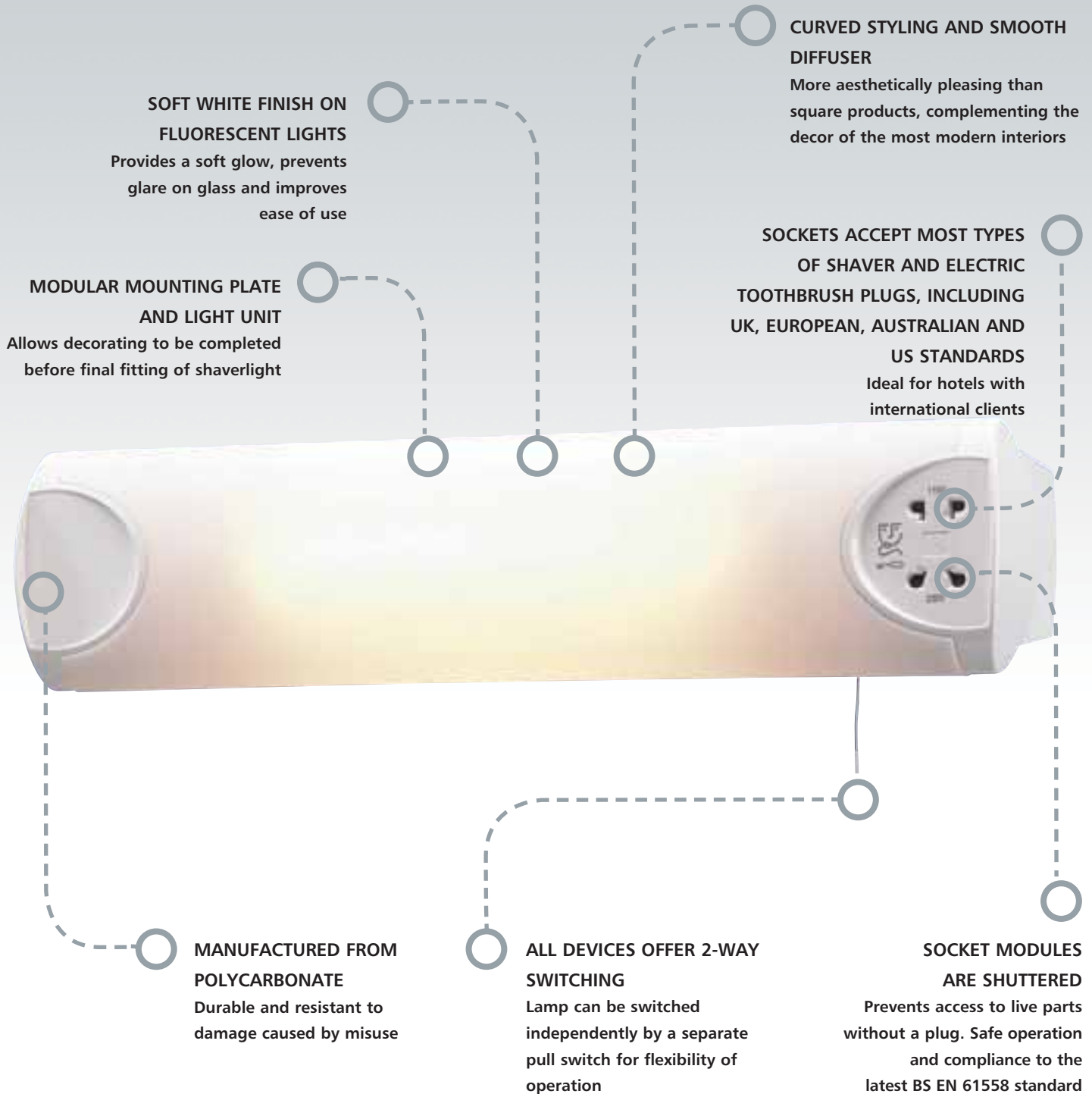
Units are available with or without a shaver/toothbrush socket and can be mounted horizontally or vertically.

A standard pull cord controls lighting and two way switching allows most units to be linked to a lightswitch or another Clearshave.

## features and benefits

- **Automatic energisation after plug insertion**
- **Overload protection**
- **Ideal for washrooms and bathrooms\***
- **Shaver socket accepts a range of shaver plugs**
- **Clearshave products with shaver sockets are now all suitable for use with electric toothbrushes too**

\* Where current Wiring Regulations permit



### Standards and approvals

All Clearshave Plus products have been tested by the Lighting Association laboratory and licensed by ASTA.  
All Clearshave Plus luminaires comply with EN 60598-2-1

- **Shaver supply units of shaver lights comply with BS EN 61558-2-5: 1998**
- **Luminaires are rated IP20 to BS EN 60529: 1992**
- **IP20 (Luminaires) and IP41 (Shaver/toothbrush sockets) are suitable for installation in zone 3 as defined in the current IEE Wiring Regulations (BS 7671)**

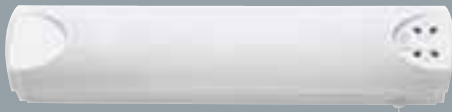


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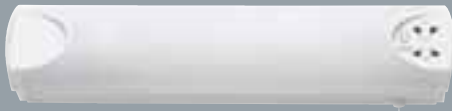
white | wiring devices

## Shaverlights

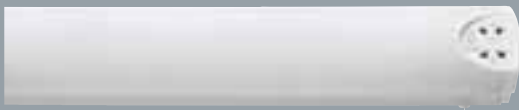
## Luminaires



K708WHI



K808WHI



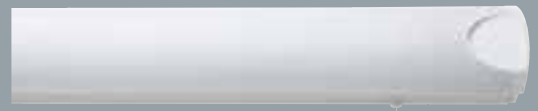
K711WHI



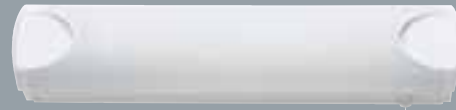
K712WHI



K811WHI



K812WHI



K818WHI

**K708WHI**  
60W 284mm TUNGSTEN  
STRIP LAMP (SUPPLIED)

1

**K808WHI**  
11W SINGLE ENDED  
FLUORESCENT TUBE  
(SUPPLIED)

1

**K711WHI**  
15W WARM WHITE  
450mm FLUORESCENT  
TUBE (SUPPLIED)

1

**K712WHI**  
18W WARM WHITE  
600mm FLUORESCENT  
TUBE (SUPPLIED)

1

**K811WHI**  
15W WARM WHITE  
450mm FLUORESCENT  
TUBE (SUPPLIED)

1

**K812WHI**  
18W WARM WHITE  
600mm FLUORESCENT  
TUBE (SUPPLIED)

1

**K818WHI**  
11W SINGLE ENDED  
FLUORESCENT TUBE  
(SUPPLIED)

1

Horizontal/vertical light units with a dual voltage shaver/toothbrush socket.

Units are supplied complete with a pull cord switch which controls the light only.

All Clearshave units incorporate a dual voltage shaver/toothbrush socket, with a double wound isolating transformer rated 20VA at 230 or 115 volts which meets BS 61558-2-5: 1998 and allows the user to comply with BS 7671: 1992 of the IEE Wiring Regulations where permitted for use in bathrooms.

Any British, American, European or Australian shaver/toothbrush plug can be inserted to give the required voltage.

Insertion of a plug automatically switches on the shaver/toothbrush socket by energising the primary side of the isolating transformer – removal automatically switches off.

The transformer is protected against overload by an automatic overload device with automatic resetting.

NB. All Clearshave units are suitable for two-way switching.

**DIMENSIONS:**  
K708WHI: 448 x 100 x 82.5mm  
K711WHI: 605 x 100 x 82.5mm  
K712WHI: 758 x 100 x 82.5mm  
K808WHI: 448 x 100 x 82.5mm

BS EN 60598-2-1: 1989  
BS EN 61558-2-5: 1998

These products are horizontal/vertical light units.

**DIMENSIONS:**  
K811WHI: 605 x 100 x 82.5mm  
K812WHI: 758 x 100 x 82.5mm  
K818WHI: 448 x 100 x 82.5mm

NB. All Clearshave Luminaire units are suitable for two-way switching.

BS EN 60598-2-1: 1989

### BONDING REQUIREMENTS:

**When installed in a room containing a fixed bath or shower, Clearshave units should be bonded in accordance with the latest edition of the IEE Wiring Regulations.**



## introduction

MK's decorative wiring device ranges have now been updated to include a new range of stylish finishes that offer greater choice and flexibility.

With 16 high quality finishes available across 4 individual ranges you will now find a style and finish that will compliment any modern, contemporary or traditional interior design scheme.

Great design relies on that precise combination of material, texture, colour and tone to create that wow factor. The ability to do the same thing with your wiring devices means you never have to settle for second best. Whether it's a new finish, combining technology or adding engraving to your products MK's Design Service team can help you achieve your design goals.

MK Electric have continued to invest in their UK manufacturing equipment, in order to be more flexible to your decorative wiring device needs whilst still offering the same level of quality and service.

## features and benefits

- **16 Stunning finishes, including 8 brand new finishes**
- **4 Individual range options**
- **Choices of a screwed or screwless aesthetic**
- **Choice of frontplate depth – modern 1.5mm, contemporary 4mm or traditional 9mm**
- **Compliment any interior design scheme**
- **Flexibility and custom options with MK's Design Service**

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decorative | wiring devices



**BRUSHED STAINLESS  
STEEL  
(BSS)**



**BRUSHED CHROME  
(BRC)**



**LACQUERED BRUSHED  
STEEL  
(LBS)**



**POLISHED CHROME  
(POC/PCR)**



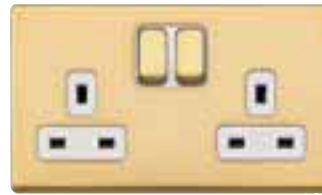
**SILVER ANODIZED  
ALUMINIUM  
(SAA)**



**PORCELAIN WHITE  
(WHI)**



**LUSTROUS IVORY  
(LIV)**



**SATIN GOLD  
(SAG)**



**LUSTROUS BLACK  
(LBK)**



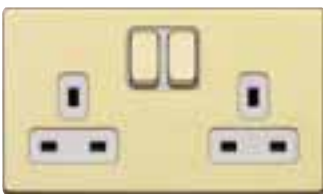
**BRUSHED NICKEL  
(BNI)**



**BLACK NICKEL  
(BLN)**



**DESERT BRONZE  
(DBZ)**



**POLISHED BRASS  
(PBR)**



**ANTIQUE BRASS  
(ABS)**



**TEXTURED IRON  
(TIR)**



**TEXTURED COPPER  
(TCO)**



### range introduction

The simple, clean styling of Aspect is both modern and contemporary, so it looks at home anywhere, in almost any kind of environment where style and quality are important. The profile is just 4mm slim, so it's discreet, as well as stylish, while the concealed screws leave an elegant frontplate, making it more attractive still.

In addition to impressive looks, with Aspect comes unrivalled safety. Utilising MK's 3-pin operated safety shutter, that prevents misuse and unsafe access to live circuitry, Aspect offers the user the peace of mind and comfort that they have the safest range of wiring devices available installed in their surroundings.

Echo™ is an innovative range of entirely wireless, batteryless and self powered switches, only available from MK Electric and in finishes to complement the Aspect range. Please see page 31 for details.

### features and benefits

#### **Slim profile 'screwless' front plates of only 4mm**

Provide a clean and flawless look that complements the décor of the finest interiors.

#### **Total safety**

3-pin operated "child resistant shutter system", which is designed to inhibit access to the electricity supply, unless all 3 pins of a standard British 13A plug are in position.

#### **13 standard high quality finishes**

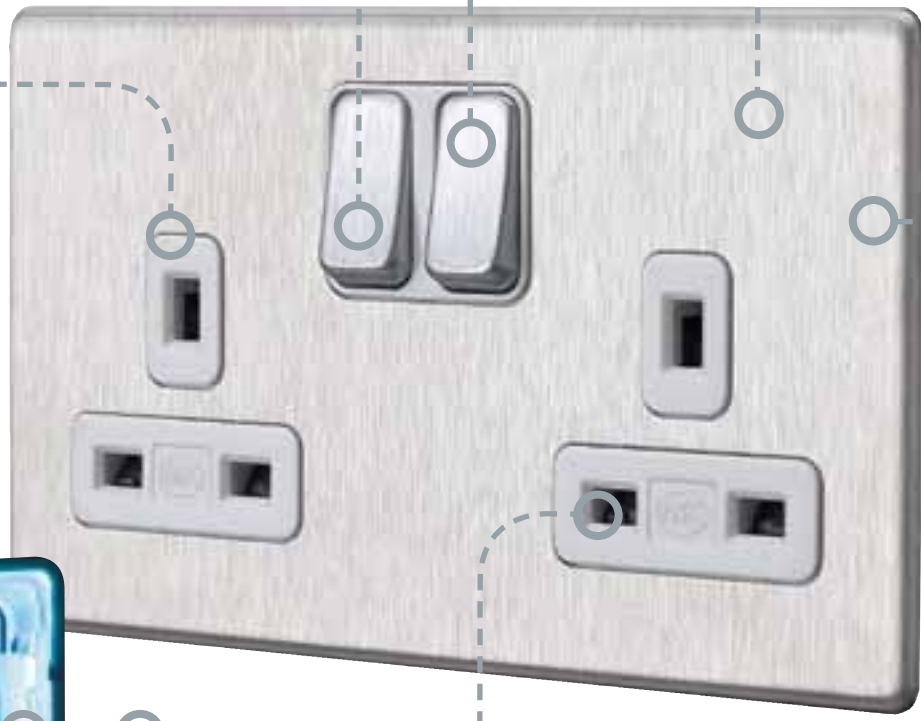
Aspect now offers a range of fresh, reassuring and creative colours.

#### **Design Service**

Perfect for when only a creative solution will do.

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decorative | wiring devices



**MATCHING METAL ROCKER SWITCHES (EXCLUDING NEON PRODUCTS)**

**DOUBLE POLE SWITCHING**

**13 HIGH QUALITY FINISHES TO CHOOSE FROM**

**CHOICE OF BLACK OR WHITE INSERTS ON MOST FINISHES**  
Provide impact resistance in any environment

**STYLISH SLIM DESIGN**  
Frontplate profile only 4mm

**PATENTED SPRING CLIP FOR POSITIVE EARTHING**

**CORROSION RESISTANT SURFACE TREATED FRAME**

**SCREWDRIVER GUIDING RAMP**

**3-PIN "CHILD RESISTANT SHUTTER SYSTEM"**  
Designed to inhibit access to the electricity supply, unless all 3 pins of a standard British 13A plug are in position

As well as a wide choice of finishes, MK Aspect is available in a range of outlets for interactive and digital TV, IT and telecomms services. There are reliable and effective dimmer switches, and a comprehensive range of modular switches – all simple to install.

Terminal screws are backed out and captive Terminals are upwards facing to make installation easier.

Funnel entrance to terminals.

Clear terminal markings for easy identification.



## Switchsocket Outlets

1 GANG DP  
DUAL EARTH  
13 AMP

1 GANG DP  
WITH NEON  
DUAL EARTH  
13 AMP

2 GANG DP  
DUAL EARTH  
13 AMP

2 GANG DP  
WITH NEON  
DUAL EARTH  
13 AMP

1 GANG DP  
ROUND PIN  
5 AMP



### FINISHES

BRUSHED STAINLESS STEEL	K24357BSS* 1	K24657BSS* 1	K24347BSS* 1	K24647BSS* 1	K24382BSS* 1
LACQUERED BRUSHED STEEL	K24357LBS* 1	K24657LBS* 1	K24347LBS* 1	K24647LBS* 1	K24382LBS* 1
BRUSHED CHROME	K24357BRC* 1	K24657BRC* 1	K24347BRC* 1	K24647BRC* 1	K24382BRC* 1
POLISHED CHROME	K24357POC* 1	K24657POC* 1	K24347POC* 1	K24647POC* 1	K24382POC* 1
SATIN GOLD	K24357SAG* 1	K24657SAG* 1	K24347SAG* 1	K24647SAG* 1	K24382SAG* 1
PORCELAIN WHITE	K24357WHIW 1	K24657WHIW 1	K24347WHIW 1	K24647WHIW 1	K24382WHIW 1
LUSTROUS IVORY	K24357LIVW 1	K24657LIVW 1	K24347LIVW 1	K24647LIVW 1	K24382LIVW 1
LUSTROUS BLACK	K24357LBKB 1	K24657LBKB 1	K24347LBKB 1	K24647LBKB 1	K24382LBKB 1
POLISHED BRASS	K24357PBR* 1	K24657PBR* 1	K24347PBR* 1	K24647PBR* 1	K24382PBR* 1
TEXTURED IRON	K24357TIRB 1	K24657TIRB 1	K24347TIRB 1	K24647TIRB 1	K24382TIRB 1
DESERT BRONZE	K24357DBZB 1	K24657DBZB 1	K24347DBZB 1	K24647DBZB 1	K24382DBZB 1
ANTIQUÉ BRASS	K24357ABSB 1	K24657ABSB 1	K24347ABSB 1	K24647ABSB 1	K24382ABSB 1
TEXTURED COPPER	K24357TCOB 1	K24657TCOB 1	K24347TCOB 1	K24647TCOB 1	K24382TCOB 1

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterix, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm

BS 1363 Pt 2: 1995

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm

BS 1363 Pt 2: 1995

Neon is only available in white or black insulated rocker.

MOUNTING BOXES:  
FLUSH 35mm: 886ZIC  
FLUSH 47mm: 878ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 146mm

FIXING CENTRES: 120.6mm

BS 1363 Pt 2: 1995

MOUNTING BOXES:  
FLUSH 35mm: 886ZIC  
FLUSH 47mm: 878ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 146mm

FIXING CENTRES: 120.6mm

BS 1363 Pt 2: 1995

Neon is only available in white or black insulated rocker.

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm

BS 546: 1950

Dual Earth: Fitted with two earth terminals to provide a double earth facility for use when installations require a high integrity protective connection as specified within BS 7671: 2008.

Dual Earth  
(see note box)

Dual Earth  
(see note box)

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## Socket Outlets

## Floor Mounted Socket Outlets

1 GANG DP  
ROUND PIN  
15 AMP

1 GANG  
DUAL EARTH  
13 AMP

2 GANG  
DUAL EARTH  
13 AMP

1 GANG  
ROUND PIN  
5 AMP

FLOOR SOCKET  
1 GANG  
13 AMP

FLOOR SOCKET  
1 GANG  
13 AMP



K24383BSS* 1	K24780BSS* 1	K24781BSS* 1	K24381BSS* 1	K24740BSS* 1	K24742BSS* 1
K24383LBS* 1	K24780LBS* 1	K24781LBS* 1	K24381LBS* 1	K24740LBS* 1	K24742LBS* 1
K24383BRC* 1	K24780BRC* 1	K24781BRC* 1	K24381BRC* 1	K24740BRC* 1	K24742BRC* 1
K24383POC* 1	K24780POC* 1	K24781POC* 1	K24381POC* 1	K24740POC* 1	K24742POC* 1
K24383SAG* 1	K24780SAG* 1	K24781SAG* 1	K24381SAG* 1	K24740SAG* 1	K24742SAG* 1
K24383WHIW 1	K24780WHIW 1	K24781WHIW 1	K24381WHIW 1	K24740WHIW 1	K24742WHIW 1
K24383LIVW 1	K24780LIVW 1	K24781LIVW 1	K24381LIVW 1	K24740LIVW 1	K24742LIVW 1
K24383LBKB 1	K24780LBKB 1	K24781LBKB 1	K24381LBKB 1	K24740LBKB 1	K24742LBKB 1
K24383PBR* 1	K24780PBR* 1	K24781PBR* 1	K24381PBR* 1	K24740PBR* 1	K24742PBR* 1
K24383TIRB 1	K24780TIRB 1	K24781TIRB 1	K24381TIRB 1	K24740TIRB 1	K24742TIRB 1
K24383DBZB 1	K24780DBZB 1	K24781DBZB 1	K24381DBZB 1	K24740DBZB 1	K24742DBZB 1
K24383ABSB 1	K24780ABSB 1	K24781ABSB 1	K24381ABSB 1	K24740ABSB 1	K24742ABSB 1
K24383TCOB 1	K24780TCOB 1	K24781TCOB 1	K24381TCOB 1	K24740TCOB 1	K24742TCOB 1

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterix, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 86mm  
FIXING CENTRES: 60.3mm  
BS 546: 1950

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 86mm  
FIXING CENTRES: 60.3mm  
BS 1363 Pt. 2: 1995

MOUNTING BOXES:  
FLUSH 35mm: 886ZIC  
FLUSH 47mm: 878ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 146mm  
FIXING CENTRES: 120.6mm  
BS 1363 Pt 2: 1995

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 86mm  
FIXING CENTRES: 60.3mm  
BS 546: 1950

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

Rotary operated shutter  
DIMENSIONS:  
102 x 86mm  
FIXING CENTRES: 60.3mm  
Floor sockets have fixing screws  
BS1363 Pt. 2: 1995

MOUNTING BOXES:  
FLUSH 35mm: 886ZIC  
FLUSH 47mm: 878ZIC  
(for extra wiring space)

Rotary operated shutter  
DIMENSIONS:  
102 x 146mm  
FIXING CENTRES: 120.6mm  
Floor sockets have fixing screws  
BS1363 Pt. 2: 1995

Dual Earth  
(see note box)

Dual Earth  
(see note box)

### Shaver/ Toothbrush Supply Outlet

DUAL VOLTAGE  
115/230V OUTPUT  
220/240V  
50/60Hz INPUT

### Connection Units Switched

DP  
13 AMP

DP  
WITH NEON  
13 AMP

DP WITH  
NEON &  
FLEX OUTLET  
13 AMP

### Connection Units Unswitched

WITH NEON  
13 AMP



#### FINISHES

BRUSHED STAINLESS STEEL	K24709BSS*	1	K24941BSS*	1	K24961BSS*	1	K24971BSS*	1	K24958BSS*	1
LACQUERED BRUSHED STEEL	K24709LBS*	1	K24941LBS*	1	K24961LBS*	1	K24971LBS*	1	K24958LBS*	1
BRUSHED CHROME	K24709BRC*	1	K24941BRC*	1	K24961BRC*	1	K24971BRC*	1	K24958BRC*	1
POLISHED CHROME	K24709POC*	1	K24941POC*	1	K24961POC*	1	K24971POC*	1	K24958POC*	1
SATIN GOLD	K24709SAG*	1	K24941SAG*	1	K24961SAG*	1	K24971SAG*	1	K24958SAG*	1
PORCELAIN WHITE	K24709WHIW	1	K24941WHIW	1	K24961WHIW	1	K24971WHIW	1	K24958WHIW	1
LUSTROUS IVORY	K24709LIVW	1	K24941LIVW	1	K24961LIVW	1	K24971LIVW	1	K24958LIVW	1
LUSTROUS BLACK	K24709LBKB	1	K24941LBKB	1	K24961LBKB	1	K24971LBKB	1	K24958LBKB	1
POLISHED BRASS	K24709PBR*	1	K24941PBR*	1	K24961PBR*	1	K24971PBR*	1	K24958PBR*	1
TEXTURED IRON	K24709TIRB	1	K24941TIRB	1	K24961TIRB	1	K24971TIRB	1	K24958TIRB	1
DESERT BRONZE	K24709DBZB	1	K24941DBZB	1	K24961DBZB	1	K24971DBZB	1	K24958DBZB	1
ANTIQUÉ BRASS	K24709ABSB	1	K24941ABSB	1	K24961ABSB	1	K24971ABSB	1	K24958ABSB	1
TEXTURED COPPER	K24709TCOB	1	K24941TCOB	1	K24961TCOB	1	K24971TCOB	1	K24958TCOB	1

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOXES:  
FLUSH: 878ZIC

This design incorporates a double wound isolating transformer rated 20VA at 230 or 115 volts and meets BS EN 61558-2-5: 1998 making it safe for use in bathrooms.

Insertion of a shaver/toothbrush plug automatically switches on by energising the primary side of the isolating transformer – removal automatically switches off. The transformer is protected against overload by an automatic solid state overload device with automatic resetting.

DIMENSIONS:  
146 x 86mm

FIXING CENTRES: 120.6mm  
BS EN 61558-2-5: 1998

MOUNTING BOXES:  
FLUSH: 877ZIC

All connection units are fitted with a 13A fuse (to BS 1362).

TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS 1363-4: 1995

Neon is only available in white or black insulated rocker.

Matching metal capped fuse carriers are standard on all Aspect Connection Units (except Black and White).



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## Switches

WITH NEON &  
FLEX OUTLET  
13 AMP







1 GANG SP  
2 WAY  
20 AMP

2 GANG SP  
2 WAY  
20 AMP

3 GANG SP  
2 WAY  
10 AMP

1 GANG SP  
2 WAY  
20 AMP  
WITH LARGE  
ROCKER

2 GANG SP  
2 WAY  
20 AMP  
WITH LARGE  
ROCKERS

					
<b>K24978BSS*</b> <b>1</b>	<b>K24371BSS*</b> <b>1</b>	<b>K24372BSS*</b> <b>1</b>	<b>K24373BSS*</b> <b>1</b>	<b>K23471BSS*</b> <b>1</b>	<b>K23472BSS*</b> <b>1</b>
<b>K24978LBS*</b> <b>1</b>	<b>K24371LBS*</b> <b>1</b>	<b>K24372LBS*</b> <b>1</b>	<b>K24373LBS*</b> <b>1</b>	<b>K23471LBS*</b> <b>1</b>	<b>K23472LBS*</b> <b>1</b>
<b>K24978BRC*</b> <b>1</b>	<b>K24371BRC*</b> <b>1</b>	<b>K24372BRC*</b> <b>1</b>	<b>K24373BRC*</b> <b>1</b>	<b>K23471BRC*</b> <b>1</b>	<b>K23472BRC*</b> <b>1</b>
<b>K24978POC*</b> <b>1</b>	<b>K24371POC*</b> <b>1</b>	<b>K24372POC*</b> <b>1</b>	<b>K24373POC*</b> <b>1</b>	<b>K23471POC*</b> <b>1</b>	<b>K23472POC*</b> <b>1</b>
<b>K24978SAG*</b> <b>1</b>	<b>K24371SAG*</b> <b>1</b>	<b>K24372SAG*</b> <b>1</b>	<b>K24373SAG*</b> <b>1</b>	<b>K23471SAG*</b> <b>1</b>	<b>K23472SAG*</b> <b>1</b>
<b>K24978WHIW</b> <b>1</b>	<b>K24371WHIW</b> <b>1</b>	<b>K24372WHIW</b> <b>1</b>	<b>K24373WHIW</b> <b>1</b>	<b>K23471WHIW</b> <b>1</b>	<b>K23472WHIW</b> <b>1</b>
<b>K24978LIVW</b> <b>1</b>	<b>K24371LIVW</b> <b>1</b>	<b>K24372LIVW</b> <b>1</b>	<b>K24373LIVW</b> <b>1</b>	<b>K23471LIVW</b> <b>1</b>	<b>K23472LIVW</b> <b>1</b>
<b>K24978LBKB</b> <b>1</b>	<b>K24371LBKB</b> <b>1</b>	<b>K24372LBKB</b> <b>1</b>	<b>K24373LBKB</b> <b>1</b>	<b>K23471LBKB</b> <b>1</b>	<b>K23472LBKB</b> <b>1</b>
<b>K24978PBR*</b> <b>1</b>	<b>K24371PBR*</b> <b>1</b>	<b>K24372PBR*</b> <b>1</b>	<b>K24373PBR*</b> <b>1</b>	<b>K23471PBR*</b> <b>1</b>	<b>K23472PBR*</b> <b>1</b>
<b>K24978TIRB</b> <b>1</b>	<b>K24371TIRB</b> <b>1</b>	<b>K24372TIRB</b> <b>1</b>	<b>K24373TIRB</b> <b>1</b>	<b>K23471TIRB</b> <b>1</b>	<b>K23472TIRB</b> <b>1</b>
<b>K24978DBZB</b> <b>1</b>	<b>K24371DBZB</b> <b>1</b>	<b>K24372DBZB</b> <b>1</b>	<b>K24373DBZB</b> <b>1</b>	<b>K23471DBZB</b> <b>1</b>	<b>K23472DBZB</b> <b>1</b>
<b>K24978ABSB</b> <b>1</b>	<b>K24371ABSB</b> <b>1</b>	<b>K24372ABSB</b> <b>1</b>	<b>K24373ABSB</b> <b>1</b>	<b>K23471ABSB</b> <b>1</b>	<b>K23472ABSB</b> <b>1</b>
<b>K24978TCOB</b> <b>1</b>	<b>K24371TCOB</b> <b>1</b>	<b>K24372TCOB</b> <b>1</b>	<b>K24373TCOB</b> <b>1</b>	<b>K23471TCOB</b> <b>1</b>	<b>K23472TCOB</b> <b>1</b>

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOXES:  
FLUSH: 877ZIC

All connection units are fitted with a 13A fuse (to BS 1362).

TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS 1363-4: 1995

Neon is only available in white or black rocker.

MOUNTING BOXES:  
FLUSH: 861ZIC

TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> Stranded (max)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS EN 60669-1: 1999

MOUNTING BOXES:  
FLUSH: 861ZIC

TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> Stranded (max)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS EN 60669-1: 1999

MOUNTING BOXES:  
FLUSH: 861ZIC

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS EN 60669-1: 1999

MOUNTING BOXES:  
FLUSH: 861ZIC

DIMENSIONS:  
86 x 86mm

ROCKER  
DIMENSIONS:  
22 x 40mm

FIXING CENTRES:  
60.3mm

BS EN 60669-1: 1999

MOUNTING BOXES:  
FLUSH: 861ZIC

DIMENSIONS:  
86 x 86mm

ROCKER  
DIMENSIONS:  
22 x 40mm

FIXING CENTRES:  
60.3mm

BS EN 60669-1: 1999

Matching metal capped fuse carriers are standard on all Aspect Connection Units (except Black and White).

## Switches

1 GANG SP  
2 WAY  
20 AMP  
WITH WIDE  
ROCKER

High Current  
Switches

1 GANG DP  
WITH NEON  
32 AMP

1 GANG DP  
WITH NEON  
50 AMP

3 POLE  
FAN  
ISOLATOR



## FINISHES

BRUSHED STAINLESS STEEL	K23473BSS*	1	K24305BSS*	1	K24336BSS*	1	K24859BSS*	1
LACQUERED BRUSHED STEEL	K23473LBS*	1	K24305LBS*	1	K24336LBS*	1	K24859LBS*	1
BRUSHED CHROME	K23473BRC*	1	K24305BRC*	1	K24336BRC*	1	K24859BRC*	1
POLISHED CHROME	K23473POC*	1	K24305POC*	1	K24336POC*	1	K24859POC*	1
SATIN GOLD	K23473SAG*	1	K24305SAG*	1	K24336SAG*	1	K24859SAG*	1
PORCELAIN WHITE	K23473WHIW	1	K24305WHIW	1	K24336WHIW	1	K24859WHIW	1
LUSTROUS IVORY	K23473LIVW	1	K24305LIVW	1	K24336LIVW	1	K24859LIVW	1
LUSTROUS BLACK	K23473LBKB	1	K24305LBKB	1	K24336LBKB	1	K24859LBKB	1
POLISHED BRASS	K23473PBR*	1	K24305PBR*	1	K24336PBR*	1	K24859PBR*	1
TEXTURED IRON	K23473TIRB	1	K24305TIRB	1	K24336TIRB	1	K24859TIRB	1
DESERT BRONZE	K23473DBZB	1	K24305DBZB	1	K24336DBZB	1	K24859DBZB	1
ANTIQU BRASS	K23473ABSB	1	K24305ABSB	1	K24336ABSB	1	K24859ABSB	1
TEXTURED COPPER	K23473TCOB	1	K24305TCOB	1	K24336TCOB	1	K24859TCOB	1

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\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterix, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOXES:  
FLUSH: 861ZIC  
DIMENSIONS:  
86 x 86mm  
ROCKER  
DIMENSIONS:  
50 x 40mm  
FIXING CENTRES:  
60.3mm  
BS EN 60669-1: 1999

MOUNTING BOXES:  
FLUSH: 861ZIC  
DIMENSIONS:  
86 x 86mm  
ROCKER  
DIMENSIONS:  
22 x 40mm  
FIXING CENTRES:  
60.3mm  
BS EN 60669-1: 1999

MOUNTING BOXES:  
FLUSH: 878ZIC  
DIMENSIONS:  
86 x 146mm  
FIXING CENTRES:  
120.6mm  
BS EN 60669-1: 1999

MOUNTING BOXES:  
FLUSH: 861ZIC  
DIMENSIONS:  
86 x 86mm  
FIXING CENTRES:  
60.3mm  
BS EN 60947-3: 1992

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## Intelligent Dimmers (CE marked)

2 WAY SINGLE  
230V a.c. 50Hz  
60W/VA MIN-  
500W/400VA  
MAX.

2 WAY SINGLE  
230V a.c. 50Hz  
40W/VA MIN.  
300W/240VA  
MAX.

2 WAY DOUBLE  
230V a.c. 50Hz  
40W/VA MIN.  
300W/240VA  
MAX. FOR EACH  
DIMMER

		
<b>K24301BSS</b>	<b>K24521BSS</b>	<b>K24522BSS</b>
<b>K24301LBS</b>	<b>K24521LBS</b>	<b>K24522LBS</b>
<b>K24301BRC</b>	<b>K24521BRC</b>	<b>K24522BRC</b>
<b>K24301POC</b>	<b>K24521POC</b>	<b>K24522POC</b>
<b>K24301SAG</b>	<b>K24521SAG</b>	<b>K24522SAG</b>
<b>K24301WHI</b>	<b>K24521WHI</b>	<b>K24522WHI</b>
<b>K24301LIV</b>	<b>K24521LIV</b>	<b>K24522LIV</b>
<b>K24301LBK</b>	<b>K24521LBK</b>	<b>K24522LBK</b>
<b>K24301PBR</b>	<b>K24521PBR</b>	<b>K24522PBR</b>
<b>K24301TIR</b>	<b>K24521TIR</b>	<b>K24522TIR</b>
<b>K24301DBZ</b>	<b>K24521DBZ</b>	<b>K24522DBZ</b>
<b>K24301ABS</b>	<b>K24521ABS</b>	<b>K24522ABS</b>
<b>K24301TCO</b>	<b>K24521TCO</b>	<b>K24522TCO</b>



MOUNTING BOXES:  
FLUSH 866ZIC – 35mm  
deep min

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm

MOUNTING BOXES:  
FLUSH 866ZIC – 35mm  
deep min

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm

MOUNTING BOXES:  
FLUSH 866ZIC – 35mm  
deep min

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm

These dimmers employ the latest micro-controller based circuitry to provide electronic soft-start and overload protection. They are suitable for use with good quality electronic or wire-wound transformers. Can also be used with good quality halogen lamps incorporating GU10 bases. Please check with lamp manufacturer to determine suitability.

### NOT SUITABLE FOR FLUORESCENT LOADS.

Conform to latest standards BS EN 60669-2-1.

All intelligent dimmers have a combined push-on/push-off switch and rotary dimmer control, and are suitable for one or two-way switching. Only one dimmer can be used in a two way switching circuit.

They are radio frequency interference suppressed to BS EN 55015.

### Dimmers (NON UK)

220V A.C. 50HZ  
60-500W  
SINGLE

220V A.C. 50HZ  
100-1000W  
SINGLE

### Grid Plus Modular Frontplates SUPPLIED WITH MOUNTING FRAME

1 MODULE

2 MODULE



#### FINISHES

BRUSHED STAINLESS STEEL	K24541BSS	1	K24561BSS	1	K24331BSS	1	K24332BSS	1
LACQUERED BRUSHED STEEL	K24541LBS	1	K24561LBS	1	K24331LBS	1	K24332LBS	1
BRUSHED CHROME	K24541BRC	1	K24561BRC	1	K24331BRC	1	K24332BRC	1
POLISHED CHROME	K24541POC	1	K24561POC	1	K24331POC	1	K24332POC	1
SATIN GOLD	K24541SAG	1	K24561SAG	1	K24331SAG	1	K24332SAG	1
PORCELAIN WHITE	K24541WHI	1	K24561WHI	1	K24331WHI	1	K24332WHI	1
LUSTROUS IVORY	K24541LIV	1	K24561LIV	1	K24331LIV	1	K24332LIV	1
LUSTROUS BLACK	K24541LBK	1	K24561LBK	1	K24331LBK	1	K24332LBK	1
POLISHED BRASS	K24541PBR	1	K24561PBR	1	K24331PBR	1	K24332PBR	1
TEXTURED IRON	K24541TIR	1	K24561TIR	1	K24331TIR	1	K24332TIR	1
DESERT BRONZE	K24541DBZ	1	K24561DBZ	1	K24331DBZ	1	K24332DBZ	1
ANTIQUÉ BRASS	K24541ABS	1	K24561ABS	1	K24331ABS	1	K24332ABS	1
TEXTURED COPPER	K24541TCO	1	K24561TCO	1	K24331TCO	1	K24332TCO	1

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

MOUNTING BOXES:  
FLUSH 866ZIC –  
35mm deep min.  
DIMENSIONS:  
86 x 86mm  
FIXING CENTRES: 60.3mm  
Suitable for tungsten GLS  
lamps only, with internal  
fuses.  
NOT SUITABLE FOR  
FLUORESCENT LOADS.

MOUNTING BOXES:  
FLUSH 866ZIC –  
35mm deep min.  
DIMENSIONS:  
86 x 86mm  
FIXING CENTRES:  
60.3mm  
Suitable for tungsten GLS  
lamps only, with internal  
fuses.  
NOT SUITABLE FOR  
FLUORESCENT LOADS.

MOUNTING BOX:  
FLUSH: 891ALM  
DIMENSIONS:  
86 x 86mm  
BS 5733: 2010

MOUNTING BOX:  
FLUSH: 891ALM  
DIMENSIONS:  
86 x 86mm  
BS 5733: 2010

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## Switch Modules

3 MODULE

4 MODULE

6 MODULE

8 MODULE

BLANK INSERT



K24333BSS	1	K24334BSS	1	K24346BSS	1	K24348BSS	1	K4880BSS*	1
K24333LBS	1	K24334LBS	1	K24346LBS	1	K24348LBS	1	K4880LBS*	1
K24333BRC	1	K24334BRC	1	K24346BRC	1	K24348BRC	1	K4880BRC*	1
K24333POC	1	K24334POC	1	K24346POC	1	K24348POC	1	K4880POC*	1
K24333SAG	1	K24334SAG	1	K24346SAG	1	K24348SAG	1	K4880SAG*	1
K24333WHI	1	K24334WHI	1	K24346WHI	1	K24348WHI	1	K4880WHIW	1
K24333LIV	1	K24334LIV	1	K24346LIV	1	K24348LIV	1	K4880LIVW	1
K24333LBK	1	K24334LBK	1	K24346LBK	1	K24348LBK	1	K4880LBKB	1
K24333PBR	1	K24334PBR	1	K24346PBR	1	K24348PBR	1	K4880PBR*	1
K24333TIR	1	K24334TIR	1	K24346TIR	1	K24348TIR	1	K4880TIRB	1
K24333DBZ	1	K24334DBZ	1	K24346DBZ	1	K24348DBZ	1	K4880DBZB	1
K24333ABS	1	K24334ABS	1	K24346ABS	1	K24348ABS	1	K4880ABSB	1
K24333TCO	1	K24334TCO	1	K24346TCO	1	K24348TCO	1	K4880TCOB	1

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterix, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOX:  
FLUSH: 892ALM  
DIMENSIONS:  
86 x 146mm  
BS 5733: 2010

MOUNTING BOX:  
FLUSH: 892ALM  
DIMENSIONS:  
86 x 146mm  
BS 5733: 2010

MOUNTING BOX:  
FLUSH: 893ALM  
DIMENSIONS:  
146 x 146mm  
BS 5733: 2010

MOUNTING BOX:  
FLUSH: 893ALM  
DIMENSIONS:  
146 x 146mm  
BS 5733: 2010

Matching metal decorative caps are standard on all Aspect Grid Blank Inserts (except WHI).  
BS 5733: 2010

## Switch Modules 10 Amp

10 AMP  
SP 1 WAY

10 AMP  
DP 1 WAY

10 AMP  
SP 2 WAY

10 AMP  
SP 2 WAY  
RETRACTIVE  
SWITCH

10 AMP  
SP 2 WAY  
RED  
RETRACTIVE  
SWITCH



### FINISHES

BRUSHED STAINLESS STEEL	K4881BSS* 1	K4981BSS* 1	K4882BSS* 1	K4885BSS* 1	K4885RED 1 K4885REDB 1
LACQUERED BRUSHED STEEL	K4881LBS* 1	K4981LBS* 1	K4882LBS* 1	K4885LBS* 1	
BRUSHED CHROME	K4881BRC* 1	K4981BRC* 1	K4882BRC* 1	K4885BRC* 1	
POLISHED CHROME	K4881POC* 1	K4981POC* 1	K4882POC* 1	K4885POC* 1	
SATIN GOLD	K4881SAG* 1	K4981SAG* 1	K4882SAG* 1	K4885SAG* 1	
PORCELAIN WHITE	K4881WHIW 1	K4981WHIW 1	K4882WHIW 1	K4885WHIW 1	
LUSTROUS IVORY	K4881LIVW 1	K4981LIVW 1	K4882LIVW 1	K4885LIVW 1	
LUSTROUS BLACK	K4881LBKB 1	K4981LBKB 1	K4882LBKB 1	K4885LBKB 1	
POLISHED BRASS	K4881PBR* 1	K4981PBR* 1	K4882PBR* 1	K4885PBR* 1	
TEXTURED IRON	K4881TIRB 1	K4981TIRB 1	K4882TIRB 1	K4885TIRB 1	
DESERT BRONZE	K4881DBZB 1	K4981DBZB 1	K4882DBZB 1	K4885DBZB 1	
ANTIQU BRASS	K4881ABSB 1	K4981ABSB 1	K4882ABSB 1	K4885ABSB 1	
TEXTURED COPPER	K4881TCOB 1	K4981TCOB 1	K4882TCOB 1	K4885TCOB 1	

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterix, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

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BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with inductive loads.

Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with inductive loads.

Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

Not available in other finishes

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## Switch Modules

### 20 Amp

10 AMP  
SP 2 WAY  
RETRACTIVE  
SWITCH MARKED  
WITH BELL  
SYMBOL

10 AMP  
SP 2 WAY  
RETRACTIVE  
SWITCH  
MARKED  
'PRESS'

10 AMP  
2 WAY  
CENTRE OFF  
RETRACTIVE  
SWITCH

20 AMP  
SP 1 WAY

20 AMP  
DP  
1 WAY  
PUSH TO MAKE

20 AMP  
DP  
1 WAY  
RED ROCKER  
PUSH TO MAKE



<b>K4885BWHI</b> 1 <b>K4885BBLK</b> 1	<b>K4885PWHI</b> 10 <b>K4885PBLK</b> 1	<b>K4900WHI</b> 10 <b>K4900BLK</b> 10	<b>K4891BSS*</b> 1	<b>K4910BSS*</b> 1	<b>K4910RED</b> 10 <b>K4910REDB</b> 1
			<b>K4891LBS*</b> 1	<b>K4910LBS*</b> 1	
			<b>K4891BRC*</b> 1	<b>K4910BRC*</b> 1	
			<b>K4891POC*</b> 1	<b>K4910POC*</b> 1	
			<b>K4891SAG*</b> 1	<b>K4910SAG*</b> 1	
			<b>K4891WHIW</b> 1	<b>K4910WHIW</b> 1	
			<b>K4891LIVW</b> 1	<b>K4910LIVW</b> 1	
			<b>K4891LBKB</b> 1	<b>K4910LBKB</b> 1	
			<b>K4891PBR*</b> 1	<b>K4910PBR*</b> 1	
			<b>K4891TIRB</b> 1	<b>K4910TIRB</b> 1	
			<b>K4891DBZB</b> 1	<b>K4910DBZB</b> 1	
			<b>K4891ABSB</b> 1	<b>K4910ABSB</b> 1	
			<b>K4891TCOB</b> 1	<b>K4910TCOB</b> 1	

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterix, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

These switches do NOT have to be derated when used with inductive loads.

Note: Push switches are not designed for fluorescent loads.

BS EN 60669-1: 1999

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BS EN 60669-1: 1999

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Note: Push switches are not designed for fluorescent loads.

BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

These switches do NOT have to be derated when used with inductive loads.

Note: Push switches are not designed for fluorescent loads.

BS EN 60669-1: 1999

Not available in other finishes

Not available in other finishes





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20 AMP  
SP 2 WAY  
& CENTRE OFF  
LATCHING

20 AMP  
SP 2 WAY  
RED ROCKER  
& CENTRE OFF  
LATCHING

20 AMP  
INTERMEDIATE

20 AMP  
INTERMEDIATE  
RED ROCKER

20 AMP  
DP  
1 WAY

20 AMP  
DP  
1 WAY  
WITH NEON



<b>K4899BSS*</b> 1	<b>K4899RED</b> 10	<b>K4893BSS*</b> 1	<b>K4893RED</b> 10 <b>K4893REDB</b> 10	<b>K4896BSS*</b> 1	<b>K4896NWHI</b> 1 <b>K4896NBLK</b> 1
<b>K4899LBS*</b> 1		<b>K4893LBS*</b> 1		<b>K4896LBS*</b> 1	
<b>K4899BRC*</b> 1		<b>K4893BRC*</b> 1		<b>K4896BRC*</b> 1	
<b>K4899POC*</b> 1		<b>K4893POC*</b> 1		<b>K4896POC*</b> 1	
<b>K4899SAG*</b> 1		<b>K4893SAG*</b> 1		<b>K4896SAG*</b> 1	
<b>K4899WHIW</b> 1		<b>K4893WHIW</b> 1		<b>K4896WHIW</b> 1	
<b>K4899LIVW</b> 1		<b>K4893LIVW</b> 1		<b>K4896LIVW</b> 1	
<b>K4899LBKB</b> 1		<b>K4893LBKB</b> 1		<b>K4896LBKB</b> 1	
<b>K4899PBR*</b> 1		<b>K4893PBR*</b> 1		<b>K4896PBR*</b> 1	
<b>K4899TIRB</b> 1		<b>K4893TIRB</b> 1		<b>K4896TIRB</b> 1	
<b>K4899DBZB</b> 1		<b>K4893DBZB</b> 1		<b>K4896DBZB</b> 1	
<b>K4899ABSB</b> 1		<b>K4893ABSB</b> 1		<b>K4896ABSB</b> 1	
<b>K4899TCOB</b> 1		<b>K4893TCOB</b> 1		<b>K4896TCOB</b> 1	

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterix, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with inductive loads.  
Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

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BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

Not available in other finishes

Not available in other finishes

Not available in other finishes

## Switch Modules 20 Amp

20 AMP  
DP  
1 WAY  
WITH WINDOW

20 AMP  
DP  
1 WAY  
RED ROCKER



## Printed Modules with and without Neon



### FINISHES

- BRUSHED STAINLESS STEEL
- LACQUERED BRUSHED STEEL
- BRUSHED CHROME
- POLISHED CHROME
- SATIN GOLD
- PORCELAIN WHITE
- LUSTROUS IVORY
- LUSTROUS BLACK
- POLISHED BRASS
- TEXTURED IRON
- DESERT BRONZE
- ANTIQUÉ BRASS
- TEXTURED COPPER

**K4896WWHI** 10  
**K4896WBLK** 10

**K4896RED** 10

### K4896 PRINTED MODULE

FOR WHITE ROCKERS, USE THE SUFFIX 'WHI'. FOR BLACK ROCKERS, USE THE SUFFIX 'BLK'. FOR EXAMPLE: K4896BRWHI OR K4896BRBLK

<b>BOILER</b> K4896BR	<b>WASTE DISPOSAL</b> K4896WD	<b>HOB</b> K4896HB
<b>DISHWASHER</b> K4896DW	<b>WASHING MACHINE</b> K4896WM	<b>IMM. HEATER</b> K4896IH
<b>COOKER HOOD</b> K4896CH	<b>TUMBLE DRYER</b> K4896TD	<b>PLINTH HEATER</b> K4896PH
<b>FAN</b> K4896FN	<b>WASHER DRYER</b> K4896WDR	<b>WORKTOP LIGHTING</b> K4896WL
<b>FRIDGE</b> K4896FG	<b>MICROWAVE</b> K4896MW	<b>WINE COOLER</b> K4896WC
<b>FREEZER</b> K4896FZ	<b>HEATER</b> K4896HR	<b>WARMING DRAWER</b> K4896WDA
<b>FRIDGE FREEZER</b> K4896FF	<b>OVEN</b> K4896OV	<b>COFFEE MACHINE</b> K4896CM

### K4896N PRINTED MODULE WITH NEON

FOR WHITE ROCKERS, USE THE SUFFIX 'WHI'. FOR BLACK ROCKERS, USE THE SUFFIX 'BLK'. FOR EXAMPLE: K4896NBRWHI OR K4896NBRBLK

<b>BOILER</b> K4896NBR	<b>WASTE DISPOSAL</b> K4896NWD	<b>HOB</b> K4896NHB
<b>DISHWASHER</b> K4896NDW	<b>WASHING MACHINE</b> K4896NWM	<b>IMM. HEATER</b> K4896NIH
<b>COOKER HOOD</b> K4896NCH	<b>TUMBLE DRYER</b> K4896NTD	<b>PLINTH HEATER</b> K4896NPH
<b>FAN</b> K4896NFN	<b>WASHER DRYER</b> K4896NWDR	<b>WORKTOP LIGHTING</b> K4896NWL
<b>FRIDGE</b> K4896NFG	<b>MICROWAVE</b> K4896NMW	<b>WINE COOLER</b> K4896NWC
<b>FREEZER</b> K4896NFZ	<b>HEATER</b> K4896NHR	<b>WARMING DRAWER</b> K4896NWDA
<b>FRIDGE FREEZER</b> K4896NFF	<b>OVEN</b> K4896NOV	<b>COFFEE MACHINE</b> K4896NCM

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

Not available in other finishes

Note: K4896NIH (Imm. Heater with Neon) is not available with black rockers.

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## Key Switch Modules

20 AMP  
INTERMEDIATE  
KEY SWITCH



**K4894WHI** **10**  
**K4894BLK** **1**

BS EN 60669-1: 1999  
Key (3405ZIC)  
is supplied.

20 AMP  
SP  
KEY SWITCH  
2 WAY



**K4898WHI** **10**  
**K4898BLK** **1**

BS EN 60669-1: 1999  
Key (3405ZIC)  
is supplied.

20 AMP SP  
KEY SWITCH  
2 WAY  
MARKED  
'EMG LTG'



**K4898ELWHI** **10**  
**K4898ELBLK** **1**

BS EN 60669-1: 1999  
Key (3405ZIC)  
is supplied.

20 AMP  
DP  
KEY SWITCH  
1 WAY



**K4917WHI** **10**  
**K4917BLK** **1**

BS EN 60669-1: 1999  
Key (3405ZIC)  
is supplied.

20 AMP DP  
EMERGENCY  
LIGHTING



**K4917ELWHI** **10**

BS EN 60669-1: 1999  
Key (3405ZIC)  
is supplied.

20 AMP SP  
KEY SWITCH  
2 WAY  
BIASED  
1 WAY



**K4918WHI** **10**  
**K4918BLK** **10**

BS EN 60669-1: 1999  
Key (3405ZIC)  
is supplied.

Not available in other finishes

Indicator Modules

200-250V  
NEON

200-250V  
NEON

200-250V  
FLUORESCENT

21-36V  
FILAMENT

21-36V  
FILAMENT



**FINISHES**

- BRUSHED STAINLESS STEEL
- LACQUERED BRUSHED STEEL
- BRUSHED CHROME
- POLISHED CHROME
- SATIN GOLD
- PORCELAIN WHITE
- LUSTROUS IVORY
- LUSTROUS BLACK
- POLISHED BRASS
- TEXTURED IRON
- DESERT BRONZE
- ANTIQUÉ BRASS
- TEXTURED COPPER

**K4889RED** 10  
**K4889REDB** 1

**K4889AMB** 10

**K4889GRN** 10

**K4836RED** 10

**K4836AMB** 10

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

BS 5733: 2010

BS 5733: 2010

BS 5733: 2010

BS 5733: 2010

BS 5733: 2010

Not available in other finishes

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### Dimmer Switch Modules

#### TUNGSTEN FILAMENT AND LOW VOLTAGE LIGHTING

1 GANG 40W/ VA-220W/180VA, 230VA.C, 50HZ TWO WAY ONE MODULE	1 GANG 60W/ VA-400W/320VA, 230VA.C, 50HZ TWO WAY TWO MODULE
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### Accessory Modules

SINGLE TV CO-AXIAL OUTLET NON-ISOLATED	SINGLE TV CO-AXIAL OUTLET ISOLATED
--	--

21-36V  
FILAMENT



<b>K4836GRN</b> <span style="border: 1px solid black; padding: 2px;">10</span>	<b>K4501BSS*LV</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4500BSS*LV</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4499BSS*</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4520WHI</b> <span style="border: 1px solid black; padding: 2px;">10</span> <b>K4520BLK</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4521WHI</b> <span style="border: 1px solid black; padding: 2px;">10</span> <b>K4521BLK</b> <span style="border: 1px solid black; padding: 2px;">1</span>
	<b>K4501LBS*LV</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4500LBS*LV</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4499LBS*</b> <span style="border: 1px solid black; padding: 2px;">1</span>		
	<b>K4501BRC*LV</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4500BRC*LV</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4499BRC*</b> <span style="border: 1px solid black; padding: 2px;">1</span>		
	<b>K4501POC*LV</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4500POC*LV</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4499POC*</b> <span style="border: 1px solid black; padding: 2px;">1</span>		
	<b>K4501SAG*LV</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4500SAG*LV</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4499SAG*</b> <span style="border: 1px solid black; padding: 2px;">1</span>		
	<b>K4501WHIWL</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4500WHIWL</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4499WHIW</b> <span style="border: 1px solid black; padding: 2px;">1</span>		
	<b>K4501LIVWL</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4500LIVWL</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4499LIVW</b> <span style="border: 1px solid black; padding: 2px;">1</span>		
	<b>K4501LBKBL</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4500LBKBL</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4499LBKB</b> <span style="border: 1px solid black; padding: 2px;">1</span>		
	<b>K4501PBR*LV</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4500PBR*LV</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4499PBR*</b> <span style="border: 1px solid black; padding: 2px;">1</span>		
	<b>K4501TIRBL</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4500TIRBL</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4499TIRB</b> <span style="border: 1px solid black; padding: 2px;">1</span>		
	<b>K4501DBZBL</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4500DBZBL</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4499DBZB</b> <span style="border: 1px solid black; padding: 2px;">1</span>		
	<b>K4501ABSBL</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4500ABSBL</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4499ABSB</b> <span style="border: 1px solid black; padding: 2px;">1</span>		
	<b>K4501TCOBL</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4500TCOBL</b> <span style="border: 1px solid black; padding: 2px;">1</span>	<b>K4499TCOB</b> <span style="border: 1px solid black; padding: 2px;">1</span>		

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterix, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

BS 5733: 2010

These dimmers incorporate the latest in micro-controller based circuitry to provide electronic soft-start and overload protection. They are radio frequency interference suppressed to BS EN 55015.

Suitable for use with good quality electronic or wire wound transformers. Can also be used with good quality mains voltage halogen lamps incorporating GU10 bases. Please check with lamp manufacturer to determine suitability.

Matching metal decorative caps are standard on all Aspect Grid Dimmers (except WHI).

K4500 is only suitable for use in 2, 4 and 8 module grids.

They are not suitable for fluorescent lamps.

Note: Refer to technical section for derating factors when more than one unit is used in any one box.

Conforms to the latest standard BS EN 60669-2-1.

MK Fluorescent Grid Dimmers are low voltage controllers for connection to 1-10V controllable ballasts.

For direct connection to TV or FM aerial co-axial download. NOT to be used in same enclosure as mains exceeding 50V.

BS 3041: 1977

IEC 169-2: 1965

BS 5733: 2010 where applicable.

For direct connection to TV or FM aerial co-axial download. NOT to be used in same enclosure as mains exceeding 50V.

BS 3041: 1977

IEC 169-2: 1965

BS 5733: 2010 where applicable.

Not available in other finishes

When ordering K4501 and K4500, use the suffix 'LV' right at the end, eg. K4501BSSWL

Not available in other finishes

### Accessory Modules

BUZZER UNIT  
200-250V



BUZZER UNIT  
21-36V



16 AMP  
CORD OUTLET



13 AMP  
FUSE UNIT



13 AMP  
FUSE UNIT  
WITH  
TAMPERPROOF  
SCREW



#### FINISHES

BRUSHED STAINLESS STEEL

LACQUERED BRUSHED STEEL

BRUSHED CHROME

POLISHED CHROME

SATIN GOLD

PORCELAIN WHITE

LUSTROUS IVORY

LUSTROUS BLACK

POLISHED BRASS

TEXTURED IRON

DESERT BRONZE

ANTIQUÉ BRASS

TEXTURED COPPER

K4000WHI 10

K4001WHI 10

K4886WHI 10  
K4886BLK 1K4890WHI 10  
K4890BLK 1K4890KOWHI 10  
K4890KOBLK 1

LEAD TIMES: Please  
contact our Customer  
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200-250V  
BS 5733: 2010

Sound output level  
Av 61 db @ 15 feet.  
BS 5733: 2010

Complete with 3 pairs of  
terminals. The supply terminals  
are suitable for up to 2 x  
2.5mm<sup>2</sup> or 1 x 4mm<sup>2</sup> solid  
conductors. The load terminals  
are suitable for one 1.5mm<sup>2</sup>  
flexible cord.

A cord grip is also fitted.  
BS 5733: 2010

Fuse carrier comes with 13A  
cartridge fuse link to BS 1362.  
BS 5733: 2010

Fuse carrier comes with 13A  
cartridge fuse link to BS 1362.  
BS 5733: 2010

Not available in other finishes

technical hotline +44 (0)1268 563720




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## Euro Modular Frontplates

EURO  
1 MODULE  
25 X 50MM

EURO  
2 MODULE  
50 X 50MM

EURO  
4 MODULE  
100 X 50MM

					
<b>K24181BSS</b>	<b>1</b>	<b>K24182BSS</b>	<b>1</b>	<b>K24184BSS</b>	<b>1</b>
<b>K24181LBS</b>	<b>1</b>	<b>K24182LBS</b>	<b>1</b>	<b>K24184LBS</b>	<b>1</b>
<b>K24181BRC</b>	<b>1</b>	<b>K24182BRC</b>	<b>1</b>	<b>K24184BRC</b>	<b>1</b>
<b>K24181POC</b>	<b>1</b>	<b>K24182POC</b>	<b>1</b>	<b>K24184POC</b>	<b>1</b>
<b>K24181SAG</b>	<b>1</b>	<b>K24182SAG</b>	<b>1</b>	<b>K24184SAG</b>	<b>1</b>
<b>K24181WHI</b>	<b>1</b>	<b>K24182WHI</b>	<b>1</b>	<b>K24184WHI</b>	<b>1</b>
<b>K24181LIV</b>	<b>1</b>	<b>K24182LIV</b>	<b>1</b>	<b>K24184LIV</b>	<b>1</b>
<b>K24181LBK</b>	<b>1</b>	<b>K24182LBK</b>	<b>1</b>	<b>K24184LBK</b>	<b>1</b>
<b>K24181PBR</b>	<b>1</b>	<b>K24182PBR</b>	<b>1</b>	<b>K24184PBR</b>	<b>1</b>
<b>K24181TIR</b>	<b>1</b>	<b>K24182TIR</b>	<b>1</b>	<b>K24184TIR</b>	<b>1</b>
<b>K24181DBZ</b>	<b>1</b>	<b>K24182DBZ</b>	<b>1</b>	<b>K24184DBZ</b>	<b>1</b>
<b>K24181ABS</b>	<b>1</b>	<b>K24182ABS</b>	<b>1</b>	<b>K24184ABS</b>	<b>1</b>
<b>K24181TCO</b>	<b>1</b>	<b>K24182TCO</b>	<b>1</b>	<b>K24184TCO</b>	<b>1</b>



### MOUNTING BOXES:

Suitable for flush boxes to BS 4662: 2006 and surface boxes to BS 5733: 2010. Refer to appropriate module for minimum box depth.

FIXING CENTRES: 60.3mm

BS 5733: 2010 where applicable.

Note: No grid required, modules just clip into place.

### MOUNTING BOXES:

Suitable for flush boxes to BS 4662: 2006 and surface boxes to BS 5733: 2010. Refer to appropriate module for minimum box depth.

FIXING CENTRES: 60.3mm

BS 5733: 2010 where applicable.

Note: No grid required, modules just clip into place.

### MOUNTING BOXES:

Suitable for flush boxes to BS 4662: 2006 and surface boxes to BS 5733: 2010. Refer to appropriate module for minimum box depth.

FIXING CENTRES: 120.6mm

BS 5733: 2010 where applicable.

Note: No grid required, modules just clip into place.

## Euro Power Modules

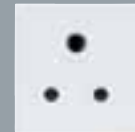
UK  
1 GANG  
13 AMP 250V  
EURO\*  
TWO MODULE

GERMAN  
2P+E 16 AMP 250V  
SHUTTERED EURO\*  
TWO MODULE  
(NON UK)

AMERICAN  
15 AMP 127V  
SHUTTERED  
EURO\*  
TWO MODULE  
(NON UK)

UK  
1 GANG  
5 AMP 250V  
SHUTTERED  
EURO\*  
TWO MODULE

FRENCH/BELGIAN  
2P+E 16AMP  
250V SHUTTERED  
EURO\*  
TWO MODULE  
(NON UK)



## FINISHES

BRUSHED STAINLESS STEEL

LACQUERED BRUSHED STEEL

BRUSHED CHROME

POLISHED CHROME

SATIN GOLD

PORCELAIN WHITE

LUSTROUS IVORY

LUSTROUS BLACK

POLISHED BRASS

TEXTURED IRON

DESERT BRONZE

ANTIQUÉ BRASS

TEXTURED COPPER

K5830WHI 10  
K5830BLK 10

K5831WHI 10  
K5831BLK 10

K5832WHI 10  
K5832BLK 10

K5833WHI 10  
K5833BLK 10

K5834WHI 10  
K5834BLK 10

LEAD TIMES: Please  
contact our Customer  
Services Department on:  
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MOUNTING BOX:  
35mm minimum  
46mm (for extra  
wiring space).  
DIMENSIONS:  
50 x 50mm  
BS 1363 Part 2: 1995

MOUNTING BOX:  
46mm  
DIMENSIONS:  
50 x 50mm  
IEC 60884-1: 2006

MOUNTING BOX:  
35mm  
46mm (for extra wiring  
space)  
DIMENSIONS:  
50 x 50mm  
SASO 2203: 2003

MOUNTING BOX:  
35mm minimum  
46mm (for extra  
wiring space).  
DIMENSIONS:  
50 x 50mm  
BS 546: 1950

MOUNTING BOX:  
46mm  
DIMENSIONS:  
50 x 50mm  
NF C61-341

Not available in other finishes



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## Euro Datacom Modules

USB CHARGING MODULE	RJ11/12 ONE MODULE 25X50MM	RJ45 CAT 6 ONE MODULE 25X50MM	RJ45 CAT 6 SCREENED ONE MODULE 25X50MM	RJ45 CAT 6 ANGLED ONE MODULE 25X50MM	RJ45 CAT 5E ANGLED ONE MODULE 25X50MM
					
<b>K5837WHI</b> <b>1</b> <b>K5837BLK</b> <b>1</b>	<b>K5887WHI</b> <b>5</b> <b>K5887BLK</b> <b>5</b>	<b>K5846WHI</b> <b>5</b> <b>K5846BLK</b> <b>5</b>	<b>K5846SWHI</b> <b>5</b> <b>K5846SBLK</b> <b>5</b>	<b>K5864WHI</b> <b>5</b>	<b>K5844WHI</b> <b>5</b>

K5837  
MOUNTING BOX:  
35mm minimum  
46mm for extra wiring space  
DIMENSIONS:  
50 x 50mm  
IEC 60950-1  
IEC 61000-6-1/3

Suitable for both RJ11 and RJ12 jacks  
RJ11; 4 wire  
RJ12; 6 wire  
MOUNTING BOXES:  
Minimum box depth 35mm  
FCC68  
EN 41003

Cat 6 performance.  
Suitable for both 568A and 568B wiring schemes.  
MOUNTING BOXES:  
Minimum Box Depth 35mm  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

Cat 6 performance.  
Suitable for both 568A and 568B wiring schemes.  
MOUNTING BOXES:  
Minimum Box Depth 35mm  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

Cat 6 performance.  
Suitable for both 568A and 568B wiring schemes.  
MOUNTING BOXES:  
Minimum Box Depth 35mm  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

Enhanced Cat 5 performance.  
Suitable for both 568A and 568B wiring schemes.  
MOUNTING BOXES:  
Minimum box depth 35mm standard  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

Not available in other finishes

Mains operated products and extra low voltage modules must not be installed within the same frontplate aperture.  
Refer to BS 7671: 2008 for details.

\* Euro frontplates can be found on page 101.

## Euro Datacom Modules

RJ45  
CAT 5E  
ONE MODULE  
25 X 50MM

TELEPHONE MASTER  
ONE MODULE  
25 X 50MM

TELEPHONE  
SECONDARY  
ONE MODULE  
25 X 50MM

BNC 50  
ONE MODULE  
25 X 50MM



### FINISHES

- BRUSHED STAINLESS STEEL
- LACQUERED BRUSHED STEEL
- BRUSHED CHROME
- POLISHED CHROME
- SATIN GOLD
- PORCELAIN WHITE
- LUSTROUS IVORY
- LUSTROUS BLACK
- POLISHED BRASS
- TEXTURED IRON
- DESERT BRONZE
- ANTIQUÉ BRASS
- TEXTURED COPPER

**K5845WHI** 5  
**K5845BLK** 5

**K5820WHI** 5  
**K5820BLK** 5

**K5821WHI** 5  
**K5821BLK** 5

**K5801WHI** 5

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

Enhanced Cat 5 performance. Suitable for both 568A and 568B wiring schemes.

MOUNTING BOXES: Minimum box depth 35mm standard

ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

MOUNTING BOXES: Minimum depth 35mm  
BS 6312 Pt 2

MOUNTING BOXES: Minimum depth 35mm  
BS 6312 Pt 2

50 Ohm crimp connector suitable for use with RG58, URM43, URM76 and Beldon 9907 type co-axial cables.

MOUNTING BOXES: Minimum box depth 35mm






Not available in other finishes

Mains operated products and extra low voltage modules must not be installed within the same frontplate. Refer to BS 7671: 2008 for details.

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## Euro Multimedia Modules

SINGLE OUTLET (IEC MALE) ONE MODULE 25 X 50MM	SINGLE OUTLET (IEC FEMALE) ONE MODULE 25 X 50MM	SINGLE F-TYPE SATELLITE SOCKET ONE MODULE 25 X 50MM	TWIN OUTLET TV/FM DIPLEXER TWO MODULE 50 X 50MM <b>(IRELAND ONLY)</b>	TWIN OUTLET TV-FM/DAB DIPLEXER TWO MODULE 50 X 50MM
				
<b>K5850WHI</b> <span style="background-color: black; color: white; padding: 0 2px;">5</span> <b>K5850BLK</b> <span style="background-color: black; color: white; padding: 0 2px;">5</span>	<b>K5851WHI</b> <span style="background-color: black; color: white; padding: 0 2px;">5</span> <b>K5851BLK</b> <span style="background-color: black; color: white; padding: 0 2px;">5</span>	<b>K5855WHI</b> <span style="background-color: black; color: white; padding: 0 2px;">5</span> <b>K5855BLK</b> <span style="background-color: black; color: white; padding: 0 2px;">5</span>	<b>K5852WHI</b> <span style="background-color: black; color: white; padding: 0 2px;">5</span> <b>K5852BLK</b> <span style="background-color: black; color: white; padding: 0 2px;">5</span>	<b>K5852DABWHI</b> <span style="background-color: black; color: white; padding: 0 2px;">5</span> <b>K5852DABBLK</b> <span style="background-color: black; color: white; padding: 0 2px;">5</span>

Fully screened non isolated TV outlets containing a combination of single, TV/FM Diplexer, TV/FM/SAT Triplexer and BT secondary telephone outlets for use within digital TV systems and interactive TV services.

Single outlets for connection to a single TV, FM or Satellite co-axial aerial lead.

MOUNTING BOXES:  
Min box depth 47mm

DIMENSIONS:  
ONE MODULE 25 x 50mm  
TWO MODULE 50 x 50mm

BS 3041: 1997 IEC 169-2: 1965  
BS EN 50083 & BS 5733: 2010 where applicable.

TV/FM Diplexer units for connection to a single co-axial aerial lead with combined TV and FM signals.

PERFORMANCE  
Single TV: DC - 950MHz  
Sat: DC - 1.75GHz  
Diplexer TV: 5 - 65MHz  
470 - 862MHz  
FM: 87.5 - 108 MHz

TV/FM/DAB FOR DIGITAL RADIO  
PERFORMANCE  
Diplexer TV: 5-65MHz  
470-862MHz  
FM/DAB: 87.5-230MHz

These products are fully compatible with Labgear TV distribution systems and are approved for use in "Sky Homes" and "Homes On" specifications.

## Euro Multimedia Modules

TRIPLE OUTLET  
TV/FM/SATELLITE  
TRIPLEXER  
TWO MODULE  
50 X 50MM  
(IRELAND ONLY)

TRIPLE OUTLET  
TV-FM/DAB-SAT  
TRIPLEXER TWO  
MODULE  
50 X 50MM

QUAD OUTLET  
TV-FM/DAB-  
2XSAT  
TWO MODULE  
50 X 50MM

FEMALE HDMI  
OUTLET



## FINISHES

BRUSHED STAINLESS STEEL

LACQUERED BRUSHED STEEL

BRUSHED CHROME

POLISHED CHROME

SATIN GOLD

PORCELAIN WHITE

LUSTROUS IVORY

LUSTROUS BLACK

POLISHED BRASS

TEXTURED IRON

DESERT BRONZE

ANTIQUÉ BRASS

TEXTURED COPPER

**K5853WHI** **5**  
**K5853BLK** **5**

**K5853DABWHI** **5**  
**K5853DABBLK** **5**

**K5854DABWHI** **5**  
**K5854DABBLK** **5**

**K5807WHI** **5**  
**K5807BLK** **5**

**LEAD TIMES:** Please  
contact our Customer  
Services Department on:  
01268 563 404

TV/FM diplexer units for connection to a single co-axial aerial lead with combined TV and FM signals.  
TV/FM/SAT triplexer units for connection to a single co-axial aerial lead with combined TV, FM and Satellite signals

K5807 Female HDMI Outlet is HDMI 1.1, 1.2 and 1.3 compatible, HDCP compliant.

Data Rate: Up to 2.25 Gbps  
Scan: Up to 1080p/1920x1200

Input Connector:  
1 x HDMI Female (Type A)

Output Connector:  
1 x HDMI Female (Type A)

Supports high resolution input:  
PC: VGA, SVGA,

SXVGA (1280x1024) and UXGA (1600x1200, 1920x1200)

HDTV: 480p, 720p, 1080i and 1080p

HDMI input cable should be no larger than 20m.

Weight of product: 16g

Dimensions: 50 x 50 x 20mm

## PERFORMANCE

## SINGLE OUTLETS

TV/FM IEC MALE OR FEMALE  
DC-950MHz  
SAT F-TYPE  
DC-1.75GHz

## TV/FM/SAT PRODUCTS

OUTLET TV DIPLEXER  
5-65MHz  
470-862MHz  
FM/DAB SAT 87.5-108MHz  
N/A

## TV/FM/DAB/SAT PRODUCTS FOR DIGITAL RADIO

OUTLET TV DIPLEXER  
5-65MHz  
470-862MHz  
FM/DAB SAT OR SAT1 87.5-230MHz  
N/A  
SAT2

## OUTLET TV

FM SAT1  
TRIPLEXER  
5-65MHz  
470-862MHz  
87.5-108MHz  
950-2300MHz

## OUTLET TV

FM SAT1 SAT2  
TRIPLEXER  
5-65MHz  
470-862MHz  
87.5-230MHz  
950-2300MHz  
5-2300MHz

Not available in other finishes

For the full range of Euro multimedia modules, please see Logic Plus page 56

These products are fully compatible with Labgear TV distribution systems and are approved for use in "Sky Homes" and "Homes On" specifications.

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## Euro Blank Modules

EURO  
TWO MODULE  
(50 X 50MM)

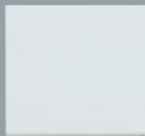




EURO  
ONE MODULE  
(25 X 50MM)

EURO  
1/TWO MODULE  
(12.5 X 50MM)

## LJU6C Datacom Frontplate

1 GANG  
TWO MODULE  
22 X 37MM

2 GANG  
TWO MODULE  
22 X 37MM

				
<b>K180WHI</b> <b>10</b>	<b>K188WHI</b> <b>10</b> <b>K188BLK</b> <b>10</b>	<b>K186WHI</b> <b>10</b> <b>K186BLK</b> <b>10</b>	<b>K24171BSS</b> <b>1</b>	<b>K24172BSS</b> <b>1</b>
			<b>K24171LBS</b> <b>1</b>	<b>K24172LBS</b> <b>1</b>
	<b>K24171BRC</b> <b>1</b>		<b>K24172BRC</b> <b>1</b>	
	<b>K24171POC</b> <b>1</b>		<b>K24172POC</b> <b>1</b>	
	<b>K24171SAG</b> <b>1</b>		<b>K24172SAG</b> <b>1</b>	
	<b>K24171WHI</b> <b>1</b>		<b>K24172WHI</b> <b>1</b>	
	<b>K24171LIV</b> <b>1</b>		<b>K24172LIV</b> <b>1</b>	
	<b>K24171LBK</b> <b>1</b>		<b>K24172LBK</b> <b>1</b>	
	<b>K24171PBR</b> <b>1</b>		<b>K24172PBR</b> <b>1</b>	
	<b>K24171TIR</b> <b>1</b>		<b>K24172TIR</b> <b>1</b>	
	<b>K24171DBZ</b> <b>1</b>		<b>K24172DBZ</b> <b>1</b>	
	<b>K24171ABS</b> <b>1</b>		<b>K24172ABS</b> <b>1</b>	
	<b>K24171TCO</b> <b>1</b>		<b>K24172TCO</b> <b>1</b>	

MOUNTING BOXES:  
Min. box depth 16mm  
BS 5733: 2010 where applicable

MOUNTING BOXES:  
Min. box depth 16mm  
BS 5733: 2010 where applicable

MOUNTING BOXES:  
Min. box depth 16mm  
BS 5733: 2010 where applicable

MOUNTING BOXES:  
suitable for flush boxes to BS 4662: 1970 and surface boxes to BS 5733: 2010

Refer to appropriate module for minimum box depth.

FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm

BS 5733: 2010 where appropriate

Note: No grid required, modules just clip into place

MOUNTING BOXES:  
suitable for flush boxes to BS 4662: 1970 and surface boxes to BS 5733: 2010

Refer to appropriate module for minimum box depth.

FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm

BS 5733: 2010 where appropriate

Note: No grid required, modules just clip into place

### LJU6C Datacom Modules

RJ11/12  
ONE MODULE

RJ45 CAT 6  
ONE MODULE

RJ45  
CAT 6  
SCREENED  
ONE MODULE

RJ45  
CAT 5E  
ONE MODULE



#### FINISHES

BRUSHED STAINLESS STEEL
LACQUERED BRUSHED STEEL
BRUSHED CHROME
POLISHED CHROME
SATIN GOLD
PORCELAIN WHITE
LUSTROUS IVORY
LUSTROUS BLACK
POLISHED BRASS
TEXTURED IRON
DESERT BRONZE
ANTIQUÉ BRASS
TEXTURED COPPER

**K5787WHI**

**5**

**K5746WHI**  
**K5746BLK**

**5**

**5**

**K5746sWHI**  
**K5746sBLK**

**5**

**5**

**K5745WHI**  
**K5745BLK**

**5**

**5**

**LEAD TIMES:** Please contact our Customer Services Department on: 01268 563 404

Suitable for both RJ11 and RJ12 jacks.  
RJ11: 4 wire  
RJ12: 6 wire  
MOUNTING BOXES:  
Minimum box depth 35mm  
FCC68  
EN41003

Cat 6 performance.  
Suitable for both 568A and 568B wiring schemes.  
MOUNTING BOXES:  
Minimum Box Depth 35mm  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

Cat 6 performance.  
Suitable for both 568A and 568B wiring schemes.  
MOUNTING BOXES:  
Minimum Box Depth 35mm  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

Enhanced Cat 5 performance.  
Suitable for both 568A and 568B wiring schemes.  
MOUNTING BOXES:  
Minimum box depth 25mm  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

Not available in other finishes

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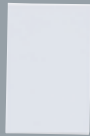

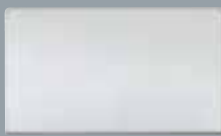
## LJU6C Datacom Blanks

## Blank Plates

LJU6C  
ONE MODULE  
(22 X 37MM)

1 GANG

2 GANG

			
<b>K170WHI</b> <b>K170BLK</b>		<b>K24330BSS</b>	<b>K24329BSS</b>
		<b>K24330LBS</b>	<b>K24329LBS</b>
		<b>K24330BRC</b>	<b>K24329BRC</b>
		<b>K24330POC</b>	<b>K24329POC</b>
		<b>K24330SAG</b>	<b>K24329SAG</b>
		<b>K24330WHI</b>	<b>K24329WHI</b>
		<b>K24330LIV</b>	<b>K24329LIV</b>
		<b>K24330LBK</b>	<b>K24329LBK</b>
		<b>K24330PBR</b>	<b>K24329PBR</b>
		<b>K24330TIR</b>	<b>K24329TIR</b>
		<b>K24330DBZ</b>	<b>K24329DBZ</b>
		<b>K24330ABS</b>	<b>K24329ABS</b>
		<b>K24330TCO</b>	<b>K24329TCO</b>



MOUNTING BOXES:  
Minimum box depth 16mm  
BS 5733: 2010 where appropriate

MOUNTING BOXES:  
FLUSH:  
866ZIC  
DIMENSIONS:  
86 x 86mm  
FIXING CENTRES:  
1 gang: 60.3mm  
BS 5733: 2010

MOUNTING BOXES:  
FLUSH:  
886ZIC  
DIMENSIONS:  
86 x 146mm  
FIXING CENTRES:  
2 gang: 120.6mm  
BS 5733: 2010

Not available in other finishes



### range introduction

Edge™ is a range of wiring devices that combine function and style. The design is smooth, clean and the products are very slim – in fact just 1.5mm. An impressive yet subtle statement, available in an unrivalled range of finishes, Edge™ is the choice in modern, contemporary or traditional interiors where style and detail are the desired effect.

In addition to the wide choice of standard finishes, a made-to-order service gives designers the ability to match almost any RAL colour required.

With Edge™ comes unrivalled safety. Utilising MK's 3-pin operated safety shutter, that prevents misuse and unsafe access to live circuitry, Edge™ offers the user the peace of mind and comfort that they have the safest range of wiring devices available installed in their surroundings.

Echo™ is an innovative range of entirely wireless, batteryless and self powered switches, only available from MK Electric and in finishes to complement the Edge™ range. Please see page 31 for details.

### features and benefits

#### **Slim profile frontplates of only 1.5mm with matching flat head screws throughout**

A clean and practical range of products that complement the finest interiors.

#### **Total safety**

3-pin operated "child resistant shutter system", which is designed to inhibit access to the electricity supply, unless all 3 pins of a standard British 13A plug are in position.

#### **Comprehensive range of sockets, switches and modular ancillary products**

Mean that whatever the application, the Edge™ range has a wiring device to suit.

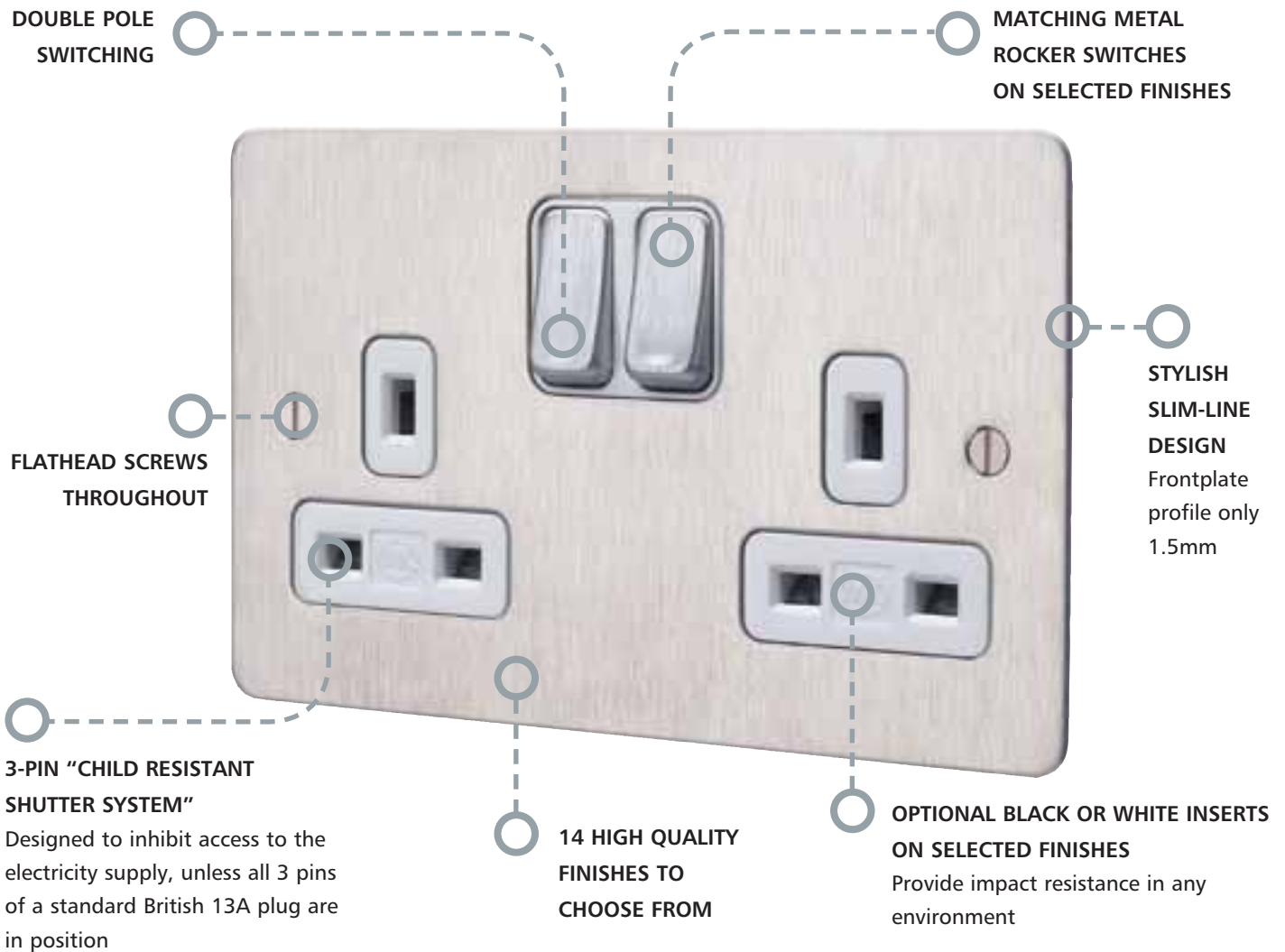
#### **14 standard high quality finishes with a made-to-order service**

Allows designers the flexibility to provide the finish of their choice.



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Terminal screws are backed out and captive. Terminals are upwards facing to make installation easier.

Funnel entrance to terminals.

Clear terminal markings for easy identification.

The built-in lock in the Edge™ 13A Lockable Socket ensures that power cannot be turned on or off without the removeable key, making it ideal for communal areas such as hotel lobbies.

Combination plates provide one neat solution to all power, data, TV and satellite outlet requirements.



## Switchsocket Outlets

1 GANG DP  
DUAL EARTH  
13 AMP

1 GANG DP  
WITH NEON  
DUAL EARTH  
13 AMP

NON STANDARD  
1 GANG DP  
CLEAN EARTH  
13 AMP

2 GANG DP  
DUAL EARTH  
13 AMP



FINISHES								
BRUSHED STAINLESS STEEL	K14357BSS*	1	K14657BSS*	1	K14268BSS*	1	K14347BSS*	1
LACQUERED BRUSHED STEEL	K14357LBS*	1	K14657LBS*	1	K14268LBS*	1	K14347LBS*	1
SILVER ANODIZED ALUMINIUM	K14357SAA*	1	K14657SAA*	1	K14268SAA*	1	K14347SAA*	1
BRUSHED CHROME	K14357BRC*	1	K14657BRC*	1	K14268BRC*	1	K14347BRC*	1
POLISHED CHROME	K14357POC*	1	K14657POC*	1	K14268POC*	1	K14347POC*	1
SATIN GOLD	K14357SAG*	1	K14657SAG*	1	K14268SAG*	1	K14347SAG*	1
PORCELAIN WHITE	K14357WHIW	1	K14657WHIW	1	K14268WHIW	1	K14347WHIW	1
LUSTROUS IVORY	K14357LIVW	1	K14657LIVW	1	K14268LIVW	1	K14347LIVW	1
LUSTROUS BLACK	K14357LBKB	1	K14657LBKB	1	K14268LBKB	1	K14347LBKB	1
POLISHED BRASS	K14357PBR*	1	K14657PBR*	1	K14268PBR*	1	K14347PBR*	1
TEXTURED IRON	K14357TIRB	1	K14657TIRB	1	K14268TIRB	1	K14347TIRB	1
DESERT BRONZE	K14357DBZB	1	K14657DBZB	1	K14268DBZB	1	K14347DBZB	1
ANTIQUE BRASS	K14357ABSB	1	K14657ABSB	1	K14268ABSB	1	K14347ABSB	1
TEXTURED COPPER	K14357TCOB	1	K14657TCOB	1	K14268TCOB	1	K14347TCOB	1

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
BS 1363 Pt 2: 1995

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
BS 1363 Pt 2: 1995

Neon is only available in white or black insulated rocker.

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
BS 1363 Pt 2: 1995

(where relevant)  
These products are provided with facilities for 'clean earth' connections and are suitable for non-standard plugs with 'T' shaped earth pins.

MOUNTING BOXES:  
FLUSH 35mm: 886ZIC  
FLUSH 47mm: 878ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 146mm

FIXING CENTRES: 120.6mm  
BS 1363 Pt 2: 1995

Dual Earth: Fitted with two earth terminals to provide a double earth facility for use when installations require a high integrity protective connection as specified within BS 7671: 2008.

Dual Earth  
(see note box)

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2 GANG DP  
CLEAN EARTH  
13 AMP

2 GANG DP  
WITH NEON  
DUAL EARTH  
13 AMP

NON STANDARD  
2 GANG DP  
CLEAN EARTH  
13 AMP

1 GANG DP  
ROUND PIN  
15 AMP



<b>K14345BSS*</b>	<b>1</b>	<b>K14647BSS*</b>	<b>1</b>	<b>K14246BSS*</b>	<b>1</b>	<b>K14383BSS*</b>	<b>1</b>
<b>K14345LBS*</b>	<b>1</b>	<b>K14647LBS*</b>	<b>1</b>	<b>K14246LBS*</b>	<b>1</b>	<b>K14383LBS*</b>	<b>1</b>
<b>K14345SAA*</b>	<b>1</b>	<b>K14647SAA*</b>	<b>1</b>	<b>K14246SAA*</b>	<b>1</b>	<b>K14383SAA*</b>	<b>1</b>
<b>K14345BRC*</b>	<b>1</b>	<b>K14647BRC*</b>	<b>1</b>	<b>K14246BRC*</b>	<b>1</b>	<b>K14383BRC*</b>	<b>1</b>
<b>K14345POC*</b>	<b>1</b>	<b>K14647POC*</b>	<b>1</b>	<b>K14246POC*</b>	<b>1</b>	<b>K14383POC*</b>	<b>1</b>
<b>K14345SAG*</b>	<b>1</b>	<b>K14647SAG*</b>	<b>1</b>	<b>K14246SAG*</b>	<b>1</b>	<b>K14383SAG*</b>	<b>1</b>
<b>K14345WHIW</b>	<b>1</b>	<b>K14647WHIW</b>	<b>1</b>	<b>K14246WHIW</b>	<b>1</b>	<b>K14383WHIW</b>	<b>1</b>
<b>K14345LIVW</b>	<b>1</b>	<b>K14647LIVW</b>	<b>1</b>	<b>K14246LIVW</b>	<b>1</b>	<b>K14383LIVW</b>	<b>1</b>
<b>K14345LBKB</b>	<b>1</b>	<b>K14647LBKB</b>	<b>1</b>	<b>K14246LBKB</b>	<b>1</b>	<b>K14383LBKB</b>	<b>1</b>
<b>K14345PBR*</b>	<b>1</b>	<b>K14647PBR*</b>	<b>1</b>	<b>K14246PBR*</b>	<b>1</b>	<b>K14383PBR*</b>	<b>1</b>
<b>K14345TIRB</b>	<b>1</b>	<b>K14647TIRB</b>	<b>1</b>	<b>K14246TIRB</b>	<b>1</b>	<b>K14383TIRB</b>	<b>1</b>
<b>K14345DBZB</b>	<b>1</b>	<b>K14647DBZB</b>	<b>1</b>	<b>K14246DBZB</b>	<b>1</b>	<b>K14383DBZB</b>	<b>1</b>
<b>K14345ABSB</b>	<b>1</b>	<b>K14647ABSB</b>	<b>1</b>	<b>K14246ABSB</b>	<b>1</b>	<b>K14383ABSB</b>	<b>1</b>
<b>K14345TCOB</b>	<b>1</b>	<b>K14647TCOB</b>	<b>1</b>	<b>K14246TCOB</b>	<b>1</b>	<b>K14383TCOB</b>	<b>1</b>

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterix, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOXES:  
FLUSH 35mm: 886ZIC  
FLUSH 47mm: 878ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 146mm

FIXING CENTRES: 120.6mm  
BS 1363 Pt 2: 1995

MOUNTING BOXES:  
FLUSH 35mm: 886ZIC  
FLUSH 47mm: 878ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 146mm

FIXING CENTRES: 120.6mm  
BS 1363 Pt 2: 1995

Neon is only available in white or black insulated rocker.

MOUNTING BOXES:  
FLUSH 35mm: 886ZIC  
FLUSH 47mm: 878ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 146mm

FIXING CENTRES: 120.6mm  
BS 1363 Pt 2: 1995

(where relevant)

These products are provided with facilities for 'clean earth' connections, and are suitable for non-standard plugs with T shaped earth pins. Refer to non-standard plugs page 224.

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
BS 546: 1950

Dual Earth  
(see note box)

## Switchsocket Outlets

IN-LINE COMBINATION PLATES  
4 GANG DP DUAL EARTH 13A,  
EURO FOUR MODULE  
100 X 50MM

2 GANG DP DUAL EARTH  
13A,EURO 6 MODULE  
50 X 50MM (X3)

STACKED COMBINATION PLATE  
4 GANG DP DUAL EARTH 13A  
EURO 8 MODULE  
100 X 50MM (X2)



### FINISHES

BRUSHED STAINLESS STEEL	K14200BSS*	1	K14205BSS*	1	K14100BSS*	1
LACQUERED BRUSHED STEEL	K14200LBS*	1	K14205LBS*	1	K14100LBS*	1
SILVER ANODIZED ALUMINIUM	K14200SAA*	1	K14205SAA*	1	K14100SAA*	1
BRUSHED CHROME	K14200BRC*	1	K14205BRC*	1	K14100BRC*	1
POLISHED CHROME	K14200POC*	1	K14205POC*	1	K14100POC*	1
SATIN GOLD	K14200SAG*	1	K14205SAG*	1	K14100SAG*	1
PORCELAIN WHITE	K14200WHIW	1	K14205WHIW	1	K14100WHIW	1
LUSTROUS IVORY	K14200LIVW	1	K14205LIVW	1	K14100LIVW	1
LUSTROUS BLACK	K14200LBKB	1	K14205LBKB	1	K14100LBKB	1
POLISHED BRASS	K14200PBR*	1	K14205PBR*	1	K14100PBR*	1
TEXTURED IRON	K14200TIRB	1	K14205TIRB	1	K14100TIRB	1
DESERT BRONZE	K14200DBZB	1	K14205DBZB	1	K14100DBZB	1
ANTIQUE BRASS	K14200ABSB	1	K14205ABSB	1	K14100ABSB	1
TEXTURED COPPER	K14200TCOB	1	K14205TCOB	1	K14100TCOB	1

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOXES:\*\*  
(for K14200)  
FLUSH 35mm: K14201  
FLUSH 47mm: K14202

DIMENSIONS:  
86 x 442.8mm

BS 1363 Pt 2: 1995

\*\* See page 197 for box dimensions

MOUNTING BOXES:\*\*  
(for K14205)  
FLUSH 35mm: K14206  
FLUSH 47mm: K14207

DIMENSIONS:  
86 x 407.9mm

BS 1363 Pt 2: 1995

\*\* See page 197 for box dimensions

MOUNTING BOXES:\*\*  
FLUSH 35mm: K14101  
FLUSH 47mm: K14102

DIMENSIONS:  
173 x 293.6mm

BS 1363 Pt 2: 1995

\*\* See page 197 for box dimensions

Dual Earth  
(see note box)

Dual Earth  
(see note box)

Dual Earth  
(see note box)

Mains operated products and extra low voltage modules must not be installed within the same frontplate aperture. Refer to BS 7671: 2008 for details.

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## Socket Outlets

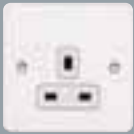
1 GANG  
DUAL EARTH  
13 AMP

2 GANG  
DUAL EARTH  
13 AMP

1 GANG  
2 AMP

1 GANG  
5 AMP

SWITCHED  
SOCKET  
1 GANG  
5 AMP



K14780BSS*	1	K14781BSS*	1	K14380BSS*	1	K14381BSS*	1	K14382BSS*	1
K14780LBS*	1	K14781LBS*	1	K14380LBS*	1	K14381LBS*	1	K14382LBS*	1
K14780SAA*	1	K14781SAA*	1	K14380SAA*	1	K14381SAA*	1	K14382SAA*	1
K14780BRC*	1	K14781BRC*	1	K14380BRC*	1	K14381BRC*	1	K14382BRC*	1
K14780POC*	1	K14781POC*	1	K14380POC*	1	K14381POC*	1	K14382POC*	1
K14780SAG*	1	K14781SAG*	1	K14380SAG*	1	K14381SAG*	1	K14382SAG*	1
K14780WHIW	1	K14781WHIW	1	K14380WHIW	1	K14381WHIW	1	K14382WHIW	1
K14780LIVW	1	K14781LIVW	1	K14380LIVW	1	K14381LIVW	1	K14382LIVW	1
K14780LBKB	1	K14781LBKB	1	K14380LBKB	1	K14381LBKB	1	K14382LBKB	1
K14780PBR*	1	K14781PBR*	1	K14380PBR*	1	K14381PBR*	1	K14382PBR*	1
K14780TIRB	1	K14781TIRB	1	K14380TIRB	1	K14381TIRB	1	K14382TIRB	1
K14780DBZB	1	K14781DBZB	1	K14380DBZB	1	K14381DBZB	1	K14382DBZB	1
K14780ABSB	1	K14781ABSB	1	K14380ABSB	1	K14381ABSB	1	K14382ABSB	1
K14780TCOB	1	K14781TCOB	1	K14380TCOB	1	K14381TCOB	1	K14382TCOB	1

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterix, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
BS 1363 Pt 2: 1995

MOUNTING BOXES:  
FLUSH 35mm: 886ZIC  
FLUSH 47mm: 878ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 146mm

FIXING CENTRES:  
120.6mm  
BS 1363 Pt 2: 1995

MOUNTING BOXES:  
FLUSH 25mm: 861ZIC  
FLUSH 35mm: 866ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
Earth pin linear operated  
shutter  
BS 546: 1950

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
BS 546: 1950

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
BS 546: 1950

Dual Earth  
(see note box)

### Floor Mounted Euro Frames

1 GANG  
STANDARD



2 GANG  
STANDARD



### Key Operated Socket Outlet and Switch

KEY OPERATED  
1 GANG DP  
DUAL EARTH  
13 AMP



KEY OPERATED  
1 GANG  
DP SWITCH  
20 AMP



FINISHES	1 GANG STANDARD		2 GANG STANDARD		KEY OPERATED 1 GANG DP DUAL EARTH 13 AMP		KEY OPERATED 1 GANG DP SWITCH 20 AMP	
BRUSHED STAINLESS STEEL	K14790BSS	1	K14791BSS	1	K14355BSS*	1	K14378BSS	1
LACQUERED BRUSHED STEEL	K14790LBS	1	K14791LBS	1	K14355LBS*	1	K14378LBS	1
SILVER ANODIZED ALUMINIUM	K14790SAA	1	K14791SAA	1	K14355SAA*	1	K14378SAA	1
BRUSHED CHROME	K14790BRC	1	K14791BRC	1	K14355BRC*	1	K14378BRC	1
POLISHED CHROME	K14790POC	1	K14791POC	1	K14355POC*	1	K14378POC	1
SATIN GOLD	K14790SAG	1	K14791SAG	1	K14355SAG*	1	K14378SAG	1
PORCELAIN WHITE	K14790WHI	1	K14791WHI	1	K14355WHIW	1	K14378WHI	1
LUSTROUS IVORY	K14790LIV	1	K14791LIV	1	K14355LIVW	1	K14378LIV	1
LUSTROUS BLACK	K14790LBK	1	K14791LBK	1	K14355LBKB	1	K14378LBK	1
POLISHED BRASS	K14790PBR	1	K14791PBR	1	K14355PBR*	1	K14378PBR	1
TEXTURED IRON	K14790TIR	1	K14791TIR	1	K14355TIRB	1	K14378TIR	1
DESERT BRONZE	K14790DBZ	1	K14791DBZ	1	K14355DBZB	1	K14378DBZ	1
ANTIQUE BRASS	K14790ABS	1	K14791ABS	1	K14355ABSB	1	K14378ABS	1
TEXTURED COPPER	K14790TCO	1	K14791TCO	1	K14355TCOB	1	K14378TCO	1

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOXES:  
FLUSH: 1 GANG: 866ZIC  
DIMENSIONS:  
102 x 86mm  
FIXING CENTRES:  
60.3mm  
Boxes must have a  
minimum depth of 35mm.

MOUNTING BOXES:  
FLUSH: 2 GANG: 886ZIC  
DIMENSIONS:  
102 x 146mm  
FIXING CENTRES:  
120.6mm  
Boxes must have a  
minimum depth of 35mm.

MOUNTING BOX:  
FLUSH 47mm: 878ZIC  
DIMENSIONS:  
86 x 146mm  
FIXING CENTRES:  
120.6mm  
BS 1363 Pt 2: 1995

MOUNTING BOX:  
FLUSH 46mm: 877ZIC  
DIMENSIONS:  
86 x 86mm  
FIXING CENTRES:  
60.3mm  
BS EN 60669-1: 1999

Dual Earth  
(see note box)

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1 GANG DP  
LOCKABLE  
FIRE ALARM  
ISOLATOR  
SWITCH  
20 AMP

Shaver/  
Toothbrush  
Supply Units

DUAL VOLTAGE  
OUTPUT 115/230V  
INPUT 220/240V  
50/60HZ

120/130V INPUT  
(NON UK)

		
<b>K14379BSS</b> <b>1</b>	<b>K14709BSS*</b> <b>1</b>	<b>K14710BSS*</b> <b>1</b>
Only available in Brushed Stainless Steel	<b>K14709LBS*</b> <b>1</b>	<b>K14710LBS*</b> <b>1</b>
	<b>K14709SAA*</b> <b>1</b>	<b>K14710SAA*</b> <b>1</b>
	<b>K14709BRC*</b> <b>1</b>	<b>K14710BRC*</b> <b>1</b>
	<b>K14709POC*</b> <b>1</b>	<b>K14710POC*</b> <b>1</b>
	<b>K14709SAG*</b> <b>1</b>	<b>K14710SAG*</b> <b>1</b>
	<b>K14709WHIW</b> <b>1</b>	<b>K14710WHIW</b> <b>1</b>
	<b>K14709LIVW</b> <b>1</b>	<b>K14710LIVW</b> <b>1</b>
	<b>K14709LBKB</b> <b>1</b>	<b>K14710LBKB</b> <b>1</b>
	<b>K14709PBR*</b> <b>1</b>	<b>K14710PBR*</b> <b>1</b>
	<b>K14709TIRB</b> <b>1</b>	<b>K14710TIRB</b> <b>1</b>
	<b>K14709DBZB</b> <b>1</b>	<b>K14710DBZB</b> <b>1</b>
	<b>K14709ABSB</b> <b>1</b>	<b>K14710ABSB</b> <b>1</b>
	<b>K14709TCOB</b> <b>1</b>	<b>K14710TCOB</b> <b>1</b>

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOX:  
FLUSH 46mm: 877ZIC

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS 60669-2-4: 2005

The isolator has primarily been introduced for use in alarm systems that must comply with BS 5839 Part 1

MOUNTING BOXES:  
FLUSH: 878ZIC

This design incorporates a double wound isolating transformer rated 20VA at 230 or 115 volts and meets BS EN 61558-2-5: 1998, making it safe for use in bathrooms.

Insertion of a shaver/toothbrush plug automatically switches on output by energising the primary side of the isolating transformer – removal automatically switches it off. The transformer is protected against overload by an automatic solid state overload device with automatic resetting.

DIMENSIONS: 146 x 86mm

FIXING CENTRES: 120.6mm

BS EN 61558-2-5: 1998



## Connection Units Switched

DP 13 AMP	DP WITH NEON** 13 AMP	DP WITH FLEX OUTLET 13 AMP	DP WITH NEON** & FLEX OUTLET 13 AMP
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### FINISHES

FINISHES	DP 13 AMP	DP WITH NEON** 13 AMP	DP WITH FLEX OUTLET 13 AMP	DP WITH NEON** & FLEX OUTLET 13 AMP
BRUSHED STAINLESS STEEL	K14941BSS* 1	K14961BSS* 1	K14931BSS* 1	K14971BSS* 1
LACQUERED BRUSHED STEEL	K14941LBS* 1	K14961LBS* 1	K14931LBS* 1	K14971LBS* 1
SILVER ANODIZED ALUMINIUM	K14941SAA* 1	K14961SAA* 1	K14931SAA* 1	K14971SAA* 1
BRUSHED CHROME	K14941BRC* 1	K14961BRC* 1	K14931BRC* 1	K14971BRC* 1
POLISHED CHROME	K14941POC* 1	K14961POC* 1	K14931POC* 1	K14971POC* 1
SATIN GOLD	K14941SAG* 1	K14961SAG* 1	K14931SAG* 1	K14971SAG* 1
PORCELAIN WHITE	K14941WHIW 1	K14961WHIW 1	K14931WHIW 1	K14971WHIW 1
LUSTROUS IVORY	K14941LIVW 1	K14961LIVW 1	K14931LIVW 1	K14971LIVW 1
LUSTROUS BLACK	K14941LBKB 1	K14961LBKB 1	K14931LBKB 1	K14971LBKB 1
POLISHED BRASS	K14941PBR* 1	K14961PBR* 1	K14931PBR* 1	K14971PBR* 1
TEXTURED IRON	K14941TIRB 1	K14961TIRB 1	K14931TIRB 1	K14971TIRB 1
DESERT BRONZE	K14941DBZB 1	K14961DBZB 1	K14931DBZB 1	K14971DBZB 1
ANTIQUÉ BRASS	K14941ABSB 1	K14961ABSB 1	K14931ABSB 1	K14971ABSB 1
TEXTURED COPPER	K14941TCOB 1	K14961TCOB 1	K14931TCOB 1	K14971TCOB 1

**LEAD TIMES:** Please contact our Customer Services Department on: 01268 563 404

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

All connection units are fitted with a 13A fuse (to BS 1362).

TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
BS 1363 Pt 4: 1995

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

All connection units are fitted with a 13A fuse (to BS 1362).

TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS 1363 Pt 4: 1995

**\*\*NOTE: Neon is only available in white or black insulated rocker.**

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

All connection units are fitted with a 13A fuse (to BS 1362).

TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
BS 1363 Pt 4: 1995

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

All connection units are fitted with a 13A fuse (to BS 1362).

TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
BS 1363 Pt 4: 1995

**\*\*NOTE: Neon is only available in white or black insulated rocker.**

Matching metal capped fuse carriers are standard on all Edge™ Connection Units (except BLK, WHI and Neon).



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## Connection Units Unswitched

13 AMP

 WITH NEON  
13 AMP

 WITH FLEX  
OUTLET  
13 AMP

 WITH NEON &  
FLEX OUTLET  
13 AMP


<b>K14948BSS*</b>	<b>1</b>	<b>K14958BSS*</b>	<b>1</b>	<b>K14989BSS*</b>	<b>1</b>	<b>K14978BSS*</b>	<b>1</b>
<b>K14948LBS*</b>	<b>1</b>	<b>K14958LBS*</b>	<b>1</b>	<b>K14989LBS*</b>	<b>1</b>	<b>K14978LBS*</b>	<b>1</b>
<b>K14948SAA*</b>	<b>1</b>	<b>K14958SAA*</b>	<b>1</b>	<b>K14989SAA*</b>	<b>1</b>	<b>K14978SAA*</b>	<b>1</b>
<b>K14948BRC*</b>	<b>1</b>	<b>K14958BRC*</b>	<b>1</b>	<b>K14989BRC*</b>	<b>1</b>	<b>K14978BRC*</b>	<b>1</b>
<b>K14948POC*</b>	<b>1</b>	<b>K14958POC*</b>	<b>1</b>	<b>K14989POC*</b>	<b>1</b>	<b>K14978POC*</b>	<b>1</b>
<b>K14948SAG*</b>	<b>1</b>	<b>K14958SAG*</b>	<b>1</b>	<b>K14989SAG*</b>	<b>1</b>	<b>K14978SAG*</b>	<b>1</b>
<b>K14948WHIW</b>	<b>1</b>	<b>K14958WHIW</b>	<b>1</b>	<b>K14989WHIW</b>	<b>1</b>	<b>K14978WHIW</b>	<b>1</b>
<b>K14948LIVW</b>	<b>1</b>	<b>K14958LIVW</b>	<b>1</b>	<b>K14989LIVW</b>	<b>1</b>	<b>K14978LIVW</b>	<b>1</b>
<b>K14948LBKB</b>	<b>1</b>	<b>K14958LBKB</b>	<b>1</b>	<b>K14989LBKB</b>	<b>1</b>	<b>K14978LBKB</b>	<b>1</b>
<b>K14948PBR*</b>	<b>1</b>	<b>K14958PBR*</b>	<b>1</b>	<b>K14989PBR*</b>	<b>1</b>	<b>K14978PBR*</b>	<b>1</b>
<b>K14948TIRB</b>	<b>1</b>	<b>K14958TIRB</b>	<b>1</b>	<b>K14989TIRB</b>	<b>1</b>	<b>K14978TIRB</b>	<b>1</b>
<b>K14948DBZB</b>	<b>1</b>	<b>K14958DBZB</b>	<b>1</b>	<b>K14989DBZB</b>	<b>1</b>	<b>K14978DBZB</b>	<b>1</b>
<b>K14948ABSB</b>	<b>1</b>	<b>K14958ABSB</b>	<b>1</b>	<b>K14989ABSB</b>	<b>1</b>	<b>K14978ABSB</b>	<b>1</b>
<b>K14948TCOB</b>	<b>1</b>	<b>K14958TCOB</b>	<b>1</b>	<b>K14989TCOB</b>	<b>1</b>	<b>K14978TCOB</b>	<b>1</b>

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

All connection units are fitted with a 13A fuse (to BS 1362).

TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
BS 1363 Pt 4: 1995

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

All connection units are fitted with a 13A fuse (to BS 1362).

TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
BS 1363 Pt 4: 1995

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
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TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
BS 1363 Pt 4: 1995

MOUNTING BOXES:  
FLUSH 35mm: 866ZIC  
FLUSH 46mm: 877ZIC  
(for extra wiring space)

All connection units are fitted with a 13A fuse (to BS 1362).

TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm  
BS 1363 Pt 4: 1995

## Switches

1 GANG SP  
2 WAY  
20 AMP

2 GANG SP  
2 WAY  
20 AMP

3 GANG SP  
2 WAY  
10 AMP

1 GANG SP  
2 WAY  
20 AMP  
WITH LARGE  
ROCKER



FINISHES								
BRUSHED STAINLESS STEEL	K14371BSS*	1	K14372BSS*	1	K14373BSS*	1	K13471BSS*	1
LACQUERED BRUSHED STEEL	K14371LBS*	1	K14372LBS*	1	K14373LBS*	1	K13471LBS*	1
SILVER ANODIZED ALUMINIUM	K14371SAA*	1	K14372SAA*	1	K14373SAA*	1	K13471SAA*	1
BRUSHED CHROME	K14371BRC*	1	K14372BRC*	1	K14373BRC*	1	K13471BRC*	1
POLISHED CHROME	K14371POC*	1	K14372POC*	1	K14373POC*	1	K13471POC*	1
SATIN GOLD	K14371SAG*	1	K14372SAG*	1	K14373SAG*	1	K13471SAG*	1
PORCELAIN WHITE	K14371WHIW	1	K14372WHIW	1	K14373WHIW	1	K13471WHIW	1
LUSTROUS IVORY	K14371LIVW	1	K14372LIVW	1	K14373LIVW	1	K13471LIVW	1
LUSTROUS BLACK	K14371LBKB	1	K14372LBKB	1	K14373LBKB	1	K13471LBKB	1
POLISHED BRASS	K14371PBR*	1	K14372PBR*	1	K14373PBR*	1	K13471PBR*	1
TEXTURED IRON	K14371TIRB	1	K14372TIRB	1	K14373TIRB	1	K13471TIRB	1
DESERT BRONZE	K14371DBZB	1	K14372DBZB	1	K14373DBZB	1	K13471DBZB	1
ANTIQUE BRASS	K14371ABSB	1	K14372ABSB	1	K14373ABSB	1	K13471ABSB	1
TEXTURED COPPER	K14371TCOB	1	K14372TCOB	1	K14373TCOB	1	K13471TCOB	1

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOXES:  
FLUSH: 861ZIC  
TERMINAL CAPACITY  
2 x 6mm<sup>2</sup> Stranded (max)  
DIMENSIONS:  
86 x 86mm  
FIXING CENTRES:  
60.3mm  
BS .EN 60669-1: 1999  
These switches do not  
have to be derated when  
used with fluorescent or  
inductive loads

MOUNTING BOXES:  
FLUSH: 861ZIC  
TERMINAL CAPACITY  
2 x 6mm<sup>2</sup> Stranded (max)  
DIMENSIONS:  
86 x 86mm  
FIXING CENTRES:  
60.3mm  
BS EN 60669-1: 1999  
These switches do not have  
to be derated when used  
with fluorescent or  
inductive loads

MOUNTING BOXES:  
FLUSH: 861ZIC  
TERMINAL CAPACITY  
2 x 6mm<sup>2</sup> Stranded (max)  
DIMENSIONS:  
86 x 86mm  
FIXING CENTRES:  
60.3mm  
BS EN 60669-1: 1999  
These switches do not have  
to be derated when used  
with fluorescent or  
inductive loads

MOUNTING BOXES:  
FLUSH: 861ZIC  
DIMENSIONS:  
86 x 86mm  
ROCKER DIMENSIONS:  
22 x 40mm  
FIXING CENTRES:  
120.6mm  
BS 60669-1: 1999  
These switches do not have  
to be derated when used  
with fluorescent or  
inductive loads

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2 GANG SP  
2 WAY  
20 AMP  
WITH LARGE  
ROCKERS

### High Current Switches

1 GANG DP  
WITH NEON  
32 AMP







1 GANG DP  
WITH NEON  
50 AMP

### Cooker Control Unit

45 AMP DP  
MAIN SWITCH  
AND 13 AMP  
SWITCH SOCKET  
OUTLET WITH  
NEONS

### 3 Pole Fan Isolator

### 32A Triple Pole & Neutral Switch

					
<b>K13472BSS*</b> <b>1</b>	<b>K14305BSS*</b> <b>1</b>	<b>K14336BSS*</b> <b>1</b>	<b>K14361BSS*</b> <b>1</b>	<b>K14859BSS*</b> <b>1</b>	<b>K14114BSS*</b> <b>1</b>
<b>K13472LBS*</b> <b>1</b>	<b>K14305LBS*</b> <b>1</b>		<b>K14361LBS*</b> <b>1</b>	<b>K14859LBS*</b> <b>1</b>	<b>K14114LBS*</b> <b>1</b>
<b>K13472SAA*</b> <b>1</b>	<b>K14305SAA*</b> <b>1</b>		<b>K14361SAA*</b> <b>1</b>	<b>K14859SAA*</b> <b>1</b>	<b>K14114SAA*</b> <b>1</b>
<b>K13472BRC*</b> <b>1</b>	<b>K14305BRC*</b> <b>1</b>		<b>K14361BRC*</b> <b>1</b>	<b>K14859BRC*</b> <b>1</b>	<b>K14114BRC*</b> <b>1</b>
<b>K13472POC*</b> <b>1</b>	<b>K14305POC*</b> <b>1</b>		<b>K14361POC*</b> <b>1</b>	<b>K14859POC*</b> <b>1</b>	<b>K14114POC*</b> <b>1</b>
<b>K13472SAG*</b> <b>1</b>	<b>K14305SAG*</b> <b>1</b>		<b>K14361SAG*</b> <b>1</b>	<b>K14859SAG*</b> <b>1</b>	<b>K14114SAG*</b> <b>1</b>
<b>K13472WHIW</b> <b>1</b>	<b>K14305WHIW</b> <b>1</b>		<b>K14361WHIW</b> <b>1</b>	<b>K14859WHIW</b> <b>1</b>	<b>K14114WHIW</b> <b>1</b>
<b>K13472LIVW</b> <b>1</b>	<b>K14305LIVW</b> <b>1</b>		<b>K14361LIVW</b> <b>1</b>	<b>K14859LIVW</b> <b>1</b>	<b>K14114LIVW</b> <b>1</b>
<b>K13472LBKB</b> <b>1</b>	<b>K14305LBKB</b> <b>1</b>		<b>K14361LBKB</b> <b>1</b>	<b>K14859LBKB</b> <b>1</b>	<b>K14114LBKB</b> <b>1</b>
<b>K13472PBR*</b> <b>1</b>	<b>K14305PBR*</b> <b>1</b>		<b>K14361PBR*</b> <b>1</b>	<b>K14859PBR*</b> <b>1</b>	<b>K14114PBR*</b> <b>1</b>
<b>K13472TIRB</b> <b>1</b>	<b>K14305TIRB</b> <b>1</b>		<b>K14361TIRB</b> <b>1</b>	<b>K14859TIRB</b> <b>1</b>	<b>K14114TIRB</b> <b>1</b>
<b>K13472DBZB</b> <b>1</b>	<b>K14305DBZB</b> <b>1</b>		<b>K14361DBZB</b> <b>1</b>	<b>K14859DBZB</b> <b>1</b>	<b>K14114DBZB</b> <b>1</b>
<b>K13472ABSB</b> <b>1</b>	<b>K14305ABSB</b> <b>1</b>		<b>K14361ABSB</b> <b>1</b>	<b>K14859ABSB</b> <b>1</b>	<b>K14114ABSB</b> <b>1</b>
<b>K13472TCOB</b> <b>1</b>	<b>K14305TCOB</b> <b>1</b>		<b>K14361TCOB</b> <b>1</b>	<b>K14859TCOB</b> <b>1</b>	<b>K14114TCOB</b> <b>1</b>

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

MOUNTING BOXES:  
FLUSH: 861ZIC

DIMENSIONS:  
86 x 86mm

ROCKER DIMENSIONS:  
22 x 40mm

FIXING CENTRES:  
120.6mm

BS 60669-1:1999

These switches do not have to be derated when used with fluorescent or inductive loads

MOUNTING BOXES:  
FLUSH: 866ZIC

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS EN 60669-1: 1999

These switches do not have to be derated when used with fluorescent or inductive loads.

MOUNTING BOXES:  
FLUSH: 866ZIC

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS EN 60669-1: 1999

These switches do not have to be derated when used with fluorescent or inductive loads.

MOUNTING BOXES:  
FLUSH: 878ZIC

45A DP Main Switch and 13A Switchsocket outlet with NEONS (Up to 10mm<sup>2</sup> conductor).

Rotary operated shutter.

DIMENSIONS:  
86 x 146mm

FIXING CENTRES:  
120.6mm

BS 4177: 1992

To allow adequate wiring space, mounting box must be installed 6mm to 10mm sub flush to the wall surface.

MOUNTING BOXES:  
FLUSH: 877ZIC

DIMENSIONS:  
86 x 186mm

FIXING CENTRES:  
60.3mm

BS EN 60947-3:1999

To allow adequate wiring space, mounting box must be installed 6mm to 10mm sub flush to the wall surface.

MOUNTING BOXES:

FLUSH: 5268ALM (Mounting box should be mounted 6 to 10mm sub-flush to the wall)

DIMENSIONS:  
203 x 140mm

TERMINAL CAPACITY:  
16mm<sup>2</sup> conductors

BS EN 60947-3: 1999

NOT RECOMMENDED FOR SWITCHING  
LARGE BANKS OF PCS

### Intelligent Dimmers (CE marked)

2 WAY SINGLE  
230V A.C. 50HZ  
60W/VA MIN.-  
500W/400VA  
MAX.

2 WAY DOUBLE  
230V A.C. 50HZ  
60W/VA MIN.  
450W/360VA  
MAX. FOR EACH  
DIMMER

2 WAY SINGLE  
230V A.C. 50HZ  
40W/VA MIN.  
300W/240VA  
MAX.

2 WAY DOUBLE  
230V A.C. 50HZ  
40W/VA MIN.  
300W/240VA MAX.  
FOR EACH DIMMER



#### FINISHES

BRUSHED STAINLESS STEEL	K14301BSS	1	K14302BSS	1	K14521BSS	1	K14522BSS	1
LACQUERED BRUSHED STEEL	K14301LBS	1	K14302LBS	1	K14521LBS	1	K14522LBS	1
SILVER ANODIZED ALUMINIUM	K14301SSA	1	K14302SSA	1	K14521SAA	1	K14522SAA	1
BRUSHED CHROME	K14301BRC	1	K14302BRC	1	K14521BRC	1	K14522BRC	1
POLISHED CHROME	K14301POC	1	K14302POC	1	K14521POC	1	K14522POC	1
SATIN GOLD	K14301SAG	1	K14302SAG	1	K14521SAG	1	K14522SAG	1
PORCELAIN WHITE	K14301WHI	1	K14302WHI	1	K14521WHI	1	K14522WHI	1
LUSTROUS IVORY	K14301LIV	1	K14302LIV	1	K14521LIV	1	K14522LIV	1
LUSTROUS BLACK	K14301LBK	1	K14302LBK	1	K14521LBK	1	K14522LBK	1
POLISHED BRASS	K14301PBR	1	K14302PBR	1	K14521PBR	1	K14522PBR	1
TEXTURED IRON	K14301TIR	1	K14302TIR	1	K14521TIR	1	K14522TIR	1
DESERT BRONZE	K14301DBZ	1	K14302DBZ	1	K14521DBZ	1	K14522DBZ	1
ANTIQUE BRASS	K14301ABS	1	K14302ABS	1	K14521ABS	1	K14522ABS	1
TEXTURED COPPER	K14301TCO	1	K14302TCO	1	K14521TCO	1	K14522TCO	1

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

#### MOUNTING BOXES:

FLUSH 866ZIC – 35mm deep min

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm

#### MOUNTING BOXES:

FLUSH 886ZIC – 35mm deep min

DIMENSIONS:  
86 x 146mm

FIXING CENTRES: 120.6mm

#### MOUNTING BOXES:

FLUSH 866ZIC – 35mm deep min

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm

#### MOUNTING BOXES:

FLUSH 866ZIC – 35mm deep min

DIMENSIONS:  
86 x 86mm

FIXING CENTRES: 60.3mm

These dimmers employ the latest micro-controller based circuitry to provide electronic soft-start and overload protection. They are suitable for use with good quality electronic or wire-wound transformers. Can also be used with good quality halogen lamps incorporating GU10 bases. Please check with lamp manufacturer to determine suitability.

#### NOT SUITABLE FOR FLUORESCENT LOADS.

Conform to latest standards BS EN 60669-2-1 and BS EN 55015.

All intelligent dimmers have a combined push-on/push-off switch and rotary dimmer control, and are suitable for one or two-way switching. They are radio frequency interference suppressed to BS EN 55015.

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Toggle Switch Frontplates  
SUPPLIED WITH GRIDS

1 MODULE

2 MODULE

3 MODULE

4 MODULE



<b>K14431BSS</b>	<b>1</b>	<b>K14432BSS</b>	<b>1</b>	<b>K14433BSS</b>	<b>1</b>	<b>K14434BSS</b>	<b>1</b>
<b>K14431LBS</b>	<b>1</b>	<b>K14432LBS</b>	<b>1</b>	<b>K14433LBS</b>	<b>1</b>	<b>K14434LBS</b>	<b>1</b>
<b>K14431SAA</b>	<b>1</b>	<b>K14432SAA</b>	<b>1</b>	<b>K14433SAA</b>	<b>1</b>	<b>K14434SAA</b>	<b>1</b>
<b>K14431BRC</b>	<b>1</b>	<b>K14432BRC</b>	<b>1</b>	<b>K14433BRC</b>	<b>1</b>	<b>K14434BRC</b>	<b>1</b>
<b>K14431POC</b>	<b>1</b>	<b>K14432POC</b>	<b>1</b>	<b>K14433POC</b>	<b>1</b>	<b>K14434POC</b>	<b>1</b>
<b>K14431SAG</b>	<b>1</b>	<b>K14432SAG</b>	<b>1</b>	<b>K14433SAG</b>	<b>1</b>	<b>K14434SAG</b>	<b>1</b>
<b>K14431WHI</b>	<b>1</b>	<b>K14432WHI</b>	<b>1</b>	<b>K14433WHI</b>	<b>1</b>	<b>K14434WHI</b>	<b>1</b>
<b>K14431LIV</b>	<b>1</b>	<b>K14432LIV</b>	<b>1</b>	<b>K14433LIV</b>	<b>1</b>	<b>K14434LIV</b>	<b>1</b>
<b>K14431LBK</b>	<b>1</b>	<b>K14432LBK</b>	<b>1</b>	<b>K14433LBK</b>	<b>1</b>	<b>K14434LBK</b>	<b>1</b>
<b>K14431PBR</b>	<b>1</b>	<b>K14432PBR</b>	<b>1</b>	<b>K14433PBR</b>	<b>1</b>	<b>K14434PBR</b>	<b>1</b>
<b>K14431TIR</b>	<b>1</b>	<b>K14432TIR</b>	<b>1</b>	<b>K14433TIR</b>	<b>1</b>	<b>K14434TIR</b>	<b>1</b>
<b>K14431DBZ</b>	<b>1</b>	<b>K14432DBZ</b>	<b>1</b>	<b>K14433DBZ</b>	<b>1</b>	<b>K14434DBZ</b>	<b>1</b>
<b>K14431ABS</b>	<b>1</b>	<b>K14432ABS</b>	<b>1</b>	<b>K14433ABS</b>	<b>1</b>	<b>K14434ABS</b>	<b>1</b>
<b>K14431TCO</b>	<b>1</b>	<b>K14432TCO</b>	<b>1</b>	<b>K14433TCO</b>	<b>1</b>	<b>K14434TCO</b>	<b>1</b>

MOUNTING BOX  
FLUSH: 891ALM  
DIMENSIONS:  
86 x 86mm  
BS 5733: 2010

MOUNTING BOX  
FLUSH: 891ALM  
DIMENSIONS:  
86 x 86mm  
BS 5733: 2010

MOUNTING BOX  
FLUSH: 892ALM  
DIMENSIONS:  
86 x 146mm  
BS 5733: 2010

MOUNTING BOX  
FLUSH: 892ALM  
DIMENSIONS:  
86 x 146mm  
BS 5733: 2010

### Toggle Switch Modules

### Grid Plus Modular Frontplates

SUPPLIED WITH GRIDS

20 AMP  
SP 1 WAY20 AMP  
SP 2 WAY20 AMP  
DP 1 WAY20 AMP  
INTERMEDIATE

1 MODULE



FINISHES										
BRUSHED STAINLESS STEEL	K14891BSS	1	K14892BSS	1	K14896BSS	1	K14893BSS	1	K14331BSS	1
LACQUERED BRUSHED STEEL	K14891LBS	1	K14892LBS	1	K14896LBS	1	K14893LBS	1	K14331LBS	1
SILVER ANODIZED ALUMINIUM	K14891SAA	1	K14892SAA	1	K14896SAA	1	K14893SAA	1	K14331SAA	1
BRUSHED CHROME	K14891BRC	1	K14892BRC	1	K14896BRC	1	K14893BRC	1	K14331BRC	1
POLISHED CHROME	K14891POC	1	K14892POC	1	K14896POC	1	K14893POC	1	K14331POC	1
SATIN GOLD	K14891SAG	1	K14892SAG	1	K14896SAG	1	K14893SAG	1	K14331SAG	1
PORCELAIN WHITE	K14891WHI	1	K14892WHI	1	K14896WHI	1	K14893WHI	1	K14331WHI	1
LUSTROUS IVORY	K14891LIV	1	K14892LIV	1	K14896LIV	1	K14893LIV	1	K14331LIV	1
LUSTROUS BLACK	K14891LBK	1	K14892LBK	1	K14896LBK	1	K14893LBK	1	K14331LBK	1
POLISHED BRASS	K14891PBR	1	K14892PBR	1	K14896PBR	1	K14893PBR	1	K14331PBR	1
TEXTURED IRON	K14891TIR	1	K14892TIR	1	K14896TIR	1	K14893TIR	1	K14331TIR	1
DESERT BRONZE	K14891DBZ	1	K14892DBZ	1	K14896DBZ	1	K14893DBZ	1	K14331DBZ	1
ANTIQUE BRASS	K14891ABS	1	K14892ABS	1	K14896ABS	1	K14893ABS	1	K14331ABS	1
TEXTURED COPPER	K14891TCO	1	K14892TCO	1	K14896TCO	1	K14893TCO	1	K14331TCO	1

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

These switches do NOT have to be derated when used with fluorescent and inductive loads.  
BS EN 60699-1: 1999

These switches do NOT have to be derated when used with fluorescent and inductive loads.  
BS EN 60699-1: 1999

These switches do NOT have to be derated when used with fluorescent and inductive loads.  
BS EN 60699-1: 1999

These switches do NOT have to be derated when used with fluorescent and inductive loads.  
BS EN 60699-1: 1999

MOUNTING BOX FLUSH: 891ALM  
DIMENSIONS: 86 x 86mm  
BS 5733: 2010

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2 MODULE



























































































3 MODULE

4 MODULE

6 MODULE

8 MODULE

9 MODULE

					
<b>K14332BSS</b> 	<b>K14333BSS</b> 	<b>K14334BSS</b> 	<b>K14346BSS</b> 	<b>K14348BSS</b> 	<b>K14349BSS</b> 
<b>K14332LBS</b> 	<b>K14333LBS</b> 	<b>K14334LBS</b> 	<b>K14346LBS</b> 	<b>K14348LBS</b> 	<b>K14349LBS</b> 
<b>K14332SAA</b> 	<b>K14333SAA</b> 	<b>K14334SAA</b> 	<b>K14346SAA</b> 	<b>K14348SAA</b> 	<b>K14349SAA</b> 
<b>K14332BRC</b> 	<b>K14333BRC</b> 	<b>K14334BRC</b> 	<b>K14346BRC</b> 	<b>K14348BRC</b> 	<b>K14349BRC</b> 
<b>K14332POC</b> 	<b>K14333POC</b> 	<b>K14334POC</b> 	<b>K14346POC</b> 	<b>K14348POC</b> 	<b>K14349POC</b> 
<b>K14332SAG</b> 	<b>K14333SAG</b> 	<b>K14334SAG</b> 	<b>K14346SAG</b> 	<b>K14348SAG</b> 	<b>K14349SAG</b> 
<b>K14332WH</b> 	<b>K14333WHI</b> 	<b>K14334WHI</b> 	<b>K14346WHI</b> 	<b>K14348WHI</b> 	<b>K14349WHI</b> 
<b>K14332LIV</b> 	<b>K14333LIV</b> 	<b>K14334LIV</b> 	<b>K14346LIV</b> 	<b>K14348LIV</b> 	<b>K14349LIV</b> 
<b>K14332LBK</b> 	<b>K14333LBK</b> 	<b>K14334LBK</b> 	<b>K14346LBK</b> 	<b>K14348LBK</b> 	<b>K14349LBK</b> 
<b>K14332PBR</b> 	<b>K14333PBR</b> 	<b>K14334PBR</b> 	<b>K14346PBR</b> 	<b>K14348PBR</b> 	<b>K14349PBR</b> 
<b>K14332TIR</b> 	<b>K14333TIR</b> 	<b>K14334TIR</b> 	<b>K14346TIR</b> 	<b>K14348TIR</b> 	<b>K14349TIR</b> 
<b>K14332DBZ</b> 	<b>K14333DBZ</b> 	<b>K14334DBZ</b> 	<b>K14346DBZ</b> 	<b>K14348DBZ</b> 	<b>K14349DBZ</b> 
<b>K14332ABS</b> 	<b>K14333ABS</b> 	<b>K14334ABS</b> 	<b>K14346ABS</b> 	<b>K14348ABS</b> 	<b>K14349ABS</b> 
<b>K14332TCO</b> 	<b>K14333TCO</b> 	<b>K14334TCO</b> 	<b>K14346TCO</b> 	<b>K14348TCO</b> 	<b>K14349TCO</b> 

MOUNTING BOX  
FLUSH: 891ALM  
DIMENSIONS:  
86 x 86mm  
BS 5733: 2010

MOUNTING BOX  
FLUSH: 892ALM  
DIMENSIONS:  
86 x 146mm  
BS 5733: 2010

MOUNTING BOX  
FLUSH: 892ALM  
DIMENSIONS:  
86 x 146mm  
BS 5733: 2010

MOUNTING BOX  
FLUSH: 893ALM  
DIMENSIONS:  
146 x 146mm  
BS 5733: 2010

MOUNTING BOX  
FLUSH: 893ALM  
DIMENSIONS:  
146 x 146mm  
BS 5733: 2010

MOUNTING BOX  
FLUSH: 895ALM  
DIMENSIONS:  
206 x 146mm  
BS 5733: 2010

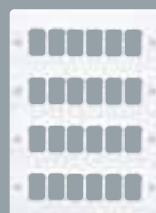
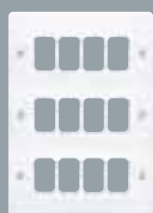
**Grid Plus Modular Frontplates**  
 SUPPLIED WITH GRIDS

**Grid Plus  
Spare Mounting  
Frames**

12 MODULE

18 MODULE

24 MODULE

1 MODULE  
ARCHITRAVE1 MODULE  
MOUNTING  
FRAME**FINISHES**

BRUSHED STAINLESS STEEL	K14352BSS	1	K14358BSS	1	K14354BSS	1	K14401BSS	1	K14701	10
LACQUERED BRUSHED STEEL	K14352LBS	1	K14358LBS	1	K14354LBS	1	K14401LBS	1		
SILVER ANODIZED ALUMINIUM	K14352SAA	1	K14358SAA	1	K14354SAA	1	K14401SAA	1		
BRUSHED CHROME	K14352BRC	1	K14358BRC	1	K14354BRC	1	K14401BRC	1		
POLISHED CHROME	K14352POC	1	K14358POC	1	K14354POC	1	K14401POC	1		
SATIN GOLD	K14352SAG	1	K14358SAG	1	K14354SAG	1	K14401SAG	1		
PORCELAIN WHITE	K14352WHI	1	K14358WHI	1	K14354WHI	1	K14401WHI	1		
LUSTROUS IVORY	K14352LIV	1	K14358LIV	1	K14354LIV	1	K14401LIV	1		
LUSTROUS BLACK	K14352LBK	1	K14358LBK	1	K14354LBK	1	K14401LBK	1		
POLISHED BRASS	K14352PBR	1	K14358PBR	1	K14354PBR	1	K14401PBR	1		
TEXTURED IRON	K14352TIR	1	K14358TIR	1	K14354TIR	1	K14401TIR	1		
DESERT BRONZE	K14352DBZ	1	K14358DBZ	1	K14354DBZ	1	K14401DBZ	1		
ANTIQUE BRASS	K14352ABS	1	K14358ABS	1	K14354ABS	1	K14401ABS	1		
TEXTURED COPPER	K14352TCO	1	K14358TCO	1	K14354TCO	1	K14401TCO	1		

LEAD TIMES: Please  
contact our Customer  
Services Department on:  
01268 563 404

MOUNTING BOX  
FLUSH: 895ALM  
DIMENSIONS:  
206 x 146mm  
BS 5733: 2010

MOUNTING BOX  
FLUSH: 898ALM  
DIMENSIONS:  
206 x 206mm  
BS 5733: 2010

MOUNTING BOX  
FLUSH: 900ALM  
DIMENSIONS:  
207 x 267mm  
BS 5733: 2010

MOUNTING BOX  
FLUSH: 3891ZIC  
MOUNTING FRAME  
K14801  
DIMENSIONS:  
38.8 x 91.75  
BS 5733: 2010







Not available in  
other finishes



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Switch Modules

2 MODULE MOUNTING FRAME	3 MODULE MOUNTING FRAME	4 MODULE MOUNTING FRAME	6 MODULE MOUNTING FRAME	1 MODULE ARCHITRAVE MOUNTING FRAME	BLANK INSERT
					
K14702 10	K14703 10	K14704 10	K14706 10	K14801 10	K4880BSS* 1 K4880LBS* 1 K4880SSA* 1 K4880BRC* 1 K4880POC* 1 K4880SAG* 1 K4880WHIW 1 K4880LIVW 1 K4880LBKB 1 K4880PBR* 1 K4880TIRB 1 K4880DBZB 1 K4880ABSB 1 K4880TCOB 1

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

Will only fit  
MK Mounting Box  
3891ZIC

BS 5733: 2010

Not available in other finishes

Switch Modules  
10 Amp

10 AMP  
SP 1 WAY

10 AMP  
DP 1 WAY

10 AMP  
SP 2 WAY

10 AMP  
SP 2 WAY  
RETRACTIVE  
SWITCH

10 AMP  
SP 2 WAY  
RED  
RETRACTIVE  
SWITCH



FINISHES

BRUSHED STAINLESS STEEL	K4881BSS* 1	K4981BSS* 1	K4882BSS* 1	K4885BSS* 1	K4885RED 1 K4885REDB 1
LACQUERED BRUSHED STEEL	K4881LBS* 1	K4981LBS* 1	K4882LBS* 1	K4885LBS* 1	
SILVER ANODIZED ALUMINIUM	K4881SAA* 1	K4981SAA* 1	K4882SAA* 1	K4885SAA* 1	
BRUSHED CHROME	K4881BRC* 1	K4981BRC* 1	K4882BRC* 1	K4885BRC* 1	
POLISHED CHROME	K4881POC* 1	K4981POC* 1	K4882POC* 1	K4885POC* 1	
SATIN GOLD	K4881SAG* 1	K4981SAG* 1	K4882SAG* 1	K4885SAG* 1	
PORCELAIN WHITE	K4881WHIW 1	K4981WHIW 1	K4882WHIW 1	K4885WHIW 1	
LUSTROUS IVORY	K4881LIVW 1	K4981LIVW 1	K4882LIVW 1	K4885LIVW 1	
LUSTROUS BLACK	K4881LBKB 1	K4981LBKB 1	K4882LBKB 1	K4885LBKB 1	
POLISHED BRASS	K4881PBR* 1	K4981PBR* 1	K4882PBR* 1	K4885PBR* 1	
TEXTURED IRON	K4881TIRB 1	K4981TIRB 1	K4882TIRB 1	K4885TIRB 1	
DESERT BRONZE	K4881DBZB 1	K4981DBZB 1	K4882DBZB 1	K4885DBZB 1	
ANTIQUE BRASS	K4881ABSB 1	K4981ABSB 1	K4882ABSB 1	K4885ABSB 1	
TEXTURED COPPER	K4881TCOB 1	K4981TCOB 1	K4882TCOB 1	K4885TCOB 1	

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with inductive loads.  
Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with inductive loads.  
Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

Not available in other finishes

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### Switch Modules

#### 20 Amp

10 AMP  
SP 2 WAY  
RETRACTIVE  
SWITCH  
MARKED WITH  
BELL SYMBOL

10 AMP  
SP 2 WAY  
RETRACTIVE  
SWITCH  
MARKED  
'PRESS'

10 AMP  
2 WAY  
CENTRE OFF  
RETRACTIVE  
SWITCH

20 AMP  
SP 1 WAY

20 AMP  
DP  
1 WAY  
PUSH TO MAKE

20 Amp  
DP  
1 WAY  
RED ROCKER  
PUSH TO MAKE



<b>K4885BWHI</b> <b>1</b> <b>K4885BBLK</b> <b>1</b>	<b>K4885PWHI</b> <b>10</b> <b>K4885PBLK</b> <b>1</b>	<b>K4900WHI</b> <b>10</b> <b>K4900BLK</b> <b>10</b>	<b>K4891BSS*</b> <b>1</b>	<b>K4910BSS*</b> <b>1</b>	<b>K4910RED</b> <b>10</b> <b>K4910REDB</b> <b>1</b>
			<b>K4891LBS*</b> <b>1</b>	<b>K4910LBS*</b> <b>1</b>	
			<b>K4891SAA*</b> <b>1</b>	<b>K4910SAA*</b> <b>1</b>	
			<b>K4891BRC*</b> <b>1</b>	<b>K4910BRC*</b> <b>1</b>	
			<b>K4891POC*</b> <b>1</b>	<b>K4910POC*</b> <b>1</b>	
			<b>K4891SAG*</b> <b>1</b>	<b>K4910SAG*</b> <b>1</b>	
			<b>K4891WHIW</b> <b>1</b>	<b>K4910WHIW</b> <b>1</b>	
			<b>K4891LIVW</b> <b>1</b>	<b>K4910LIVW</b> <b>1</b>	
			<b>K4891LBKB</b> <b>1</b>	<b>K4910LBKB</b> <b>1</b>	
			<b>K4891PBR*</b> <b>1</b>	<b>K4910PBR*</b> <b>1</b>	
			<b>K4891TIRB</b> <b>1</b>	<b>K4910TIRB</b> <b>1</b>	
			<b>K4891DBZB</b> <b>1</b>	<b>K4910DBZB</b> <b>1</b>	
			<b>K4891ABSB</b> <b>1</b>	<b>K4910ABSB</b> <b>1</b>	
<b>K4891TCOB</b> <b>1</b>	<b>K4910TCOB</b> <b>1</b>				

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterix, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

These switches do NOT have to be derated when used with inductive loads.

Note: Push switches are not designed for fluorescent loads.

BS EN 60669-1: 1999

These switches do NOT have to be derated when used with inductive loads.

Note: Push switches are not designed for fluorescent loads.

BS EN 60669-1: 1999

These switches do NOT have to be derated when used with inductive loads.

Note: Push switches are not designed for fluorescent loads.

BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

These switches do NOT have to be derated when used with inductive loads.

Note: Push switches are not designed for fluorescent loads.

BS EN 60669-1: 1999

Not available in other finishes

Not available in other finishes

## Switch Modules 20 Amp

20 AMP  
DP 1 WAY  
PUSH TO BREAK  
RETRACTIVE

20 AMP  
DP 1 WAY  
RED ROCKER  
PUSH TO BREAK  
RETRACTIVE

20 AMP  
SP 2 WAY

20 AMP  
SP 2 WAY  
RED ROCKER

20 AMP  
SP 2 WAY  
SWITCH WITH  
INTEGRAL  
NEON  
LOCATOR



### FINISHES

BRUSHED STAINLESS STEEL			K4892BSS*	1		
LACQUERED BRUSHED STEEL			K4892LBS*	1		
SILVER ANODIZED ALUMINIUM			K4892SAA*	1		
BRUSHED CHROME			K4892BRC*	1		
POLISHED CHROME			K4892POC*	1		
SATIN GOLD			K4892SAG*	1		
PORCELAIN WHITE	K4915WHI	10	K4915RED	10	K4892WHIW	1
LUSTROUS IVORY	K4915BLK	10	K4915REDB	1	K4892LIVW	1
LUSTROUS BLACK					K4892LBKB	1
POLISHED BRASS					K4892PBR*	1
TEXTURED IRON					K4892TIRB	1
DESERT BRONZE					K4892DBZB	1
ANTIQUÉ BRASS					K4892ABSB	1
TEXTURED COPPER					K4892TCOB	1
					K4892RED	10
					K4892REDB	10
					K4892LWHI	10
					K4892LBLK	1

**LEAD TIMES:** Please contact our Customer Services Department on: 01268 563 404

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

These switches do NOT have to be derated when used with inductive loads.

Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with inductive loads.

Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.

Additional information on printed modules available in Grid Plus Section, pages 175.

BS EN 60669-1: 1999

Not available in other finishes

Not available in other finishes

technical hotline +44 (0)1268 563720

decorative | wiring devices

20 AMP  
SP 2 WAY  
& CENTRE OFF  
LATCHING

20 AMP  
SP 2 WAY  
RED ROCKER  
& CENTRE OFF  
LATCHING

20 AMP  
INTERMEDIATE

20 AMP  
INTERMEDIATE  
RED ROCKER

20 AMP  
DP  
1 WAY

20 AMP  
DP  
1 WAY  
WITH NEON



<b>K4899BSS*</b> <b>1</b>	<b>K4899RED</b> <b>10</b>	<b>K4893BSS*</b> <b>1</b>	<b>K4893RED</b> <b>10</b> <b>K4893REDB</b> <b>10</b>	<b>K4896BSS*</b> <b>1</b>	<b>K4896NWHI</b> <b>1</b> <b>K4896NBLK</b> <b>1</b>
<b>K4899LBS*</b> <b>1</b>		<b>K4893LBS*</b> <b>1</b>		<b>K4896LBS*</b> <b>1</b>	
<b>K4899SAA*</b> <b>1</b>		<b>K4893SAA*</b> <b>1</b>		<b>K4896SAA*</b> <b>1</b>	
<b>K4899BRC*</b> <b>1</b>		<b>K4893BRC*</b> <b>1</b>		<b>K4896BRC*</b> <b>1</b>	
<b>K4899POC*</b> <b>1</b>		<b>K4893POC*</b> <b>1</b>		<b>K4896POC*</b> <b>1</b>	
<b>K4899SAG*</b> <b>1</b>		<b>K4893SAG*</b> <b>1</b>		<b>K4896SAG*</b> <b>1</b>	
<b>K4899WHIW</b> <b>1</b>		<b>K4893WHIW</b> <b>1</b>		<b>K4896WHIW</b> <b>1</b>	
<b>K4899LIVW</b> <b>1</b>		<b>K4893LIVW</b> <b>1</b>		<b>K4896LIVW</b> <b>1</b>	
<b>K4899LBKB</b> <b>1</b>		<b>K4893LBKB</b> <b>1</b>		<b>K4896LBKB</b> <b>1</b>	
<b>K4899PBR*</b> <b>1</b>		<b>K4893PBR*</b> <b>1</b>		<b>K4896PBR*</b> <b>1</b>	
<b>K4899TIRB</b> <b>1</b>		<b>K4893TIRB</b> <b>1</b>		<b>K4896TIRB</b> <b>1</b>	
<b>K4899DBZB</b> <b>1</b>		<b>K4893DBZB</b> <b>1</b>		<b>K4896DBZB</b> <b>1</b>	
<b>K4899ABSB</b> <b>1</b>		<b>K4893ABSB</b> <b>1</b>		<b>K4896ABSB</b> <b>1</b>	
<b>K4899TCOB</b> <b>1</b>		<b>K4893TCOB</b> <b>1</b>		<b>K4896TCOB</b> <b>1</b>	

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

These switches do NOT have to be derated when used with inductive loads.

Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

Not available in other finishes

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

Not available in other finishes

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

Not available in other finishes

Switch Modules  
20 Amp

20 AMP  
DP  
1 WAY  
WITH WINDOW

20 AMP  
DP  
1 WAY  
RED ROCKER



Printed Modules  
with and without  
Neon



FINISHES

- BRUSHED STAINLESS STEEL
- LACQUERED BRUSHED STEEL
- SILVER ANODIZED ALUMINIUM
- BRUSHED CHROME
- POLISHED CHROME
- SATIN GOLD
- PORCELAIN WHITE
- LUSTROUS IVORY
- LUSTROUS BLACK
- POLISHED BRASS
- TEXTURED IRON
- DESERT BRONZE
- ANTIQUÉ BRASS
- TEXTURED COPPER

**K4896WWHI** 10  
**K4896WBLK** 10

**K4896RED** 10

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

Not available in other finishes

K4896 PRINTED MODULE

FOR WHITE ROCKERS, USE THE SUFFIX 'WHI'. FOR BLACK ROCKERS, USE THE SUFFIX 'BLK'. FOR EXAMPLE: K4896BRWHI OR K4896BRBLK

<b>BOILER</b> K4896BR	<b>WASTE DISPOSAL</b> K4896WD	<b>HOB</b> K4896HB
<b>DISHWASHER</b> K4896DW	<b>WASHING MACHINE</b> K4896WM	<b>IMM. HEATER</b> K4896IH
<b>COOKER HOOD</b> K4896CH	<b>TUMBLE DRYER</b> K4896TD	<b>PLINTH HEATER</b> K4896PH
<b>FAN</b> K4896FN	<b>WASHER DRYER</b> K4896WDR	<b>WORK TOP LIGHTING</b> K4896WL
<b>FRIDGE</b> K4896FG	<b>MICROWAVE</b> K4896MW	<b>WINE COOLER</b> K4896WC
<b>FREEZER</b> K4896FZ	<b>HEATER</b> K4896HR	<b>WARMING DRAWER</b> K4896WDA
<b>FRIDGE FREEZER</b> K4896FF	<b>OVEN</b> K4896OV	<b>COFFEE MACHINE</b> K4896CM

K4896N PRINTED MODULE WITH NEON

FOR WHITE ROCKERS, USE THE SUFFIX 'WHI'. FOR BLACK ROCKERS, USE THE SUFFIX 'BLK'. FOR EXAMPLE: K4896NBRWHI OR K4896NBRBLK

<b>BOILER</b> K4896NBR	<b>WASTE DISPOSAL</b> K4896NWD	<b>HOB</b> K4896NHB
<b>DISHWASHER</b> K4896NDW	<b>WASHING MACHINE</b> K4896NWM	<b>IMM. HEATER</b> K4896NIH
<b>COOKER HOOD</b> K4896NCH	<b>TUMBLE DRYER</b> K4896NTD	<b>PLINTH HEATER</b> K4896NPH
<b>FAN</b> K4896NFN	<b>WASHER DRYER</b> K4896NWDR	<b>WORK TOP LIGHTING</b> K4896NWL
<b>FRIDGE</b> K4896NFG	<b>MICROWAVE</b> K4896NMW	<b>WINE COOLER</b> K4896NWC
<b>FREEZER</b> K4896NFZ	<b>HEATER</b> K4896NHR	<b>WARMING DRAWER</b> K4896NWDA
<b>FRIDGE FREEZER</b> K4896NFF	<b>OVEN</b> K4896NOV	<b>COFFEE MACHINE</b> K4896NCM







Note: K4896NIH (Imm. Heater with Neon) is not available with black rockers.

Not available in other finishes

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## Key Switch Modules

20 AMP INTERMEDIATE KEY SWITCH	20 AMP SP KEY SWITCH 2 WAY	20 AMP SP KEY SWITCH 2 WAY MARKED 'EMG LTG'	20 AMP DP KEY SWITCH 1 WAY	20 AMP DP EMERGENCY LIGHTING	20 AMP SP KEY SWITCH 2 WAY BIASED 1 WAY
					
<b>K4894WHI</b> 10 <b>K4894BLK</b> 1	<b>K4898WHI</b> 10 <b>K4898BLK</b> 1	<b>K4898ELWHI</b> 10 <b>K4898ELBLK</b> 1	<b>K4917WHI</b> 10 <b>K4917BLK</b> 1	<b>K4917ELWHI</b> 10	<b>K4918WHI</b> 10 <b>K4918BLK</b> 10

BS EN 60669-1: 1999  
Key (3405ZIC) is supplied.

BS EN 60669-1: 1999  
Key (3405ZIC) is supplied.

BS EN 60669-1: 1999  
Key (3405ZIC) is supplied.

BS EN 60669-1: 1999  
Key (3405ZIC) is supplied.

BS EN 60669-1: 1999  
Key (3405ZIC) is supplied.

BS EN 60669-1: 1999  
Key (3405ZIC) is supplied.

Not available in other finishes

Indicator Modules

200-250V  
NEON

200-250V  
NEON

200-250V  
FLUORESCENT

21-36V  
FILAMENT

21-36V  
FILAMENT



**FINISHES**

- BRUSHED STAINLESS STEEL
- LACQUERED BRUSHED STEEL
- SILVER ANODIZED ALUMINIUM
- BRUSHED CHROME
- POLISHED CHROME
- SATIN GOLD
- PORCELAIN WHITE
- LUSTROUS IVORY
- LUSTROUS BLACK
- POLISHED BRASS
- TEXTURED IRON
- DESERT BRONZE
- ANTIQUÉ BRASS
- TEXTURED COPPER

**K4889RED 10**  
**K4889REDB 1**

**K4889AMB 10**

**K4889GRN 10**

**K4836RED 10**

**K4836AMB 10**

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

BS 5733: 2010

BS 5733: 2010

BS 5733: 2010

BS 5733: 2010

BS 5733: 2010

Not available in other finishes



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### Dimmer Switch Modules

#### TUNGSTEN FILAMENT AND LOW VOLTAGE LIGHTING

1 GANG 40W/  
VA-220W/180VA,  
230VA.C, 50HZ  
TWO WAY  
ONE MODULE

1 GANG 60W/  
VA-400W/320VA,  
230VA.C, 50HZ  
TWO WAY  
TWO MODULE

0-10V/1-10V  
FLUORESCENT  
CONTROLLER  
ONE MODULE

### Accessory Modules

SINGLE TV  
CO-AXIAL OUTLET  
NON-ISOLATED

SINGLE TV  
CO-AXIAL OUTLET  
ISOLATED

21-36V  
FILAMENT



<b>K4836GRN</b> <b>10</b>	<b>K4501BSS*LV</b> <b>1</b>	<b>K4500BSS*LV</b> <b>1</b>	<b>K4499BSS*</b> <b>1</b>
	<b>K4501LBS*LV</b> <b>1</b>	<b>K4500LBS*LV</b> <b>1</b>	<b>K4499LBS*</b> <b>1</b>
	<b>K4501SAA*LV</b> <b>1</b>	<b>K4500SAA*LV</b> <b>1</b>	<b>K4499SAA*</b> <b>1</b>
	<b>K4501BRC*LV</b> <b>1</b>	<b>K4500BRC*LV</b> <b>1</b>	<b>K4499BRC*</b> <b>1</b>
	<b>K4501POC*LV</b> <b>1</b>	<b>K4500POC*LV</b> <b>1</b>	<b>K4499POC*</b> <b>1</b>
	<b>K4501SAG*LV</b> <b>1</b>	<b>K4500SAG*LV</b> <b>1</b>	<b>K4499SAG*</b> <b>1</b>
	<b>K4501WHIWL</b> <b>1</b>	<b>K4500WHIWL</b> <b>1</b>	<b>K4499WHIW</b> <b>10</b>
	<b>K4501LIVWL</b> <b>1</b>	<b>K4500LIVWL</b> <b>1</b>	<b>K4499LIVW</b> <b>1</b>
	<b>K4501LBKBL</b> <b>1</b>	<b>K4500LBKBL</b> <b>1</b>	<b>K4499LBKB</b> <b>1</b>
	<b>K4501PBR*LV</b> <b>1</b>	<b>K4500PBR*LV</b> <b>1</b>	<b>K4499PBR*</b> <b>1</b>
	<b>K4501TIRBL</b> <b>1</b>	<b>K4500TIRBL</b> <b>1</b>	<b>K4499TIRB</b> <b>1</b>
	<b>K4501DBZBL</b> <b>1</b>	<b>K4500DBZBL</b> <b>1</b>	<b>K4499DBZB</b> <b>1</b>
	<b>K4501ABSBL</b> <b>1</b>	<b>K4500ABSBL</b> <b>1</b>	<b>K4499ABSB</b> <b>1</b>
	<b>K4501TCOBL</b> <b>1</b>	<b>K4500TCOBL</b> <b>1</b>	<b>K4499TCOB</b> <b>1</b>
		<b>K4520WHI</b> <b>10</b>	
		<b>K4520BLK</b> <b>1</b>	
		<b>K4521WHI</b> <b>10</b>	
		<b>K4521BLK</b> <b>1</b>	

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

BS 5733: 2010

These dimmers incorporate the latest in micro-controller based circuitry to provide electronic soft-start and overload protection. They are radio frequency interference suppressed to BS EN 55015.

Suitable for use with good quality electronic or wire wound transformers. Can also be used with good quality mains voltage halogen lamps incorporating GU10 bases. Please check with lamp manufacturer to determine suitability.

Matching metal decorative caps are standard on all Aspect Grid Dimmers (except WHI).

K4500 is only suitable for use in 2, 4 and 8 module grids.

They are not suitable for fluorescent lamps.

Note: Refer to technical section for derating factors when more than one unit is used in any one box.

Conforms to the latest standard BS EN 60669-2-1.

MK Fluorescent Grid Dimmers are low voltage controllers for connection to 1-10V controllable ballasts.

For direct connection to TV or FM aerial co-axial download. NOT to be used in same enclosure as mains exceeding 50V.

BS 3041: 1977

IEC 169-2: 1965

BS 5733: 2010 where applicable.

For direct connection to TV or FM aerial co-axial download. NOT to be used in same enclosure as mains exceeding 50V.

BS 3041: 1977

IEC 169-2: 1965

BS 5733: 2010 where applicable.

Not available in other finishes

When ordering K4501 and K4500, use the suffix 'LV' right at the end, eg. K4501BSSWLV

Not available in other finishes

Accessory Modules

BUZZER UNIT  
200-250V

BUZZER UNIT  
21-36V

16 AMP  
CORD OUTLET

13 AMP  
FUSE UNIT

13 AMP  
FUSE UNIT  
WITH  
TAMPERPROOF  
SCREW



FINISHES

- BRUSHED STAINLESS STEEL
- LACQUERED BRUSHED STEEL
- SILVER ANODIZED ALUMINIUM
- BRUSHED CHROME
- POLISHED CHROME
- SATIN GOLD
- PORCELAIN WHITE
- LUSTROUS IVORY
- LUSTROUS BLACK
- POLISHED BRASS
- TEXTURED IRON
- DESERT BRONZE
- ANTIQUÉ BRASS
- TEXTURED COPPER

K4000WHI 10

K4001WHI 10

K4886WHI 10  
K4886BLK 1

K4890WHI 10  
K4890BLK 1

K4890KOWHI 10  
K4890KOBK 1

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

200-250V  
BS 5733: 2010

Sound output level  
Av 61 db @ 15 feet.  
BS 5733: 2010

Complete with 3 pairs of terminals. The supply terminals are suitable for up to 2 x 2.5mm<sup>2</sup> or 1 x 4mm<sup>2</sup> solid conductors. The load terminals are suitable for one 1.5mm<sup>2</sup> flexible cord.  
A cord grip is also fitted.  
BS 5733: 2010

Fuse carrier comes with 13A cartridge fuse link to BS 1362.  
BS 5733: 2010

Fuse carrier comes with 13A cartridge fuse link to BS 1362.  
BS 5733: 2010

Not available in other finishes

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## Euro Modular Frontplates

EURO  
1 MODULE  
25 X 50MM

EURO  
2 MODULE  
50 X 50MM

EURO  
4 MODULE  
100 X 50MM

		
<b>K14181BSS</b>	<b>K14182BSS</b>	<b>K14184BSS</b>
<b>K14181LBS</b>	<b>K14182LBS</b>	<b>K14184LBS</b>
<b>K14181SAA</b>	<b>K14182SAA</b>	<b>K14184SAA</b>
<b>K14181BRC</b>	<b>K14182BRC</b>	<b>K14184BRC</b>
<b>K14181POC</b>	<b>K14182POC</b>	<b>K14184POC</b>
<b>K14181SAG</b>	<b>K14182SAG</b>	<b>K14184SAG</b>
<b>K14181WHI</b>	<b>K14182WHI</b>	<b>K14184WHI</b>
<b>K14181LIV</b>	<b>K14182LIV</b>	<b>K14184LIV</b>
<b>K14181LBK</b>	<b>K14182LBK</b>	<b>K14184LBK</b>
<b>K14181PBR</b>	<b>K14182PBR</b>	<b>K14184PBR</b>
<b>K14181TIR</b>	<b>K14182TIR</b>	<b>K14184TIR</b>
<b>K14181DBZ</b>	<b>K14182DBZ</b>	<b>K14184DBZ</b>
<b>K14181ABS</b>	<b>K14182ABS</b>	<b>K14184ABS</b>
<b>K14181TCO</b>	<b>K14182TCO</b>	<b>K14184TCO</b>



### MOUNTING BOXES:

Suitable for flush boxes to BS 4662: 2006 and surface boxes to BS 5733: 2010. Refer to appropriate module for minimum box depth.

FIXING CENTRES: 60.3mm

BS 5733: 2010 where applicable.

Note: No grid required, modules just clip into place.

### MOUNTING BOXES:

Suitable for flush boxes to BS 4662: 2006 and surface boxes to BS 5733: 2010. Refer to appropriate module for minimum box depth.

FIXING CENTRES: 60.3mm

BS 5733: 2010 where applicable.

Note: No grid required, modules just clip into place.

### MOUNTING BOXES:

Suitable for flush boxes to BS 4662: 2006 and surface boxes to BS 5733: 1995. Refer to appropriate module for minimum box depth.

FIXING CENTRES: 120.6mm

BS 5733: 2010 where applicable.

Note: No grid required, modules just clip into place.

## Euro Power Modules

## UK

1 GANG  
13 AMP 250V  
EURO\*  
TWO MODULE

## GERMAN

2P+E 16 AMP 250V  
SHUTTERED EURO\*  
TWO MODULE  
(NON UK)

## AMERICAN

15 AMP 127V  
SHUTTERED  
EURO\*  
TWO MODULE  
(NON UK)

## UK

1 GANG  
5 AMP 250V  
SHUTTERED  
EURO\*  
TWO MODULE

## FRENCH/BELGIAN

2P+E 16AMP  
250V SHUTTERED  
EURO\*  
TWO MODULE  
(NON UK)



## FINISHES

BRUSHED STAINLESS STEEL

LACQUERED BRUSHED STEEL

SILVER ANODIZED ALUMINIUM

BRUSHED CHROME

POLISHED CHROME

SATIN GOLD

PORCELAIN WHITE

LUSTROUS IVORY

LUSTROUS BLACK

POLISHED BRASS

TEXTURED IRON

DESERT BRONZE

ANTIQUÉ BRASS

TEXTURED COPPER

K5830WHI 10

K5830BLK 10

K5831WHI 10

K5831BLK 10

K5832WHI 10

K5832BLK 10

K5833WHI 10

K5833BLK 10

K5834WHI 10

K5834BLK 10

LEAD TIMES: Please  
contact our Customer  
Services Department on:  
01268 563 404

MOUNTING BOX:  
35mm minimum  
46mm for extra  
wiring space.  
DIMENSIONS:  
50 x 50mm  
BS 1363 Part 2: 1995

MOUNTING BOX:  
46mm  
DIMENSIONS:  
50 x 50mm  
IEC 60884-1: 2006

MOUNTING BOX:  
35mm  
46mm (for extra wiring  
space)  
DIMENSIONS:  
50 x 50mm  
SASO 2203: 2003

MOUNTING BOX:  
35mm minimum  
46mm for extra  
wiring space.  
DIMENSIONS:  
50 x 50mm  
BS 546: 1950

MOUNTING BOX:  
46mm  
DIMENSIONS:  
50 x 50mm  
NF C61-341

Not available in other finishes



Mains operated products and extra low voltage modules must not be installed within the same frontplate aperture.  
Refer to BS 7671: 2008 for details.

\* Euro frontplates can be found on page 137.

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## Euro Datacom Modules

USB CHARGING MODULE	RJ11/12 ONE MODULE 25X50MM	RJ45 CAT 6 ONE MODULE 25X50MM	RJ45 CAT 6 SCREENED ONE MODULE 25X50MM	RJ45 CAT 6 ANGLED ONE MODULE 25X50MM	RJ45 CAT 5E ANGLED ONE MODULE 25X50MM
					
<b>K5837WHI</b> <span style="border: 1px solid black; padding: 0 2px;">1</span> <b>K5837BLK</b> <span style="border: 1px solid black; padding: 0 2px;">1</span>	<b>K5887WHI</b> <span style="border: 1px solid black; padding: 0 2px;">5</span> <b>K5887BLK</b> <span style="border: 1px solid black; padding: 0 2px;">5</span>	<b>K5846WHI</b> <span style="border: 1px solid black; padding: 0 2px;">5</span> <b>K5846BLK</b> <span style="border: 1px solid black; padding: 0 2px;">5</span>	<b>K5846sWHI</b> <span style="border: 1px solid black; padding: 0 2px;">5</span> <b>K5846sBLK</b> <span style="border: 1px solid black; padding: 0 2px;">5</span>	<b>K5864WHI</b> <span style="border: 1px solid black; padding: 0 2px;">5</span>	<b>K5844WHI</b> <span style="border: 1px solid black; padding: 0 2px;">5</span>

K5837  
MOUNTING BOX:  
35mm minimum  
46mm for extra wiring space  
DIMENSIONS:  
50 x 50mm  
IEC 60950-1  
IEC 61000-6-1/3

Suitable for both RJ11 and RJ12 jacks  
RJ11; 4 wire  
RJ12; 6 wire  
MOUNTING BOXES:  
Minimum box depth 35mm  
FCC68  
EN 41003

Cat 6 performance.  
Suitable for both 568A and 568B wiring schemes.  
MOUNTING BOXES:  
Minimum Box Depth 35mm  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

Cat 6 performance.  
Suitable for both 568A and 568B wiring schemes.  
MOUNTING BOXES:  
Minimum Box Depth 35mm  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

Cat 6 performance.  
Suitable for both 568A and 568B wiring schemes.  
MOUNTING BOXES:  
Minimum Box Depth 35mm  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

Enhanced Cat 5 performance.  
Suitable for both 568A and 568B wiring schemes.  
MOUNTING BOXES:  
Minimum box depth 35mm standard  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

Not available in other finishes

Mains operated products and extra low voltage modules must not be installed within the same frontplate aperture.  
Refer to BS 7671: 2008 for details.

\* Euro frontplates can be found on page 137.

Euro Datacom Modules

RJ45  
CAT 5E  
ONE MODULE  
25 X 50MM

TELEPHONE  
MASTER  
ONE MODULE  
25 X 50MM

TELEPHONE  
SECONDARY  
ONE MODULE  
25 X 50MM

BNC 50  
ONE MODULE  
25 X 50MM



FINISHES

- BRUSHED STAINLESS STEEL
- LACQUERED BRUSHED STEEL
- SILVER ANODIZED ALUMINIUM
- BRUSHED CHROME
- POLISHED CHROME
- SATIN GOLD
- PORCELAIN WHITE
- LUSTROUS IVORY
- LUSTROUS BLACK
- POLISHED BRASS
- TEXTURED IRON
- DESERT BRONZE
- ANTIQUÉ BRASS
- TEXTURED COPPER

**K5845WHI** **5**  
**K5845BLK** **5**

**K5820WHI** **5**  
**K5820BLK** **5**

**K5821WHI** **5**  
**K5821BLK** **5**

**K5801WHI** **5**

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

Enhanced Cat 5 performance. Suitable for both 568A and 568B wiring schemes.  
MOUNTING BOXES: Minimum box depth 35mm standard  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

MOUNTING BOXES: Minimum depth 35mm  
BS 6312 Pt 2

MOUNTING BOXES: Minimum depth 35mm  
BS 6312 Pt 2

50 Ohm crimp connector suitable for use with RG58, URM43, URM76 and Beldon 9907 type co-axial cables.  
MOUNTING BOXES: Minimum box depth 35mm

Not available in other finishes

Mains operated products and extra low voltage modules must not be installed within the same frontplate. Refer to BS 7671: 2008 for details.

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decorative | wiring devices

## Euro Multimedia Modules

SINGLE OUTLET  
(IEC MALE)  
ONE MODULE  
25 X 50MM

SINGLE OUTLET  
(IEC FEMALE)  
ONE MODULE  
25 X 50MM

SINGLE F-TYPE  
SATELLITE  
SOCKET  
ONE MODULE  
25 X 50MM

TWIN OUTLET  
TV/FM DIPLEXER  
TWO MODULE  
50 X 50MM  
(IRELAND ONLY)

TWIN OUTLET  
TV-FM/DAB  
DIPLEXER  
TWO MODULE  
50 X 50MM



**K5850WHI** **5**  
**K5850BLK** **5**

**K5851WHI** **5**  
**K5851BLK** **5**

**K5855WHI** **5**  
**K5855BLK** **5**

**K5852WHI** **5**  
**K5852BLK** **5**

**K5852DABWHI** **5**  
**K5852DABBLK** **5**

Fully screened non isolated TV outlets containing a combination of single, TV/FM Diplexer, TV/FM/SAT Triplexer and BT secondary telephone outlets for use within digital TV systems and interactive TV services.

Single outlets for connection to a single TV, FM or Satellite co-axial aerial lead.

MOUNTING BOXES:  
Min box depth 47mm

DIMENSIONS:  
ONE MODULE 25 x 50mm  
TWO MODULE 50 x 50mm

BS 3041: 1997 IEC 169-2: 1965  
BS EN 50083 & BS 5733: 2010 where applicable.

TV/FM Diplexer units for connection to a single co-axial aerial lead with combined TV and FM signals.

TV/FM/SAT Triplexer units for connection to a single co-axial aerial lead with combined TV, FM and Satellite signals

PERFORMANCE  
Single TV: DC - 950MHz  
Sat: DC - 1.75GHz

Diplexer TV: 5 - 65MHz  
470 - 862MHz  
FM: 87.5 - 108 MHz

TV/FM/DAB FOR DIGITAL RADIO

PERFORMANCE  
Diplexer TV: 5-65MHz  
470-862MHz  
FM/DAB: 87.5-230MHz

These products are fully compatible with Labgear TV distribution systems and are approved for use in "Sky Homes" and "Homes On" specifications.

## Euro Multimedia Modules

## TRIPLE OUTLET

TV/FM/SATELLITE

TRIPLEXER

TWO MODULE

50 X 50MM

(IRELAND ONLY)

TRIPLE OUTLET

TV-FM/DAB-SAT

TRIPLEXER TWO

MODULE

50 X 50MM

QUAD OUTLET

TV-FM/DAB-

2XSAT

TWO MODULE

50 X 50MM

FEMALE HDMI

OUTLET



## FINISHES

BRUSHED STAINLESS STEEL

LACQUERED BRUSHED STEEL

SILVER ANODIZED ALUMINIUM

BRUSHED CHROME

POLISHED CHROME

SATIN GOLD

PORCELAIN WHITE

LUSTROUS IVORY

LUSTROUS BLACK

POLISHED BRASS

TEXTURED IRON

DESERT BRONZE

ANTIQUÉ BRASS

TEXTURED COPPER

K5853WHI

5

K5853DABWHI

5

K5854DABWHI

5

K5807WHI

5

K5853BLK

5

K5853DABBLK

5

K5854DABBLK

5

K5807BLK

5

LEAD TIMES: Please contact our Customer Services Department on: 01268 563 404

TV/FM diplexer units for connection to a single co-axial aerial lead with combined TV and FM signals.  
TV/FM/SAT triplexer units for connection to a single co-axial aerial lead with combined TV, FM and Satellite signals

## PERFORMANCE

SINGLE OUTLETS

TV/FM IEC MALE OR FEMALE

DC-950MHz

SAT F-TYPE

DC-1.75GHz

## TV/FM/SAT PRODUCTS

OUTLET

TV

DIPLEXER

5-65MHz

470-862MHz

FM/DAB

SAT

87.5-108MHz

N/A

## TV/FM/DAB/SAT PRODUCTS FOR

DIGITAL RADIO

OUTLET

TV

DIPLEXER

5-65MHz

470-862MHz

FM/DAB

SAT OR SAT1

SAT2

87.5-230MHz

N/A

OUTLET

TV

FM

SAT1

TRIPLEXER

5-65MHz

470-862MHz

87.5-108MHz

950-2300MHz

OUTLET

TV

FM

SAT1

SAT2

TRIPLEXER

5-65MHz

470-862MHz

87.5-230MHz

950-2300MHz

5-2300MHz

K5807 Female HDMI Outlet is HDMI 1.1, 1.2 and 1.3 compatible, HDCP compliant.

Data Rate: Up to 2.25Gbps

Scan: Up to 1080p/1920 x 1200

Input Connector:  
1 x HDMI Female (TypeA)

Output Connector:  
1 x HDMI Female (TypeA)

Supports high resolution input:

PC: VGA, SVGA,

SXVGA (1280 x 1024) and UXGA (1600 x 1200, 1920 x 1200)

HDTV: 480p, 720p, 1080i and 1080p

HDMI input cable should be no larger than 20m.

Weight of product: 16g

Dimensions: 50 x 50 x 20mm

For the full range of Euro multimedia modules, please see Logic Plus page 56

These products are fully compatible with Labgear TV distribution systems and are approved for use in "Sky Homes" and "Homes On" specifications.



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## Euro Blank Modules

EURO  
TWO MODULE  
(50 X 50MM)

EURO  
ONE MODULE  
(25 X 50MM)

EURO  
1/2 MODULE  
(12.5 X 50MM)

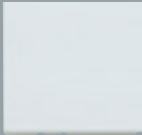





## LJU6C Datacom Frontplate

1 GANG  
TWO MODULE  
22 X 37MM

## LJU6C Datacom Modules

RJ11/12  
ONE MODULE

RJ45 CAT 6  
ONE MODULE

					
<b>K180WHI</b> <b>10</b>	<b>K188WHI</b> <b>10</b> <b>K188BLK</b> <b>10</b>	<b>K186WHI</b> <b>10</b> <b>K186BLK</b> <b>10</b>	<b>K14172BSS</b> <b>10</b> <b>K14172LBS</b> <b>10</b> <b>K14172SAA</b> <b>10</b> <b>K14172BRC</b> <b>10</b> <b>K14172POC</b> <b>10</b> <b>K14172SAG</b> <b>10</b> <b>K14172WHI</b> <b>10</b> <b>K14172LIV</b> <b>10</b> <b>K14172LBK</b> <b>10</b> <b>K14172PBR</b> <b>10</b> <b>K14172TIR</b> <b>10</b> <b>K14172DBZ</b> <b>10</b> <b>K14172ABS</b> <b>10</b> <b>K14172TCO</b> <b>10</b>	<b>K5787WHI</b> <b>5</b> <b>K5787BLK</b> <b>5</b>	<b>K5746WHI</b> <b>5</b> <b>K5746BLK</b> <b>5</b>

MOUNTING BOXES:  
Min. box depth 16mm  
BS 5733: 2010 where applicable

MOUNTING BOXES:  
Min. box depth 16mm  
BS 5733: 2010 where applicable

MOUNTING BOXES:  
Min. box depth 16mm  
BS 5733: 2010 where applicable

MOUNTING BOXES:  
suitable for flush boxes to BS 4662; 2006 and surface boxes to BS 5733: 2010  
Refer to appropriate module for minimum box depth.  
FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm  
BS 5733: 2010 where appropriate  
Note: No grid required, modules just clip into place

Suitable for both RJ11 and RJ12 jacks.  
RJ11: 4 wire  
RJ12: 6 wire  
MOUNTING BOXES:  
Minimum box depth 35mm  
FCC68  
EN41003

Cat 6 performance.  
Suitable for both 568A and 568B wiring schemes.  
MOUNTING BOXES:  
Minimum Box Depth 35mm  
ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

### LJU6C Datacom Modules

RJ45  
CAT 6  
SCREENED  
ONE MODULE

RJ45  
CAT 5E  
ONE MODULE

### LJU6C Datacom Blanks

LJU6C  
ONE MODULE  
(22 X 37MM)

### TV/Satellite

TV/FM  
SINGLE  
NON-ISOLATED



#### FINISHES

BRUSHED STAINLESS STEEL

LACQUERED BRUSHED STEEL

SILVER ANODIZED ALUMINIUM

BRUSHED CHROME

POLISHED CHROME

SATIN GOLD

PORCELAIN WHITE

LUSTROUS IVORY

LUSTROUS BLACK

POLISHED BRASS

TEXTURED IRON

DESERT BRONZE

ANTIQUÉ BRASS

TEXTURED COPPER

K5746SWHI

5

K5745WHI

5

K170WHI

10

K14320WHIW

1

K5746SBLK

5

K5745BLK

5

K170BLK

10

K14320LIVW

1

K14320LBKB

1

K14320PBR\*

1

K14320TIRB

1

K14320DBZB

1

K14320ABSB

1

K14320TCOB

1

**LEAD TIMES:** Please contact our Customer Services Department on: 01268 563 404

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterisk, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

Cat 6 performance.

Suitable for both 568A and 568B wiring schemes.

MOUNTING BOXES:  
Minimum Box Depth 35mm

ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

Enhanced Cat 5 performance.

Suitable for both 568A and 568B wiring schemes.

MOUNTING BOXES:  
Minimum box depth 25mm

ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

MOUNTING BOXES:

Minimum box depth 16mm

BS 5733: 2010 where appropriate

MOUNTING BOXES:

FLUSH: 861ZIC  
SURFACE K2140WHI

Single outlet for connection to a single TV or FM co-axial aerial lead.

DIMENSIONS:  
86 x 86mm






FIXING CENTRES:  
60.3mm

BS 3041: 1977  
IEC169-2: 1965  
BS 5733: 2010 where applicable

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## Blank Plates

TV/FM SINGLE ISOLATED	TV/FM TWIN ISOLATED DIPLEXER	SINGLE F TYPE SATELLITE	1 GANG	2 GANG
				
<b>K14321BSS*</b>	<b>K14322BSS*</b>	<b>K14325BSS*</b>	<b>K14330BSS</b>	<b>K14329BSS</b>
<b>K14321LBS*</b>	<b>K14322LBS*</b>	<b>K14325LBS*</b>	<b>K14330LBS</b>	<b>K14329LBS</b>
<b>K14321SAA*</b>	<b>K14322SAA*</b>	<b>K14325SAA*</b>	<b>K14330SAA</b>	<b>K14329SAA</b>
<b>K14321BRC*</b>	<b>K14322BRC*</b>	<b>K14325BRC*</b>	<b>K14330BRC</b>	<b>K14329BRC</b>
<b>K14321POC*</b>	<b>K14322POC*</b>	<b>K14325POC*</b>	<b>K14330POC</b>	<b>K14329POC</b>
<b>K14321SAG*</b>	<b>K14322SAG*</b>	<b>K14325SAG*</b>	<b>K14330SAG</b>	<b>K14329SAG</b>
<b>K14321WHIW</b>	<b>K14322WHIW</b>	<b>K14325WHIW</b>	<b>K14330WHI</b>	<b>K14329WHI</b>
<b>K14321LIVW</b>	<b>K14322LIVW</b>	<b>K14325LIVW</b>	<b>K14330LIV</b>	<b>K14329LIV</b>
<b>K14321LBKB</b>	<b>K14322LBKB</b>	<b>K14325LBKB</b>	<b>K14330LBK</b>	<b>K14329LBK</b>
<b>K14321PBR*</b>	<b>K14322PBR*</b>	<b>K14325PBR*</b>	<b>K14330PBR</b>	<b>K14329PBR</b>
<b>K14321TIRB</b>	<b>K14322TIRB</b>	<b>K14325TIRB</b>	<b>K14330TIR</b>	<b>K14329TIR</b>
<b>K14321DBZB</b>	<b>K14322DBZB</b>	<b>K14325DBZB</b>	<b>K14330DBZ</b>	<b>K14329DBZ</b>
<b>K14321ABSB</b>	<b>K14322ABSB</b>	<b>K14325ABSB</b>	<b>K14330ABS</b>	<b>K14329ABS</b>
<b>K14321TCOB</b>	<b>K14322TCOB</b>	<b>K14325TCOB</b>	<b>K14330TCO</b>	<b>K14329TCO</b>

\* Available with the option of either White or Black inserts. Add Suffix 'W' or 'B' to part number when ordering, E.g. KxxxxBSSW.

Where there is no asterix, the final suffix W = White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts

**MOUNTING BOXES:**  
FLUSH: 861ZIC

Provides safety isolation rated at 2000Va.c. between aerial lead and socket. Single outlet for direct connection to a single TV or FM co-axial aerial lead.

DIMENSIONS: 86 x 86mm  
FIXING CENTRES: 60.3mm

BS 3041: 1977  
IEC169-2: 1965  
BS 5733: 2010 where applicable

**MOUNTING BOXES:**  
FLUSH: 861ZIC

Provides safety isolation rated at 2000Va.c. between aerial lead and socket. Twin outlet with TV/FM diplexer for connection to single co-axial aerial lead with combined TV & FM signals.

DIMENSIONS: 86 x 86mm  
FIXING CENTRES: 60.3mm

BS 3041: 1977  
IEC169-2: 1965  
BS 5733: 2010 where applicable

**MOUNTING BOXES:**  
FLUSH: 861ZIC

SURFACE: K2140WHI

DIMENSIONS: 86 x 86mm

FIXING CENTRES: 60.3mm

BS 3041: 1977  
IEC169-2: 1965  
BS 5733: 2010 where applicable

**MOUNTING BOXES:**  
FLUSH: 866ZIC

DIMENSIONS: 86 x 86mm

FIXING CENTRES: 1 gang: 60.3mm  
BS 5733: 2010

**MOUNTING BOXES:**  
FLUSH: 886ZIC

DIMENSIONS: 86 x 146mm

FIXING CENTRES: 2 gang: 120.6mm

BS 5733: 2010



Echo switch (transmitter) - Aspect brushed stainless steel

Available on a worldwide basis, the MK Design Service is supported by a dedicated team to ensure the seamless delivery of your chosen products.

To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)

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## range introduction

## features and benefits

With a crisp clean edge and luxurious finishes of brushed nickel, black nickel and polished chrome, Alloy™ brings style and decadence to both contemporary and classical interiors. Alloy's finishes have been designed to harmonise seamlessly with contemporary light fittings and door furniture to create a truly coordinated look that evolves as interior design trends change.

### Available in Brushed Nickel, Black Nickel and Polished Chrome

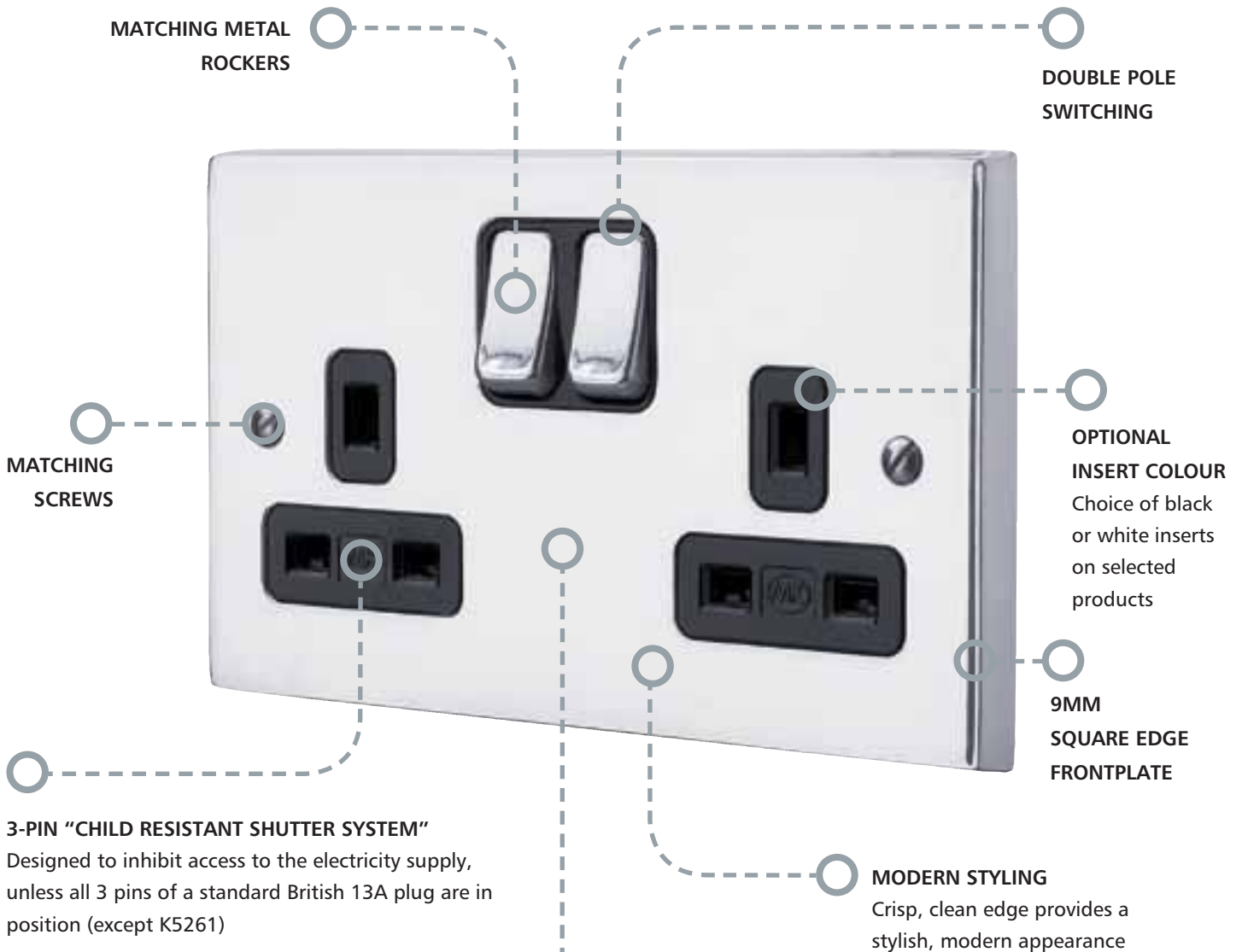
Providing a range of products that will complement the décor of any interior.

### Total Safety

MK 13A sockets have a 3-pin operated "child resistant shutter system", which is designed to inhibit access to the electricity supply unless all 3 pins of a standard British 13A plug are in position.

### Ease of installation

Ideal for retrofits and other decorative applications where back box space is limited.

**3-PIN "CHILD RESISTANT SHUTTER SYSTEM"**

Designed to inhibit access to the electricity supply, unless all 3 pins of a standard British 13A plug are in position (except K5261)

Terminal screws are backed out and captive and terminals are upwards facing to make installation easier.

Funnel entrance to terminals.

Clear terminal markings for easy identification.

**AVAILABLE IN THREE FINISHES**

Brushed Nickel  
(BNI)



Black Nickel  
(BLN)



Polished Chrome  
(POC)

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## Switchsocket Outlets

13 AMP  
FLUSH

13 AMP  
NON STANDARD  
FLUSH

## Shaver/ Toothbrush Supply Units

## Connection Units

FLUSH

## DP Switches

32 AMP AND  
50 AMP  
FLUSH

## Cooker Control Unit

45 AMP DP MAIN  
SWITCH AND  
13 AMP SWITCH  
SOCKET OUTLET  
WITH NEONS FLUSH



K5357BNI



K1278BNI



K4404POC



K5971BNI



K5305BLN



K5261BNI



K5347BLN



K1278BLN



K5971POC



K5336POC



K5261BLN



K5347POC



K5261POC

**K5357BNI** 1  
**K5357BLN** 1  
**K5357BNIUCW** 1  
**K5357BNIUCB** 1  
**K5357POCUCW** 1  
**K5357POCUCB** 1  
**K5357POC** 1  
 1G 13A DP  
 SWITCHED SOCKET OUTLET  
**K5347BNI** 1  
**K5347BLN** 1  
**K5347POCUCW** 1  
**K5347POCUCB** 1  
**K5347POC** 1  
 2G 13A DP  
 SWITCHED SOCKET OUTLET

UCW- UNCAPPED WHITE  
ROCKERS  
UCB- UNCAPPED BLACK  
ROCKERS

MOUNTING BOXES:

FLUSH 25mm  
1 gang: 861ZIC  
2 gang: 862ZIC

FLUSH 35mm (for extra wiring  
space)  
1 gang: 866ZIC  
2 gang: 886ZIC

### High integrity earthing.

K5357 is fitted with two  
earth terminals to provide a  
double earth facility when  
installations require a high  
integrity protective connection  
as specified within  
BS 7671: 2008

**K1278BNI** 1  
**K1278BLN** 1  
**K1278POC** 1  
 1G 13A DP NON STD  
 SWITCHED SOCKET OUTLET

MOUNTING BOXES:

FLUSH 25mm  
861ZIC

FLUSH 35mm (for extra wiring  
space)  
866ZIC

**K1278** has facility for 'clean  
earth' connection and is  
suitable for non-standard  
plugs with 'T' shaped earth  
pins. See page 224.

DIMENSIONS:  
87.5 x 87.5mm

FIXING CENTRES:  
60.3mm

BS 1363 Pt 2:1995  
(where relevant)

DIMENSIONS:

1 gang: 87.5 x 87.5mm  
2 gang: 87.5 x 149.5mm

FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm

BS 1363 Pt 2:1995

**K4404BNI** 1  
**K4404BLN** 1  
**K4404POC** 1  
 SHAVER/TOOTHBRUSH UNIT  
 115/230V INPUT

MOUNTING BOXES:

FLUSH: 878ZIC

This design incorporates  
a double wound isolating  
transformer rated 20VA at  
230 or 115 volts it meets  
BS EN61558-2-5 making it safe  
for use in bathrooms. Insertion  
of a shaver/toothbrush plug  
automatically switches on by  
energising the primary side of  
the isolating transformer  
— removal automatically  
switches off. The transformer is  
protected against overload by an  
automatic solid state overload  
device with automatic resetting.

DIMENSIONS: 149.5 x 87.5mm

FIXING CENTRES: 120.6mm

BS EN61558-2-5:1998

**K5361BNI** 1  
**K5361BLN** 1  
**K5361POC** 1  
 13A DP SWITCHED  
 CONNECTION UNIT/NEON

**K5971BNI** 1  
**K5971BLN** 1  
**K5971POC** 1  
 13A DP SWITCHED  
 CONNECTION UNIT FLEX/  
 NEON

MOUNTING BOXES:

FLUSH: 866ZIC

All units are fitted with a 13A  
fuse (to BS 1362)

TERMINAL CAPACITY  
2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS:  
87.5 x 87.5mm

FIXING CENTRES:  
60.3mm

BS 1363 Pt 4:1995

**K5305BNI** 1  
**K5305BLN** 1  
**K5305POC** 1  
 32A DP SWITCH WITH NEON

**K5336BNI** 1  
**K5336BLN** 1  
**K5336POC** 1  
 50A DP SWITCH WITH NEON

MOUNTING BOXES:

K5305 FLUSH:  
866ZIC (6mm<sup>2</sup> conductors)  
877ZIC (10mm<sup>2</sup> conductors)

K5336 FLUSH:  
886ZIC (6mm<sup>2</sup> conductors)  
878ZIC (10mm<sup>2</sup> conductors)

Fitted with an earth terminal.

These products are not  
recommended for switching  
large banks of PCs

DIMENSIONS:  
K5305: 87.5 x 87.5mm  
K5336: 87.5 x 149.5mm

FIXING CENTRES:  
K5305: 60.3mm  
K5336: 120.6mm

BS EN 60669-1: 1999

**K5261BNI** 1  
**K5261BLN** 1  
**K5261POC** 1  
 COOKER CONTROL UNIT

MOUNTING BOXES:

FLUSH:  
886ZIC (Up to 6mm<sup>2</sup> conductor)  
878ZIC (Up to 10mm<sup>2</sup> conductor)

Rotary operated shutter.

DIMENSIONS:  
87.5 x 149.5mm

FIXING CENTRES:  
120.6mm

BS 4177:1992

Please add insert colour to product code when ordering, Polished Chrome and Brushed Nickel are available with White or Black inserts, order POCW, POCCB, BNIW or BNIB. Black Nickel is only available with Black inserts.

## Plateswitches

10 AMP  
FLUSH



K5371BNI



K5371POC

## Standard Dimmer Switches

230V a.c. 50Hz  
TUNGSTEN FILAMENT  
FLUSH



K5306BNI



K5307BLN



K5307POC

## Intelligent Dimmer Switches

230V A.C. 50HZ  
TUNGSTEN FILAMENT  
AND LOW VOLTAGE  
FLUSH



K5306BNILV



K5307BLNLV



K5307POCLV

## Blank Plates

FLUSH



K5330BLN



K5329BNI

**K5371BNI**  
**K5371BLN**  
**K5371BNIUCW**  
**K5371BNIUCB**  
**K5371POCUCW**  
**K5371POCUCB**  
**K5371POC**  
1G 10A SP 2 WAY SWITCH

1  
1  
1  
1  
1  
1  
1

**K5379BNI**  
**K5379BLN**  
**K5379BNIUCW**  
**K5379BNIUCB**  
**K5379POCUCW**  
**K5379POCUCB**  
**K5379POC**  
2G 10A SP 2 WAY SWITCH

1  
1  
1  
1  
1  
1  
1

**K5373BNI**  
**K5373BLN**  
**K5373POC**  
3G 10A SP 2 WAY SWITCH  
SUPPLIED WITH BLACK OR WHITE PLASTIC  
ROCKERS ONLY

1  
1  
1

**K5306BNI**  
**K5306BLN**  
**K5306POC**  
1G 2 WAY 40-250W  
SINGLE DIMMER-STD

1  
1  
1

**K5301BNI**  
**K5301BLN**  
**K5301POC**  
1G 2 WAY 60-500W  
SINGLE DIMMER-STD

1  
1  
1

**K5307BNI**  
**K5307BLN**  
**K5307POC**  
1G 2 WAY 40-250W  
DOUBLE DIMMER-STD

1  
1  
1

Conforming to the latest standards BS EN60669-2-1 and BS EN55015, they are overload protected and are suitable for use with tungsten filament lamps only.

Two way dimmers use push on/push off switches.  
**They are not suitable for use with fluorescent loads, electronic transformers or wire-wound transformers in low voltage lighting systems.**

## MOUNTING BOXES FOR ALL DIMMERS

FLUSH:  
1 gang: 861ZIC: 25mm deep min  
866ZIC: 35mm deep  
DIMENSIONS:  
1 gang: 86 x 86mm  
FIXING CENTRES:  
1 gang: 60.3mm

**K5306BNILV**  
**K5306BLNLV**  
**K5306POCLV**  
1G 2 WAY 40-300W/240VA  
SINGLE DIMMER-LV

1  
1  
1

**K5301BNILV**  
**K5301BLNLV**  
**K5301POCLV**  
1G 2 WAY 60-500W/400VA  
SINGLE DIMMER-LV

1  
1  
1

**K5307BNILV**  
**K5307BLNLV**  
**K5307POCLV**  
1G 2 WAY 40-300W/240VA  
DOUBLE DIMMER-LV

1  
1  
1

Conforming to the latest standards BS EN60669-2-1 and BS EN55015, they use 'state of the art' micro controller based circuitry to provide soft start and overload protection.

The soft start feature helps in greatly prolonging the life of tungsten, normal or halogen lamps.

Suitable for use with good quality electronic or wire wound transformers. Can also be used with good quality mains voltage halogen lamps incorporating GU10 bases. Please check with lamp manufacturer to determine suitability.

**Not suitable for use with fluorescent loads.**

**K5330BNI**  
**K5330BLN**  
**K5330POC**  
1G BLANK PLATE

1  
1  
1

**K5329BNI**  
**K5329BLN**  
**K5329POC**  
2G BLANK PLATE

1  
1  
1

DIMENSIONS:  
1 gang: 87.5 x 87.5mm  
2 gang: 87.5 x 149.5mm

FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm

BS 5733:2010

UCW – UNCAPPED WHITE ROCKERS  
UCB – UNCAPPED BLACK ROCKERS

MOUNTING BOXES:  
FLUSH: 3995ZIC

These switches do not have to be derated when used with fluorescent or inductive loads. Switches can be wired as either one-way or two-way.

DIMENSIONS: 87.5 x 87.5mm  
FIXING CENTRES: 60.3mm  
BS EN 60669-1: 1999

Please add insert colour to product code when ordering, Polished Chrome and Brushed Nickel are available with White or Black inserts, order POCW, POCB, BNIW or BNIB. Black Nickel is only available with Black inserts.



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## TV/FM Coaxial and Satellite Socket Outlets

## Euro Data Frontplates

## Euro Power Modules

FLUSH



K5320BNI



K5321BLN



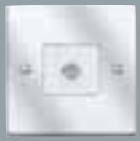
K5321POC



K5322BNI



K5325BLN



K5325POC

FLUSH



K181BNI



K182BLN



K184POC



K5830WHI



K5831WHI



K5832WHI

**K5320BNI**  
**K5320BLN**  
**K5320POC**  
TV/FM SINGLE  
NON-ISOLATED OUTLET

1  
1  
1

**K5322BNI**  
**K5322BLN**  
**K5322POC**  
TV/FM DIPLEXER  
TWIN OUTLET

1  
1  
1

**K5321BNI**  
**K5321BLN**  
**K5321POC**  
TV/FM SINGLE  
ISOLATED OUTLET

1  
1  
1

**K5325BNI**  
**K5325BLN**  
**K5325POC**  
F TYPE SATELLITE  
SOCKET OUTLET

1  
1  
1

**K181BNI**  
**K181BLN**  
**K181POC**  
1G 1 MODULE  
EURO DATA FRONTPLATE

1  
1  
1

**K182BNI**  
**K182BLN**  
**K182POC**  
1G 2 MODULE  
EURO DATA FRONTPLATE

1  
1  
1

**K184BNI**  
**K184BLN**  
**K184POC**  
2G 4 MODULE  
EURO DATA FRONTPLATE

1  
1  
1

**K5830WHI**  
**K5830BLK**  
UK EURO 2 MODULE  
13A 250V SHUTTERED

10  
10

**K5831WHI**  
**K5831BLK**  
GERMAN 2P+E  
16A 250V SHUTTERED  
EURO 2 MODULE (NON UK)

10  
10

**K5832WHI**  
**K5832BLK**  
AMERICAN  
15A 127V SHUTTERED  
EURO 2 MODULE (NON UK)

10  
10

### MOUNTING BOXES:

FLUSH:861ZIC

**K5320** **K5325** Single outlet for connection to a single TV or FM co-axial aerial lead.

**K5321**, **K5322** Provides safety isolation rated at 2000V.a.c. between aerial lead and socket. Single outlet for connection to a single TV or FM co-axial aerial lead. Twin outlet with TV/FM diplexer for connection to single co-axial aerial lead with combined TV & FM signals. Suitable for UHF TV and VHF FM radio.

DIMENSIONS: 87.5 x 87.5mm  
FIXING CENTRES: 60.3mm

IEC169-2: 1965 BS 5733: 2010 where applicable

### MOUNTING BOXES:

Suitable for flush boxes to BS 4662:1970 and surface boxes to BS 5733: 2010.

Refer to appropriate data modules for minimum box depth.

See pages 54-56 for complete data module selection.

FIXING CENTRES  
1 gang: 60.3mm 2 gang: 120.6mm

BS 5733: 2010 where applicable

Note: No grid required, modules just clip into place.

### K5830

MOUNTING BOX: 35mm minimum  
46mm (for extra wiring space)  
DIMENSIONS: 50 x 50mm  
BS 1363 Pt2:1995

### K5831

MOUNTING BOX: 46mm  
DIMENSIONS: 50 x 50mm  
IEC 60884-1: 2002

### K5832

MOUNTING BOX: 35mm  
46mm (for extra wiring space)  
DIMENSIONS: 50 x 50mm  
SASO 2203: 2003

See pages 54-56 for the full range of available Euro modules

Please add insert colour to product code when ordering, Polished Chrome and Brushed Nickel are available with White or Black inserts, order POCW, POCB, BNIW or BNIB. Black Nickel is only available with Black inserts.

## Euro Power Modules

## MK Modular Data Frontplates

## Grid Plus Frontplates

FLUSH

FLUSH

FLUSH



K5833WHI



K5834WHI



K5837WHI



K5091BNI



K5091POC



K5093BNI



K5331BNI



K5332BNI



K5332BLN



K5333BNI



K5334BLN



K5334POC

**K5833WHI**  
**K5833BLK**  
UK EURO 2 MODULE  
5A 250V SHUTTERED

10  
10

**K5834WHI**  
**K5834BLK**  
FRENCH/BELGIAN 2P+E  
16A 250V SHUTTERED  
EURO 2 MODULE (NON UK)

10  
10

**K5837WHI**  
**K5837BLK**  
USB CHARGING MODULE  
EURO 2 MODULE

1  
1

**K5091BNI**  
**K5091BLN**  
**K5091POC**  
1 MODULE  
DATA/TELECOM FRONTPLATE

1  
1  
1

**K5092BNI**  
**K5092BLN**  
**K5092POC**  
2 MODULE  
DATA/TELECOM FRONTPLATE

1  
1  
1

**K5093BNI**  
**K5093BLN**  
**K5093POC**  
3 MODULE  
DATA/TELECOM FRONTPLATE

1  
1  
1

**K5094BNI**  
**K5094BLN**  
**K5094POC**  
4 MODULE  
DATA/TELECOM FRONTPLATE

1  
1  
1

**K5331BNI**  
**K5331BLN**  
**K5331POC**  
1G GRID FRONTPLATE

1  
1  
1

**K5332BNI**  
**K5332BLN**  
**K5332POC**  
2G GRID FRONTPLATE

1  
1  
1

**K5333BNI**  
**K5333BLN**  
**K5333POC**  
3G GRID FRONTPLATE

1  
1  
1

**K5334BNI**  
**K5334BLN**  
**K5334POC**  
4G GRID FRONTPLATE

1  
1  
1

**K5833**  
MOUNTING BOX: 35mm minimum  
46mm (for extra wiring space)  
DIMENSIONS: 50 x 50mm  
BS 546:1950

**K5834**  
MOUNTING BOX: 46mm  
DIMENSIONS: 50 x 50mm  
NFC61-341

**K5837**  
MOUNTING BOX: 35mm  
46mm (for extra wiring space)  
DIMENSIONS: 50 x 50mm

Features 2 charging sockets each delivering 1A charging current at 5Vdc (total 2A max). Allows charging of portable devices via USB 2.0 type A plug.

IEC 60950-1  
IEC 61000-6-1/3

See pages 54-56 for the full range of available Euro modules

MOUNTING BOXES:  
FLUSH 35mm  
(for extra wiring space)  
866ZIC

See page 58 for appropriate data modules and mounting frames.

DIMENSIONS:  
87.5 x 87.5mm

BS 5733: 2010  
where applicable

FIXING CENTRES:  
60.3mm

BS 5733: 2010  
where applicable

Note: Require appropriate grid.  
K5091: Use K3701  
K5092: Use K3702  
Refer to Page 192

MOUNTING BOXES:  
FLUSH 35mm  
(for extra wiring space)  
886ZIC

See page 58 for appropriate data modules and mounting frames.

DIMENSIONS:  
87.5 x 149.5mm

BS 5733: 2010  
where applicable

FIXING CENTRES:  
120.6mm

BS 5733: 2010  
where applicable

Note: Require appropriate grid.  
K5093: Use K3703  
K5094: Use K3704  
Refer to Page 192

DIMENSIONS:  
87.5 x 87.5mm

See pages 176-191 for the appropriate switch modules.

For modules in black inserts and capped rockers choose POC modules, see page 92.

BS 5733: 2010

DIMENSIONS:  
87.5 x 149.5mm

See pages 176-191 for the appropriate switch modules.

For modules in black inserts and capped rockers choose POC modules, see page 92.

BS 5733: 2010

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range introduction

features and benefits

Available in Brushed Stainless Steel, Brushed Chrome, Satin Gold and Polished Chrome finishes, Albany Plus™ brings stylish yet subtle good looks to both contemporary and classical interiors. Being manufactured from the finest materials, Albany Plus™ wiring devices maintain their high quality appearance for years to come.

Echo™ is an innovative range of entirely wireless, batteryless and self powered switches, only available from MK Electric and in finishes to complement the Albany Plus™ range. Please see page 31 for details.

#### Available in Brushed Stainless Steel, Brushed Chrome, Satin Gold and Polished Chrome

Providing a range of products that complement the décor and requirements of any interior.

#### Albany Plus™ Brushed Chrome and Satin Gold are pre-treated with a heat-cured powder lacquer finish

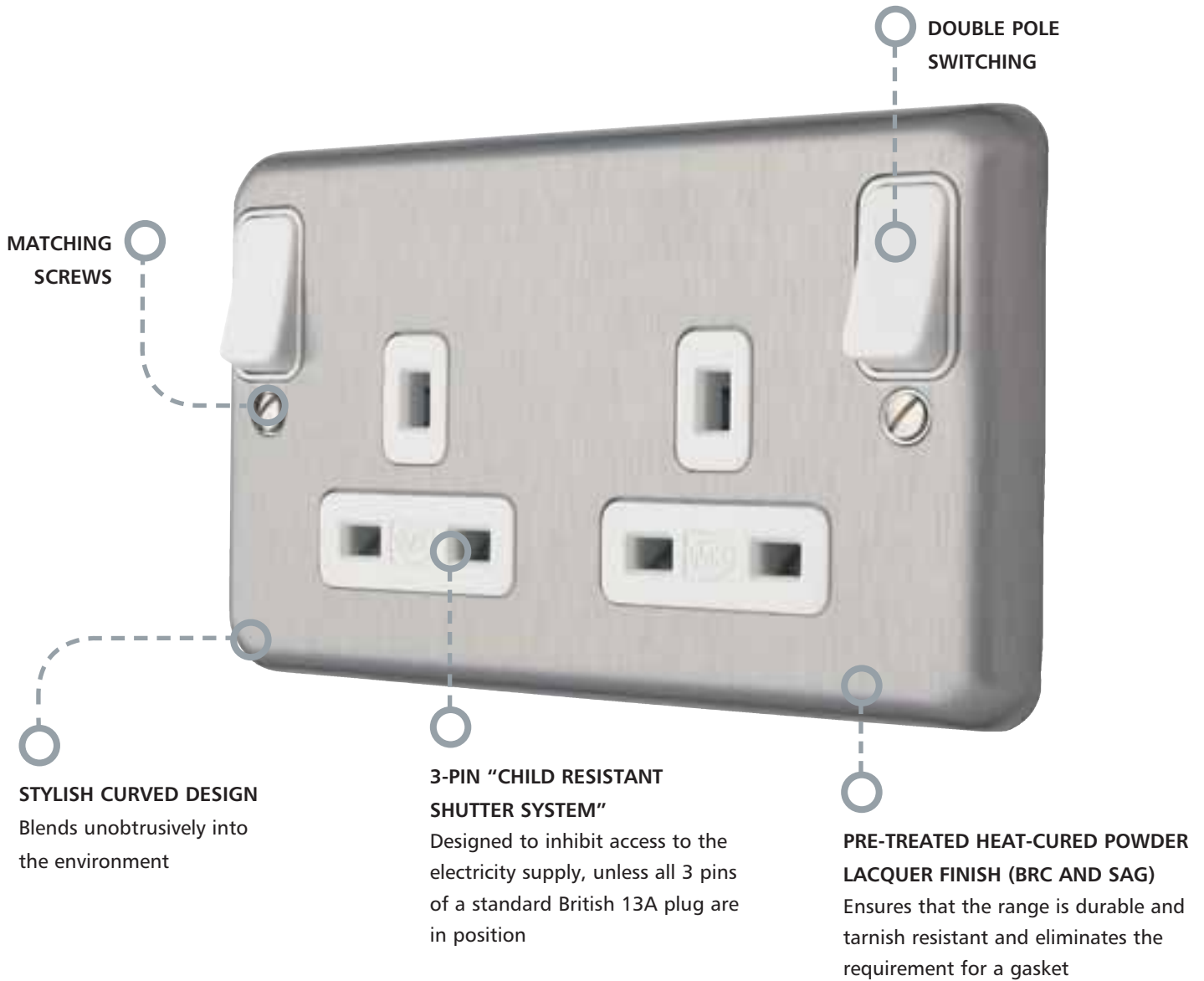
Brushed Chrome and Satin Gold products are coated with a special heat-cured powder lacquer finish ensuring that the range is durable, tarnish resistant and maintains its stylish and understated appearance for many years, and eliminates the need for a gasket.

#### Total Safety

MK sockets have a 3-pin operated "child resistant shutter system", which is designed to inhibit access to the electricity supply unless all 3 pins of a standard British 13A plug are in position.

#### Design Service

Perfect for when only a customised solution will do.



Terminal screws are backed out and captive. Terminals are upwards facing to make installation easier.

Funnel entrance to terminals.

Clear terminal markings for easy identification.

Polished Chrome finish complements modern interior design.

Brushed Chrome finish has subtle good looks to suit classic interiors.



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## Switchsocket Outlets

13 AMP

1 GANG DP  
DUAL EARTH  
TERMINALS  
FLUSH

2 GANG DP  
FLUSH

2 GANG DP WITH  
RED ROCKERS  
FLUSH

1 GANG DP  
DUAL EARTH  
TERMINALS  
WITH NEON  
FLUSH



### FINISHES

BRUSHED STAINLESS STEEL	K2958BSS	10	K2948BSS	5	K2948D6BSS	5	K2458BSS	10
BRUSHED CHROME	K2958BRC	10	K2948BRC	5	K2948D6BRC	5	K2458BRC	10
SATIN GOLD	K2958SAG	10	K2948SAG	5			K2458SAG	10
POLISHED CHROME	K2958PCR	10	K2948PCR	5			K2458PCR	10

#### High Integrity Earthing

K2958, K2458, K2947  
Fitted with two earth terminals to provide a double earth facility for use when installations require a high integrity protective connection as specified within BS 7671: 2008

#### High Integrity Earthing

K2958, K2458, K2947  
Fitted with two earth terminals to provide a double earth facility for use when installations require a high integrity protective connection as specified within BS 7671: 2008.

#### MOUNTING BOXES:

FLUSH 25mm  
1 GANG: 861ZIC  
2 GANG: 862ZIC  
FLUSH 35mm (for extra wiring space)  
1 GANG: 866ZIC  
2 GANG: 886ZIC

#### SURFACE WITH KNOCKOUTS

1 GANG: K899ALM  
2 GANG: K897ALM

#### SURFACE WITHOUT KNOCKOUTS

1 GANG: K829ALM  
2 GANG: K830ALM

#### DIMENSIONS:

1 GANG: 86 x 86mm  
2 GANG: 86 x 146mm

#### FIXING CENTRES:

1 GANG: 60.3mm  
2 GANG: 120.6mm

BS 1363 Pt 2: 1995

#### Double pole switching

All switchsockets have double pole switching (neutral makes first, breaks last).

## Switchsocket Outlets

2 GANG DP  
WITH NEONS  
FLUSH

2 GANG DP  
WITH OUTBOARD  
ROCKERS AND  
DUAL EARTH  
TERMINALS  
FLUSH

2 GANG DP  
WITH OUTBOARD  
RED ROCKERS AND  
DUAL EARTH  
TERMINALS  
FLUSH

2 GANG DP  
WITH OUTBOARD  
ROCKERS AND  
'CLEAN EARTH'  
FACILITY  
FLUSH

1 GANG DP  
WITH  
CLEAN EARTH  
FACILITY  
FLUSH



## FINISHES

BRUSHED STAINLESS STEEL	K2448BSS	5	K2947BSS	5	K2947D6BSS	5	K2947CEBSS	5	K1258BSS	10
BRUSHED CHROME	K2448BRC	5	K2947BRC	5	K2947D6BRC	5	K2947CEBRC	5		
SATIN GOLD	K2448SAG	5	K2947SAG	5						
POLISHED CHROME	K2448PCR	5	K2947PCR	5			K2947CEPCR	5	K1258PCR	10

**High Integrity Earthing**

K2958, K2458, K2947

Fitted with two earth terminals to

provide a double earth facility for use when installations require a high integrity protective connection as specified within BS 7671: 2008.

**K2947CE**

This product is provided with facilities for 'clean earth' connection.

BS 1363 Pt 2: 1995

**K1258, K1259,**

These products are provided with facilities for 'clean earth' connection and are suitable for non standard plugs with 'T' shaped earth pin.

See page 224.

BS 1363 Pt 2: 1995 where relevant

**MOUNTING BOXES:**

FLUSH 25mm

1 GANG: 861ZIC

2 GANG: 862ZIC

FLUSH 35mm (for extra wiring space)

1 GANG: 866ZIC

2 GANG: 886ZIC

**SURFACE WITH KNOCKOUTS**

1 GANG: K899ALM

2 GANG: K897ALM

**SURFACE WITHOUT KNOCKOUTS**

1 GANG: K829ALM

2 GANG: K830ALM

**DIMENSIONS:**

1 GANG: 86 x 86mm

2 GANG: 86 x 146mm

**FIXING CENTRES:**

1 GANG: 60.3mm

2 GANG: 120.6mm

BS 1363 Pt 2: 1995

**Double pole switching**

All switchsockets have double pole switching (neutral makes first, breaks last).

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2 GANG DP  
WITH  
CLEAN EARTH  
FACILITY  
FLUSH

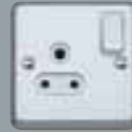
2 GANG DP  
FILTERED  
13 AMP  
SPIKE AND RFI  
FLUSH

REPLACEMENT  
FILTER SOCKET

1 GANG DP  
5 AMP  
SHUTTERED  
ROUND PIN  
FLUSH

1 GANG DP  
15 AMP  
SHUTTERED  
ROUND PIN  
FLUSH

Switchsocket  
Outlets RCD  
Protected  
1 GANG  
30MA RATED  
TRIPPING CURRENT  
ACTIVE CONTROL  
CIRCUIT FLUSH



K1259BSS	5	K2826BSS	5	K1800WHI	5	K2881BSS	10	K2883BSS	10	
K1259BRC	5	K2826BRC	5		K2881BRC	10	K2883BRC	10	K6301BRC	5
K1259SAG	5	K2826SAG	5		K2881SAG	10	K2883SAG	10		
K1259PCR	5	K2826PCR	5		K2881PCR	10	K2883PCR	10		

K1258, K1259,  
These products are  
provided with facilities for  
'clean earth' connection  
and are suitable for non  
standard plugs with 'T'  
shaped earth pin.  
See page 224.

BS 1363 Pt 2: 1995  
where relevant

MOUNTING BOX: 866ZIC  
Provides two way filtering  
to reduce voltage spikes and  
radio frequency interference.  
Protected by thermal cut out.  
Fitted with two earth  
terminals to provide a  
double earth facility when  
installations require a  
high integrity protective  
connection as specified  
within BS 7671: 2008.  
Maximum total load 13A  
DIMENSIONS:  
86 x 146 x 39mm  
FIXING CENTRES:  
120.6mm  
BS 5733: 2010

Maximum total load is  
13A  
BS 5733: 2010

MOUNTING BOXES:  
FLUSH 25mm: 861ZIC  
FLUSH 35mm: (for extra  
wiring space) 866ZIC  
SURFACE (BRC)  
WITH KNOCKOUTS: K899ALM  
WITHOUT KNOCKOUTS:  
K829ALM  
DIMENSIONS: 86 x 86mm  
FIXING CENTRES: 60.3mm  
BS 546: 1950

MOUNTING BOXES:  
FLUSH 25mm: 861ZIC  
FLUSH 35mm: (for extra  
wiring space) 866ZIC  
SURFACE (BRC)  
WITH KNOCKOUTS:  
K899ALM  
WITHOUT KNOCKOUTS:  
K829ALM  
DIMENSIONS: 86 x 86mm  
FIXING CENTRES: 60.3mm  
BS 546: 1950

MOUNTING BOXES  
FLUSH: 886ZIC  
Boxes must have a minimum depth  
of 30mm  
SURFACE (BRC)  
WITH KNOCKOUTS: K897ALM  
WITHOUT KNOCKOUTS: K830ALM  
It is important to ensure that  
the correct control circuit, active  
or passive, is selected for each  
application.  
Only suitable for supply voltage of  
240V a.c., 50Hz.  
DIMENSIONS: 86 x 146mm  
FIXING CENTRES: 120.6mm  
BS 7288: 1990

**Switchsocket  
Outlets RCD  
Protected**

1 GANG

30MA RATED

TRIPPING CURRENT  
PASSIVE CONTROL  
CIRCUIT **FLUSH**
**Socket Outlets  
13 AMP**
2 GANG WITH  
DUAL EARTH  
TERMINALS**FLUSH**
**MEIGaN Socket Outlets  
13 AMP**
1 GANG DP  
SWITCHED  
**FLUSH**1 GANG DP  
UNSWITCHED  
**FLUSH**2 GANG DP  
WITH OUTBOARD  
ROCKERS  
**FLUSH****FINISHES**

<b>BRUSHED STAINLESS STEEL</b>	<b>K6304BSS</b>	<b>5</b>	<b>K733BSS</b>	<b>5</b>				
<b>BRUSHED CHROME</b>			<b>K733BRC</b>	<b>5</b>	<b>K2958BLU</b>	<b>1</b>	<b>K732BLU</b>	<b>1</b>
<b>SATIN GOLD</b>					ENGRAVED "MEDICAL EQUIPMENT ONLY"		ENGRAVED "MEDICAL EQUIPMENT ONLY"	
<b>POLISHED CHROME</b>			<b>K733PCR</b>	<b>5</b>			<b>K2947CEBLU</b>	<b>5</b>
							"CLEAN EARTH" FACILITY. ENGRAVED "MEDICAL EQUIPMENT ONLY"	

It is important to ensure that the correct control circuit, active or passive, is selected for each application.

Only suitable for supply voltage of 240V a.c., 50Hz. BS 7288: 1990

**High Integrity Earthing**

K733 is fitted with two earth terminals to provide a double earth facility when installations require a high integrity protective connection as specified within BS 7671 IEE Wiring Regulations.

Product complies with the Medical Electrical Installation Guidance Notes (MEIGaN)

Product complies with the Medical Electrical Installation Guidance Notes (MEIGaN)

**K2947CEBLU  
K733CEBLU**

**These product are provided with facilities for "clean earth" connection.**

Product complies with the Medical Electrical Installation Guidance Notes (MEIGaN)

**MOUNTING BOXES:**

FLUSH 25mm  
1 GANG: 861ZIC  
2 GANG: 862ZIC  
FLUSH 35mm (for extra wiring space)  
1 GANG: 866ZIC  
2 GANG: 886ZIC  
SURFACE WITH KNOCKOUTS:  
1 GANG: K899ALM  
2 GANG: K897ALM  
WITHOUT KNOCKOUTS:  
1 GANG: K829ALM  
2 GANG: K830ALM

**DIMENSIONS:**

1 GANG: 86 x 86mm  
2 GANG: 86 x 146mm  
FIXING CENTRES:  
1 GANG: 60.3mm  
2 GANG: 120.6mm  
BS 1363 Pt 2: 1995  
(except for K6304)



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## Key Operated Socket Outlet and Switch

2 GANG  
UNSWITCHED  
SOCKET  
FLUSH

13 AMP 1 GANG DP  
DUAL EARTH KEY  
OPERATED SOCKET  
FLUSH

20 AMP 1 GANG DP  
KEY OPERATED  
SWITCH  
FLUSH

## Floor Mounted Socket Outlets

13 AMP

1 GANG  
SWITCHSOCKET  
SPRING LOADED  
HINGED COVER  
PLATE

1 GANG  
SWITCHSOCKET  
SPRING LOADED  
HINGED COVER  
PLATE

2 GANG SOCKET  
WITH SPRING  
LOADED  
HINGED COVER  
PLATE



<b>K733CEBLU</b> <b>5</b> "CLEAN EARTH" FACILITY. ENGRAVED "MEDICAL EQUIPMENT ONLY"	<b>K2949BSS</b> <b>5</b>	<b>K2158BSS</b> <b>5</b>	<b>740BSS</b> <b>10</b>	<b>741BSS</b> <b>10</b>	<b>742BSS</b> <b>5</b>
			<b>740BRC</b> <b>10</b>	<b>741BRC</b> <b>10</b>	<b>742BRC</b> <b>5</b>
			<b>740SAG</b> <b>10</b>	<b>741SAG</b> <b>10</b>	<b>742SAG</b> <b>5</b>

**K2947CEBLU**  
**K733CEBLU**  
 These product are provided with facilities for "clean earth" connection.  
 BS 1363 Pt 2: 1995  
 Product complies with the Medical Electrical Installation Guidance Notes (MEIGaN)

MOUNTING BOXES:  
 FLUSH 35mm:  
 1 GANG: 866ZIC  
 2 GANG: 886ZIC  
 SURFACE WITH KNOCKOUTS:  
 1 GANG: K899ALM  
 2 GANG: K897ALM  
 WITHOUT KNOCKOUTS:  
 1 GANG: K829ALM  
 2 GANG: K830ALM  
 DIMENSIONS:  
 1 GANG: 86 x 86mm  
 2 GANG: 86 x 146mm  
 K2949  
 BS 1363: Pt2: 1995

MOUNTING BOXES:  
 FLUSH 35mm:  
 1 GANG: 866ZIC  
 2 GANG: 886ZIC  
 SURFACE WITH KNOCKOUTS:  
 1 GANG: K899ALM  
 2 GANG: K897ALM  
 WITHOUT KNOCKOUTS:  
 1 GANG: K829ALM  
 2 GANG: K830ALM  
 DIMENSIONS:  
 1 GANG: 86 x 86mm  
 2 GANG: 86 x 146mm  
 K2158  
 BS EN 60669 – 1: 1999

MOUNTING BOXES:  
 FLUSH:  
 1 GANG: 866ZIC  
 2 GANG: 886ZIC  
 Boxes must have a minimum depth of 35mm  
 Rotary operated shutter.  
 DIMENSIONS:  
 1 GANG: 102 x 86mm  
 2 GANG: 102 x 146mm  
 FIXING CENTRES:  
 1 GANG: 60.3mm  
 2 GANG: 120.6mm  
 BS 1363 Pt2: 1995

MOUNTING BOXES:  
 FLUSH:  
 1 GANG: 866ZIC  
 2 GANG: 886ZIC  
 Boxes must have a minimum depth of 35mm  
 Rotary operated shutter.  
 DIMENSIONS:  
 1 GANG: 102 x 86mm  
 2 GANG: 102 x 146mm  
 FIXING CENTRES:  
 1 GANG: 60.3mm  
 2 GANG: 120.6mm  
 BS 1363 Pt2: 1995

MOUNTING BOXES:  
 FLUSH:  
 1 GANG: 866ZIC  
 2 GANG: 886ZIC  
 Boxes must have a minimum depth of 35mm  
 Rotary operated shutter.  
 DIMENSIONS:  
 1 GANG: 102 x 86mm  
 2 GANG: 102 x 146mm  
 FIXING CENTRES:  
 1 GANG: 60.3mm  
 2 GANG: 120.6mm  
 BS 1363 Pt2: 1995

## : Connection Units

SWITCHED FUSED

 DP SWITCHED  
WITH FLEX OUTLET  
FLUSH

 DP SWITCHED  
FLUSH

 DP SWITCHED  
WITH  
TAMPERPROOF  
FUZE  
CARRIER SCREW  
FLUSH

 DP SWITCHED  
WITH NEON  
FLUSH


## FINISHES

BRUSHED STAINLESS STEEL	K931BSS	5	K941BSS	5	K941KOBSS	5	K961BSS	5	K961D6BSS	5
BRUSHED CHROME	K931BRC	5	K941BRC	5	K941KOBRC	5	K961BRC	5	K961D6BRC	5
SATIN GOLD	K931SAG	5	K941SAG	5	K941KOSAG	5	K961SAG	5	K961D6SAG	5
POLISHED CHROME	K931PCR	5	K941PCR	5	K941KOPCR	5	K961PCR	5	K961D6PCR	5

## MOUNTING BOXES:

FLUSH: 866ZIC

SURFACE (BRC):

WITH KNOCKOUTS: K899ALM

WITHOUT KNOCKOUTS:

K829ALM

All connection units are fitted with a 13A fuse (to BS 1362)

TERMINAL CAPACITY: 2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS: 86 x 86mm

FIXING CENTRES: 60.3mm

BS 1363 Pt 4: 1995

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DP SWITCHED  
WITH FLEX  
OUTLET AND  
NEON  
**FLUSH**

DP SWITCHED  
WITH FLEX  
OUTLET AND  
NEON  
**FLUSH**

DP SWITCHED  
WITH FLEX  
OUTLET,  
NEON AND  
TAMPERPROOF  
FUSE  
CARRIER SCREW  
**FLUSH**

### Connection Units UNSWITCHED FUSED

WITH  
TAMPERPROOF  
FUSE CARRIER  
SCREW  
**FLUSH**

WITH  
TAMPERPROOF  
FUSE CARRIER  
SCREW  
**FLUSH**



<b>K971BSS</b>	<b>5</b>	<b>K971D6BSS</b>	<b>5</b>	<b>K971KOBSS</b>	<b>5</b>	<b>K948BSS</b>	<b>5</b>	<b>K948KOBSS</b>	<b>5</b>
<b>K971BRC</b>	<b>5</b>	<b>K971D6BRC</b>	<b>5</b>	<b>K971KOBRC</b>	<b>5</b>	<b>K948BRC</b>	<b>5</b>	<b>K948KOBRC</b>	<b>5</b>
<b>K971SAG</b>	<b>5</b>	<b>K971D6SAG</b>	<b>5</b>	<b>K971KOSAG</b>	<b>5</b>	<b>K948SAG</b>	<b>5</b>	<b>K948KOSAG</b>	<b>5</b>
<b>K971PCR</b>	<b>5</b>					<b>K948PCR</b>	<b>5</b>	<b>K948KOPCR</b>	<b>5</b>

#### MOUNTING BOXES:

FLUSH: 866ZIC

SURFACE (BRC) :  
WITH KNOCKOUTS:  
K899ALM

WITHOUT KNOCKOUTS:  
K829ALM

All connection units are fitted with a  
13A fuse  
(to BS 1362)

TERMINAL CAPACITY  
2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS: 86 x 86mm

FIXING CENTRES: 60.3mm

BS 1363 Pt 4: 1995

Connection  
 Units

 UNSWITCHED  
 FUSED

 WITH NEON  
 FLUSH

 WITH FLEX  
 OUTLET  
 AND NEON  
 FLUSH

## DP Switches

20 AMP

FLUSH

 WITH NEON  
 FLUSH

 WITH FLEX  
 OUTLET  
 AND NEON  
 FLUSH

**FINISHES**

BRUSHED STAINLESS STEEL	<b>K958BSS</b>	<b>5</b>	<b>K978BSS</b>	<b>5</b>	<b>K5213BSS</b>	<b>5</b>	<b>K5233BSS</b>	<b>5</b>	<b>K5233D6BSS</b>	<b>5</b>
BRUSHED CHROME	<b>K958BRC</b>	<b>5</b>	<b>K978BRC</b>	<b>5</b>	<b>K5213BRC</b>	<b>5</b>	<b>K5233BRC</b>	<b>5</b>	<b>K5233D6BRC</b>	<b>5</b>
SATIN GOLD	<b>K958SAG</b>	<b>5</b>	<b>K978SAG</b>	<b>5</b>	<b>K5213SAG</b>	<b>5</b>	<b>K5233SAG</b>	<b>5</b>	<b>K5233D6SAG</b>	<b>5</b>
POLISHED CHROME			<b>K978PCR</b>	<b>5</b>			<b>K5233PCR</b>	<b>5</b>		

## MOUNTING BOXES:

FLUSH: 866ZIC

SURFACE (BRC) :

WITH KNOCKOUTS: K899ALM

WITHOUT KNOCKOUTS:

K829ALM

All connection units are fitted with a 13A fuse (to BS 1362)

TERMINAL CAPACITY

 2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS: 86 x 86mm

FIXING CENTRES: 60.3mm

BS 1363 Pt 4: 1995

## MOUNTING BOXES:

FLUSH:

866ZIC

SURFACE (BRC)

WITH KNOCKOUTS:

K899ALM

WITHOUT KNOCKOUTS:

K829ALM

TERMINAL CAPACITY

 2 x 6mm<sup>2</sup> stranded (max)

DIMENSIONS:

86 x 86mm

FIXING CENTRES:

60.3mm

BS EN 60669-1: 1999

 DP Switches are  
 not recommended  
 for switching large  
 banks of PCs

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## High Current Switches

WITH FLEX  
OUTLET  
AND NEON  
FLUSH

32 AMP  
FLUSH

50 AMP  
FLUSH

## Cooker Control Units

45 AMP  
DP MAIN  
SWITCH AND 13  
AMP SWITCH  
SOCKET OUTLET  
WITH NEONS  
FLUSH

## Triple Pole & Neutral Switch

32 AMP  
WITH NEON  
FLUSH

## Shaver/Toothbrush Supply Units

DUAL VOLTAGE  
115/230V  
OUTPUT  
(220/240V  
50/60HZ INPUT)  
FLUSH



<b>K5250BSS</b>	<b>5</b>	<b>K5106BSS</b>	<b>5</b>	<b>K5236BSS</b>	<b>5</b>	<b>K5261BSS</b>	<b>5</b>	<b>K5114BSS</b>	<b>5</b>	<b>K703BSS</b>	<b>5</b>
<b>K5250BRC</b>	<b>5</b>	<b>K5106BRC</b>	<b>5</b>	<b>K5236BRC</b>	<b>5</b>	<b>K5261BRC</b>	<b>5</b>	<b>K5114BRC</b>	<b>5</b>	<b>K703BRC</b>	<b>5</b>
<b>K5250SAG</b>	<b>5</b>	<b>K5106SAG</b>	<b>5</b>	<b>K5236SAG</b>	<b>5</b>	<b>K5261SAG</b>	<b>5</b>	<b>K5114SAG</b>	<b>5</b>	<b>K703SAG</b>	<b>5</b>
<b>K5250PCR</b>	<b>5</b>	<b>K5106PCR</b>	<b>5</b>	<b>K5236PCR</b>	<b>5</b>	<b>K5261PCR</b>	<b>5</b>	<b>K5114PCR</b>	<b>5</b>	<b>K703PCR</b>	<b>5</b>

DP Switches are not recommended for switching large banks of PCs

MOUNTING BOXES:  
FLUSH:  
866ZIC (6mm<sup>2</sup> conductors)  
877ZIC (10mm<sup>2</sup> conductors)  
SURFACE (BRC) :  
WITH KNOCKOUTS:  
K899ALM  
WITHOUT KNOCKOUTS:  
K829ALM  
DIMENSIONS:  
86 x 86mm  
FIXING CENTRES:  
60.3mm  
BS EN 60669-1: 1999

MOUNTING BOXES:  
FLUSH:  
886ZIC (6mm<sup>2</sup> conductors)  
878ZIC (10mm<sup>2</sup> conductors)  
SURFACE (BRC)  
WITH KNOCKOUTS  
K897ALM  
WITHOUT KNOCKOUTS  
K830ALM  
DIMENSIONS:  
86 x 146mm  
FIXING CENTRES:  
120.6mm  
BS EN 60669-1: 1999

MOUNTING BOXES:  
FLUSH:  
886ZIC  
(Up to 6mm<sup>2</sup> conductor)  
878ZIC  
(Up to 10mm<sup>2</sup> conductor)  
Rotary operated shutter.  
DIMENSIONS:  
86 x 146mm  
FIXING CENTRES:  
120.6mm  
BS 4177: 1992

MOUNTING BOX:  
FLUSH: 878ZIC  
This product is rated at 440 volts with a motor load rating of up to 12kW – 16 HP at 415V 3 phase.  
It has a utilisation category of AC22A – switching of mixed resistive and inductive loads including moderate overloads for a continuous duty of 32 amps. Making capacity is 2000 amps peak.  
TERMINAL CAPACITY:  
16mm<sup>2</sup> conductors.  
DIMENSIONS:  
146 x 86mm  
BS EN 60947-3: 1992

MOUNTING BOXES:  
FLUSH: 878ZIC  
This design incorporates a double wound isolating transformer rated 20VA at 230 or 115 volts and meets BS EN 61558-2-5:1998 making it safe for use in bathrooms.  
Insertion of a shaver/toothbrush plug automatically switches on by energising the primary side of the isolating transformer – removal automatically switches off. The transformer is protected against overload by an automatic solid state overload device with automatic resetting.  
DIMENSIONS: 146 x 86mm  
FIXING CENTRES: 120.6mm  
BS EN 61558-2-5: 1998

DUAL VOLTAGE  
115/230V  
OUTPUT  
(120/130V  
50/60HZ INPUT)  
NON UK  
FLUSH

Flex Outlets  
(NON UK)

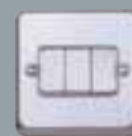
FLUSH

Plateswitches

10 AMP  
FLUSH

2 GANG SP  
TWO-WAY  
FLUSH

3 GANG SP  
TWO-WAY  
FLUSH



#### FINISHES

BRUSHED STAINLESS STEEL		K2240BSS	5	K4671BSS	5	K4672BSS	5	K4673BSS	5	
BRUSHED CHROME	K707BRC	5	K2240BRC	5	K4671BRC	5	K4672BRC	5	K4673BRC	5
SATIN GOLD		K2240SAG	5	K4671SAG	5	K4672SAG	5	K4673SAG	5	
POLISHED CHROME				K4671PCR	5	K4672PCR	5	K4673PCR	5	

MOUNTING BOXES:  
FLUSH: 878ZIC

This design incorporates a double wound isolating transformer rated 20VA at 230 or 115 volts and meets BS EN 61558-2-5:1998 making it safe for use in bathrooms.

Insertion of a shaver/toothbrush plug automatically switches on by energising the primary side of the isolating transformer – removal automatically switches off. The transformer is protected against overload by an automatic solid state overload device with automatic resetting.

DIMENSIONS: 146 x 86mm  
FIXING CENTRES: 120.6mm  
BS EN 61558-2-5: 1998

MOUNTING BOXES:  
FLUSH: 866ZIC

SURFACE (BRC)  
WITH KNOCKOUTS:  
K899ALM

WITHOUT KNOCKOUTS:  
K829ALM

Cable diameter:  
Minimum 4mm  
Maximum 14.5mm  
DIMENSIONS:  
1 gang: 86 x 86mm

FIXING CENTRES:  
1 gang: 60.3mm  
BS 5733: 2010

MOUNTING BOXES:  
FLUSH: 3995ZIC

SURFACE (BRC) :  
WITH KNOCKOUTS: K899ALM  
WITHOUT KNOCKOUTS: K829ALM

These switches do not have to be derated when used with fluorescent or inductive loads.

Switches can be wired as either one-way or two-way.  
DIMENSIONS: 86 x 86mm  
FIXING CENTRES: 60.3mm  
BS EN 60669-1: 1999

If an intermediate switch is required, a modular (Grid Plus) version is available. Order K3431 grid plate, K3701 grid frame and K4893WHI 20A intermediate switch.

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### 3 Pole Fan Isolator

1 GANG SP  
TWO-WAY  
10 AMP  
WIDE ROCKER  
FLUSH

2 GANG SP  
TWO-WAY  
WIDE ROCKER  
FLUSH

10 AMP  
WITHOUT  
SWITCHLOCK  
FLUSH

SWITCHLOCK  
FOR FAN  
ISOLATOR

### Standard Dimmer Switches

230Va.c. 50Hz TUNGSTEN FILAMENT

1 GANG TWO WAY  
SINGLE  
40W MIN, 250W  
MAX  
FLUSH

1 GANG TWO WAY  
SINGLE  
60W MIN,  
500W MAX  
FLUSH



K4761BSS	5	K4762BSS	5	K4860BSS	1	K4858	10	K1534BSS	1	K1551BSS	1
K4761BRC	5	K4762BRC	5	K4860BRC	1		K1534BRC	1	K1551BRC	1	
K4761SAG	5	K4762SAG	5	K4860SAG	1		K1534SAG	1	K1551SAG	1	
K4761PCR	5	K4762PCR	5	K4860PCR	1		K1534PCR	1	K1551PCR	1	

#### MOUNTING BOXES:

FLUSH: 3995ZIC

SURFACE: K2160WHI

For local isolation of fans with or without timers for repair or routine maintenance.

#### DIMENSIONS:

86 x 86mm

#### FIXING CENTRES:

60.3mm

BS EN 60947-3: 1992

Conforming to the latest standards BS EN 60669-2-1 and BS EN 55015, they are overload protected and are suitable for use with tungsten filament lamps only.

Two way dimmers use push on/push off switches.

**They are not suitable for use with fluorescent loads or with electronic or with wire-wound transformers in low voltage lighting systems.**

### Standard Dimmer Switches

230Va.c. 50Hz TUNGSTEN FILAMENT

1 GANG TWO WAY DOUBLE 40W, 250W MAX FOR EACH DIMMER FLUSH	2 GANG TWO WAY DOUBLE 60W MIN, 450W MAX FOR EACH DIMMER FLUSH	2 GANG TWO WAY TRIPLE 40W MIN, 250W MAX FOR EACH DIMMER FLUSH
---	--	--



FINISHES						
BRUSHED STAINLESS STEEL	K1532BSS	1	K1552BSS	1	K1533BSS	1
BRUSHED CHROME	K1532BRC	1	K1552BRC	1	K1533BRC	1
SATIN GOLD	K1532SAG	1	K1552SAG	1	K1533SAG	1
POLISHED CHROME	K1532PCR	1	K1552PCR	1	K1533PCR	1

Conforming to the latest standards BS EN 60669-2-1 and BS EN 55015, they are overload protected and are suitable for use with tungsten filament lamps only.

Two way dimmers use push on/push off switches.

**They are not suitable for use with fluorescent loads or with electronic or with wire-wound transformers in low voltage lighting systems.**



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## Intelligent Dimmer Switches

230VA.C. 50HZ TUNGSTEN FILAMENT

1 GANG TWO WAY  
SINGLE  
40W/VA MIN,  
300W/240VA MAX  
FLUSH

1 GANG TWO  
WAY SINGLE  
60W/VA MIN,  
500W/400VA MAX  
FLUSH

1 GANG TWO WAY  
DOUBLE  
40W/VA MIN,  
300W/240VA MAX  
FOR EACH DIMMER  
FLUSH

2 GANG TWO  
WAY DOUBLE  
60W/VA MIN,  
450W/360VA  
MAX FOR EACH  
DIMMER  
FLUSH

## Dimmer Switches

(NON UK) 200-240Va.c.  
50Hz or 60Hz

1 GANG SINGLE  
ONE WAY  
75-500W 50HZ  
FLUSH



K1536BSSLV	1	K1551BSSLV	1	K1532BSSLV	1	K1552BSSLV	1	K1541BSS	1
K1536BRCLV	1	K1551BRCLV	1	K1532BRCLV	1	K1552BRCLV	1	K1541BRC	1
K1536SAGLV	1	K1551SAGLV	1	K1532SAGLV	1	K1552SAGLV	1	K1541SAG	1
K1536PCRLV	1	K1551PCRLV	1	K1532PCRLV	1	K1552PCRLV	1	K1541PCR	1

Conforming to the latest standards BS EN 60669-2-1 and BS EN 55015, they use 'state of the art' micro controller based circuitry to provide soft start and overload protection.

The soft start feature helps in greatly prolonging the life of tungsten, normal or halogen lamps.

Suitable for use with good quality electronic or wire wound transformers. Can also be used with good quality mains voltage halogen lamps incorporating GU10 bases. Please check with lamp manufacturer to determine suitability.

**Not suitable for use with fluorescent loads.**

### Dimmer Switches

1 GANG SINGLE  
TWO WAY 100–  
1000W 50HZ  
FLUSH



### Blank Plates

1 GANG  
FLUSH



2 GANG  
FLUSH



### TV/FM Coaxial Socket Outlets

NON ISOLATED  
FLUSH



ISOLATED  
FLUSH



#### FINISHES

BRUSHED STAINLESS STEEL	<b>K1561BSS</b>	<b>1</b>	<b>K3330BSS</b>	<b>10</b>	<b>K3329BSS</b>	<b>5</b>	<b>K3580BSS</b>	<b>5</b>	<b>K3581BSS</b>	<b>5</b>
BRUSHED CHROME	<b>K1561BRC</b>	<b>1</b>	<b>K3330BRC</b>	<b>10</b>	<b>K3329BRC</b>	<b>5</b>	<b>K3580BRC</b>	<b>5</b>	<b>K3581BRC</b>	<b>5</b>
SATIN GOLD	<b>K1561SAG</b>	<b>1</b>	<b>K3330SAG</b>	<b>10</b>	<b>K3329SAG</b>	<b>5</b>	<b>K3580SAG</b>	<b>5</b>	<b>K3581SAG</b>	<b>5</b>
POLISHED CHROME	<b>K1561PCR</b>	<b>1</b>	<b>K3330PCR</b>	<b>10</b>	<b>K3329PCR</b>	<b>5</b>	<b>K3580PCR</b>	<b>5</b>	<b>K3581PCR</b>	<b>5</b>

#### MOUNTING BOXES FOR DIMMERS:

FLUSH:  
1 GANG: 861ZIC 25mm deep min  
2 GANG: 862ZIC 25mm deep min  
866ZIC: 35mm min for K1532BRCLV K1532SAGLV

DIMENSIONS:  
1 GANG: 86 x 86mm  
2 GANG: 86 x 146mm

FIXING CENTRES:  
1 GANG: 60.3mm  
2 GANG: 120.6mm

#### MOUNTING BOXES:

FLUSH:  
1 GANG: 866ZIC  
2 GANG: 886ZIC  
SURFACE (BRC) :  
WITH KNOCKOUTS:  
1 GANG: K899ALM  
2 GANG: K897ALM  
WITHOUT KNOCKOUTS:  
1 GANG: K829ALM  
2 GANG: K830ALM

DIMENSIONS:  
1 GANG: 86 x 86mm  
2 GANG: 86 x 146mm

FIXING CENTRES:  
1 GANG: 60.3mm  
BS 5733: 2010

#### MOUNTING BOXES:

FLUSH:  
1 GANG: 866ZIC  
2 GANG: 886ZIC  
SURFACE (BRC) :  
WITH KNOCKOUTS:  
1 GANG: K899ALM  
2 GANG: K897ALM  
WITHOUT KNOCKOUTS:  
1 GANG: K829ALM  
2 GANG: K830ALM

DIMENSIONS:  
1 GANG: 86 x 86mm  
2 GANG: 86 x 146mm

FIXING CENTRES:  
1 GANG: 60.3mm  
BS 5733: 2010

#### MOUNTING BOXES:

FLUSH: 861ZIC  
SURFACE (BRC) :  
WITH KNOCKOUTS: K899ALM  
WITHOUT KNOCKOUTS: K829ALM

#### K3580

Single outlet for connection to a single TV or FM co-axial aerial lead.

#### K3581, K3582

Provides safety isolation rated at 2000Va.c. between aerial lead and socket. Single outlet for connection to a single TV or FM co-axial aerial lead. Twin outlet with TV/

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## Satellite Socket Outlets

TWIN  
OUTLET WITH  
TV/FM DIPLEXER  
FLUSH

SINGLE OUTLET  
F TYPE  
SATELLITE SOCKET  
FLUSH

## Floor Mounted Euro Frame

1 GANG STANDARD  
FLOOR MOUNTED  
EURO FRAME

1 GANG RECESS  
FLOOR  
MOUNTED EURO  
FRAME

2 GANG  
STANDARD  
FLOOR  
MOUNTED EURO  
FRAME

2 GANG RECESS  
FLOOR  
MOUNTED EURO  
FRAME



K3582BSS	5	K3585BSS	1	790BSS	10	791BSS	10	795BSS	10	796BSS	10
K3582BRC	5	K3585BRC	1	790BRC	10	791BRC	10	795BRC	10	796BRC	10
K3582SAG	5	K3585SAG	1	790SAG	10	791SAG	10	795SAG	10	796SAG	10
K3582PCR	5	K3585PCR	1								

IEC 169-2: 1965

DIMENSIONS:  
86 x 86mm

FIXING CENTRES:  
60.3mm

BS 5733: 2010 where  
applicable

FM diplexer for  
connection to single  
co-axial aerial lead  
with combined TV & FM  
signals. Suitable for  
UHF TV and VHF FM  
radio.

Fully screened  
modular TV/  
Satellite outlets  
are available to fit  
Euro frontplates.  
See page 56 for  
details.

MOUNTING BOXES:

FLUSH:  
1 GANG: 866ZIC  
2 GANG: 886ZIC

Boxes must have a minimum depth of 35mm

DIMENSIONS:  
1 GANG: 102 x 86mm  
2 GANG: 102 x 146mm

FIXING CENTRES:  
1 GANG: 60.3mm  
2 GANG: 120.6mm

NOTE:  
Recessed Euro Frame products must be used with 'F' Type  
connectors. This ensures full lid closure when the aerial lead is  
disconnected.

Power sockets must only be used with the standard Euro Frame  
products as the recessed type may NOT allow full plug engagement.

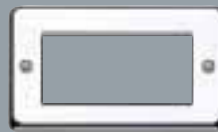
BS 5733: 2010

For a complete selection of Euro modules, see pages 54-56.

Euro, LJU6C and MK Modular  
 Data Frontplates

 EURO 1 MODULE  
 FLUSH

 EURO 2 MODULE  
 FLUSH

 EURO 4 MODULE  
 FLUSH

 LJU6C 2 MODULE  
 FLUSH


FINISHES	EURO 1 MODULE		EURO 2 MODULE		EURO 4 MODULE		LJU6C 2 MODULE	
BRUSHED STAINLESS STEEL	K181BSS	5	K182BSS	5	K184BSS	5	K172BSS	5
BRUSHED CHROME	K181BRC	5	K182BRC	5	K184BRC	5	K172BRC	5
SATIN GOLD	K181SAG	5	K182SAG	5	K184SAG	5	K172SAG	5
POLISHED CHROME	K181PCR	5	K182PCR	5	K184PCR	5	K172PCR	5

For a complete selection of Euro, LJU6C and MK Modular Data modules and more information see pages 54-58.

**DIMENSIONS:**

1 & 2 module: 86 x 86mm

3 & 4 module: 86 x 146mm

BS 5733: 2010.

Note: LJU6C and Euro Data Frontplates: no grid required, modules just clip into place. MK Modular require appropriate grid.

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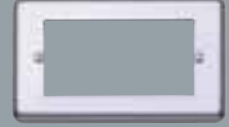
decorative | wiring devices

MK MODULAR  
1 MODULE  
FLUSH

MK MODULAR  
2 MODULE  
FLUSH

MK MODULAR  
3 MODULE  
FLUSH

MK MODULAR  
4 MODULE  
FLUSH



<b>K391BSS</b>	<b>10</b>	<b>K392BSS</b>	<b>10</b>	<b>K393BSS</b>	<b>5</b>	<b>K394BSS</b>	<b>5</b>
<b>K391BRC</b>	<b>10</b>	<b>K392BRC</b>	<b>10</b>	<b>K393BRC</b>	<b>5</b>	<b>K394BRC</b>	<b>5</b>
<b>K391SAG</b>	<b>10</b>	<b>K392SAG</b>	<b>10</b>	<b>K393SAG</b>	<b>5</b>	<b>K394SAG</b>	<b>5</b>
<b>K391PCR</b>	<b>10</b>	<b>K392PCR</b>	<b>10</b>	<b>K393PCR</b>	<b>5</b>	<b>K394PCR</b>	<b>5</b>

For a complete selection of Euro, LJU6C and MK Modular Data modules and more information see pages 54-58.

DIMENSIONS:

1 & 2 module: 86 x 86mm

3 & 4 module: 86 x 146mm

BS 5733: 2010.

Note: LJU6C and Euro Data Frontplates: no grid required, modules just clip into place. MK Modular require appropriate grid.

## Euro Power Modules

UK 1 GANG EURO 2 MODULE 13 AMP 250V SHUTTERED	GERMAN 2P+E 16 AMP 250V SHUTTERED EURO 2 MODULE (NON UK)	AMERICAN 15 AMP 127V SHUTTERED EURO 2 MODULE (NON UK)	UK 1 GANG EURO 2 MODULE 5 AMP 250V SHUTTERED	FRENCH/ BELGIAN 2P+E 16AMP 250V SHUTTERED EURO TWO MODULE (NON UK)	USB CHARGING MODULE EURO 2 MODULE
--	--	---	--	---	---

## FINISHES

BRUSHED STAINLESS STEEL

BRUSHED CHROME

SATIN GOLD

POLISHED CHROME



K5830WHI 10

K5831WHI 10

K5832WHI 10

K5833WHI 10

K5834WHI 10

K5837WHI 1

K5830BLK 10

K5831BLK 10

K5832BLK 10

K5833BLK 10

K5834BLK 10

K5837BLK 1

**K5830**  
MOUNTING BOX: 35mm  
minimum  
46mm (for extra wiring  
space)  
DIMENSIONS:  
50 x 50mm  
BS 1363 Pt 2:1995

**K5831**  
MOUNTING BOX: 46mm  
DIMENSIONS:  
50 x 50mm  
IEC 60884-1: 2006

**K5832**  
MOUNTING BOX: 35mm  
46mm (for extra wiring  
space)  
DIMENSIONS:  
50 x 50mm  
SASO 2203: 2003

**K5833**  
MOUNTING BOX:  
35mm minimum  
46mm (for extra wiring  
space)  
DIMENSIONS:  
50 x 50mm  
BS 546:1950

**K5834**  
MOUNTING BOX:  
46mm  
DIMENSIONS:  
50 x 50mm  
NFC61-341

**K5837**  
MOUNTING BOX: 35mm  
46mm (for extra wiring  
space)  
DIMENSIONS: 50 x 50mm

Features 2 charging sockets  
each delivering 1A charging  
current at 5Vdc (total 2A  
max). Allows charging of  
portable devices via USB 2.0  
type A plug.

IEC 60950-1  
IEC 61000-6-1/3

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## Grid Plus Frontplates

1 MODULE  
FLUSH

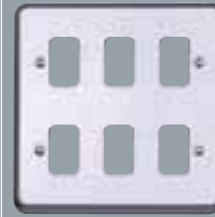
2 MODULE  
FLUSH

3 MODULE  
FLUSH

4 MODULE  
FLUSH

6 MODULE  
FLUSH

8 MODULE  
FLUSH



K3431BSS	10	K3432BSS	10	K3433BSS	5	K3434BSS	5	K3436BSS	1	K3438BSS	1
K3431BRC	10	K3432BRC	10	K3433BRC	5	K3434BRC	5	K3436BRC	1	K3438BRC	1
K3431SAG	10	K3432SAG	10	K3433SAG	5	K3434SAG	5	K3436SAG	1	K3438SAG	1
K3431PCR	10	K3432PCR	10	K3433PCR	5	K3434PCR	5	K3436PCR	1	K3438PCR	1

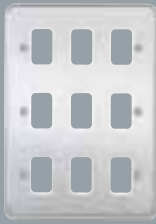
For a complete selection of Grid Plus switch modules see Grid Plus pages 176 - 191.

DIMENSIONS:  
Architrave: 118 x 38mm  
1 & 2 module: 86 x 86mm  
3 & 4 module: 86 x 146mm

BS 5733: 2010

Grid Plus  
Frontplates

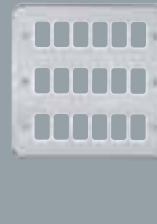
9 MODULE  
FLUSH



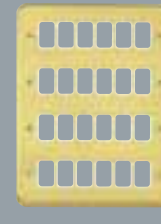
12 MODULE  
FLUSH



18 MODULE  
FLUSH



24 MODULE  
FLUSH



ARCHITRAVE  
1 MODULE  
FLUSH



FINISHES

BRUSHED STAINLESS STEEL	K3439BSS	1	K3442BSS	1	K3448BSS	1	K3454BSS	1	K3401BSS	10
BRUSHED CHROME	K3439BRC	1	K3442BRC	1	K3448BRC	1	K3454BRC	1	K3401BRC	10
SATIN GOLD	K3439SAG	1	K3442SAG	1	K3448SAG	1	K3454SAG	1	K3401SAG	10
POLISHED CHROME	K3439PCR	1	K3442PCR	1	K3448PCR	1	K3454PCR	1	K3401PCR	10

For a complete selection of Grid Plus switch modules see Grid Plus, pages 176-191.

DIMENSIONS:  
Architrave: 118 x 38mm  
6 & 8 module: 146 x 146mm  
9 & 12 module: 206 x 146mm

BS 5733: 2010



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## range introduction

## features and benefits

Grid Plus is a modular switching and monitoring system in a choice of attractive finishes to match complementary accessory ranges.

The comprehensive range of modules includes switches, indicators, dimmers, secret key switches, printed switches and buzzer units – making it the ideal system for commercial and public building applications.

Easy to fit and change, Grid Plus modules simply clip into place from the front of the mounting frame.

### Vast range

Comprehensive range of grid and plate modules from a single manufacturer making the range flexible and suitable for more installations.

### Ease of installation

Grid modules 'clip fit' to the frame without any requirement for special tools. They can be moved, removed or replaced whilst the frame is fitted to the box making installation or replacement speedy and simple.

### Durability

Grid frames are made from pre-galvanised steel to provide extra high corrosion resistance preventing tarnishing. Ensures longevity of product.

### Safety

Grid frames earth terminal capacity exceeds current standards for total safety assurance. All products are 100% tested before delivery for confidence of a 'fit and forget' installation. 20 year guarantee.

Blank  
 Inserts

 Switch Modules  
 10 Amp

 1 MODULE  
 BLANK INSERT

 10 AMP SP  
 ONE WAY

 10 AMP DP  
 ONE WAY

 10 AMP SP  
 TWO WAY

 10 AMP SP  
 TWO-WAY  
 RETRACTIVE  
 SWITCH


## FINISHES

WHITE	K4880WHI	10	K4881WHI	10	K4981WHI	10	K4882WHI	10	K4885WHI	10
BLACK	K4880BLK	10	K4881BLK	10	K4981BLK	10	K4882BLK	10	K4885BLK	10
GRAPHITE	K4880GRA	10	K4881GRA	10			K4882GRA	10		

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

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## Switch Modules 20 Amp

10 AMP SP  
TWO-WAY  
RED RETRACTIVE  
SWITCH

10 AMP SP  
TWO-WAY  
RETRACTIVE SWITCH  
MARKED WITH  
BELL SYMBOL

10 AMP SP  
TWO-WAY  
RETRACTIVE  
SWITCH MARKED  
'PRESS'

10 AMP SP  
TWO WAY  
CENTRE OFF  
RETRACTIVE  
SWITCH

20 AMP SP  
ONE-WAY



**K4885RED**

**1**

**K4885BWHI**

**1**

**K4885PWHI**

**10**

**K4900WHI**

**10**

**K4891WHI**

**10**

**K4885REDB**

**1**

**K4885BBLK**

**1**

**K4885PBLK**

**1**

**K4900BLK**

**10**

**K4891BLK**

**10**

**K4891GRA**

**10**

Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

## Switch Modules 20 Amp

20 AMP DP  
ONE-WAY  
PUSH TO MAKE

20 AMP DP  
ONE-WAY  
RED ROCKER  
PUSH TO MAKE

20 AMP DP  
ONE-WAY  
PUSH TO BREAK  
RETRACTIVE

20 AMP DP  
ONE-WAY  
RED ROCKER  
PUSH TO BREAK  
RETRACTIVE

20 AMP SP  
TWO WAY



### FINISHES

WHITE	K4910WHI <b>10</b>	K4910RED <b>10</b>	K4915WHI <b>10</b>	K4915RED <b>10</b>	K4892WHI <b>10</b>
BLACK	K4910BLK <b>10</b>	K4910REDB <b>1</b>	K4915BLK <b>10</b>	K4915REDB <b>1</b>	K4892BLK <b>10</b>
GRAPHITE					

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

Note: Push switches are not designed for fluorescent loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

B suffix on the list number denotes black inserts

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modular | wiring devices

20 AMP SP  
TWO-WAY  
RED ROCKER







20 AMP SP  
TWO-WAY  
SWITCH WITH  
INTEGRAL NEON  
LOCATOR

20 AMP SP  
TWO-WAY  
AND CENTRE OFF  
LATCHING

20 AMP SP  
RED ROCKER  
TWO-WAY  
AND CENTRE OFF  
LATCHING

20 AMP  
INTERMEDIATE

20 AMP  
INTERMEDIATE  
RED ROCKER

					
<b>K4892RED</b> <b>10</b>	<b>K4892LWHI</b> <b>10</b>	<b>K4899WHI</b> <b>10</b>	<b>K4899RED</b> <b>10</b>	<b>K4893WHI</b> <b>10</b>	<b>K4893RED</b> <b>10</b>
<b>K4892REDB</b> <b>10</b>	<b>K4892LBLK</b> <b>1</b>	<b>K4899BLK</b> <b>10</b>		<b>K4893BLK</b> <b>10</b>	<b>K4893REDB</b> <b>10</b>

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

These switches do NOT have to be derated when used with fluorescent or inductive loads.  
BS EN 60669-1: 1999

Switch Modules  
20 Amp

20 AMP DP  
ONE-WAY

20 AMP DP  
ONE-WAY  
NEON

20 AMP DP  
ONE-WAY  
WITH WINDOW

20 AMP DP  
ONE-WAY  
RED ROCKER

Printed Modules  
with and  
without Neon

20 AMP DP  
ONE-WAY  
BOILER

20 AMP DP  
ONE-WAY  
BOILER  
NEON

**FINISHES**

<b>WHITE</b>	K4896WHI <b>10</b>	K4896NWHI <b>1</b>	K4896WWHI <b>10</b>	K4896RED <b>10</b>	K4896BRWHI <b>1</b>	K4896NBRWHI <b>1</b>
<b>BLACK</b>	K4896BLK <b>10</b>	K4896NBLK <b>1</b>	K4896WBLK <b>10</b>		K4896BRBLK <b>1</b>	K4896NBRBLK <b>1</b>

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

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**modular** | wiring devices

20 AMP DP ONE-WAY DISHWASHER	20 AMP DP ONE-WAY DISHWASHER NEON	20 AMP DP ONE-WAY COOKER HOOD	20 AMP DP ONE-WAY COOKER HOOD NEON	20 AMP DP ONE-WAY FAN	20 AMP DP ONE-WAY FAN NEON	20 AMP DP ONE-WAY FRIDGE
------------------------------------	--	-------------------------------------	---	-----------------------------	-------------------------------------	--------------------------------



<b>K4896DWWHI</b> <b>1</b>	<b>K4896NDWWHI</b> <b>1</b>	<b>K4896CHWHI</b> <b>1</b>	<b>K4896NCHWHI</b> <b>1</b>	<b>K4896FNWHI</b> <b>1</b>	<b>K4896NFNWHI</b> <b>1</b>	<b>K4896FGWHI</b> <b>1</b>
<b>K4896DWBLK</b> <b>1</b>	<b>K4896NDWBLK</b> <b>1</b>	<b>K4896CHBLK</b> <b>1</b>	<b>K4896NCHBLK</b> <b>1</b>	<b>K4896FNBLK</b> <b>1</b>	<b>K4896NFNBLK</b> <b>1</b>	<b>K4896FGBLK</b> <b>1</b>

### Printed Modules with and without Neon

20 AMP DP  
ONE-WAY  
FRIDGE  
NEON

20 AMP DP  
ONE-WAY  
FREEZER

20 AMP DP  
ONE-WAY  
FREEZER  
NEON

20 AMP DP  
ONE-WAY  
FRIDGE FREEZER

20 AMP DP  
ONE-WAY  
FRIDGE FREEZER  
NEON



#### FINISHES

WHITE	K4896NFGWHI <b>1</b>	K4896FZWHI <b>1</b>	K4896NFZWHI <b>1</b>	K4896FFWHI <b>1</b>	K4896NFFWHI <b>1</b>
BLACK	K4896NFGBLK <b>1</b>	K4896FZBLK <b>1</b>	K4896NFZBLK <b>1</b>	K4896FFBLK <b>1</b>	K4896NFFBLK <b>1</b>

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999



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**modular** | wiring devices

20 AMP DP  
ONE-WAY  
WASTE DISPOSAL

20 AMP DP  
ONE-WAY  
WASTE DISPOSAL  
NEON

20 AMP DP  
ONE-WAY  
WASHING  
MACHINE

20 AMP DP  
ONE-WAY  
WASHING  
MACHINE  
NEON

20 AMP DP  
ONE-WAY  
TUMBLE DRYER

20 AMP DP  
ONE-WAY  
TUMBLE DRYER  
NEON



**K4896WDWHI**

**1**

**K4896NWDWHI**

**1**

**K4896WMWHI**

**1**

**K4896NWMWHI**

**1**

**K4896TDWHI**

**1**

**K4896NTDWHI**

**1**

**K4896WDBLK**

**1**

**K4896NWDBLK**

**1**

**K4896WMBLK**

**1**

**K4896NWMBLK**

**1**

**K4896TDBLK**

**1**

**K4896NTDBLK**

**1**

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

### Printed Modules with and without Neon

20 AMP DP ONE-WAY WASHER DRYER	20 AMP DP ONE-WAY WASHER DRYER NEON	20 AMP DP ONE-WAY MICROWAVE	20 AMP DP ONE-WAY MICROWAVE NEON	20 AMP DP ONE-WAY HEATER
--------------------------------------	--	-----------------------------------	---	--------------------------------



#### FINISHES

WHITE	K4896WDRWHI <b>1</b>	K4896NDRWHI <b>1</b>	K4896MWWHI <b>1</b>	K4896NMWWHI <b>1</b>	K4896HRWHI <b>1</b>
BLACK	K4896WDRBLK <b>1</b>	K4896NDRBLK <b>1</b>	K4896MWBLK <b>1</b>	K4896NMWBLK <b>1</b>	K4896HRBLK <b>1</b>

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

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modular | wiring devices

20 AMP DP  
ONE-WAY  
HEATER  
NEON

20 AMP DP  
ONE-WAY  
OVEN

20 AMP DP  
ONE-WAY  
OVEN  
NEON

20 AMP DP  
ONE-WAY  
HOB

20 AMP DP  
ONE-WAY  
HOB  
NEON

20 AMP DP  
ONE-WAY  
IMMERSION  
HEATER



**K4896NHRWHI**

**1**

**K4896OVWHI**

**1**

**K4896NOVWHI**

**1**

**K4896HBWHI**

**1**

**K4896NHBWHI**

**1**

**K4896IHWHI**

**1**

**K4896NHRBLK**

**1**

**K4896OVBLK**

**1**

**K4896NOVBLK**

**1**

**K4896HBBLK**

**1**

**K4896NHBBLK**

**1**

**K4896IHBLK**

**1**

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

Printed Modules with and  
 without Neon

 20 AMP DP  
 ONE-WAY  
 IMMERSION  
 HEATER  
 NEON

 20 AMP DP  
 ONE-WAY  
 PLINTH HEATER

 20 AMP DP  
 ONE-WAY  
 PLINTH HEATER  
 NEON

 20 AMP DP  
 ONE-WAY  
 WORKTOP  
 LIGHTING

 20 AMP DP  
 ONE-WAY  
 WORKTOP  
 LIGHTING  
 NEON


## FINISHES

WHITE

K4896NIHWHI

1

K4896PHWHI

1

K4896NPHWHI

1

K4896WLWHI

1

K4896NWLWHI

1

BLACK

K4896PHBLK

1

K4896NPHBLK

1

K4896WLBLK

1

K4896NWLBLK

1

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

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modular | wiring devices

20 AMP DP  
ONE-WAY  
WINE COOLER

20 AMP DP  
ONE-WAY  
WINE COOLER  
NEON

20 AMP DP  
ONE-WAY  
WARMING  
DRAWER

20 AMP DP  
ONE-WAY  
WARMING  
DRAWER  
NEON

20 AMP DP  
ONE-WAY  
COFFEE MACHINE

20 AMP DP  
ONE-WAY  
COFFEE MACHINE  
NEON



K4896WCWHI

1

K4896NWCWHI

1

K4896WDAWHI

1

K4896NDAWHI

1

K4896CMWHI

1

K4896NCMWHI

1

K4896WCBLK

1

K4896NWCBLK

1

K4896WDABLK

1

K4896NDABLK

1

K4896CMBLK

1

K4896NCMBLK

1

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

BS EN 60669-1: 1999

## Secret Key Switch Modules

20 AMP  
INTERMEDIATE  
SECRET KEY  
SWITCH

20 AMP SP  
TWO-WAY  
SECRET KEY  
SWITCH

20 AMP SP  
TWO-WAY  
SECRET KEY  
SWITCH MARKED  
'EMG LTG TEST'

20 AMP DP  
ONE-WAY  
SECRET KEY  
SWITCH

20 AMP DP  
EMERGENCY  
LIGHTING



### FINISHES

WHITE	K4894WHI <b>10</b>	K4898WHI <b>10</b>	K4898ELWHI <b>10</b>	K4917WHI <b>10</b>	K4917ELWHI <b>10</b>
BLACK	K4894BLK <b>1</b>	K4898BLK <b>1</b>	K4898ELBLK <b>1</b>	K4917BLK <b>1</b>	

BS EN 60669-1: 1999  
Key (34052IC) is supplied.

BS EN 60669-1: 1999  
Key (34052IC) is supplied.

BS EN 60669-1: 1999  
Key (34052IC) is supplied.

BS EN 60669-1: 1999  
Key (34052IC) is supplied.

BS EN 60669-1: 1999  
Key (34052IC) is supplied.

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modular | wiring devices

## Indicator Unit Modules

20 AMP SP  
TWO-WAY  
SECRET KEY  
SWITCH (BIASED  
ONE WAY)

200-250V  
NEON

200-250V  
NEON

200-250V  
FLUORESCENT

21-36V  
FILAMENT

21-36V  
FILAMENT



**K4918WHI**

**10**

**K4889RED**

**10**

**K4889AMB**

**10**

**K4889GRN**

**10**

**K4836RED**

**10**

**K4836AMB**

**10**

**K4918BLK**

**10**

**K4889REDB**

**1**

BS EN 60669-1: 1999  
Key (3405ZIC) is supplied.

BS 5733: 2010

BS 5733: 2010

BS 5733: 2010

BS 5733: 2010

BS 5733: 2010

B suffix on the list number  
denotes black inserts

### Indicator Unit Modules

21-36V  
FILAMENT



### Dimmer Switch Modules

#### TUNGSTEN FILAMENT AND LOW VOLTAGE LIGHTING

40W/VA-220W/  
180VA MAX  
230V A.C., 50HZ  
ONE MODULE



60W/VA-400W/  
320VA MAX  
230V A.C., 50HZ  
TWO MODULE



0-10V/1-10V  
FLUORESCENT  
CONTROLLER  
ONE MODULE



### Accessory Modules

SINGLE TV  
CO-AXIAL OUTLET  
NON-ISOLATED



#### FINISHES

WHITE	K4836GRN <b>10</b>	K4501WHILV <b>1</b>	K4500WHILV <b>1</b>	K4499WHI <b>1</b>	K4520WHI <b>10</b>
BLACK		K4501BLKLV <b>1</b>	K4500BLKLV <b>1</b>	K4499BLK <b>1</b>	K4520BLK <b>1</b>

BS 5733: 2010

These dimmers employ the latest microcontroller based circuitry to provide electronic soft start and overload protection.

Suitable for use with good quality electronic or wire wound transformers. Can also be used with good quality mains voltage halogen lamps incorporating GU10 bases. Please check with lamp manufacturer to determine suitability.

K4501WHI/BLK Max. No. of low voltage T/F's – 3

K4500WHI/BLK Max. No. of low voltage T/F's – 5

Not suitable for fluorescent loads.

All dimmers have push on – push off, 2 way switches, integral with rotary control.

Note: Refer to technical section for derating.

Conform to BS EN 60669-2-1 and BS EN 55015

MK Fluorescent Grid Dimmers are low voltage controllers for connection to 1-10V controllable ballasts.

For direct connection to TV or FM aerial co-axial download. NOT to be used in same enclosure as mains exceeding 50V.

BS 3041: 1977

IEC 169-2: 1965

BS 5733: 2010 where applicable.



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modular | wiring devices

SINGLE TV  
CO-AXIAL OUTLET  
ISOLATED

BUZZER UNIT  
200-250V

BUZZER UNIT  
21-36V

16A CORD OUTLET

13A FUSE UNIT

13A FUSE UNIT  
WITH  
TAMPERPROOF  
SCREW



**K4521WHI**

**10**

**K4000WHI**

**10**

**K4001WHI**

**10**

**K4886WHI**

**10**

**K4890WHI**

**10**

**K4890KOWHI**

**10**

**K4521BLK**

**1**

**K4886BLK**

**1**

**K4890BLK**

**1**

**K4890KOBK**

**1**

For direct connection to TV or FM aerial co-axial downlead. NOT to be used in same enclosure as mains exceeding 50V.

BS 3041: 1977  
IEC 169-2: 1965

BS 5733: 2010 where applicable.

Sound output level  
Av 61 db @ 15 feet.  
BS 5733: 2010











Sound output level  
Av 61 db @ 15 feet.  
BS 5733: 2010

Complete with 3 pairs of terminals. The supply terminals are suitable for up to 2 x 2.5mm<sup>2</sup> or 1 x 4mm<sup>2</sup> solid conductors. The load terminals are suitable for one 1.5mm<sup>2</sup> flexible cord. A cord grip is also fitted.

Fuse carrier comes with 13A cartridge fuse link to BS 1362.













Fuse carrier comes with 13A cartridge fuse link to BS 1362.

## SELECTION CHART

	1 	2 	3 	4 	6 
	<b>COVER PLATES</b>				
<b>LOGIC PLUS</b>	K3631WHI/GRA <b>10</b>	K3632WHI/GRA <b>10</b>	K3633WHI/GRA <b>10</b>	K3634WHI/GRA <b>10</b>	K3636WHI/GRA <b>1</b>
<b>METALCLAD PLUS</b>	K3491ALM <b>10</b>	K3492ALM <b>10</b>	K3493ALM <b>5</b>	K3494ALM <b>5</b>	K3496ALM <b>1</b>
<b>ALBANY PLUS</b> See Albany Plus Pg 173	K3431 <b>1</b>	K3432 <b>1</b>	K3433 <b>1</b>	K3434 <b>1</b>	K3436 <b>1</b>
<b>EDGE</b> See Edge Pg 124	K14331 <b>1</b>	K14332 <b>1</b>	K14333 <b>1</b>	K14334 <b>1</b>	K14346 <b>1</b>
<b>ASPECT</b> See Aspect Pg 90	K24331 <b>1</b>	K24332 <b>1</b>	K24333 <b>1</b>	K24334 <b>1</b>	K24346 <b>1</b>
<b>ALLOY</b> See Alloy Pg 152	K5331 <b>1</b>	K5332 <b>1</b>	K5333 <b>1</b>	K5334 <b>1</b>	
	<b>BOXES</b>				
<b>LOGIC PLUS flush</b>	<b>891ALM</b> 2 x 20mm knockouts <b>10</b>	<b>891ALM</b> 2 x 20mm knockouts <b>10</b>	<b>892ALM</b> 4 x 20, 4 x 25mm knockouts <b>5</b>	<b>892ALM</b> 4 x 20, 4 x 25mm knockouts <b>5</b>	<b>893ALM</b> 4 x 20, 4 x 25mm knockouts <b>5</b>
	<b>821ALM</b> without knockouts <b>10</b>	<b>821ALM</b> without knockouts <b>10</b>	<b>822ALM</b> without knockouts <b>5</b>	<b>822ALM</b> without knockouts <b>5</b>	<b>823ALM</b> without knockouts <b>5</b>
<b>LOGIC PLUS surface metal</b>	<b>K2213ALM</b> 5 x 20mm knockouts <b>5</b>	<b>K2213ALM</b> 5 x 20mm knockouts <b>5</b>	<b>K2214ALM</b> 7 x 20mm knockouts <b>5</b>	<b>K2214ALM</b> 7 x 20mm knockouts <b>5</b>	
	<b>K2211ALM</b> without knockouts <b>5</b>	<b>K2211ALM</b> without knockouts <b>5</b>	<b>K2212ALM</b> without knockouts <b>5</b>	<b>K2212ALM</b> without knockouts <b>5</b>	
<b>LOGIC PLUS surface moulded</b>	<b>K2140WHI</b> with knockouts <b>10</b>	<b>K2140WHI</b> with knockouts <b>10</b>	<b>K2142WHI</b> with knockouts <b>5</b>	<b>K2142WHI</b> with knockouts <b>5</b>	
<b>LOGIC PLUS surface pvc</b>	<b>K2181WHI</b> with knockouts <b>10</b>	<b>K2181WHI</b> with knockouts <b>10</b>	<b>K2183WHI</b> with knockouts <b>5</b>	<b>K2183WHI</b> with knockouts <b>5</b>	
<b>METALCLAD PLUS &amp; ALBANY PLUS surface</b>	<b>K8891ALM</b> 5 x 20mm knockouts <b>10</b>	<b>K8891ALM</b> 5 x 20mm knockouts <b>10</b>	<b>K8892ALM</b> 7 x 20mm knockouts <b>5</b>	<b>K8892ALM</b> 7 x 20mm knockouts <b>5</b>	<b>K8893ALM</b> 4 x 20mm, 4 x 25mm knockouts <b>5</b>
	<b>K8821ALM</b> without knockouts <b>10</b>	<b>K8821ALM</b> without knockouts <b>10</b>	<b>K8822ALM</b> without knockouts <b>5</b>	<b>K8822ALM</b> without knockouts <b>5</b>	<b>K8823ALM</b> without knockouts <b>5</b>
	<b>K8901ALM</b> deep box 5 x 20mm knockouts <b>10</b>	<b>K8901ALM</b> deep box 5 x 20mm knockouts <b>10</b>	<b>K8902ALM</b> deep box 4 x 20mm, 4 x 25mm knockouts <b>10</b>	<b>K8902ALM</b> deep box 4 x 20mm, 4 x 25mm knockouts <b>10</b>	
<b>ALBANY PLUS ASPECT &amp; EDGE flush</b>	<b>891ALM</b> 2 x 20mm knockouts <b>10</b>	<b>891ALM</b> 2 x 20mm knockouts <b>10</b>	<b>892ALM</b> 4 x 20, 4 x 25mm knockouts <b>5</b>	<b>892ALM</b> 4 x 20, 4 x 25mm knockouts <b>5</b>	<b>893ALM</b> 4 x 20, 4 x 25mm knockouts <b>5</b>
	<b>821ALM</b> without knockouts <b>10</b>	<b>821ALM</b> without knockouts <b>10</b>	<b>822ALM</b> without knockouts <b>5</b>	<b>822ALM</b> without knockouts <b>5</b>	<b>823ALM</b> without knockouts <b>5</b>
	<b>GRIDS</b>				
Edge/Insignia & Aspect cover plates include an integral grid	<b>K3701</b> <b>10</b> 	<b>K3702</b> <b>10</b> 	<b>K3703</b> <b>10</b> 	<b>K3704</b> <b>10</b> 	<b>K3703 X 2</b> <b>10</b> 

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8 	9 	12 	18 	24 	Architrave 
<b>K3638WHI/GRA</b> <b>1</b> <b>K3498ALM</b> <b>1</b>  <b>K3438</b> <b>1</b>  <b>K14348</b> <b>1</b>  <b>K24348</b> <b>1</b>	<b>K3499ALM</b> <b>1</b>  <b>K3439</b> <b>1</b>  <b>K14349</b> <b>1</b>	<b>K3639WHI</b> <b>1</b> <b>K3502ALM</b> <b>1</b>  <b>K3442</b> <b>1</b>  <b>K14352</b> <b>1</b>	<b>K3508ALM</b> <b>1</b>  <b>K3448</b> <b>1</b>  <b>K14358</b> <b>1</b>	<b>K3514ALM</b> <b>1</b>  <b>K3454</b> <b>1</b>  <b>K14354</b> <b>1</b>	  <b>K3401</b> <b>1</b>  <b>K14401</b> <b>1</b>
<b>893ALM</b> <b>5</b> 4 x 20, 4 x 25mm knockouts  <b>823ALM</b> <b>5</b> without knockouts		<b>895ALM</b> <b>1</b> 5 x 20, 5 x 25mm knockouts  <b>825ALM</b> <b>1</b> without knockouts			
<b>K8893ALM</b> <b>5</b> 4 x 20mm, 4 x 25mm knockouts  <b>K8823ALM</b> <b>5</b> without knockouts	<b>K8895ALM</b> <b>1</b> 5 x 20mm, 5 x 25mm knockouts  <b>K8825ALM</b> <b>1</b> without knockouts	<b>K8895ALM</b> <b>1</b> 5 x 20mm, 5 x 25mm knockouts  <b>K8825ALM</b> <b>1</b> without knockouts	<b>K8898ALM</b> <b>1</b> 5 x 20mm, 5 x 25mm knockouts  <b>K8826ALM</b> <b>1</b> without knockouts	<b>K8900ALM</b> <b>1</b> 6 x 20mm, 6 x 25mm knockouts  <b>K8827ALM</b> <b>1</b> without knockouts	
<b>893ALM</b> <b>5</b> 4 x 20, 4 x 25mm knockouts  <b>823ALM</b> <b>5</b> without knockouts	<b>895ALM</b> <b>1</b> 5 x 20, 5 x 25mm knockouts  <b>825ALM</b> <b>1</b> without knockouts	<b>895ALM</b> <b>1</b> 5 x 20, 5 x 25mm knockouts  <b>825ALM</b> <b>1</b> without knockouts	<b>898ALM</b> <b>1</b> 6 x 32mm knockouts	<b>900ALM</b> <b>1</b> 6 x 32mm knockouts	<b>3895ZIC</b> <b>5</b> 3 x 20mm knockouts (for flush mounting only)  <b>3891ZIC</b> <b>5</b> 1 gang Architrave Boxes for EDGE
<b>K3704 X 2</b> <b>10</b> 	<b>K3703 X 3</b> <b>10</b> 	<b>K3704 X 3</b> <b>10</b> 	<b>K3706 X 3</b> <b>10</b> 	<b>K3706 X 4</b> <b>10</b> 	<b>K3708ZIC</b> <b>10</b> 



## range introduction

When an installation requires the specification of a dimmer to control larger lighting loads, the MK Electric High Power Dimmer will meet your requirements, and give you the confidence that you have specified a product which comes with MK's brand standards of quality, reliability, safety and responsibility.

As with all MK products the High Power Dimmer is manufactured to ISO 9002 certification using only the most superior manufacturing techniques and raw materials. Each product undergoes 100% electrical and visual testing to ensure reliability and safety, and is guaranteed for 2 years.

The High Power Dimmer includes a host of different functions, enabling lighting scene control, stairwell lighting and push button dimmer with memory. For applications up to 3000W loads, an installation can be specified to include a Master and up to 2 Slaves.

Dimming can offer energy savings compared to powering a lamp to full brightness.

## features and benefits

- **Up to 1000W dimming output per unit**
- **Up to 3000W dimming output when utilising Master and Slaves**
- **Provides rotary control using a 1-10V interface such as the K4499 Fluorescent Controller Module from the MK Electric Grid Plus Range**
- **Universal, Trailing Edge and Leading Edge Dimmers available**
- **Automatic load detection on Universal module**
- **Central on/off function**
- **Staircase lighting function with or without switch-off warning**
- **Lighting scene control with two, user adjustable, preset scene levels**
- **Overload and short circuit protection**

## Function Selection

### Operating Modes

Function	Description
Push button dimmer with memory	Non cyclic dimming with maximum & minimum brightness limit adjustment. Soft start switch on at last dimming level.
Push button dimmer without memory	Non cyclic dimming with maximum & minimum brightness limit adjustment. Soft start switch on at maximum level.
Push button cyclic dimmer with memory	Cyclic dimming with maximum & minimum brightness limit adjustment. Soft start switch on at last dimming level.
Push button cyclic dimmer without memory	Cyclic dimming with maximum & minimum brightness limit adjustment. Soft start switch on at maximum level.
Stairwell lighting controller with turn off warning	Time Delay Switch with 50% brightness turn off warning. Adjustable time-on period between 1sec - 2.3hrs. Adjustable turn-off warning periods between 1sec - 8min.
Stairwell lighting controller without turn of warning	Time Delay Switch without turn off warning. Adjustable brightness and time-on period.
Scene Control Dimmer	Two user adjustable preset scene levels.
Rotary Dimmer using 0/1-10V control	Rotary control dimming with conventional 0/1-10V controls, (e.g. MK K4499).

### Product Selector

List Number	Description	230V Tungsten Filament Lamps	12V Wirewound Transformers	12V Electronic Transformers
K1400	1kW UNIVERSAL DIMMER - MASTER/SLAVE	Yes 60-1000W	Yes 50-900VA	Yes 50-900VA
K1401M	1kW LEADING EDGE DIMMER - MASTER	Yes 60-1000W	Yes 50-900VA	-
K1401S	1kW LEADING EDGE DIMMER - SLAVE	Yes 60-1000W	Yes 50-900VA	-
K1402M	1kW TRAILING EDGE DIMMER - MASTER	Yes 60-1000W	-	Yes 50-900VA
K1402S	1kW TRAILING EDGE DIMMER - SLAVE	Yes 60-1000W	-	Yes 50-900VA

### Compatible Wiring Devices

List Number	Description	Product Range
K4499WHI / BLK	0-10V FLUORESCENT CONTROLLER ONE MODULE	GRID PLUS
K4900WHI / BLK	10A RETRACTIVE GRID SWITCH	GRID PLUS

## 1kW Din Rail Dimmer Modules

UNIVERSAL  
1kW



K1400

LEADING EDGE  
1kW



K1401M

1kW



K1401S

TRAILING EDGE  
1kW



K1402M

1kW



K1402S

**K1400**  
1kW UNIVERSAL DIMMER –  
MASTER/SLAVE

1

**K1401M**  
1kW LEADING EDGE DIMMER –  
MASTER

1

**K1401S**  
1kW LEADING EDGE DIMMER –  
SLAVE

1

**K1402M**  
1kW TRAILING EDGE DIMMER –  
MASTER

1

**K1402S**  
1kW TRAILING EDGE DIMMER –  
SLAVE

1

**Dimensions:**  
108 x 55 x 60mm  
6 DIN module

**Mounting:**  
Suitable for mounting onto 35mm  
DIN rail.

**Terminals:**  
Mains supply/slave control:  
2 x 1.5mm<sup>2</sup> or 1 x 2.5mm<sup>2</sup>  
T1/2/3 Switch control: 1 x 1mm<sup>2</sup>

**Loads:**  
Resistive, Incandescent and Mains  
Halogen lamps: 60-1000W

Low voltage wire-wound  
transformers: 50-900VA  
Low voltage electronic transformers:  
50-900VA

Maximum control line length: 100m

EN 60669-2-1

**Dimensions:**  
108 x 55 x 60mm  
6 DIN module

**Mounting:**  
Suitable for mounting onto 35mm  
DIN rail.

**Terminals:**  
Mains supply/slave control:  
2 x 1.5mm<sup>2</sup> or 1 x 2.5mm<sup>2</sup>  
T1/2/3 Switch control: 1 x 1mm<sup>2</sup>

**Loads:**  
Resistive, Incandescent and Mains  
Halogen lamps: 60-1000W

Low voltage wire-wound  
transformers: 50-900VA  
Maximum control line length: 100m

EN 60669-2-1

For use with up to 2 x K1401S or  
K1402S slaves

**Dimensions:**  
108 x 55 x 60mm  
6 DIN module

**Mounting:**  
Suitable for mounting onto 35mm  
DIN rail.

**Terminals:**  
Mains supply/slave control:  
2 x 1.5mm<sup>2</sup> or 1 x 2.5mm<sup>2</sup>  
T1/2/3 Switch control: 1 x 1mm<sup>2</sup>

**Loads:**  
Resistive, Incandescent and Mains  
Halogen lamps: 60-1000W

Low voltage wire-wound  
transformers: 50-900VA  
Maximum control line length: 100m

EN 60669-2-1

For use with K1401M or K1402M  
Master dimmers

**Dimensions:**  
108 x 55 x 60mm  
6 DIN module

**Mounting:**  
Suitable for mounting onto 35mm  
DIN rail.

**Terminals:**  
Mains supply/slave control:  
2 x 1.5mm<sup>2</sup> or 1 x 2.5mm<sup>2</sup>  
T1/2/3 Switch control: 1 x 1mm<sup>2</sup>

**Loads:**  
Resistive, Incandescent and Mains  
Halogen lamps: 60-1000W

Low voltage electronic transformers:  
50-900VA  
Maximum control line length: 100m

EN 60669-2-1

For use with up to 2 x K1401S or  
K1402S slaves

**Dimensions:**  
108 x 55 x 60mm  
6 DIN module

**Mounting:**  
Suitable for mounting onto 35mm  
DIN rail.

**Terminals:**  
Mains supply/slave control:  
2 x 1.5mm<sup>2</sup> or 1 x 2.5mm<sup>2</sup>  
T1/2/3 Switch control: 1 x 1mm<sup>2</sup>

**Loads:**  
Resistive, Incandescent and Mains  
Halogen lamps: 60-1000W

Low voltage electronic transformers:  
50-900VA  
Maximum control line length: 100m

EN 60669-2-1

For use with K1401M or K1402M  
Master dimmers

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boxes and ancillary products | wiring devices

## Steel Boxes

25mm  
FLUSH

35mm  
FLUSH

35mm  
FLUSH

46mm  
47mm  
FLUSH



**861ZIC** 10  
1 GANG  
ONE ADJUSTABLE LUG

**862ZIC** 5  
2 GANG  
ONE ADJUSTABLE LUG

With earth terminal, and adjustable lug  
DIMENSIONS:  
1 gang: 75 x 75mm  
2 gang: 75 x 135mm  
FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm  
KNOCKOUTS:  
1 gang: 12 x 20mm  
2 gang: 10 x 20mm  
2 x 25mm  
BS 4662: 2006

**K863** 5  
FOR 3 GANG  
K2737 LOGIC PLUS™  
SWITCHSOCKET

Fitted with two earth terminals.  
Two adjustable lugs.  
DIMENSIONS: 203 x 75mm  
FIXING CENTRES: 180.9mm  
KNOCKOUTS:  
3 gang: 14 x 20mm  
6 x 20mm  
BS 5733: 2010

**866ZIC** 10  
1 GANG  
ONE ADJUSTABLE LUG

**886ZIC** 5  
2 GANG  
ONE ADJUSTABLE LUG

DIMENSIONS:  
1 gang: 75 x 75mm  
2 gang: 75 x 135mm  
FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm  
KNOCKOUTS:  
1 gang: 7 x 20mm  
3 x 25mm  
2 gang: 11 x 20mm  
4 x 25mm  
BS 4662: 2006

**877ZIC** 10  
1 GANG  
46MM DEEP

**878ZIC** 5  
2 GANG 47MM DEEP  
ONE ADJUSTABLE LUG

DIMENSIONS:  
1 gang: 75 x 75mm  
2 gang: 75 x 135mm  
FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm  
KNOCKOUTS:  
1 gang: 6 x 20mm  
4 x 25mm  
2 gang: 9 x 20mm  
6 x 25mm  
BS 4662: 2006

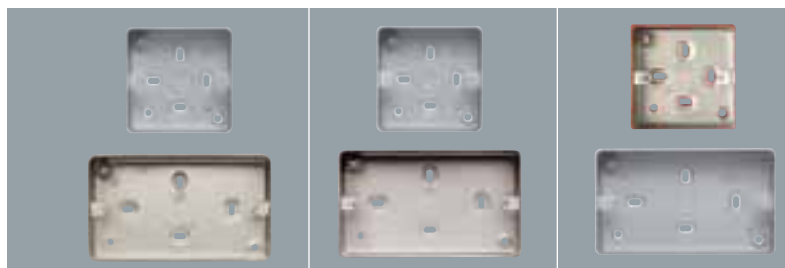
MOUNTING BOX ACCESSORIES see page 201

Flush and surface mounted metal boxes and frames, surface PVC and moulded urea boxes, frames and accessories.

All MK flush metal boxes are manufactured from superior materials and are fitted with earth terminals, an adjustable lug for out of square alignment and include more than an adequate number of knockouts.

41mm

**SURFACE FOR USE WITH LOGIC PLUS™**



**K2211ALM** 5  
1 GANG  
WITHOUT KNOCKOUTS

**K2212ALM** 5  
2 GANG  
WITHOUT KNOCKOUTS

**K2213ALM** 5  
1 GANG  
5 X 20MM KNOCKOUTS

**K2214ALM** 5  
2 GANG  
7 X 20MM KNOCKOUTS

**2211ALM** 5  
1 GANG  
WITHOUT KNOCKOUTS

**2212ALM** 5  
2 GANG  
WITHOUT KNOCKOUTS

**2213ALM** 5  
1 GANG  
5 X 20MM KNOCKOUTS

**2214ALM** 5  
2 GANG  
7 X 20MM KNOCKOUTS

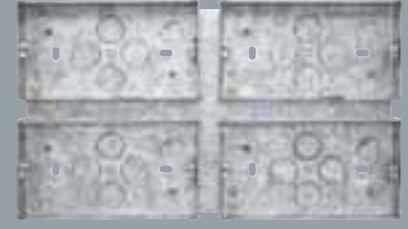
All boxes are fitted with an earth terminal.  
DIMENSIONS:  
1 gang: 86 x 86mm  
2 gang: 86 x 146mm  
FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm  
BS 5733: 2010

All boxes are fitted with an earth terminal.  
DIMENSIONS:  
1 gang: 86 x 86mm  
2 gang: 86 x 146mm

FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm  
BS 5733: 2010

## Steel Boxes

 35mm  
 47mm  
 FLUSH

 35mm  
 47mm  
 FLUSH

**K14101** 1  
 35mm FOR EDGE STACKED  
 COMBINATION PLATE K14100

**K14102** 1  
 47mm FOR EDGE STACKED  
 COMBINATION PLATE K14100

Fitted with two earth terminals.  
 Two adjustable lugs.  
 DIMENSIONS: 279.6 x 159.5mm  
 FIXING CENTRES: 268.2mm / 87.3mm  
 KNOCKOUTS:  
 35mm 18 x 20mm, 6 x 25mm  
 47mm 12 x 20mm, 12 x 25mm  
 BS 5733: 2010

**K14201** 1  
 35mm FOR EDGE IN-LINE  
 COMBINATION PLATE K14200

**K14202** 1  
 47mm FOR EDGE IN-LINE  
 COMBINATION PLATE K14200

Fitted with two earth terminals.  
 Two adjustable lugs.  
 DIMENSIONS: 430 x 75mm  
 FIXING CENTRES: 417.4mm  
 KNOCKOUTS:  
 35mm Middle Box: 6 x 20mm, 2 x 25mm  
 35mm End Boxes: 15 x 20mm, 5 x 25mm  
 47mm Middle Box: 4 x 20mm, 4 x 25mm  
 47mm End Boxes: 10 x 20mm, 10 x 25mm  
 BS 5733: 2010

**K14206** 1  
 35mm FOR EDGE IN-LINE  
 COMBINATION PLATE K14205

**K14207** 1  
 47mm FOR EDGE IN-LINE  
 COMBINATION PLATE K14205

Fitted with two earth terminals.  
 Two adjustable lugs.  
 DIMENSIONS: 392 x 75mm  
 FIXING CENTRES: 382.5mm  
 KNOCKOUTS:  
 35mm Left 2G Box: 7 x 20mm, 3 x 25mm  
 35mm Middle Boxes: 4 x 20mm  
 35mm Right Box: 6 x 20mm  
 47mm Left 2G Box: 4 x 20mm, 6 x 25mm  
 47mm Middle Boxes: 2 x 20mm, 1 x 25mm  
 47mm Right Box: 4 x 20mm, 1 x 25mm  
 BS 5733: 2010

**853ZIC** 1  
 35MM FOR LOGIC PLUS™  
 4 GANG COMBINATION PLATE  
 K2740WHI

**854ZIC** 1  
 47MM FOR LOGIC PLUS™  
 4 GANG COMBINATION PLATE  
 K2740WHI

**857ZIC** 1  
 35MM FOR LOGIC PLUS™  
 2 GANG COMBINATION PLATE  
 K2741WHI

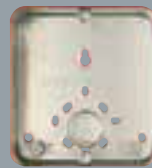
**858ZIC** 1  
 47MM FOR LOGIC PLUS™  
 2 GANG COMBINATION PLATE  
 K2741WHI  
 BS 5733: 2010

 41mm  
 SURFACE

 48mm  
 SURFACE

 55mm  
 FLUSH

 65mm  
 FLUSH

 40mm  
 SPARE BOXES

**2001ALM** 5  
 1 GANG  
 WITHOUT KNOCKOUTS

**2002ALM** 5  
 2 GANG  
 WITHOUT KNOCKOUTS

All boxes are fitted with an  
 earth terminal.  
 DIMENSIONS:  
 1 gang: 86 x 86mm  
 2 gang: 86 x 146mm  
 FIXING CENTRES:  
 1 gang: 60.3mm  
 2 gang: 120.6mm  
 BS 5733: 2010

**2003ALM** 5  
 1 GANG  
 5 X 20MM KNOCKOUTS

**2004ALM** 5  
 2 GANG  
 7 X 20MM KNOCKOUTS

**K5400WHI** 1  
 2 GANG  
 4 X 20MM KNOCKOUTS  
 4X 25MM KNOCKOUTS

DIMENSIONS:  
 86 x 146mm  
 FIXING CENTRES:  
 120.6mm  
 BS 5733: 2010

**5120ALM** 1  
 FOR FLUSH  
 COOKER CONTROL UNIT  
 K5011WHI

Fitted with two earth  
 terminals.  
 DIMENSIONS:  
 152 x 140 x 55mm  
 KNOCKOUTS: 5 x 25mm.  
 Two in each of the top &  
 bottom, one in the back.  
 BS 4177: 1992

**5268ALM** 1  
 FOR 32 AMP  
 TP & N SWITCHES  
 5114WHI

Fitted with 2 earth terminals  
 DIMENSIONS:  
 178 x 114 x 65mm  
 KNOCKOUTS:  
 5 x 25mm.  
 Two in each of the top and  
 bottom, one in the back.  
 BS 5733: 2010

**K829ALM** 5  
 1 GANG  
 WITHOUT KNOCKOUTS

**K830ALM** 5  
 2 GANG  
 WITHOUT KNOCKOUTS

**K899ALM** 10  
 1 GANG  
 5 X 20MM KNOCKOUTS

**K897ALM** 5  
 2 GANG  
 8 X 20MM KNOCKOUTS

Spares or replacements  
 for the surface Metalclad Plus  
 range. All boxes are fitted with  
 an earth terminal.  
 BS 5733: 2010



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## Steel Boxes

ARCHITRAVE  
FLUSH



**3921ZIC**  
1 GANG

10

DIMENSIONS:  
1 gang: 75 x 27 x 27mm  
FIXING CENTRES:  
1 gang: 60.3mm  
KNOCKOUTS:  
1 gang: 3 x 16mm  
BS 4662: 2006

DUAL  
FLUSH



**887ZIC**  
DUAL BOX

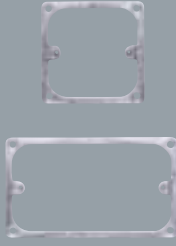
5

**888ZIC**  
DIVIDING SCREEN  
FOR DUAL BOX

10

Dual box 887ZIC will accept any two flush accessories with 86mm square plates and two M3.5 fixing holes on 60.3mm centres.  
DIMENSIONS:  
75 x 161 x 35mm  
KNOCKOUTS:  
2 gang 10 x 20mm  
4 x 25mm  
BS 4662: 2006

## Metal Frames For Panel Mounting



**K2200**  
1 GANG

10

**K2202**  
2 GANG

5

FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm  
BS 5733: 2010

## PVC Boxes

19mm  
SURFACE



**2120WHI**  
FOR 1, 2 AND  
3 GANG  
PLATESWITCHES

10

With earth terminal  
DIMENSIONS: 87 x 87mm  
FIXING CENTRES: 60.3mm  
KNOCKOUTS 'Cut-out' provided in top and bottom for 16mm oval PVC conduit. 20mm round 'push-out' type knockout in base for cable entry. Fixing holes are also provided for mounting to wall or over BS 4568 Pt.2 small circular boxes. BS 5733: 2010

32mm  
SURFACE



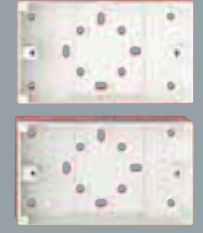
**2180WHI**  
1 GANG

10

**2181WHI**  
1 GANG

10

DIMENSIONS: 87 x 87mm  
FIXING CENTRES: 60.3mm  
KNOCKOUTS:  
**2180:** One 'push-out' for 20mm oval conduit in top, one 'cut-out' for 20mm or 25mm oval conduit and one 20mm round 'push-out' in the base.  
**2181:** One 'push-out' for 20mm round conduit in top and one 20mm round 'push-out' in base. BS 5733: 2010



**2182WHI**  
2 GANG

5

**2183WHI**  
2 GANG

5

DIMENSIONS: 87 x 148mm  
FIXING CENTRES: 120.6mm  
KNOCKOUTS:  
**2182:** Two 'push-outs' for 20mm oval conduit in top, two 'cut-outs' for 20mm or 25mm oval conduit and one 20mm round 'push-out' in base  
**2183:** One 'push-out' for 20mm round conduit in top and one 20mm round 'push-out' in base. BS 5733: 2010

## Blank Plates

METALCLAD PLUS

METALCLAD



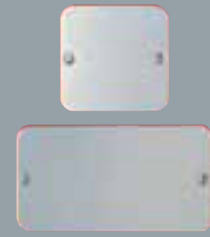
**K3390ALM**  
FOR 1 GANG  
SURFACE BOXES  
K899 & K829

5

**K3369ALM**  
FOR 2 GANG  
SURFACE BOXES  
K830 & K897

5

DIMENSIONS:  
K3390: 86 x 86mm  
K3369: 86 x 147mm  
FIXING CENTRES:  
K3390: 60.3mm  
K3369: 120.6mm  
BS 5733: 2010



**3390ALM**  
FOR 1 GANG SURFACE  
BOXES 899 & 829

10

**3370ALM**  
FOR 1 GANG SURFACE  
BOXES 891 & 821

10

**3369ALM**  
FOR 2 GANG SURFACE  
BOXES 892 & 822

5

DIMENSIONS:  
3390: 81 x 81mm  
3370: 76 x 76mm  
3369: 76 x 136mm  
FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm  
BS 5733: 2010

## PVC Boxes

32mm  
SURFACE



**K2181WHI**  
FOR 1 GANG LOGIC PLUS™ POWER ACCESSORIES

10

**K2183WHI**  
FOR 2 GANG LOGIC PLUS™ POWER ACCESSORIES

5

**K2185WHI**  
FOR 3 GANG LOGIC PLUS™ POWER ACCESSORIES

5

KNOCKOUTS:  
**K2181:** One 'cut-out' for 20mm round conduit in top face, one 'cut-out' for 20mm or 25mm oval conduit in lower face and one 20mm round 'push-out' in the base.  
**K2183 and K2185:** One 'cut-out' for 20mm round conduit in top face, two 'cut-outs' for 20mm or 25mm oval conduit in lower face and one 20mm round 'push-out' in the base. Both boxes are suitable for fitting over 1 gang and 2 gang BS 4662 flush steel boxes respectively

DIMENSIONS:  
1 gang: 87 x 87mm  
2 gang: 87 x 148mm  
3 gang: 87 x 208mm  
FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm  
3 gang: 180.9mm  
BS 4662: 2006 where applicable

## Guardian Socket Cover



**GWR1WHI**  
1 GANG

1

Accessories not supplied with unit.  
FIXING CENTRES:  
60.3mm

## Moulded Boxes DRY LINING 35mm FLUSH



**QFB1WHI**  
1 GANG

20

**QFB2WHI**  
2 GANG

10

All round flange for a flush fit. One piece moulded lug automatically snaps into place. No rear projections. Clamp device on cable entry. Will accommodate partition thickness between 6mm and 16mm. Earth terminal facility.  
BS 4662: 2006

## Moulded Boxes

**ARCHITRAVE**  
**SURFACE**

**K2151WHI** **10**  
 1 GANG  
 ARCHITRAVE BOX

**K2152WHI** **5**  
 2 GANG  
 ARCHITRAVE BOX

Earth terminal fitted in base of boxes.

**DIMENSIONS:**  
 1 gang: 87 x 33 x 16mm  
 2 gang: 148 x 33 x 16mm

**FIXING CENTRES:**  
 1 gang: 60.3mm  
 2 gang: 120.6mm

BS 5733: 2010

**16mm**  
**SURFACE**

**K2160WHI** **10**  
 FOR 1, 2 AND  
 3 GANG LOGIC PLUS™  
 PLATESWITCHES

**K2161WHI** **5**  
 FOR 4 AND 6 GANG  
 LOGIC PLUS™  
 PLATESWITCHES

Earth terminal fitted in base of boxes. Knockouts provided in sides and bases.

**DIMENSIONS:**  
 1 gang: 87 x 87mm  
 2 gang: 87 x 148mm

**FIXING CENTRES:**  
 1 gang: 60.3mm  
 2 gang: 120.6mm

BS 5733: 2010

**30mm**  
**SURFACE**

**K2140WHI** **10**  
 FOR 1 GANG  
 LOGIC PLUS™  
 POWER ACCESSORIES

**K2142WHI** **5**  
 FOR 2 GANG  
 LOGIC PLUS™  
 POWER ACCESSORIES

Knockouts in base and sides for cable entry

**K2142 and K2153** are suitable for fitting over 1 gang and 2 gang BS 4662 flush steel boxes respectively

**32mm**  
**SURFACE**

**K2153WHI** **5**  
 FOR 3 GANG  
 LOGIC PLUS™  
 POWER ACCESSORIES

**DIMENSIONS:**  
 1 gang: 87 x 87mm  
 2 gang: 87 x 148mm  
 3 gang: 87 x 208mm

**FIXING CENTRES:**  
 1 gang: 60.3mm  
 2 gang: 120.6mm  
 3 gang: 180.9mm

BS 5733: 2010

**32mm**  
**SURFACE**

**2140WHI** **10**  
 FOR 1 GANG  
 POWER ACCESSORIES  
 SQUARE CORNERS

Knockouts are provided in base and sides for cable entry

**DIMENSIONS:**  
 1 gang: 87 x 87mm  
 2 gang: 87 x 148mm

**FIXING CENTRES:**  
 1 gang: 60.3mm  
 2 gang: 120.6mm

BS 5733: 2010

**44mm**  
**SURFACE**

**2031WHI** **10**  
 FOR 1 GANG  
 POWER ACCESSORIES

Knockouts in base and sides for cable entry.

**DIMENSIONS:**  
 87 x 87mm  
**FIXING CENTRES:**  
 60.3mm  
 BS 5733: 2010

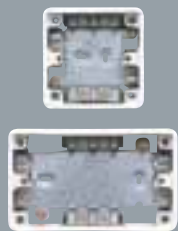
**DRY LINING**  
**35mm**  
**FLUSH**

**QFB/IG1** **20**  
 1 GANG WITH  
 INTUMESCENT GASKET

**QFB/IG2** **10**  
 2 GANG WITH  
 INTUMESCENT GASKET

**QFB/IG1 & QFB/IG2**

Pre-fitted with intumescent gaskets to give fire protection, in accordance with BS 476 Pt.22: 1987. In a fire situation, a chemical reaction will occur with the intumescent material. The void behind the wiring device will be filled, providing protection against the passage of fire.  
 BS4662: 2006

**MI CABLE BOXES**  
**37mm**  
**SURFACE**

**K2131WHI** **5**  
 1 GANG  
 10 CLAMPS

**K2132WHI** **5**  
 2 GANG  
 12 CLAMPS

Clamps accept 20mm sealing pots.

**DIMENSIONS:**  
 1 gang: 92 x 92mm  
 2 gang: 92 x 152mm

**FIXING CENTRES:**  
 1 gang: 60.3mm  
 2 gang: 120.6mm

BS 5733: 2010

**DUAL BOX**  
**38mm**  
**SURFACE**

**K2025WHI** **5**  
 FOR MOUNTING  
 TWO X 1 GANG  
 LOGIC PLUS™  
 ACCESSORIES

This box has two slots in base with 60.3mm and 120.6mm fixing centres for fitting over BS 4226 flush boxes. Knockouts provided for cable entry.

Includes integral dividing fillet.

**DIMENSIONS:** 86 x 172 mm  
 BS 5733: 2010

**40mm**  
**SURFACE**

**K2031WHI** **10**  
 FOR 1 GANG  
 LOGIC PLUS™  
 POWER ACCESSORIES

**K2172WHI** **5**  
 FOR 2 GANG  
 LOGIC PLUS™ 45 AMP  
 DP SWITCHES

Knockouts provided in sides and base.

K2172: Earth terminal fitted in base of box.

**DIMENSIONS:**  
 K2031: 87 x 87mm  
 K2172: 87 x 148mm

**FIXING CENTRES:**  
 K2031: 60.3mm  
 K2172: 120.6mm  
 BS 5733: 2010

**FLANGE BOXES**  
**45mm**  
**FLUSH**

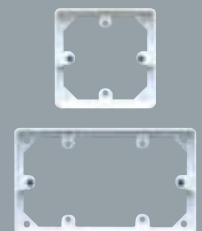
**K2061WHI** **5**  
 1 GANG

**K2062WHI** **5**  
 2 GANG

**DIMENSIONS:**  
 K2061: 88 x 88mm  
 K2062: 88 x 148mm

**FIXING CENTRES:**  
 K2061: 60.3mm  
 K2062: 120.6mm

BS 5733: 2010

**Mounting**  
**Frames For**  
**Trunking**

**K2134WHI** **10**  
 1 GANG 20MM DEEP  
 FOR LOGIC PLUS™  
 ACCESSORIES

**K2133WHI** **10**  
 2 GANG 20MM DEEP  
 FOR LOGIC PLUS™  
 ACCESSORIES

**FIXING CENTRES:**  
 1 gang: 60.3mm  
 2 gang: 120.6mm

BS 5733: 2010

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## LOGIC PLUS™ ACCESSORIES/BOX COMPATIBILITY CHART

SURFACE MOUNTING	Depth: (mm)								
	16 Moulded	30 Moulded	32* PVC	38 Moulded	40 Moulded	41 Steel	41* Steel	48* Steel	55
Moulded									
1 gang Sockets (13A)		K2140	K2181	K2025	K2031	K2211ALM	K2213ALM		
2 gang Sockets		K2142	K2183		K2172	K2212ALM	K2214ALM	K5400	
3 gang Sockets		K2153	K2185						
RCD Sockets					K2172	K2212ALM	K2214ALM	K5400	
Filtered Sockets					K2172	K2212ALM	K2214ALM	K5400	
Connection Units		K2140	K2181	K2025	K2031	K2211ALM	K2213ALM		
20A DP Switches		K2140	K2181	K2025	K2031	K2211ALM	K2213ALM		
K5105 32A DP Switch		K2140	K2181	K2025	K2031	K2211ALM	K2213ALM		
K5205, K5215 (CK & SH)					K2172	K2212ALM	K2214ALM		
K5230								K5400	
K5060, K5061					K2212	K2214ALM		K5400	
K5040, K5041									
K5001									
K700		K2140	K2181	K2025		K2211ALM	K2213ALM		
K701					K2172				
1, 2 & 3 gang Switches	K2160	K2140	K2181	K2025	K2031	K2211ALM	K2213ALM		
4 & 6 gang Switches	K2161	K2142	K2183		K2172	K2212ALM	K2214ALM	K5400	
1 gang Architrave Switch	K2151								
2 gang Architrave Switch	K2152								
Dimmers using Pattress									
K1501, K1511, K1531, K1532	K2160								
K1521, K1534, K1533, K1535	K2160								
Dimmers not using Pattress									
K1501, K1511, K1531, K1532		K2140	K2181	K2025	K2031				
K1521, K1534, K1533, K1535		K2140	K2181	K2025		K2211ALM	K2213ALM		
K191 & K192		K2140	K2181	K2025		K2211ALM	K2213ALM		
K193 & K194		K2142	K2183			K2212ALM	K2214ALM	K5400	
Data/Telecom Plates	K2160	K2140	K2181	K2025		K2211ALM	K2213ALM		

FLUSH MOUNTING (Steel & Dry lining)	Depth: (mm)						
	16	25*	27*	35*	45	47*	55
1 gang Sockets (13A)		861ZIC		QFB/IG1	K2061	877ZIC	
2 gang Sockets		862ZIC		QFB/IG2	K2062	878ZIC	
3 gang Sockets		K863					
RCD Sockets				886ZIC	K2062	878ZIC	
Filtered Sockets				886ZIC	K2062	878ZIC	
Connection Units				866ZIC	K2061	877ZIC	
20A DP Switches				866ZIC	K2061	877ZIC	
K5105 32ADP Switch				866ZIC		877ZIC	
K5205, K5215 (CK & SH)				886ZIC	K2062	878ZIC	
K5012							K5120ALM
K5045					K2061	877ZIC	
K5060, K5061				886ZIC	K2061	878ZIC	
K5011							K5120ALM
K700		861ZIC		866ZIC	K2061	877ZIC	
K701						878ZIC	
1, 2 & 3 gang Switches		861ZIC		866ZIC	K2061	877ZIC	
4 & 6 gang Switches		862ZIC		886ZIC	K2062		
1 gang Architrave Switch			3921ZIC				
Dimmers using Pattress							
K1501, K1511, K1531, K1532							
K1521, K1534, K1533, K1535						878ZIC	
Dimmers not using Pattress							
K1501, K1511, K1531, K1532		861ZIC		866ZIC	K2061	877ZIC	
K1521, K1534, K1533, K1535		861ZIC			K2062	877ZIC	
K191 & K192		861ZIC		866ZIC	K2061	877ZIC	
K193 & K194		862ZIC		886ZIC	K2062	878ZIC	
Data/Telecom Plates		861ZIC		866ZIC	K2061	877ZIC	

■ Box supplied with accessory

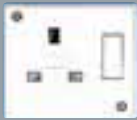
■ Dependent upon modules used

\* With conduit entry knockouts

NOTE: The size of the cable and nature of installation should be taken into consideration when choosing box depth.

Switchsocket  
Outlets

MINI LOGIC  
13 AMP  
SURFACE



2959WHI



2949WHI

Socket Outlets  
For Circular  
Conduit Boxes

ROUND PIN



312WHI



315WHI

Switchsocket  
Outlets

13 AMP  
PANEL MOUNTING



2531WHI



2532WHI

## Socket Outlets

13 AMP  
PANEL MOUNTING



734WHI



735WHI



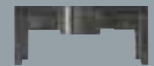
1232D1

## DP Switch

TWIN  
25 AMP  
MOULDED  
FLUSH



5257WHI



5243BRO



5246BRO

**2959WHI**  
1 GANG SP

10

**2949WHI**  
2 GANG SP

5

**312WHI\***  
1 GANG  
2A  
UNSHUTTERED

**315WHI**  
1 GANG  
5A  
SHUTTERED

10

**2531WHI**  
1 GANG SP  
SWITCHSOCKET

5

**2532WHI**  
2 GANG SP  
SWITCHSOCKET

10

**734WHI**  
1 GANG  
CRUCIFORM SOCKET

10

**735WHI**  
1 GANG  
CIRCULAR SOCKET

10

**1232D1**  
1 GANG  
NON STANDARD

10

**5257WHI**  
TWIN DP SWITCH

5

**5243BRO**  
MOULDED PHASE BARRIER  
FOR SURFACE APPLICATIONS

5

**5246BRO**  
MOULDED PHASE BARRIER  
FOR FLUSH APPLICATIONS

5

These products are supplied with a mounting box.

Mounting boxes have knockouts for cables.

DIMENSIONS:  
1 gang: 74 x 64 x 46mm  
2 gang: 133 x 64 x 46mm  
BS 1363 Pt.2:1995

These products are designed for use with circular conduit boxes to BS 4568: Pt.2:1970. See page 368. \*The IEE Wiring Regulations does not recommend the use of unshuttered sockets in household situations

DIAMETER:  
68mm  
FIXING CENTRES:  
50.8mm  
BS 546:1950

Supplied with M3.5 threaded eyelets and fixing screws.

These products have side entry terminals.

BS 1363 Pt.2:1995

Supplied with M3.5 threaded eyelets and fixing screws.

**734** and **735** have side entry terminals.

They are also available with rear entry terminals. Use suffix D5WHI when ordering.

**1232D1** has rear entry terminals and is provided with facilities for 'clean earth' connection and are suitable for non-standard plugs with 'T' shaped earth pin.

**734, 735**  
BS 1363 Pt.2:1995

**1232D1**  
BS 1363 Pt.2:1995 where relevant.

MOUNTING BOXES  
FLUSH: 886ZIC

SURFACE: 2182WHI

Suitable for installation in boxes to a minimum depth of 35mm. Complete with earth terminals and thermostat looping terminal

DIMENSIONS: 86 x 146mm

FIXING CENTRES: 120.6mm

DIAMETER OF FLEX OUTLETS:  
11mm for 'FAN'

13mm for 'HEATER'

BS EN 60669-1: 1999

**MOULDED PHASE BARRIERS**  
Self-adhesive labels are supplied for application to interior and exterior of switch to indicate when voltage exceeds 250 volts.

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## Triple Pole & Neutral Switches

32 AMP  
METAL  
FLUSH

SURFACE

## Energy Saving Switch

FLUSH

## Time Delay Switch

FLUSH

## Clock Connectors

FUSED



5114WHI



5115WHI



5116WHI



4724WHI



4700WHI



1610WHI



993WHI



995WHI



997WHI

**5114WHI**  
FLUSH MOUNTED  
WITH NEON

1

**5115WHI**  
SURFACE MOUNTED  
WITH NEON

**5116WHI**  
SURFACE MOUNTED  
WITH NEON

1

**4724WHI**  
20A DP SWITCH  
WITH KEYTAG

**4700WHI**  
SPARE KEYTAG

10

**1610WHI**  
LAMP LOAD  
400 WATTS MAX.  
60 WATTS MIN.  
AT 240V 50Hz

10

1

**993WHI**  
SURFACE MOUNTING  
suitable for installation in  
small circular conduit boxes  
to BS 4568 Pt.2:1970.

10

**995WHI**  
FLUSH MOUNTING

10

**997WHI**  
SURFACE MOUNTING

10

**MOUNTING BOX**  
FLUSH: 5268ALM

These products have a utilisation category of AC22 – rated operational current (Ie), 32A – rated operational voltage (Ue), 440V. They are suitable for switching mixed resistive and inductive loads including moderate overloads.

**5114** is also available in Albany Plus finishes (page 163).

All switches may be locked in the 'ON' or 'OFF' position with the use of the MK Padlock 8000.

**5116** is available in Metalclad Plus version (page 214).

**TERMINAL CAPACITY:**  
16mm<sup>2</sup> conductors. On surface mounted versions the earth terminal is fitted on base of box.

**DIMENSIONS:**  
5114: 203 x 140mm  
5115: 182 x 118 x 82mm  
5116: 137 x 76 x 53mm

**KNOCKOUTS:**  
5115: 5 x 25mm. Two top and bottom, one in back  
5116: 6 x 20mm. Wiring space limits recommended cable size to 6mm<sup>2</sup>.  
BS EN 60947-3:1999

**MOUNTING BOXES:**  
FLUSH: 866ZIC  
SURFACE: 2160WHI

The MK Energy Saving Switch provides a simple and effective way of reducing electricity consumption while increasing safety in buildings where appliances may be left on in unoccupied rooms. By removing the keytag the power is switched off eliminating the need to switch off each individual light or appliance. A neon locator light on the switch unit makes it easy to locate when entering darkened rooms.

**DIMENSIONS:** 86 x 86mm  
**FIXING CENTRES:** 60.3mm  
BS EN 60669-1:1999

**MOUNTING BOXES:**  
FLUSH: 3995ZIC-16mm deep min  
SURFACE: 2140WHI-30mm deep

Adjustable 2-15 minutes. Fused at 3 amps. Multi-way. Built in neon locator.

Not suitable for fluorescent lamps or low voltage lighting systems.

**DIMENSIONS:**  
86 x 86mm  
**FIXING CENTRES:**  
60.3mm

Fitted with 2 amp fuse-link to BS 1362. Terminals will accommodate 2.5mm<sup>2</sup> conductors.

**993WHI** See page 206 for Replacement Fuse Link and Replacement Fuse Carrier 6084SL

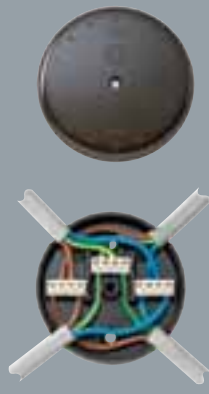
**995WHI** includes earthing facilities and is suitable for mounting in BS 4662 boxes. The removable fuse carrier is fully recessed and total projection of the plate is only 4.2mm. A knockout on the underside is provided so an M3.5 screw or hook engages with a tapped lug on the box (for hanging a wall clock).

**DIMENSIONS:**  
993WHI: 67mm diameter  
995WHI: 86 x 86mm  
997WHI: 65 x 65 x 32mm  
**FIXING CENTRES:**  
993WHI: 50.8mm  
995WHI: 60.3mm

## Junction Boxes



1131BRO



1132BRO



1133BRO



1130WHI

**1131BRO**  
4 TERMINAL BLOCKS  
10A

10

**1132BRO**  
3 TERMINAL BLOCKS  
30A

10

**1133BRO**  
3 TERMINAL BLOCKS  
30A

10

**1130WHI**  
3 TERMINAL  
30A

10

**DIMENSIONS:**  
Overall Diameter: 81.5mm  
Depth with cover: 22.5mm  
**TERMINAL CAPACITY:**  
1131: 6 x 1.5mm<sup>2</sup> conductors  
1132: 4 x 4mm<sup>2</sup> conductors  
BS EN 60670-22 (where applicable)

**DIMENSIONS:**  
Overall Diameter: 81.5mm  
Depth with cover: 22.5mm  
**TERMINAL CAPACITY:**  
1131: 6 x 1.5mm<sup>2</sup> conductors  
1132: 4 x 4mm<sup>2</sup> conductors  
BS EN 60670-22 (where applicable)

**DIMENSIONS:**  
Overall Diameter: 95mm  
Depth with cover: 25mm  
**TERMINAL CAPACITY:**  
Each terminal block accepts  
up to 4 x 6mm<sup>2</sup> conductors  
BS EN 60670-22 (where applicable)

Particularly suitable for taking spurs off un-cut ring circuit conductors.  
**DIMENSIONS:**  
86 x 64 x 31mm  
**TERMINAL CAPACITY:**  
Each terminal accepts  
3 x 4mm<sup>2</sup> conductors.  
**CABLE ENTRIES:**  
Two opposite 'through' entries  
are 'open'.  
Eight further knockouts  
are provided.  
BS EN 60670-22 (where applicable)

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boxes and ancillary products | wiring devices

## Terminal Blocks

## Service Connector Boxes

## Accessories For Boxes

## Neon Lamp Assemblies



913BRO



914BRO



1100BLK

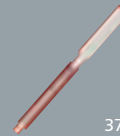


1101BLK

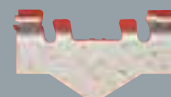


3714

3715



3710



800ZIC



3840ZIC



5144SS000T9

17270SS

### 913BRO

3 WAY

5

### 1100BLK

5 WAY DOUBLE POLE  
100A

10

### 914BRO

4 WAY

5

### 1101BLK

5 WAY SINGLE POLE  
100A

10

### 3714

BRASS EARTH  
TERMINAL WITH BRACKET

100

### 3715

BRASS EARTH  
TERMINAL  
SCREW FIX ANGLED

100

### 3709

BRASS EARTH  
TERMINAL  
SCREW FIX STRAIGHT

100

### K3716

BRASS EARTH  
TERMINAL

100

### 3710

EXTENSION STUD.  
M3.5  
Zinc-plated steel.  
Overall length 34mm

100

### 800ZIC

BOX FIXING FLANGE  
Use two to mount any flush  
MK box in a dry-partition wall

20

### 3840ZIC

CONVERSION BRACKET  
Complete with earth terminal.  
Converts 25mm deep flush  
switch boxes with 42mm  
fixing centres to accommodate plateswitches  
with 60.3mm  
fixing centres

10

### 5144SS000T9

LAMP LEAD AND  
RESISTOR ASSEMBLY  
For Ceiling Switch blocks  
and 32A DP switches

1

### 17270SS

LAMP LEAD AND  
RESISTOR ASSEMBLY  
Tag ended neon for use with  
45, 50A switches and  
cooker units

10

### 7179PS

MALE CONNECTOR  
For Switchsockets

10

#### TERMINAL CAPACITY

913: Each terminal  
accepts up to 3 x 2.5mm<sup>2</sup>  
(solid conductors) or 3 x 4mm<sup>2</sup>  
(stranded conductors).

914: Each terminal  
accepts up to 4 x 1.5mm<sup>2</sup>  
conductors.

#### FIXING CENTRES:

60.3mm for mounting on 'spare'  
lugs of 4 or 6 lug BS 4662 boxes.

#### TERMINAL CAPACITY

All 25m<sup>2</sup>

Where it is necessary to take the  
outer sheath of a double insulated  
cable into the box, the cable sizes  
are restricted to 16mm<sup>2</sup>.

#### DIMENSIONS (OVERALL)

1100 BLK 65 x 89 x 60mm  
1101 BLK 47 x 64 x 41mm

BS 7657: 2010

## Fuse-Links

BS 646:1958  
250V 50-60 Hz



K600



K630

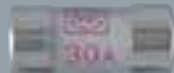


K602

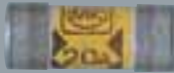


K601

BS 1361:1971  
250 V. 50-60Hz



K606



K603



K605



K604

BS 1362:1973  
250V 50-60Hz



K610



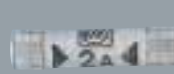
K612



K609



K608



K607

<b>K600</b> 5A RED	<b>10</b>
<b>K630</b> 3A BLACK	<b>10</b>
<b>K602</b> 2A YELLOW	<b>10</b>
<b>K601</b> 1A GREEN	<b>10</b>

<b>K606</b> 30A RED	<b>10</b>
<b>K603</b> 20A YELLOW	<b>10</b>
<b>K605</b> 15A BLUE	<b>10</b>
<b>K604</b> 5A WHITE	<b>10</b>

<b>K610</b> 13A BROWN*	<b>10</b>
<b>K612</b> 3A RED*	<b>10</b>
<b>K609</b> 10A BLACK #	<b>10</b>
<b>K608</b> 5A BLACK#	<b>10</b>
<b>K607</b> 2A BLACK#	<b>10</b>

**DIMENSIONS:**  
Overall length  
19.1mm +0.8mm -0.4mm  
End-cap diameter  
5.3mm +0.1mm -0.1mm  
End-cap length  
4.0mm +0.8mm -0.8mm

**K606**  
Overall length  
29.0mm +0.4mm -0.4mm  
End-cap diameter  
12.7mm +0.1mm -0.1mm  
End-cap length  
8.0mm +0.5mm -0.5mm

**K603, K605**  
Overall length  
26.0mm +0.2mm -0.6mm  
End-cap diameter 10.32mm  
+0.1mm-0.1mm  
End cap length  
6.4mm +0.5mm -0.5mm

\*These ratings are for use with plugs complying with BS 1363, fused connections units and similar accessories.

#These ratings are for use with fused connection units and similar accessories.

**DIMENSIONS:**  
Overall length  
25.4mm +0.8mm -0.4mm  
End-cap diameter  
6.3mm +0.2mm -0.5mm  
End-cap length  
5.5mm +0.8mm -0.8mm

## Additional Screws

<b>1015MBRS*</b> SCREW 5BA 10mm	<b>100</b>
<b>1015MNIP*</b> SCREW 5BA 10mm	<b>100</b>
<b>1045ABRS*</b> SCREW 5BA 18mm TAMPERPROOF	<b>100</b>
<b>1045ANIP*</b> SCREW 5BA 18mm TAMPERPROOF	<b>100</b>
<b>11130NIPMA*</b> SCREW M3.0 12mm	<b>100</b>
<b>11135NIPMA*</b> SCREW M3.5 14mm	<b>100</b>
<b>11135NIPMB</b> SCREW M3.5 22mm	<b>100</b>
<b>11135NIPMC</b> SCREW M3.5 24mm	<b>100</b>
<b>11135BRSM E</b> SCREW M3.5 32mm	<b>100</b>
<b>11135NIPME</b> SCREW M3.5 32mm	<b>100</b>
<b>11135BRSMF</b> SCREW M3.5 40mm	<b>100</b>
<b>11135NIPMF</b> SCREW M3.5 40mm	<b>100</b>
<b>11135BRSMG</b> SCREW M3.5 48mm	<b>100</b>
<b>11135NIPMG</b> SCREW M3.5 48mm	<b>100</b>
<b>11135BRSMK</b> SCREW M3.5 29mm	<b>100</b>
<b>11135NIPMK</b> SCREW M3.5 29mm	<b>100</b>
<b>11135NIPMN</b> SCREW M3.5 25mm	<b>100</b>
<b>11140NIPMA</b> SCREW M4.0 20mm	<b>100</b>
<b>11430BRSM A*</b> SCREW M3.0 12mm TAMPERPROOF	<b>100</b>
<b>11430NIPMA*</b> SCREW M3.0 12mm TAMPERPROOF	<b>100</b>
<b>11435BRSM E</b> SCREW M3.5 35mm TAMPERPROOF	<b>100</b>
<b>11435NIPME</b> SCREW M3.5 35mm TAMPERPROOF	<b>100</b>
<b>11435NIPMJ</b> SCREW M3.5 29mm TAMPERPROOF	<b>100</b>
<b>645NIP</b> SECRET SCREW for use with 646, 655 & 647	<b>100</b>
<b>644ZIC</b> KEY FOR 645NIP	<b>10</b>
<b>3400ZIC</b> TAMPERPROOF KEY	<b>10</b>

**BRS** finish for use with SAG accessories.

**NIP** finish for use with BRC, ALM, PCR and WHI accessories.

Tamperproof screws include one key per pack.

\*For use with old Grid System

\*\* For use with Grid Plus

## Additional Edge and Aspect Screws

<b>48370SSPBZT9</b> SCREW M3.0 12mm (2 SCREWS/PKT)	<b>100</b>
<b>48370SSPBRT9</b> SCREW M3.0 12mm (2 SCREWS/PKT)	<b>100</b>
<b>48370SSBLKT9</b> SCREW M3.0 12mm (2 SCREWS/PKT)	<b>100</b>
<b>48370SSNIPT9</b> SCREW M3.0 12mm (2 SCREWS/PKT)	<b>100</b>
<b>48370SSWHIT9</b> SCREW M3.0 12mm (2 SCREWS/PKT)	<b>100</b>
<b>48370SSPBRT9</b> SCREW M3.0 12mm (2 SCREWS/PKT)	<b>100</b>
<b>48370SSPBZT9</b> SCREW M3.0 12mm (2 SCREWS/PKT)	<b>100</b>
<b>43066SSNIPT9</b> SCREW M3.5 22mm (2 SCREWS/PKT)	<b>100</b>
<b>43066SSPBRT9</b> SCREW M3.5 22mm (2 SCREWS/PKT)	<b>100</b>
<b>43066SSWHIT9</b> SCREW M3.5 22mm (2 SCREWS/PKT)	<b>100</b>
<b>43066SSBLKT9</b> SCREW M3.5 22mm (2 SCREWS/PKT)	<b>100</b>
<b>43066SSPBZT9</b> SCREW M3.5 22mm (2 SCREWS/PKT)	<b>100</b>
<b>43352SSNIPT9</b> SCREW M3.5 28mm (2 SCREWS/PKT)	<b>100</b>
<b>43352SSPBRT9</b> SCREW M3.5 28mm (2 SCREWS/PKT)	<b>100</b>
<b>43352SSWHIT9</b> SCREW M3.5 28mm (2 SCREWS/PKT)	<b>100</b>
<b>43352SSBLKT9</b> SCREW M3.5 28mm (2 SCREWS/PKT)	<b>100</b>
<b>43352SSPBZT9</b> SCREW M3.5 28mm (2 SCREWS/PKT)	<b>100</b>

## Replacement Components

<b>3405ZIC</b> DUAL USE KEY FOR TAMPER PROOF KEY SWITCH AND SECRET SCREW CONNECTION UNITS	<b>10</b>
<b>6084SLWHI</b> FUSE CARRIERS for all Clock Connectors supplied with fuse	<b>1</b>



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MEIGAN clean earth facility 2 gang socket outlet, engraved  
"Medical Equipment Only"

Available on a worldwide basis, the MK Design Service is supported by a dedicated team to ensure the seamless delivery of your chosen products.  
To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)



## range introduction

All MK products are made to stand up to the wear and tear of everyday use, but in some areas you need them to be even tougher. That's why the Metalclad Plus™ range of surface mounted accessories is ideal for factories, workshops, garages and sheds. Made from heavy gauge steel they're tough and impact resistant and they look good too. There is a wide selection of surface mounted products in the range including switchsockets with outboard rockers and light switches with wide rockers, both very useful when wearing gloves. An RCD protected socket is also available which is essential when operating power tools.

Echo™ is an innovative range of entirely wireless, batteryless and self powered switches, only available from MK Electric and in finishes to complement the Metalclad Plus range. Please see page 31 for details.

## features and benefits

**Tough and impact resistant**

Metalclad Plus™ is ideal for factories, workshops, garages and sheds. White Metalclad is suitable for Schools and Sports Halls.

**Comprehensive range**

Suits all your needs where hard wearing performance is required.

**Frontplates have smoothly chamfered edges**

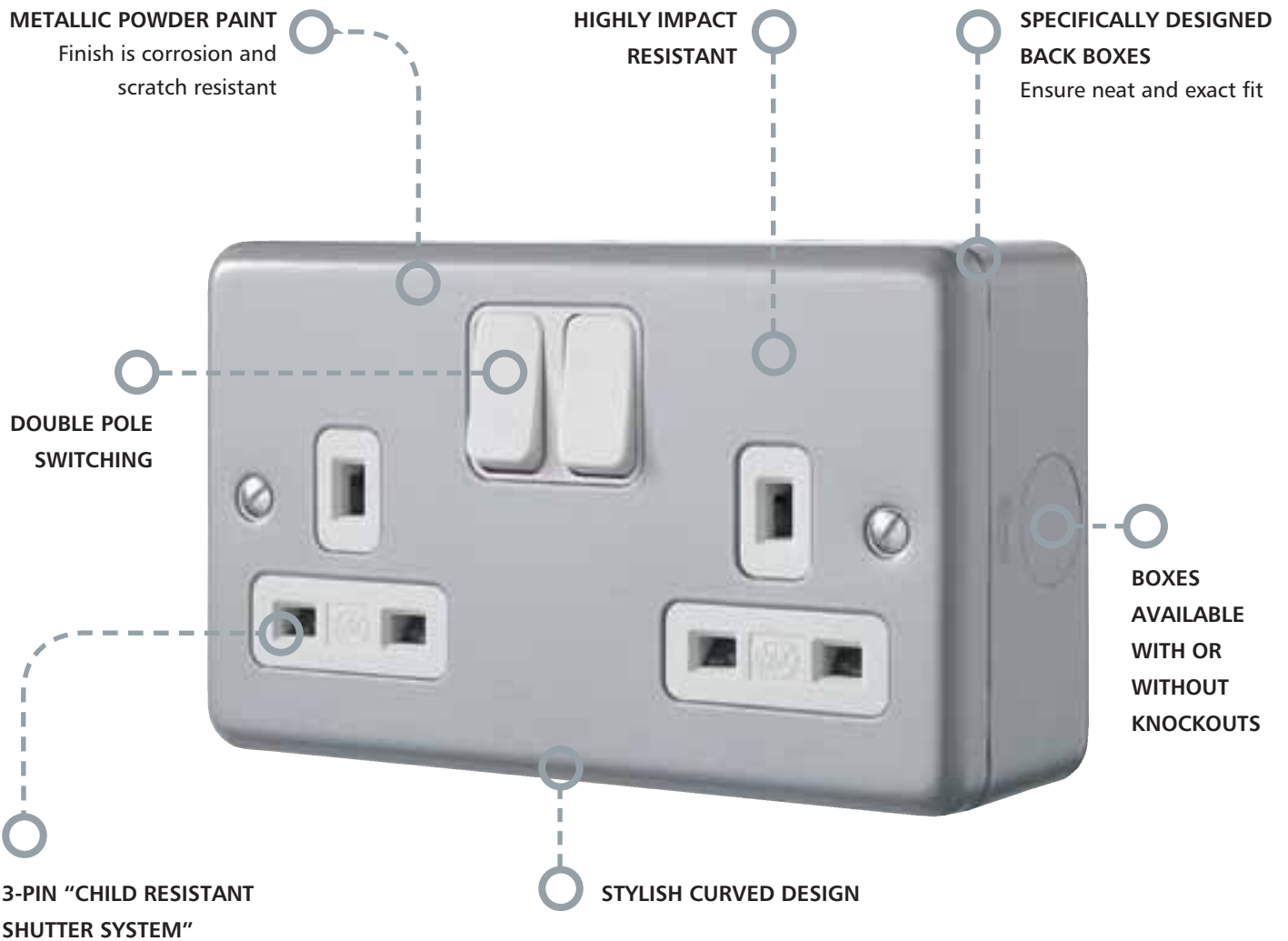
Fits flush with the backbox providing a neat finish.

**Total safety**

3-pin operated "child resistant shutter system", which is designed to inhibit access to the electricity supply, unless all 3 pins of a standard British 13 Amp plug are in position.

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surface | wiring devices



Terminal screws are backed out and captive Terminals are upwards facing to make installation easier.

Funnel entrance to terminals enables positive cable connection.

Outboard rocker sockets are ideal for gloved hands.

Clear terminal markings for easy identification.



## Switchsocket Outlets

13 AMP  
SURFACE

WITH OUTBOARD  
ROCKERS  
13 AMP  
SURFACE

WITH NEONS  
13 AMP  
SURFACE

13 AMP SOCKET  
20 AMP SWITCH  
KEY OPERATED



K2977ALM



K3077WHI



K2945ALM



K2477ALM



K2435ALM



K2977D6ALM



K3046WHI



K2945D6ALM



K2477D6ALM



K5252ALM



K2946ALM



K3045WHI



K2446ALM



K2946D6ALM



K2446D6ALM

- K2977ALM** **5**  
1 GANG DP WITH  
DUAL EARTH TERMINALS
- K2977D5ALM** **1**  
1 GANG DP WITH DUAL EARTH  
TERMINALS WITHOUT BOX
- K2977D6ALM** **1**  
1 GANG DP WITH RED ROCKER  
AND DUAL EARTH TERMINALS
- K2946ALM** **5**  
2 GANG DP
- K2946D5ALM** **1**  
2 GANG DP WITHOUT BOX
- K2946D6ALM** **1**  
2 GANG DP WITH RED ROCKERS

Earth terminal fitted in boxes.

#### DIMENSIONS:

1 gang: 86 x 86 x 51mm

2 gang: 86 x 146 x 51mm

#### TERMINAL CAPACITY:

2 x 6 mm<sup>2</sup> stranded (max)

**KNOCKOUTS:** 1 gang: 6 x 20mm.

Two in one side and one in each of

the other three sides. One in base

2 gang: 8 x 20mm.

Three in top two in bottom sides and

one in each end. One in base

#### SPARE BOXES:

1 gang: K829ALM\* K899ALM

2 gang: K830ALM\* K897ALM

(\*without side knockouts)

All boxes have a base knockout.

Boxes: BS 5733: 2010

Socket: BS 1363 Pt.2: 1995

Socket: BS EN 60669-1: 1999

- K3077WHI** **10**  
1 GANG DP  
WITHOUT BOX
- K3046WHI** **5**  
2 GANG DP  
WITHOUT BOX

#### High integrity earthing

One gang switchsockets, two gang outboard switchsockets and two gang unswitched sockets are fitted with two earth terminals to provide a double earth facility for use when installations require a high integrity protective connection as specified within BS 7671: 2008.

#### Double pole switching

All switchsockets have double pole switching (neutral makes first, breaks last).

- K2945ALM** **5**  
2 GANG DP  
WITH OUTBOARD  
ROCKERS AND DUAL  
EARTH TERMINALS
- K2945D5ALM** **1**  
2 GANG DP  
WITH OUTBOARD  
ROCKERS AND DUAL EARTH  
TERMINALS WITHOUT BOX
- K2945D6ALM** **1**  
2 GANG DP  
WITH RED OUTBOARD  
ROCKERS AND DUAL  
EARTH TERMINALS
- K3045WHI** **5**  
2 GANG DP  
WITHOUT BOX  
WITH OUTBOARD  
ROCKERS AND DUAL  
EARTH TERMINALS

- K2477ALM** **5**  
1 GANG DP  
WITH NEON AND DUAL  
EARTH TERMINALS
- K2477D6ALM** **1**  
1 GANG DP  
WITH NEON,  
RED ROCKER AND DUAL  
EARTH TERMINALS
- K2446ALM** **5**  
2 GANG DP  
WITH NEONS
- K2446D6ALM** **1**  
2 GANG DP  
WITH NEONS  
AND RED ROCKERS

- K2435ALM** **5**  
DP KEY OPERATED SOCKET
- K5252ALM** **5**  
20AX DP KEY OPERATED SWITCH

Earth terminal fitted in boxes.

#### DIMENSIONS:

1 gang: 86 x 86 x 51mm

2 gang: 86 x 146 x 51mm

#### TERMINAL CAPACITY:

1 x 6 mm<sup>2</sup> stranded (max)

#### KNOCKOUTS:

1 gang: 6 x 20mm.

Two in one side and one in each of

the other three sides. One in base

2 gang: 8 x 20mm.

Three in top two in bottom sides

and one in each end. One in base

#### SPARE BOXES:

1 gang: K829ALM\* K899ALM

2 gang: K830ALM\* K897ALM

(\*without side knockouts) All boxes

have a base knockout.

Boxes: BS 5733: 2010

Socket: BS 1363 Pt.2: 1995

Socket: BS EN 60669-1: 1999

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surface | wiring devices

## Socket Outlets

RCD PROTECTED  
13 AMP  
SURFACE

ROUND PIN  
SURFACE

NON STANDARD  
13 AMP  
SURFACE

13 AMP  
SURFACE

ROUND PIN  
SURFACE



K6102ALM



K6302ALM



K6211ALM



K6231ALM



K2871ALM



K2873ALM



K1247ALM



K1247D6ALM



K1248ALM



K1248D6ALM



K848ALM



K850ALM



K841ALM



K842ALM



K843ALM

**K6102ALM**  
1 GANG  
10mA ACTIVE CIRCUIT

1

**K6302ALM**  
1 GANG  
30mA ACTIVE CIRCUIT

1

**K6305ALM**  
1 GANG  
30mA PASSIVE CIRCUIT

1

**K6211ALM**  
2 GANG  
10mA ACTIVE CIRCUIT

1

**K6231ALM**  
2 GANG  
30mA ACTIVE CIRCUIT

1

**K6233ALM**  
2 GANG  
30mA PASSIVE CIRCUIT

1

It is important to ensure that the correct control circuit, active or passive, is selected for each application. See page 292 for definition.

Only suitable for supply voltage of 240V a.c., 50Hz.

DIMENSIONS: 86 x 147 x 54mm  
KNOCKOUTS: 8 x 20mm.  
Three in top side, two in bottom side, one in base and one in each end.

SPARE BOX  
K897ALM  
BS 7288: 1990

**K2871ALM**  
1 GANG  
5A DP  
SHUTTERD

5

**K2873ALM**  
1 GANG  
15A DP  
SHUTTERD

5

Earth terminal fitted in boxes.

DIMENSIONS:  
86 x 86 x 51mm

TERMINAL CAPACITY:  
5 amp;  
2 x 6mm<sup>2</sup> stranded (max)  
15 amp  
2 x 6mm<sup>2</sup> stranded (max)

KNOCKOUTS:  
6 x 20mm.  
Two in one side and one in each of other three sides. One in Base

Spare Boxes with and without knockouts are available.

All boxes have a base knockout.  
BS 546: 1950

**K1247ALM**  
1 GANG DP WITH  
CLEAN EARTH FACILITY

5

**K1247D6ALM**  
1 GANG DP  
WITH RED ROCKER AND  
CLEAN EARTH FACILITY

1

**K1248ALM**  
2 GANG DP WITH  
CLEAN EARTH FACILITY

5

**K1248D6ALM**  
2 GANG DP  
WITH RED ROCKERS AND  
CLEAN EARTH FACILITY

1

These products are provided with facilities for 'clean earth' connection and are suitable for non standard plugs with 'T' shaped earth pin. Earth terminal fitted in boxes.

DIMENSIONS:  
1 gang: 86 x 86 x 51mm  
2 gang: 86 x 146 x 51mm  
TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> stranded (max)  
KNOCKOUTS:  
1 gang 6 x 20mm.  
Two in one side and one in each of other three sides. One in base  
2 gang 8 x 20mm.  
Three in top, two in bottom sides and one in each end. One in base  
Spare Boxes with and without knockouts are available.

All boxes have a base knockout  
BS 1363 Pt.2: 1995 where relevant

**K848ALM**  
1 GANG

5

**K850ALM**  
2 GANG  
WITH DUAL EARTH  
TERMINALS

5

**K850ALM** has two earth terminals providing a double earth facility when installations require a high integrity protective connection as specified within BS 7671: 2008.

DIMENSIONS:  
1 gang 86 x 86 x 47mm  
2 gang 86 x 146 x 47mm  
TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> stranded (max)  
KNOCKOUTS: 1 gang 6 x 20mm.  
Two in one side and one in each of other three sides. One in base  
2 gang 8 x 20mm.  
Three in top, two in bottom sides and one in each end. One in base  
Spare Boxes with and without knockouts are available.

All boxes have a base knockout  
BS 1363 Pt.2: 1995

**K841ALM**  
1 GANG  
2A  
SHUTTERD

5

**K842ALM**  
1 GANG  
5A  
SHUTTERD

5

**K843ALM**  
1 GANG  
15A  
SHUTTERD

5

Earth terminal fitted in box.

DIMENSIONS:  
86 x 86 x 47mm

TERMINAL CAPACITY:  
2 amp;  
3 x 2.5mm<sup>2</sup> (max)  
5 amp;  
2 x 6mm<sup>2</sup> stranded (max)  
15 amp  
2 x 6mm<sup>2</sup> stranded (max)

KNOCKOUTS:  
6 x 20mm.  
Two in one side and one in each of other three sides. One in base

Spare Boxes with and without knockouts are available.

All boxes have a base knockout.  
BS 546: 1950

## FEATURES AND BENEFITS



When servicing or repairing appliances fuse carriers on connection units can be padlocked for additional safety



A secret key-operated switch helps prevent unauthorised usage



An optional tamperproof screw on the fuse carrier is particularly useful for appliances in public areas



In-line terminals means that cables can be cut to the same length. White printing gives instant terminal identification



A simple but effective cord grip securely holds the cable in connection units



Backboxes come with or without side knockouts. All boxes have a central knockout in the base for added on-site flexibility

## Socket Outlets

15 AMP  
127V  
SURFACE



K2271ALM



K2272ALM

## Connection Units

SWITCHED  
FUSED  
SURFACE



K963KOALM



K942ALM



K962ALM



K962D6ALM



K3042WHI



K3062WHI

**K2271ALM**  
1 GANG  
SHUTTERED  
(NON UK)

**K2272ALM**  
2 GANG  
SHUTTERED  
(NON UK)

Earth terminal fitted in box.

DIMENSIONS:  
1 gang 86 x 86 x 47mm  
2 gang 86 x 146 x 47mm

KNOCKOUTS:  
1 gang 6 x 20mm.  
Two in one side and one in each of other three sides. One in base  
2 gang 8 x 20mm.  
Three in top, two in bottom sides and one in each end. One in base

Spare Boxes with and without knockouts are available.

All boxes have a base knockout.

SASO 2203: 2003

5

**K963KOALM**  
DP WITH SECRET KEY OPERATED SWITCH, NEON AND TAMPERPROOF FUSE CARRIER SCREW

5

**K942ALM**  
DP SWITCHED

**K942D5ALM**  
DP SWITCHED WITHOUT BOX

**K942KOALM**  
DP SWITCHED WITH TAMPERPROOF FUSE CARRIER SCREW

**K962ALM**  
DP SWITCHED WITH NEON

**K962D6ALM**  
DP SWITCHED WITH NEON AND RED ROCKER

All connection units are fitted with a 13A fuse (to BS 1362.)

Earth terminal fitted in base of the box.

DIMENSIONS: 86 x 86 x 47mm

TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> stranded (max)

KNOCKOUTS: 6 x 20mm.  
Two in one side and one in each of other three sides, one in base.

Spare Boxes with and without knockouts are available.  
All boxes have a base knockout.

BS 1363 Pt.4: 1995

1

**K3042WHI**  
DP SWITCHED WITHOUT BOX

10

**K3062WHI**  
DP SWITCHED WITH NEON WITHOUT BOX

10

1

1

10

10

1

10

10

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surface | wiring devices

## Switches

UNSWITCHED  
FUUSED  
SURFACE

10 AMP  
SURFACE



K932ALM



K972ALM



K972D6ALM



K3072WHI



K954ALM



K983ALM



K989ALM



K986ALM



K3054WHI



K3086WHI



K3591ALM



K3592ALM



K3593ALM



K3091WHI



K3092WHI

**K932ALM**  
DP SWITCHED  
WITH FLEX OUTLET

10

**K972ALM**  
DP SWITCHED  
WITH FLEX OUTLET  
AND NEON

10

**K972D6ALM**  
DP SWITCHED  
WITH FLEX OUTLET,  
NEON AND  
RED ROCKER

5

**K3072WHI**  
DP SWITCHED  
WITH FLEX OUTLET,  
NEON  
WITHOUT BOX

10

**K954ALM**  
UNSWITCHED

10

**K954KOALM**  
UNSWITCHED WITH TAMPERPROOF  
FUSE CARRIER SCREW

1

**K983ALM**  
UNSWITCHED WITH NEON

5

**K989ALM**  
UNSWITCHED WITH FLEX OUTLET

5

**K989D1ALM**  
UNSWITCHED WITH FLEX OUTLET  
AND FITTED WITH 5 AMP FUSE

5

**K986ALM**  
UNSWITCHED WITH FLEX OUTLET  
AND NEON

5

All connection units are fitted with  
a 13A fuse (to BS 1362.)

Earth terminal fitted  
in base of the box.

DIMENSIONS:  
86 x 86 x 47mm

TERMINAL CAPACITY:  
2 x 6mm<sup>2</sup> stranded (max)

KNOCKOUTS:  
6 x 20mm.

Two in one side and one in each of  
other three sides, one in base.

Spare Boxes with and without  
knockouts are available.

All boxes have a base knockout.  
BS 1363 Pt.4: 1995

**K3054WHI**  
UNSWITCHED  
WITHOUT BOX

10

**K3086WHI**  
UNSWITCHED WITH  
FLEX OUTLET AND NEON  
WITHOUT BOX

10

**K3591ALM**  
1 GANG SP  
TWO WAY

5

**K3592ALM**  
2 GANG SP  
TWO WAY

5

**K3593ALM**  
3 GANG SP  
TWO WAY

5

**K3091WHI**  
1 GANG SP  
TWO WAY  
WITHOUT BOX

10

**K3092WHI**  
2 GANG SP  
TWO WAY  
WITHOUT BOX

10

These switches do NOT have to be  
derated when used with fluorescent  
or inductive loads.

An earth terminal is fitted in each  
box.

DIMENSIONS:  
86 x 86 x 47mm

TERMINAL CAPACITY:  
1 x 6mm<sup>2</sup> (max)

KNOCKOUTS:  
6 x 20mm.

Two in one side and one in each of  
other three sides, one in base.

Spare Boxes with and without  
knockouts are available.

All boxes have a base knockout.  
BS EN 60669-1: 1999

## Switches

10 AMP  
WITH WIDE  
ROCKERS  
SURFACE



K3781ALM



K3782ALM

## DP Switches

20 AMP  
SURFACE



K5212ALM



K5232ALM



K3012WHI

32 AMP AND  
50 AMP  
SURFACE



K5240ALM



K5230ALM

## Triple Pole

32 AMP AND  
10 AMP  
SURFACE



K5116ALM



K2857ALM



K4858WHI

## Euro Data Frontplates



K181ALM



K182ALM



K184ALM

**K3781ALM**  
1 GANG SP  
TWO WAY  
WITH WIDE ROCKER

5

**K3782ALM**  
2 GANG SP  
TWO WAY  
WITH WIDE ROCKERS

5

**K5212ALM**  
DP SWITCH

**K5232ALM**  
DP SWITCH  
WITH NEON

**K5242ALM**  
DP SWITCH  
WITH FLEX OUTLET  
AND NEON

**K3012WHI**  
DP SWITCH  
WITHOUT BOX

Earth terminal fitted in base of box.

**DIMENSIONS:**  
86 x 86 x 47mm

**TERMINAL CAPACITY:**  
1 x 6mm<sup>2</sup> (max)

**KNOCKOUTS:**  
6 x 20mm.  
Two in one side and one in each of other three sides, one in base.

Spare Boxes with and without knockouts are available.

All boxes have a base knockout.

BS EN 60669-1: 1999

**DP Switches are not recommended for switching large banks of PCs**

ALL UNITS ARE SUPPLIED WITH BACKBOXES (EXCEPT WHI AND D5 PRODUCTS)

These switches do NOT have to be derated when used with fluorescent or inductive loads.

An earth terminal is fitted in each box.

**DIMENSIONS:**  
86 x 86 x 47mm

**TERMINAL CAPACITY:**  
1 x 6mm<sup>2</sup> (max)

**KNOCKOUTS:**  
6 x 20mm.  
Two in one side and one in each of other three sides, one in base.

Spare Boxes with and without knockouts are available.

All boxes have a base knockout.

BS EN 60669-1: 1999

**K5240ALM**  
32A DP SWITCH  
WITH NEON

5

**K5230ALM**  
50A DP SWITCH  
WITH NEON

5

Earth terminal fitted in base of box.

**DIMENSIONS:**  
K5240: 86 x 86 x 65mm  
K5230: 147 x 86 x 65mm

**TERMINAL CAPACITY:**  
K5240: 1 x 10mm<sup>2</sup> (max)  
K5230: 1 x 10mm<sup>2</sup> (max)  
**KNOCKOUTS:**  
K5240: 6 x 20mm. Two in one side and one in each of other three sides, one in base.  
K5230: 4 x 20mm, 4 x 25mm

**SPARE BOX:**  
K5240: K8901ALM  
K5230: K8902ALM  
All boxes have a base knockout.

BS EN 60669-1: 1999

**K5116ALM**  
32A THREE POLE AND N SWITCH  
WITH NEON AND  
EARTH TERMINAL

1

**K2857ALM**  
10A THREE POLE FAN ISOLATOR  
WITH SWITCHLOCK  
AND PADLOCK

1

**K2859ALM**  
10A THREE POLE FAN ISOLATOR  
WITHOUT SWITCHLOCK

1

**K4858**  
SWITCHLOCK  
FOR FAN ISOLATOR

10

K5116 : 440V max.  
AC22, 12kW (16HP) & 415V, 3 phase  
32A continuous duty.

Making capacity is 2000A peak  
Lockable 'ON' or 'OFF' with MK  
padlock no K2000

K2857: For local isolation of fans with or without timers for repair or routine.

**TERMINAL CAPACITY:**  
K5116: 1 x 16mm<sup>2</sup> Conductor  
K2857: 1 x 6mm<sup>2</sup> Conductor

**DIMENSIONS:** 5116: 147 x 86 x 65  
K2857: 86 x 86 x 47

**KNOCKOUTS:**  
K5116: 4 x 20mm<sup>2</sup>, 4 x 25mm<sup>2</sup>  
K2857: 6 x 20mm<sup>2</sup>

**SPARE BOXES:** K25116: K8902ALM  
K2857: K899ALM, K829ALM  
BS EN 60947-3: 1999

**K181ALM**  
1 GANG EURO FRONTPLATE  
ONE MODULE  
APERTURE SIZE 25 X 50MM

10

**K182ALM**  
1 GANG EURO FRONTPLATE  
TWO MODULE  
APERTURE SIZE 50 X 50MM

5

**K184ALM**  
2 GANG EURO FRONTPLATE  
FOUR MODULE  
APERTURE SIZE 100 X 50MM

5

**MOUNTING BOXES:**  
Mounting Box is not supplied with frontplate

Suitable for flush boxes to  
BS 4662: 2006 and surface boxes to  
BS 5733: 2010  
Refer to appropriate module for  
minimum box depth.

**FIXING CENTRES:**  
1G; 60.3mm  
2G; 120.6mm

**STANDARDS**  
BS 5733: 2010 where applicable

Note: No grid required, modules just clip into place.



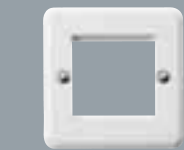
## Euro Power Modules

## Euro Datacom Modules

RJ11/12

RJ45 CAT 6

RJ45 CAT 5E



K3182WHI



K3184WHI



K5830WHI



K5831WHI



K5832WHI



K5833WHI



K5834WHI



K5837WHI



K5887WHI



K5887BLK



K5846WHI



K5846sBLK



K5864WHI



K5844WHI



K5845WHI



K5845BLK

**K3182WHI** 1  
1 GANG EURO FRONTPLATE  
TWO MODULE  
APERTURE SIZE 50 X 50MM

**K3184WHI** 1  
2 GANG EURO FRONTPLATE  
FOUR MODULE  
APERTURE SIZE 100 X 50MM

**K5830WHI** 10  
**K5830BLK** 10  
UK 1 GANG EURO 2 MODULE  
13A 250V SHUTTERED

**K5831WHI** 10  
**K5831BLK** 10  
GERMAN 2P+E  
16A 250V SHUTTERED  
EURO 2 MODULE (NON UK)

**K5832WHI** 10  
**K5832BLK** 10  
AMERICAN 2P+E  
15A 127V SHUTTERED  
EURO 2 MODULE (NON UK)

**K5830**  
MOUNTING BOX: 35mm  
46mm (for extra wiring space)  
DIMENSIONS: 50 x 50mm  
BS 1363: PL2: 1995

**K5831**  
MOUNTING BOX: 46mm  
DIMENSIONS: 50 x 50mm  
IEC 60884-1: 2006

**K5832**  
MOUNTING BOX: 35mm  
46mm (for extra wiring space)  
DIMENSIONS: 50 x 50mm  
SASO 2203: 2003

**K5833WHI** 10  
**K5833BLK** 10  
UK 1 GANG EURO 2 MODULE  
5A 250V SHUTTERED

**K5834WHI** 10  
**K5834BLK** 10  
FRENCH/BELGIAN 2P+E  
16A 250V SHUTTERED  
EURO 2 MODULE (NON UK)

**K5837WHI** 1  
**K5837BLK** 1  
USB CHARGING MODULE  
EURO 2 MODULE

**K5833**  
MOUNTING BOX: 35mm  
46mm (for extra wiring space)  
DIMENSIONS: 50 x 50mm  
BS 546: 1950

**K5834**  
MOUNTING BOX: 46mm  
DIMENSIONS: 50 x 50mm  
NF C61-341

**K5837**  
MOUNTING BOX: 35mm  
46mm (for extra wiring space)  
DIMENSIONS: 50 x 50mm

Features 2 charging sockets each delivering 1A charging current at 5Vdc (total 2A max). Allows charging of portable devices via USB 2.0 type A plug.

IEC 60950-1  
IEC 61000-6-1/3

**K5887WHI** 5  
**K5887BLK** 5  
RJ11/12  
ONE MODULE 25 X 50MM

Suitable for both RJ11 and RJ12 jacks

RJ11; 4 wire  
RJ12; 6 wire

MOUNTING BOXES:  
Minimum box depth 25mm

FCC68  
EN 41003

**K5846WHI** 5  
**K5846BLK** 5  
RJ45 CAT 6  
ONE MODULE 25 X 50MM

**K5846sWHI** 5  
**K5846sBLK** 5  
RJ45 CAT 6 SCREENED  
ONE MODULE 25 X 50MM

**K5864WHI** 5  
RJ45 CAT 6 ANGLED  
ONE MODULE 25 X 50MM

Cat 6 performance.

Suitable for both 568A and 568B wiring schemes.

MOUNTING BOXES:  
Minimum Box Depth 35mm

ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

**K5844WHI** 5  
RJ45 CAT 5E ANGLED  
ONE MODULE 25 X 50MM

**K5845WHI** 5  
**K5845BLK** 5  
RJ45 CAT 5E  
ONE MODULE 25 X 50MM

Enhanced Cat 5 performance. Suitable for both 568A and 568B wiring schemes.

Supplied with cable tie and cable anchors to secure wires in the connectors.

MOUNTING BOXES:  
Minimum box depth 25mm standard

ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

Mains operated products and extra low voltage modules must not be installed within the same frontplate. Refer to BS 7671: 2008 for details.

Euro  
Datacom  
ModulesLJU6C Data  
FrontplatesLJU6C Datacom  
Modules

## TELEPHONE

## BNC

## BLANKS

## FRONTPLATES

## RJ11/12

## RJ45 CAT 6



K5820WHI



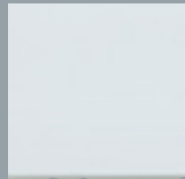
K5821WHI



K5821BLK



K5801WHI



K180WHI



K188WHI

K188BLK



K186WHI

K186BLK



K172ALM



K5787WHI



K5746WHI



K5746BLK



K5746sWHI



K5746sBLK

**K5820WHI** 5  
**K5820BLK** 5  
 TELEPHONE MASTER  
 ONE MODULE 25 X 50MM

**K5821WHI** 5  
**K5821BLK** 5  
 TELEPHONE SECONDARY  
 ONE MODULE 25 X 50MM

**K5801WHI** 5  
 BNC 50Ω  
 ONE MODULE 25 X 50MM

**K180WHI** 10  
 TWO MODULE  
 BLANK 50 X 50MM

**K188WHI** 10  
**K188BLK** 10  
 ONE MODULE  
 BLANK 25 X 50MM

**K186WHI** 10  
**K186BLK** 10  
 HALF MODULE  
 BLANK 12.5 X 50MM

**K172ALM** 10  
 1 GANG TWIN  
 LJU6C FRONTPLATE  
 TWO MODULE  
 APERTURE SIZE 22 X 37MM

**K5787WHI** 5  
 RJ11/12  
 ONE MODULE

**K5746WHI** 5  
**K5746BLK** 5  
 RJ45 CAT 6  
 ONE MODULE

**K5746sWHI** 5  
**K5746sBLK** 5  
 RJ45 CAT 6  
 SCREENED  
 ONE MODULE

MOUNTING BOXES:  
 Minimum depth 25mm  
 BS 6312 Pt 2

50 Ohm crimp connector  
 suitable for use with  
 RG58, URM43, URM76  
 and Beldon 9907 type  
 co-axial cables.

MOUNTING BOXES:  
 Minimum box depth  
 25mm

MOUNTING BOXES:  
 Minimum depth 16mm  
 BS 5733: 2010 where  
 applicable

MOUNTING BOXES:  
 Suitable for flush boxes to  
 BS 4662: 2006 and surface  
 boxes to BS 5733: 2010  
 Refer to appropriate module  
 for minimum box depth.

FIXING CENTRES:  
 1 gang: 60.3mm  
 2 gang: 120.6mm

BS 5733: 2010 where  
 appropriate

Note: No grid required,  
 modules just clip into place

Suitable for both RJ11 and  
 RJ12 jacks.

RJ11: 4 wire  
 RJ12: 6 wire

MOUNTING BOXES:  
 Minimum box depth 25mm

FCC68  
 EN41003

Cat 6 performance.

Suitable for both 568A and  
 568B wiring schemes.

MOUNTING BOXES:  
 Minimum Box Depth 35mm

ISO/IEC 11801  
 EN 50173  
 TIA 568  
 EN 41003

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## MK Modular Data System

### RJ45 CAT 5E



K5745WHI



K5745BLK

### BLANKS



K170WHI



K170BLK

### FRONTPLATES



K291ALM



K292ALM



K293ALM



K294ALM

### BOXES



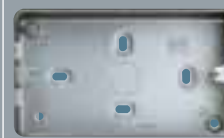
K8891ALM



K8821ALM



K8892ALM

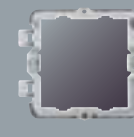


K8822ALM

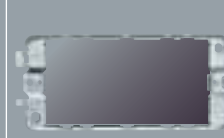
### MOUNTING FRAMES



K3701



K3702



K3703



K3704

### DATA MODULES



K455 WHI



K452WHI



K457WHI



K458WHI



K290WHI

**K5745WHI**  
**K5745BLK**  
RJ45 CAT 5E  
ONE MODULE

5  
5

**K170WHI**  
**K170BLK**  
ONE MODULE BLANK

10  
10

**K291ALM**  
1 GANG  
ONE MODULE

**K292ALM**  
1 GANG  
TWO MODULE

**K293ALM**  
2 GANG  
THREE MODULE

**K294ALM**  
2 GANG  
FOUR MODULE

BS 5733: 2010  
where applicable

Enhanced Cat 5 performance.  
Suitable for both 568A and 568B wiring schemes.

MOUNTING BOXES:  
Minimum box depth 25mm

ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

MOUNTING BOXES:  
Minimum box depth 16mm  
BS 5733: 2010 where  
appropriate

1

**K8891ALM**  
1 GANG 38mm BOX  
6 x 20mm KNOCKOUTS

1

**K8821ALM**  
1 GANG 38mm BOX  
WITHOUT KNOCKOUTS

1

**K8901ALM**  
1 GANG 46mm DEEP BOX  
6 x 20mm KNOCKOUTS

1

**K8892ALM**  
2 GANG 38mm BOX  
8 x 20mm KNOCKOUTS

**K8822ALM**  
2 GANG 38mm BOX  
WITHOUT KNOCKOUTS

**K8902ALM**  
2 GANG 46mm DEEP BOX  
4 x 20mm AND 4 x 25mm  
KNOCKOUTS

All boxes have a base  
knockout and feature  
self-levelling platforms to  
ensure that the mounting  
frame is always positioned  
correctly without the need for  
adjustment.

BS 5733: 2010  
where applicable

10

**K3701**  
1 GANG  
ONE MODULE

**K3702**  
1 GANG  
TWO MODULE

**K3703**  
2 GANG  
THREE MODULE

**K3704**  
2 GANG  
FOUR MODULE

BS 5733: 2010  
where applicable

10

**K455WHI**  
RJ45 CATEGORY 5e  
DATA SOCKET ONE MODULE

10

**K452WHI**  
TELEPHONE OUTLET  
ONE MODULE MASTER

10

**K457WHI**  
TELEPHONE OUTLET  
ONE MODULE SECONDARY

10

**K458WHI**  
RJ11 TELEPHONE/DATA  
SOCKET ONE MODULE

**K290WHI**  
BLANK ONE MODULE

Data/telecom modules are  
for use  
with Metalclad Plus  
frontplates only.

**K455** is Category 5e  
compliant  
IEC 11801  
BS EN 50173  
TIA/EIA 568A  
BS 5733: 2010

**K452 and K457**

are approved under OFTEL approval No. NS/G/23/L/100005 for  
direct and indirect connections between a termination point of  
a public telecommunications system and any piece of approved  
telecommunications apparatus.

BS 6312 Pt.2 where applicable

## Spare Boxes

## Blank Plates

Grid Plus  
Frontplates

K829ALM



K897ALM



K3390ALM



K3492ALM



K3491WHI



K830ALM



K897WHI



K3390WHI



K3494ALM



K3492WHI



K899ALM



K3369ALM



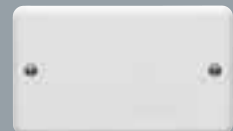
K3502ALM



K3493WHI



K899WHI



K3369WHI



K3494WHI

**K829ALM**  
1 GANG  
WITHOUT KNOCKOUTS

5

**K830ALM**  
2 GANG  
WITHOUT KNOCKOUTS

5

**K899ALM**

10

**K899WHI**  
1 GANG  
6 X 20mm KNOCKOUTS

10

**K897ALM**

**K897WHI**

2 GANG  
8 X 20mm KNOCKOUTS

5

5

**K3390ALM**  
**K3390WHI**

1 GANG

**K3369ALM**  
**K3369WHI**

2 GANG

5

5

5

5

**K3491ALM**

1 MODULE

**K3492ALM**

2 MODULE

**K3493ALM**

3 MODULE

**K3494ALM**

4 MODULE

**K3496ALM**

6 MODULE

**K3498ALM**

8 MODULE

**K3499ALM**

9 MODULE

**K3502ALM**

12 MODULE

**K3508ALM**

18 MODULE

**K3514ALM**

24 MODULE

10

10

5

5

1

1

1

1

1

1

1

**K3491WHI**

1 MODULE

**K3492WHI**

2 MODULE

**K3493WHI**

3 MODULE

**K3494WHI**

4 MODULE

10

10

5

5

All boxes are fitted with a brass earth terminal and a base knockout.

## DIMENSIONS:

1 gang: 86 x 86 x 38mm  
2 gang: 86 x 147 x 38mm

These boxes are not suitable for mounting Grid Plus modules or modular data/telecom modules.

BS 5733: 2010

## DIMENSIONS:

K3390: 86 x 86mm  
K3369: 86 x 147mm

## FIXING CENTRES:

K3390: 60.3mm  
K3369: 120.6mm

BS 5733: 2010

Blank plates supplied without backboxes.

## DIMENSIONS:

1 & 2 module: 86 x 86mm  
3 & 4 module: 86 x 146mm  
6 & 8 module: 146 x 146mm  
9 & 12 module: 146 x 206mm  
18 module: 206 x 206mm  
24 module: 206 x 266mm

BS 5733: 2010

See Grid Plus page 175 for a complete selection of switching modules.

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surface | wiring devices

Echo™ is an innovative range of entirely wireless, batteryless and self-powered switches, only available from MK Electric.

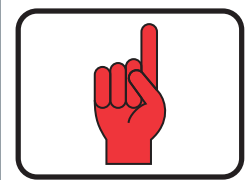
1 AND 2 CHANNEL TRANSMITTERS FOR Echo™



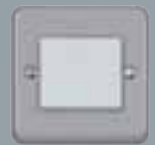
WIRELESS



BATTERYLESS



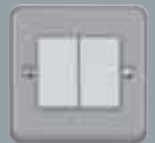
SELF-POWERED



K3786ALM



K3786WHI



K3787ALM



K3787WHI

No wires offers the benefits of almost instant switch installation and total location flexibility, resulting in reduced costs and disruption as well as improved speed and ease of installation – invaluable for areas needing to rearrange space periodically, e.g. commercial offices, or those where the channelling of walls isn't permissible or feasible, such as historic buildings or glass partition walls.

**Batteryless**

No batteries means low maintenance and low running costs. No need to buy, fit, replace or dispose of batteries, eliminating nuisance and waste for a more sustainable option.

**Self-powered**

The new Echo™ range works by harvesting tiny amounts of ambient energy which power a switch (Transmitter) to send an RF signal to the Switch Receiver which is connected to the lighting circuit – operating lighting at ranges of up to 30 metres within typical buildings.

For more information on Echo™, please see the Echo™ section page 31

**K3786ALM**  
**K3786WHI**  
1 CHANNEL SWITCH TRANSMITTER FOR ECHO™

1  
1

**K3787ALM**  
**K3787WHI**  
2 CHANNEL SWITCH TRANSMITTER FOR ECHO™

1  
1

OPERATING FREQUENCY:

868.3 Mhz

IP RATING:

IP2 x D

DIMENSIONS:

86 x 86mm

BS EN 60669-1

BS EN 60669-2-1

ETSI EN 301 489-1+ -3

ETSI EN 300 220-3



## range introduction

The Duraplug® range of heavy duty products has become a virtual byword for durability, strength and reliability.

Duraplug® offers a wide range of products including a complete range of safety extension leads featuring rubber covered plugs, extension leads, trailing sockets, lead connectors and cable couplers. All Duraplug® products are made from top quality, high impact resistant materials such as ABS/polycarbonate and rubber.

## features and benefits

- **Produced with top quality, high impact resistant materials such as ABS/polycarbonate and rubber**
- **Sockets have visible red nylon shutters**
- **Lead connectors have retaining lugs to prevent accidental disconnection**
- **All internal parts of trailing sockets are retained in the base for ease of wiring**

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portable power | wiring devices

## Heavy Duty Extension Leads

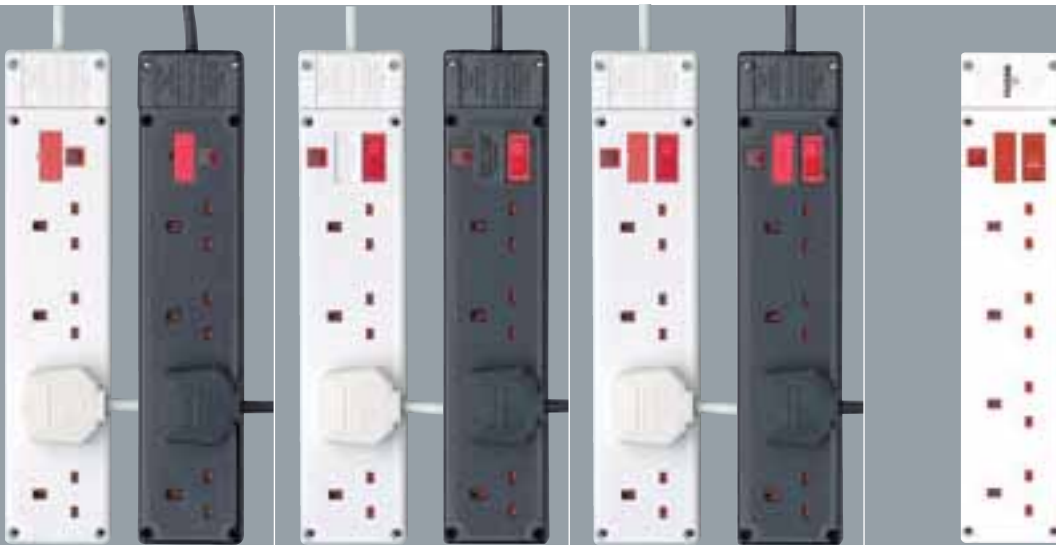
13 AMP  
FOUR WAY

FOUR WAY

FOUR WAY

## Heavy Duty Portable Socket

13 AMP  
FILTERED  
FOUR WAY



EXL135WHI

EXL135BLK

EXL136WHI

EXL136BLK

EXL137WHI

EXL137BLK

744WHI

**EXL135WHI**  
**EXL135BLK**  
13A WITH FUSE,  
NEON AND 2 METRE CABLE



**EXL136WHI**  
**EXL136BLK**  
13A WITH SWITCH,  
NEON AND 2 METRE CABLE



**EXL137WHI**  
**EXL137BLK**  
13A WITH FUSE,  
SWITCH, NEON AND  
2 METRE CABLE



**744WHI**  
13A  
WITH SWITCH,  
NEON AND FUSE



Fitted with approved PVC insulated cable of appropriate core size for maximum 13A rating and a Duraplug® rubber plug.

The sockets are manufactured in high impact ABS/Polycarbonate.

BS 1363/A: Pt.2:1995

BS 6500:2000 (Table 27) / IEC 227-5

Fitted with approved PVC insulated cable of appropriate core size for maximum 13A rating and a Duraplug® rubber plug.

The sockets are manufactured in high impact ABS/Polycarbonate.

BS 1363/A: Pt.2:1995

BS 6500:2000 (Table 27) / IEC 227-5

Fitted with approved PVC insulated cable of appropriate core size for maximum 13A rating and a Duraplug® rubber plug.

The sockets are manufactured in high impact ABS/Polycarbonate.

BS 1363/A: Pt.2:1995

BS 6500:2000 (Table 27) / IEC 227-5

Fitted with a fuse carrier and 13A fuse to BS 1362. Manufactured in high impact ABS/Polycarbonate.

Can also be wall mounted.

DIMENSIONS:  
317 x 68 x 31 mm

SPECIFICATION:  
Max. Power 3.14kW  
Response time (Varistor)  
better than 20ns

BS 1363/A: Pt.2:1995

## Heavy Duty Portable Socket

13 AMP  
FOUR WAY



FC4134WHI FC4134BLK

FOUR WAY



FC4135WHI FC4135BLK

FOUR WAY



FC4136WHI FC4136BLK

## Heavy Duty Trailing Sockets

13 AMP  
SINGLE & DOUBLE



FC133WHI



FC133ORG



FC133BLK



FCT133WHI



FCT133BLK



FC153BLK

**FC4134WHI**  
**FC4134BLK**

13A  
WITH FUSE  
AND NEON

1  
1

**FC4135WHI**  
**FC4135BLK**

13A  
WITH SWITCH  
AND NEON

1  
1

**FC4136WHI**  
**FC4136BLK**

13A  
WITH SWITCH,  
FUSE AND NEON

1  
1

**FC133WHI**  
**FC133BLK**  
**FC133ORG**

13A  
SINGLE OUTLET

10  
10  
10

**FCT133WHI**  
**FCT133BLK**  
**FCT133ORG**

13A  
TWIN OUTLET

10  
10  
10

**FC153BLK**  
15A  
SINGLE OUTLET  
ROUND PIN

10

Manufactured in high impact ABS/  
Polycarbonate  
incorporating optional wall  
mounting holes and equal length  
wire stripping.

DIMENSIONS:  
317 x 68 x 31mm  
BS 1363/A: Pt.2:1995

Manufactured in high impact ABS/  
Polycarbonate  
incorporating optional wall  
mounting holes and equal length  
wire stripping.

DIMENSIONS:  
317 x 68 x 31mm  
BS 1363/A: Pt.2:1995

Manufactured in high impact ABS/  
Polycarbonate  
incorporating optional wall  
mounting holes and equal length  
wire stripping.

DIMENSIONS:  
317 x 68 x 31mm  
BS 1363/A: Pt.2:1995

FC133 and FCT133  
Manufactured from tough  
Polypropylene with rubber cover.  
All internal component parts are  
retained in the base for ease of  
wiring.

BS 1363/A: Pt.2:1995

FC153  
Rubber cover.  
BS 546:1950

DIMENSIONS:  
FC133: 79 x 62 x 29mm  
FCT133: 80 x 125 x 29mm  
FC153: 67 x 53 x 33mm



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## Lead Connectors

 10 AMP  
TWO & THREE PIN

SPARES



LCP102BLK



LCP102PBLK



LCP102SORG



LCP103BLK



LCP103SBLK



LCP103PBLK



LCP103PWHI



PF133WHI



PF133ORG



P153BLK



CCP53BLK



CCP153BLK


**LCP102BLK**  
**LCP102ORG**

 TWO PIN 10A  
PLUG AND SOCKET

**LCP103WHI**  
**LCP103BLK**

 THREE PIN 10A  
PLUG AND SOCKET

 10  
10

 10  
10

**LCP102PBLK**  
**LCP102PORG**

10A PLUG TWO PIN

**LCP102SBLK**  
**LCP102SORG**

10A SOCKET TWO PIN

 10  
10

 10  
10

**LCP103PWHI**  
**LCP103PBLK**

10A PLUG THREE PIN

**LCP103SWHI**  
**LCP103SBLK**

10A SOCKET THREE PIN

 10  
10

 10  
10

**P53BLK**  
5A ROUND PIN

**PF133WHI**  
**PF133ORG**  
**PF133BLK**  
FITTED WITH  
13A FUSE

**P153BLK**  
15A ROUND PIN

 10  
10  
10

 10  
10

10

**CCP53BLK**  
5A  
PLUG & SOCKET

**CCP153BLK**  
15A  
PLUG & SOCKET

**CCP133PBLK**  
SPARE 13A PLUG

1

1

1

This range of connectors provides a safe and easy method of extending power cables and electrical tools and appliances. With rubber cover and polypropylene inserts with integral cable grips. Retaining lugs prevent accidental disconnection.

Two pin versions are only for use with double insulated Class 2 appliances.

Three pin versions must be used with earthed appliances.

DIMENSIONS:  
40 x 25 x 80mm

BS 5733: 2010

Comply with IP44 Ingress Protection rating to BS EN 60529:1992

BS 5733: 2010

Comply with IP44 Ingress Protection rating to BS EN 60529:1992

BS 5733: 2010

Comply with IP44 Ingress Protection rating to BS EN 60529:1992

**PF133** With rubber cover. Available with alternative fuse ratings to special order only. Approved by ASTA Licence no.470 BS 1363/A Pt.1:1995

**P53BLK** Manufactured in rubber

**P153BLK** With rubber cover and ABS/Polycarbonate base.

BS 546:1950

These splashproof couplers are a rugged means of connecting cables in industrial and commercial environments. Fitted with heavy duty cable clamps, tapered cable entry and fuse (13A version only).

DIMENSIONS:  
Diameter x Length  
CCP53: 60 x 173mm  
CCP133: 65 x 182mm  
CCP153: 68 x 180mm

BS 5733: 2010  
(BS 1363 Pin centres for 13A versions)  
BS 5733: 2010  
(BS 546 Pin centres for 5 and 15A versions)



range introduction

Established range of plugs and adaptors. The established names of Safetyplug™ and Toughplug™ strengthen MK's reputation for high quality products with the accent on safety and quality.

## Safetyplugs

## Toughplugs

## NON STANDARD



646WHI

646CHA



647CHA

647WHI

647CHA



655BLK

655ORG

655D8RED

<b>646WHI</b>	<b>10</b>
<b>646CHA</b>	<b>10</b>
FITTED WITH 13A FUSE	
<b>64603WHI</b>	<b>10</b>
FITTED WITH 3A FUSE	
<b>645NIP</b>	<b>100</b>
SECRET SCREW FOR SAFETYPLUG AND TOUGHPLUG	
<b>644ZIC</b>	<b>10</b>
KEY FOR SECRET SCREW	

See page 206 for spare fuse links.  
BS 1363 Pt.1: 1995

<b>647WHI</b>	<b>10</b>
<b>647CHA</b>	<b>10</b>
FITTED WITH 13A FUSE	

See page 206 for spare fuse links.  
For use only with MK non-standard 13A socket outlets.

BS1363 Pt1: 1995 (where relevant)

<b>655WHI</b>	<b>10</b>
FITTED WITH 13A FUSE	
<b>65503WHI</b>	<b>10</b>
FITTED WITH 3A FUSE	
<b>655BLK</b>	<b>10</b>
<b>655ORG</b>	<b>10</b>
<b>655RED</b>	<b>10</b>
FITTED WITH 13A FUSE	
<b>655D8WHI</b>	<b>10</b>
<b>655D8RED</b>	<b>10</b>
MARKED 'HOSPITAL PROPERTY'. FITTED WITH 13A FUSE	

See page 206 for spare fuse links.  
BS 1363/A Pt.1: 1995

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## Round Pin Plugs

## Plug Adaptors



505WHI



515WHI



641WHI



690WHI



692WHI



696WHI



698PPK

**502WHI**  
2A

10

**505WHI**  
5A

10

**515WHI**  
15A  
RESILIENT COVER

10

**639WHI**  
2A FUSED

10

**641WHI**  
5A FUSED

10

**643WHI**  
15A  
FITTED WITH 5A FUSE

10

**690WHI**  
13A  
WITH 1 X 13A  
AND 1 COMBINED 16A UNIVERSAL  
AND GERMAN TYPE 2P+E  
SOCKET OUTLET  
FUSED 13A

5

**692WHI**  
13A  
WITH 3 X 13A SOCKET OUTLETS  
FUSED 13A

5

**696WHI**  
13A  
WITH 2 X 13A SOCKET OUTLETS  
UNFUSED

5

**698PPK**  
13A  
WITH 1 X 1A  
SHAVER SOCKET OUTLET  
FUSED 1A

10

See page 206 for spare fuse links  
to BS 646.  
BS 546: 1950

BS 1363 Pt.3: 1995

BS 1363 Pt.3: 1995

MK Electric has always been at the forefront of technical innovation, not least in the IP environment. With three new ranges to choose from, there is a product solution for all your ingress protected installation requirements.

The new Masterseal Plus™ range has been tested to levels well in excess of British Standards. Masterseal Plus™ safeguards users in the harshest of environments, employing a patented gel seal for improved protection.

With a superb rating of IP66, Masterseal Plus™ is dust-tight to any ingress, and water-tight against high-pressure water jets from any direction.

Where a good degree of ingress protection is required, but not to the high specification of IP66-rated products, MK Shield™ is the ideal solution. MK Shield™ is rated to IP56, offering some dust ingress protection and protection against high pressure water jets from any direction. It is ideal for use in smaller commercial projects and domestic applications.

Finally, MK Splashguard™ – rated IP55 – completes MK Electric's portfolio of IP solutions, and is designed for occasional domestic use such as with garden equipment, providing protection to power supplied in damp or dusty environments.






**Masterseal Plus™**  
IP66



**MK Shield™**  
IP56



**MK Splashguard™**  
IP55

		SOLID PROTECTION	LIQUID PROTECTION
Masterseal Plus™ IP66		<b>DUST TIGHT.</b> NO INGRESS OF DUST. COMPLETE PROTECTION AGAINST CONTACT.	<b>POWERFUL WATER JETS.</b> WATER PROJECTED IN POWERFUL JETS AGAINST THE ENCLOSURE FROM ANY DIRECTION SHALL HAVE NO HARMFUL EFFECTS.
MK Shield™ IP56		<b>DUST PROTECTED.</b> INGRESS OF DUST IS NOT ENTIRELY PREVENTED, BUT IT MUST NOT ENTER IN SUFFICIENT QUANTITY TO INTERFERE WITH THE SATISFACTORY OPERATION OF THE EQUIPMENT. COMPLETE PROTECTION AGAINST CONTACT.	<b>POWERFUL WATER JETS.</b> WATER PROJECTED IN POWERFUL JETS AGAINST THE ENCLOSURE FROM ANY DIRECTION SHALL HAVE NO HARMFUL EFFECTS.
MK Splashguard™ IP55		<b>DUST PROTECTED.</b> INGRESS OF DUST IS NOT ENTIRELY PREVENTED, BUT IT MUST NOT ENTER IN SUFFICIENT QUANTITY TO INTERFERE WITH THE SATISFACTORY OPERATION OF THE EQUIPMENT. COMPLETE PROTECTION AGAINST CONTACT.	<b>WATER JETS.</b> WATER PROJECTED BY A NOZZLE AGAINST ENCLOSURE FROM ANY DIRECTION SHALL HAVE NO HARMFUL EFFECTS.

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ingress protected IP66 | wiring devices



## range introduction

Masterseal Plus™ has been specifically developed for use in both outdoor and indoor environments, and where wiring devices and accessories would be at risk from penetration by dust or water. With a rating of IP66, Masterseal Plus™ offers total protection against dust, and is protected against high pressure jets of water from any direction.

Masterseal Plus™ sockets can seal around virtually any standard 13A plug – including moulded plugs – allowing safe connection for any appliance.

An improved catch eases the opening and closing of the lid, whilst ensuring the integrity of the seal. The seal is fixed to the mounting frame of the product, enabling rapid installation, and removing the risk of error when placing a floating gasket.

The Masterseal Plus™ range extends to over 90 product variations as the new enclosures house selected products from the Logic Plus portfolio – thus offering all the benefits of the Logic Plus range within the new Masterseal Plus™ enclosures.

Masterseal Plus™ is perfectly suited to a range of indoor and outdoor applications including factories, laboratories, swimming pools, commercial kitchens, industrial units, warehouses, clean rooms and more.

## features and benefits

### IP66\*

Masterseal Plus™ offers total dust ingress protection, and is protected against high-pressure water jets from any direction.

### Robust Construction and Temperature Tolerant

Masterseal Plus™ will not discolour, crack or fade in UV light (unlike many other plastics), and will maintain operation in extremes of heat and cold.

### Impact and Environmental Protection

Masterseal Plus™ enclosures are made from recycled polycarbonate, one of the toughest thermoplastics available – incidentally also used in products such as motorcycle helmets. The raw materials are actually waste material collected from other manufacturing plants. This not only diverts material otherwise destined for landfill, but also prevents an equivalent amount of virgin material being produced along with the associated savings in energy, providing a significant reduction in carbon footprints.

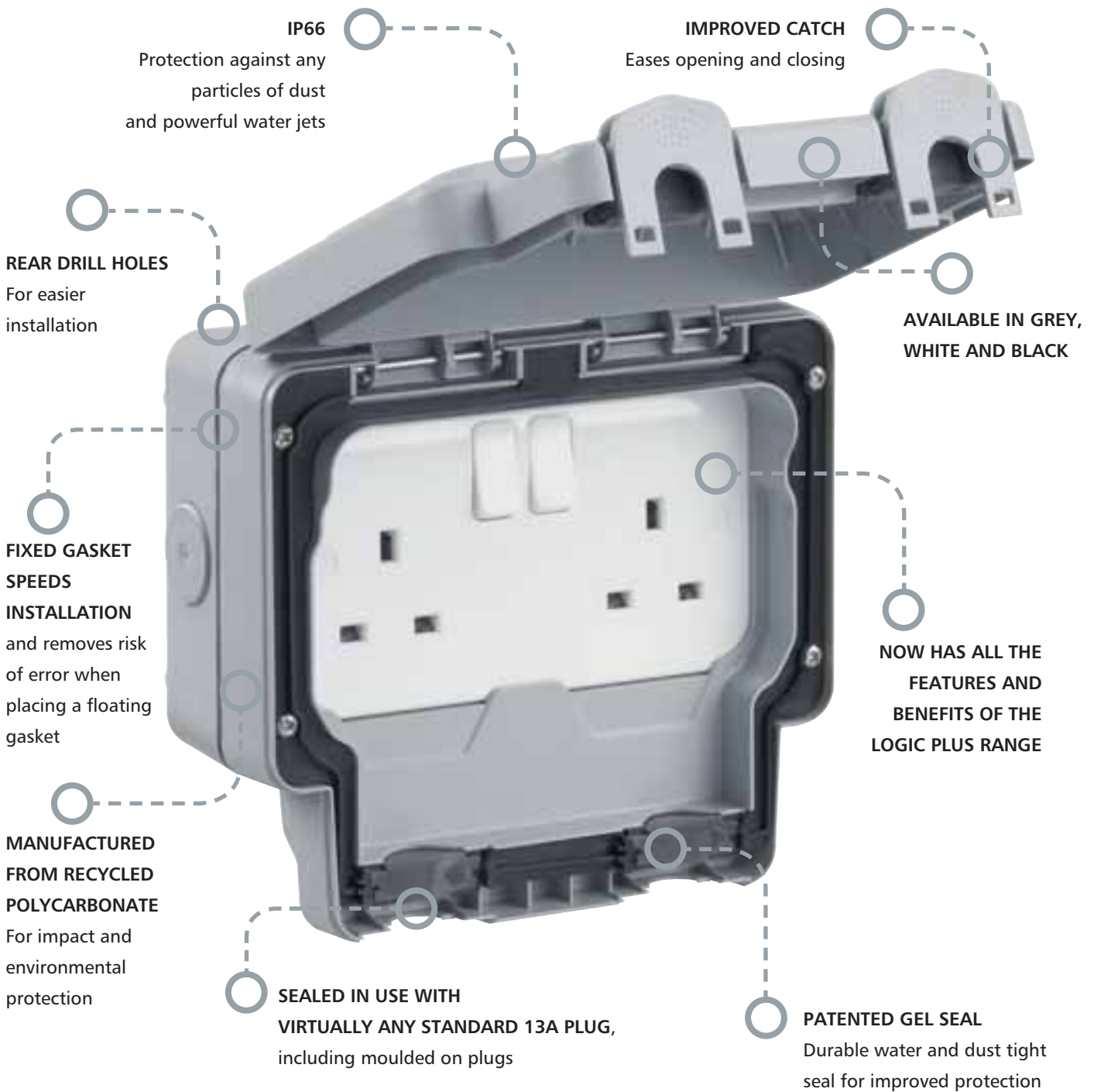
### Widest Range

The Masterseal Plus™ range extends to over 90 product variants. The new enclosures house products from the Logic Plus range, all enclosures and switches are available in Grey, White and Black.

### 20 Year Guarantee

Masterseal Plus™ is guaranteed for an industry-leading 20 years. (10 years for electronic products)

\*Grid Plus enclosures are IP56



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## Switchsocket Outlets, Timer Socket Outlets, and Key Operated Socket Outlets

## Socket Outlets

13 AMP  
IP66

RCD PROTECTED  
13 AMP  
IP66

13 AMP  
IP66

16 AMP  
IP66



**K56486GRY** 1  
**K56486WHI** 1  
**K56486BLK** 1  
13A DP  
1 GANG  
SWITCHED

**K56482GRY** 1  
**K56482WHI** 1  
**K56482BLK** 1  
13A DP  
2 GANG  
SWITCHED

**K56488GRY** 1  
**K56488WHI** 1  
**K56488BLK** 1  
13A DP SWITCHED  
2 GANG  
NEON  
CLEAR COVER

Fixing holes are for No.8 woodscrews (not supplied).

**K56486** has 4 x 20mm entries, 1 on top, bottom and each side and is supplied with an earth terminal in the back box.

2 gang backbox has 5 cable entries, 2 on top and 1 centrally on other 3 sides. Supplied with earth terminals in backbox.

DIMENSIONS:  
1 gang: 157 x 110 x 89mm  
2 gang: 157 x 175 x 89mm

BS 1363 Pt. 2: 1995  
IP66 BS EN 60529: 1992

**K56485GRY** 1  
**K56485WHI** 1  
**K56485BLK** 1  
13A SP  
1 GANG  
WITH ELECTRONIC TIMER MODULE

**K56487GRY** 1  
**K56487WHI** 1  
**K56487BLK** 1  
13A 1 GANG DP  
KEY OPERATED SOCKET

Timer Module meets the requirements of IEC 60730-1 and IEC 60730-2-7 Standards

**K56301GRY** 1  
**K56301WHI** 1  
**K56301BLK** 1  
1 GANG DP  
30 mA RATED TRIPPING CURRENT  
ACTIVE CONTROL CIRCUIT

**K56231GRY** 1  
**K56231WHI** 1  
**K56231BLK** 1  
2 GANG SP  
30 mA RATED TRIPPING CURRENT  
ACTIVE CONTROL CIRCUIT

**K56233GRY** 1  
**K56233WHI** 1  
**K56233BLK** 1  
2 GANG SP  
30 mA RATED TRIPPING CURRENT  
PASSIVE CONTROL CIRCUIT

RCD protected sockets are pulsating d.c. and a.c. fault current sensitive.

Fixing holes are for No.8 woodscrews (not supplied).

Supplied with an earth terminal in the back box. The Sentrysocket has 5 entries. Suitable for supply voltage of 240V a.c. 50Hz

Standard Shutters.

DIMENSIONS: 157 x 175 x 89mm

BS 7288: 1990  
IP66 BS EN 60529: 1992

**K56480GRY** 1  
**K56480WHI** 1  
**K56480BLK** 1  
13A 1 GANG  
UNSWITCHED

**K56481GRY** 1  
**K56481WHI** 1  
**K56481BLK** 1  
13A 2 GANG  
UNSWITCHED

Fixing holes are for No.8 woodscrews (not supplied).

**K56480** has 4 x 20mm entries, 1 on top, bottom and each side and is supplied with an earth terminal in the back box.

BS 1363: Pt2: 1995  
IP66 BS EN 60529: 1992

**K56481** Backbox has 5 cable entries, 2 on top and 1 centrally on other 3 sides. Supplied with earth terminals in backbox.

DIMENSIONS:  
1 gang: 157 x 110 x 89mm  
2 gang: 157 x 175 x 89mm

BS 1363 Pt.2: 1995  
IP66 BS EN 60529: 1992

**K56483GRY** 1  
**K56483WHI** 1  
**K56483BLK** 1  
16A  
1 GANG  
2P+E  
UNSWITCHED  
(NON UK)

Fixing holes are for No.8 woodscrews (not supplied).

**K56483** is for use with plugs having right angled cable exit.

DIMENSIONS:  
157 x 110 x 89mm  
IEC60884-1: 2006  
IP66 BS EN 60529: 1992

Masterseal enclosures are manufactured from polycarbonate. This provides an extremely high level of impact resistance. However some chemicals and synthetic oils can harm polycarbonate.

Refer to Technical Hotline for assistance  
+44 (0) 1268 563720

Key Operated  
SwitchesConnection  
Units

## Switches

Grid Plus  
Enclosures20 AMP  
IP6613 AMP  
IP6610 AMP  
IP6610 AMP  
IP6620 AMP  
IP66

IP56



K56425GRY



K56425WHI



K56425BLK



K56410WHI



K56410BLK



K56410GRY



K56400GRY



K56401WHI



K56402BLK



K56406GRY



K56407BLK



K56408WHI



K56409GRY



K56409WHI



K56409BLK



K56414GRY



K56414WHI



K56414BLK

**K56425GRY** 1  
**K56425WHI** 1  
**K56425BLK** 1

 20A  
 1 GANG  
 DP KEY OPERATED SWITCH

**K56410GRY** 1  
**K56410WHI** 1  
**K56410BLK** 1

 13A DP  
 1 GANG  
 SWITCHED, FUSED

**K56400GRY** 1  
**K56400WHI** 1  
**K56400BLK** 1

 10A 1 GANG  
 SP ONE-WAY

**K56401GRY** 1  
**K56401WHI** 1  
**K56401BLK** 1

 10A 1 GANG  
 SP TWO-WAY

**K56402GRY** 1  
**K56402WHI** 1  
**K56402BLK** 1

 10A 2 GANG  
 SP ONE-WAY

**K56406GRY** 1  
**K56406WHI** 1  
**K56406BLK** 1

 10A 1 GANG  
 DP ONE-WAY

**K56407GRY** 1  
**K56407WHI** 1  
**K56407BLK** 1

 10A 1 GANG  
 SP TWO-WAY  
 PUSH TO MAKE OR  
 PUSH TO BREAK  
 'BELL'

**K56408GRY** 1  
**K56408WHI** 1  
**K56408BLK** 1

 10A 1 GANG  
 SP TWO-WAY  
 PUSH TO MAKE OR  
 PUSH TO BREAK  
 'PRESS'

**K56409GRY** 1  
**K56409WHI** 1  
**K56409BLK** 1

 20A 1 GANG  
 DP ONE-WAY  
 'PRESS'

**K56414GRY** 1  
**K56414WHI** 1  
**K56414BLK** 1

 MODULAR GRID PLUS  
 ENCLOSURE SUPPLIED WITH  
 1 AND 2 GANG INSERTS\*

 Fixing holes are for No.8  
 woodscrews (not supplied)

**K56425** Backbox has 4 x  
 20mm entries, 1 on top,  
 bottom and each side and is  
 supplied with an earth terminal in  
 the back box.

 DIMENSIONS:  
 160 x 117 x 89mm  
 BS EN 60669-1: 1999  
 IP66 BS EN 60529: 1992

 Fitted with a 13A fuse link to  
 BS 1362.

 Fixing holes are for No.8  
 woodscrews (not supplied)  
**K56410** Backbox has 4 x 20mm entries,  
 1 on each edge, and is supplied  
 with an earth terminal in the  
 backbox.

 DIMENSIONS:  
 160 x 117 x 89mm  
 BS 1363 Pt.4: 1995  
 IP66 BS EN 60529: 1992

 Fixing holes are for No.8  
 woodscrews (not supplied).

 Each switch is fitted with a  
 neon which can be wired as  
 a locator.

 The enclosure has 4 x 20mm  
 entries, 1 on top, bottom and  
 each side and is supplied with  
 an earth terminal and a loop  
 terminal in the back box.

 These switches (except push  
 switches) do NOT have to  
 be derated when used with  
 fluorescent or inductive loads.

 DIMENSIONS:  
 95 x 95 x 57mm  
 BS EN 60669-1: 1999  
 IP66 to BS EN 60529: 1992

 Fixing holes are for No.8  
 woodscrews (not supplied).

 Each switch is fitted with a  
 neon which can be wired as  
 a locator.

 The enclosure has 4 x 20mm  
 entries, 1 on top, bottom and  
 each side and is supplied with  
 an earth terminal and a loop  
 terminal in the back box.

 These switches (except push  
 switches) do NOT have to  
 be derated when used with  
 fluorescent or inductive loads.

 DIMENSIONS:  
 95 x 95 x 57mm  
 BS EN 60669-1: 1999  
 IP66 to BS EN 60529: 1992

 \* NOTE: Installers may select  
 any switch or neon modules,  
 excluding dimmers, from Grid  
 Plus range and configure  
 product to suit installation  
 requirements.

 Fixing holes are for No.8  
 woodscrews (not supplied).  
**K56414** Backbox has 4 x 20mm entries,  
 1 on top, bottom and each  
 side. Supplied with an earth  
 terminal and a loop terminal in  
 the backbox.

 DIMENSIONS:  
 95 x 95 x 80mm  
 BS EN 60669-1: 1999  
 IP56 to BS EN 60529: 1992



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ingress protected IP66 | wiring devices

## Switch Enclosures

## Switch Modules

## Neon Modules

## Data/Telecom Enclosures Euro Format

## Euro Data Modules

IP66

10 AMP

20 AMP

IP66

TELECOM



K56420GRY



K56421WHI



K56422BLK



K56422GRY



56881BLK



56882BLK



56883BLK



56891BLK



56892BLK



56893BLK



56896BLK



56889RED



K56423GRY



K56423WHI



K56423BLK



K5820WHI



K5820BLK



K5821WHI



K5821BLK

**K56420GRY** 1  
**K56420WHI** 1  
**K56420BLK** 1

1 GANG FOR USE WITH ANY ONE SWITCH MODULE

**K56421GRY** 1  
**K56421WHI** 1  
**K56421BLK** 1

1 GANG WITH NEON FOR USE WITH ANY SWITCH AND ANY NEON MODULE

**K56422GRY** 1  
**K56422WHI** 1  
**K56422BLK** 1

2 GANG FOR USE WITH ANY TWO SWITCH MODULES

Fixing holes are for No.8 woodscrews (not supplied).

Each enclosure is fitted with a neon which should be wired as a locator.

The enclosure has 4 x 20mm entries, 1 on top, bottom and each side and is supplied with an earth terminal and a loop terminal in the back box.

NOTE: These enclosures are for use with the Masterseal Plus™ switch and neon modules.

DIMENSIONS: 95 x 95 x 57mm

IP66 to BS EN 60529: 1992

**56881BLK** 10  
 10A SP ONE-WAY

**56882BLK** 10  
 10A SP TWO-WAY

**56883BLK** 10  
 10A DP ONE-WAY

For use only with Masterseal Plus™ switch enclosures.

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

**56891BLK** 10  
 20A SP ONE-WAY

**56892BLK** 10  
 20A SP TWO-WAY

**56893BLK** 10  
 20A INTERMEDIATE

**56896BLK** 10  
 20A DP ONE-WAY

For use only with Masterseal Plus™ switch enclosures.

These switches do NOT have to be derated when used with fluorescent or inductive loads.

BS EN 60669-1: 1999

**56889RED** 10  
 200-250V NEON RED

BS 5733: 2010

**K56423GRY** 1  
**K56423WHI** 1  
**K56423BLK** 1

1 GANG DATA ENCLOSURE FOR 2 MODULE EURO OUTLET HALF MODULE BLANKS SOLD SEPARATELY

2 data modules can be accommodated providing care is used to ensure that the cables are correctly routed through the outlet.

Fixing holes are for No.8 woodscrews (not supplied). Backbox has 4 x 20mm entries, 1 on each edge. Supplied with an earth terminal and a loop terminal in the backbox.

DIMENSIONS: 160 x 117 x 89mm

IP66 to BS EN 60529: 1992

**K5820WHI** 5  
**K5820BLK** 5

TELEPHONE MASTER ONE MODULE

**K5821WHI** 5  
**K5821BLK** 5

TELEPHONE SECONDARY ONE MODULE

DIMENSIONS: 25 x 50mm

BS 6312 Pt.2

See Logic Plus page 54 for a full range of Euro modules

Euro Data  
ModulesJunction  
BoxesFlush Mounting  
FramesFlush Mounting  
BezelsConduit  
Entries

## Accessories

## DATA

30 AMP  
IP66

K5844WHI



K5887WHI K5887BLK



K56506GRY

K56506WHI  
(COVER ON)K56506WHI  
(COVER OFF)

K56500GRY



56500WHI



K56501GRY



K56502GRY



56502WHI



K56503GRY



56460WHI



56461WHI



56462WHI



56463WHI



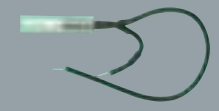
56464WHI



56837BLK



9933



56890GRN



K9944

**K5844WHI** **5**  
RJ45 CAT 5e  
ANGLED UNSCREENED  
ONE MODULE

**K5887WHI** **5**  
**K5887BLK** **5**  
RJ11/12  
ONE MODULE

**K56506GRY** **1**  
**K56506WHI** **1**  
**K56506BLK** **1**  
JUNCTION BOX  
WITH FOUR  
4-WAY TERMINALS

**K56500GRY** **1**  
**K56500WHI** **1**  
1 GANG  
PLASTER/TILE  
FLUSH MOUNTING FRAME  
WITH PROTECTIVE COVER  
FOR USE WITH 160 X  
117MM PRODUCTS

**56500GRY** **1**  
**56500WHI** **1**  
1 GANG  
PLASTER/TILE  
FLUSH MOUNTING FRAME  
WITH PROTECTIVE COVER  
FOR USE WITH 95 X 95MM  
PRODUCTS

**K56501GRY** **1**  
**K56501WHI** **1**  
2 GANG  
PLASTER/TILE  
FLUSH MOUNTING FRAME  
WITH PROTECTIVE COVER

The Flush adaptors for plaster and tile can be used with finish depths up to 20mm, by using the spacers provided. Allows flush mounted Masterseal Plus™ products to maintain their IP rating.

Can be used with side entry or back entry enclosures.

DIMENSIONS:  
56500: 115 x 115 x 34mm  
K56500: 135 X 135 X 34mm  
K56501: 135 X 195 X 34mm

**K56502GRY** **1**  
**K56502WHI** **1**  
1 GANG  
FLUSH MOUNTING BEZEL  
FOR USE WITH 160 X  
117MM PRODUCTS

**56502GRY** **1**  
**56502WHI** **1**  
1 GANG  
FLUSH MOUNTING BEZEL  
FOR USE WITH 95 X 95MM  
PRODUCTS

**K56503GRY** **1**  
**K56503WHI** **1**  
2 GANG  
FLUSH MOUNTING BEZEL

The Flush adaptors for brick and cavity walls should be used on vertical surfaces where no additional finishing, such as plastering is required.

Allows flush mounted Masterseal Plus™ products to maintain their IP rating.

Can only be used with back entry enclosures.

Supplied with 4 self tapping screws to fix enclosure to mounting bezel.

Clip-on surround hides mounting screws.

DIMENSIONS:  
56502: 145 x 145 x 41mm  
K56502: 165 x 165 x 41mm  
K56503: 165 x 245 x 41mm

**56460GRY** **5**  
**56460WHI** **5**  
ENTRY BLANK

**56461BLK** **5**  
**56461WHI** **5**  
PVC CABLE ENTRY  
TO PROVIDE DIRECT  
ENTRY OF POWER CABLE  
TO THE UNIT VIA THE  
BOTTOM BOX ENTRY

**56462BLK** **5**  
**56462WHI** **5**  
20MM PLAIN CONDUIT  
ENTRY PUSH FIT ADAPTOR  
BETWEEN BACK BOX AND  
20MM PLAIN CONDUIT

**56463BLK** **5**  
**56463WHI** **5**  
20MM THREADED  
CONDUIT ENTRY PUSH FIT  
ADAPTOR BETWEEN  
BACK BOX AND 20MM  
THREADED CONDUIT

**56464GRY** **5**  
**56464WHI** **5**  
BOX COUPLER  
FOR GANGING ONE  
MASTERSEAL OR  
MASTERSEAL PLUS™  
BOX NEXT TO ANOTHER

**56837BLK** **5**  
REPLACEMENT GEL SEAL  
FOR SOCKETS

**9933** **1**  
M20 EARTH LEAD  
ADAPTOR FOR EARTHING  
METAL CONDUIT

**56890GRN** **5**  
REPLACEMENT  
NEON LOCATOR

**K9944** **5**  
FLANGE FOR  
PANEL MOUNTING  
1 GANG 95 X 95MM  
MODULES

See Logic Plus pages 54  
for a full range of Euro  
modules

**K5844**  
Enhanced Cat 5e performance.  
Suitable for both 568A and  
568B wiring schemes.

ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003

**K5887**  
Suitable for both RJ11 and  
RJ12 jacks  
RJ11: 4 wire  
RJ12: 6 wire

FCC68  
EN 41003  
DIMENSIONS:  
25 x 50mm

Fixing holes are for No. 8  
woodscrews (not supplied).  
The enclosure has 4 entries, 1  
on top, bottom and both sides.  
TERMINAL CAPACITY:  
Each terminal block accepts four  
2.5mm<sup>2</sup> cables.  
DIMENSIONS:  
95 x 95 x 65mm  
BS 6220: 1983  
IP66 to BS EN 60529

technical hotline +44 (0)1268 563720

ingress protected IP66 | wiring devices

Echo™ is an innovative range of entirely wireless, batteryless and self-powered switches, only available from MK Electric.

1 and 2 Channel Transmitter For Echo™

Enclosure For Small Load Receiver For Echo™

Switch Receivers For Echo™

Accessories For Echo™

IP66

IP66



K55400GRY



K55000GRY



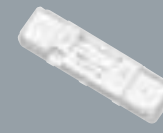
K5418R



K5417R



K55406WHI



K5420R



K5419R



K55406BLK

**Wireless**

No wires offers the benefits of almost instant switch installation and total location flexibility, resulting in reduced costs and disruption as well as improved speed and ease of installation – invaluable for areas needing to rearrange space periodically, e.g. commercial offices, or those where the channelling of walls isn't permissible or feasible, such as historic buildings or glass partition walls.

**Batteryless**

No batteries means low maintenance and low running costs. No need to buy, fit, replace or dispose of batteries, eliminating nuisance and waste for a more sustainable option.

**Self-powered**

The new Echo™ range works by harvesting tiny amounts of ambient energy which power a switch (Transmitter) to send an RF signal to the Switch Receiver which is connected to the lighting circuit – operating lighting at ranges of up to 30 metres within typical buildings.

For the complete Echo™ range, please refer to page 31.

**K55400GRY** 1  
**K55400WHI** 1  
**K55400BLK** 1  
 1 CHANNEL TRANSMITTER FOR ECHO™

**K55406GRY** 1  
**K55406WHI** 1  
**K55406BLK** 1  
 2 CHANNEL TRANSMITTER FOR ECHO™

**K55000GRY** 1  
**K55000WHI** 1  
**K55000BLK** 1  
 ENCLOSURE FOR USE WITH K5418R

**K5418R** 1  
 SMALL LOAD SWITCH RECEIVER 400 WATT

**K5420R** 1  
 10AX SWITCH RECEIVER/REPEATER

**K5417R** 1  
 REMOTE CONTROL

**K5419R** 1  
 FIELD STRENGTH INDICATOR

**KPAD** 1  
 ADHESIVE PAD (ASPECT AND LOGIC PLUS)

- **No wires**
  - Instant switch installation
  - Location/relocation flexibility
  - Simplifies office 'churn' – less disruption
- **No batteries**
  - Low maintenance
  - Low running costs
  - Less waste, a more sustainable option
  - No nuisance factor
- **Flexibility**
  - No wires, no constraints
  - Suitable for all wall types, including where channelling isn't feasible
  - Ideal for commercial, residential and historic buildings
- **Quality reliability and safety come as standard**
- **10 year guarantee**



### range introduction

MK Shield™ is the ideal solution for both outdoor and indoor environments, where a good degree of ingress protection is required, but not to the high specification of IP66 rated products.

Rated to IP56, MK Shield™ offers some dust ingress protection, whilst protecting against high pressure water jets from any direction.

In addition to its ease of installation, the range is aesthetically pleasing with an unobtrusive, modern and compact design.

MK Shield™ is ideal for use in small to medium-sized commercial projects and domestic applications.

### features and benefits

#### IP56

MK Shield™ offers some dust ingress protection, and is protected against high pressure water jets from any direction.

#### Selection of Finishes

Available in Grey, White and Clear.

#### Patented Gel Seal

The patented gel seal offers improved protection, and the push lid catch provides a waterproof seal.

#### Slim and Compact Design

Unobtrusive and aesthetically pleasing.

#### 10 Year Guarantee

technical hotline +44 (0)1268 563720

ingress protected IP56 | wiring devices

**IP56**  
Protected against high pressure water jets from any direction, some dust ingress protection

**SLIM AND COMPACT DESIGN**

**MK SHIELD™ SOCKETS WILL SEAL AROUND MOST STANDARD 13A PLUGS**

**10 YEAR GUARANTEE**

**PUSH LID CATCH PROVIDES A WATERPROOF SEAL WHEN CLOSED**

**AVAILABLE IN GREY, WHITE AND CLEAR**

**PATENTED GEL SEAL**



Switchsocket  
Outlets

## Socket Outlets

Connection  
Units

## Switches

13 AMP  
IP5613 AMP  
IP5613 AMP  
IP5610 AMP  
IP5610 AMP  
IP5620 AMP  
IP56

K46131GRY



K46031WHI



K46135GRY



K46101CLR



K46103WHI



K46206WHI



K46131CLR



K46031GRY



K46135CLR



K46102GRY








K46111CLR








K46202GRY




**K46131GRY**   
**K46131WHI**   
**K46131CLR**   
 13A DP  
 1 GANG  
 SWITCHED




**K46031GRY**   
**K46031WHI**   
 13A SP  
 1 GANG  
 UNSWITCHED




**K46135GRY**   
**K46135WHI**   
**K46135CLR**   
 13A  
 1 GANG  
 SWITCHED CONNECTION  
 UNIT WITH FRONT FLEX  
 OUTLET




**K46101GRY**   
**K46101WHI**   
**K46101CLR**   
 10A  
 1 GANG  
 SP TWO-WAY

**K46102GRY**   
**K46102WHI**   
**K46102CLR**   
 10A  
 2 GANG  
 SP TWO-WAY

**K46103GRY**   
**K46103WHI**   
**K46103CLR**   
 10A  
 3 GANG  
 SP TWO-WAY

**K46111GRY**   
**K46111WHI**   
**K46111CLR**   
 10A  
 1 GANG  
 SP PUSH SWITCH  
 'BELL'

**K46206GRY**   
**K46206WHI**   
**K46206CLR**   
 20A  
 1 GANG  
 SP ONE-WAY  
 WITH NEON

**K46202GRY**   
**K46202WHI**   
**K46202CLR**   
 20A  
 1 GANG  
 SP TWO-WAY

BS 1363-2  
 BS EN/IEC 60529

BS 1363-2  
 BS EN/IEC 60529

BS 1363-4  
 BS EN/IEC 60529

IEC 60669-1  
 BS EN/IEC 60529

IEC 60669-1  
 BS EN/IEC 60529

IEC 60669-1  
 BS EN/IEC 60529

All products conform to the relevant National Standards as well as the ingress protection standard for enclosures – BS EN/IEC 60529.

Operating Temperature: - 5° to +40°

Material: UV Stabilised Polycarbonate

Dimensions: 125 X 85 X 80mm

technical hotline +44 (0)1268 563720

ingress protected IP55 | wiring devices



## range introduction

MK Splashguard is an IP55 rated range of wiring devices designed for domestic outdoor applications and ideal for use with garden equipment. The range provides safe and reliable protection to power supplies in damp and dusty environments.

The range includes a single switched socket outlet, a switched connection unit, and a single 2-way switch for a complete yet affordable solution to the majority of domestic outdoor power requirements.

## features and benefits

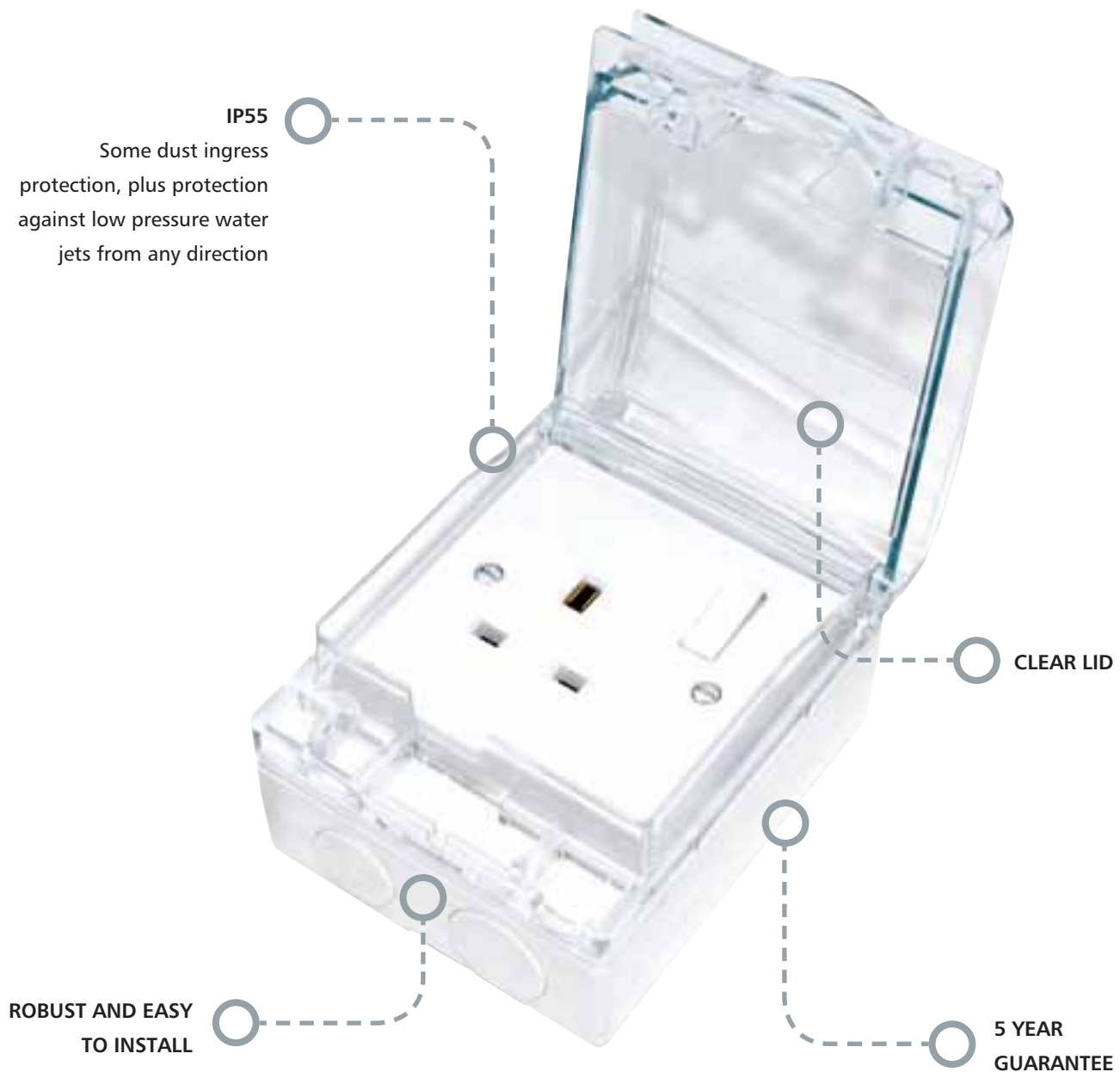
### IP55

MK Splashguard offers some dust ingress protection, plus protection against low pressure water jets from any direction.

### Clear Lid

MK Splashguard is available in white with a clear lid, allowing visible indications of power.

### 5 Year Guarantee





technical hotline +44 (0)1268 563720

ingress protected IP55 | wiring devices

## Switchsocket Outlets

13 AMP  
IP55



K36101CLR

### K36101CLR



13A SP  
1 GANG  
SWITCHED

## Connection Units

13 AMP  
IP55



K36103CLR

### K36103CLR



13A  
1 GANG  
SWITCHED CONNECTION  
UNIT WITH FRONT FLEX  
OUTLET

## Switches

10 AMP  
IP55



K36102CLR

### K36102CLR



10A  
1 GANG  
SP TWO-WAY

Tested and complies with IEC 60670 and BS EN 60529/IEC 60529.

Dimensions: 120 X 98 X 80mm



## range introduction

Commando Safetyswitches are manufactured from Polybutylene Terephthalate (PBT) for maximum impact resistance. The range offers a selection of IP54 and IP65 ratings to cover a variety of indoor and outdoor needs. The units are lockable for added safety and accept auxiliary contacts to increase further the range of applications.

A range of Triple Pole and Neutral switches are also available, manufactured from Polycarbonate (PC).

## features and benefits

### Impact resistant

PBT and PC enclosures provide remarkable impact resistance

### Water resistant

IP54, IP65 and IP66 ratings mean Commando Safetyswitch and Triple Pole and Neutral switches are suitable for outdoor and indoor use

### Added safety

Commando Safetyswitches have mechanically interlocked lids meaning the cover is impossible to remove when the switch is in the 'ON' position

technical hotline +44 (0)1268 563720

ingress protected | wiring devices

## Commando Safetyswitches

I.S.O. metric conduit entries for ease of installation.

Neutral and Earth terminals fitted as standard.

PBT enclosure offers remarkable impact resistance.

Choice of units splashproof to IP54 and IP65 for use indoors or outdoors.

Direct acting operating handle gives positive indication of the state of the contacts.

63A, 100A and 125A units have mechanically operated lids for additional safety in use. This means the cover is impossible to remove when the switch is in the 'ON' position.

Easy to use shackle allows up to six padlocks to be fitted.



## Switch Disconnectors

16 amp (lth)  
3 Pole  
IP65

25 amp (lth)  
3 Pole  
IP65



K6816



K6825



K6816YEL



K6825YEL

### K6816

#### K6816YEL

UTILISATION CATEGORY  
AC23A RATED OPERATIONAL:  
CURRENT (Ie) 10A  
VOLTAGE (Ue) 415V 50/60 Hz  
POWER 5.5 KW



### K6825

#### K6825YEL

UTILISATION CATEGORY  
AC23A RATED OPERATIONAL:  
CURRENT (Ie) 20A  
VOLTAGE (Ue) 415V 50/60 Hz  
POWER 11 KW



#### IP RATING

K6816: IP65  
K6816YEL: IP65

Supplied with blanking plugs and neutral terminals

TERMINAL CAPACITY:  
1.5 - 4mm<sup>2</sup>

CONDUIT ENTRY:  
4 x M20

**K6816**  
AUXILIARY CONTACTS:  
List No: 6818 and 6819

Will accept one auxiliary contact.

**K6816YEL**  
Auxiliary contact included.  
BS EN 60947-3:1999

#### IP RATING

K6825: IP65  
K6825YEL: IP65

Supplied with blanking plugs and neutral terminals

TERMINAL CAPACITY:  
1.5 - 4mm<sup>2</sup>

CONDUIT ENTRY:  
4 x M20

**K6825**  
AUXILIARY CONTACTS:  
List No: 6818 and 6819

Will accept one auxiliary contact.

**K6825YEL**  
Auxiliary contact included.  
BS EN 60947-3:1999

## Switch Disconnectors

25 amp (lth)  
6 Pole  
IP65



K6725



K6725YEL

40 amp (lth)  
3 Pole  
IP65



K6840



K6840YEL

63 amp (lth)  
3 Pole  
IP54 and IP65



6863



6863YEL

63 amp (lth)  
6 Pole  
IP54



6763

80 amp (lth)  
3 Pole and 6 Pole  
IP54



6800



6700

**K6725**  
**K6725YEL**  
UTILISATION CATEGORY  
AC23A RATED OPERATIONAL:  
CURRENT (Ie) 20A  
VOLTAGE (Ue) 415V 50/60 Hz  
POWER 11 kW

5  
5

**K6840**  
**K6840YEL**  
UTILISATION CATEGORY  
AC23A RATED OPERATIONAL:  
CURRENT (Ie) 25A  
VOLTAGE (Ue) 415V 50/60 Hz  
POWER 15 kW

1  
1

**6863**  
**6863YEL**  
UTILISATION CATEGORY  
AC23A RATED OPERATIONAL:  
CURRENT (Ie) 45A  
VOLTAGE (Ue) 415V 50/60 Hz  
POWER 22 kW

1  
1

**6763**  
UTILISATION CATEGORY  
AC23A RATED OPERATIONAL:  
CURRENT (Ie) 45A  
VOLTAGE (Ue) 415V 50/60 Hz  
POWER 22 kW

1

**6800**  
3 POLE  
UTILISATION CATEGORY  
AC23A RATED OPERATIONAL:  
CURRENT (Ie) 75A  
VOLTAGE (Ue) 415V 50/60 Hz  
POWER 37 kW

1

**6700**  
6 POLE  
UTILISATION CATEGORY  
AC23A RATED OPERATIONAL:  
CURRENT (Ie) 75A  
VOLTAGE (Ue) 415V 50/60 Hz  
POWER 37 kW

1

IP RATING  
K6725: IP65  
K6725YEL: IP65

Supplied with blanking plugs and  
neutral terminals

TERMINAL CAPACITY:  
1.5 – 4mm<sup>2</sup>

CONDUIT ENTRY:  
4 x M20  
2 x 18mm knockouts

**K6725**  
AUXILIARY CONTACTS:  
List No: 6818 and 6819

Will accept one  
auxiliary contact.

**K6725YEL**  
Auxiliary contact included.  
BS EN 60947-3:1999

IP RATING  
K6840: IP65  
K6840YEL: IP65

Supplied with blanking plugs and  
neutral terminals

TERMINAL CAPACITY:  
1.5 – 10mm<sup>2</sup>

CONDUIT ENTRY:  
4 x M25

**K6840**  
AUXILIARY CONTACTS:  
List No: 6818 and 6819

Will accept one auxiliary contact.

**K6840YEL**  
Auxiliary contact included.  
BS EN 60947-3:1999

IP RATING  
6863: IP54  
6863YEL: IP65

Supplied with blanking plugs and  
neutral terminals

TERMINAL CAPACITY:  
1.5 – 16mm<sup>2</sup>

CONDUIT ENTRY:  
4 x M32  
2 x M16

**6863**  
AUXILIARY CONTACTS:  
List No: 6813 or 6814

**6863YEL**  
Auxiliary contact included.  
BS EN 60947-3:1999

Supplied with neutral terminals

TERMINAL CAPACITY:  
1.5 – 16mm<sup>2</sup>

CONDUIT ENTRY:  
4 x 40.5mm diameter knockouts  
and 2 x 16.5mm diameter  
knockouts.

AUXILIARY CONTACTS:  
List No: 6813 or 6814

BS EN 60947-3:1999

Supplied with neutral terminals

TERMINAL CAPACITY:  
1.5 – 35mm<sup>2</sup>

CONDUIT ENTRY:  
6800: 4 x M32  
2 x M16

6700: 4 x 40.5mm diameter  
knockouts and 2 x 16.5mm  
diameter knockouts.

AUXILIARY CONTACTS:  
List No: 6813 or 6814

BS EN 60947-3:1999

technical hotline +44 (0)1268 563720

ingress protected | wiring devices

## Triple Pole And Neutral Switches

## Auxiliary Contacts

## Accessories

125 amp (lth)  
3 Pole  
IP54

4 Pole  
IP66

2 Pole  
IP66



6812



M4413



M4417



M4414



M4418



6813



6814



6817



6818



6819



9933



6810



M25M20



M32M25

**6812**  
UTILISATION CATEGORY  
AC23A RATED OPERATIONAL:  
CURRENT (Ie) 90A  
VOLTAGE (Ue) 415V 50/60 Hz  
POWER 45 kW

**1** **M4413**  
4 POLE  
UTILISATION CATEGORY  
AC23A RATED OPERATIONAL:  
CURRENT (Ie) 32A  
VOLTAGE (Ue) 240/415V 50/60 Hz  
POWER 11 kW

**1** **M4417**  
2 POLE  
UTILISATION CATEGORY  
AC23A RATED OPERATIONAL:  
CURRENT (Ie) 32A  
VOLTAGE (Ue) 240V 50/60 Hz  
POWER 5.5 kW

**1** **M4414**  
4 POLE  
UTILISATION CATEGORY  
AC23A RATED OPERATIONAL:  
CURRENT (Ie) 20A  
VOLTAGE (Ue) 240/415V 50/60 Hz  
POWER 7.5 kW

**1** **M4418**  
2 POLE  
UTILISATION CATEGORY  
AC23A RATED OPERATIONAL:  
CURRENT (Ie) 20A  
VOLTAGE (Ue) 240V 50/60 Hz  
POWER 3.75 kW

**1** **6813**  
16A (I<sup>b</sup>) SINGLE POLE NORMALLY OPEN  
4A OPERATIONAL CURRENT (Ie)

**10** **9933**  
EARTH LEAD ADAPTOR  
M20 X 1.5/ M20 X 1.5 THREAD SIZE  
FOR 16A & 25A SAFETYSWITCHES.

**10** **6814**  
16A (I<sup>b</sup>) SINGLE POLE NORMALLY  
CLOSED  
4A OPERATIONAL CURRENT (Ie)

**10** **6810**  
SHACKLE FOR UP TO 6 PADLOCKS

**1** **6817**  
10A (I<sup>b</sup>) SINGLE POLE NORMALLY OPEN  
1.5A OPERATIONAL CURRENT (Ie)

**2** **M25M20**  
20 & 25mm ADAPTOR

**10** **6818**  
10A (I<sup>b</sup>) SINGLE POLE NORMALLY OPEN,  
6A OPERATIONAL CURRENT (IE)  
AC15 @ 230V

**2** **M32M25**  
25 & 32mm ADAPTOR

**10** **6819**  
10A (I<sup>b</sup>) SINGLE POLE NORMALLY  
CLOSED, 6A OPERATIONAL CURRENT (IE)  
AC15 @ 230V

Supplied with neutral terminal  
TERMINAL CAPACITY:  
10 – 70mm<sup>2</sup>  
CONDUIT ENTRY:  
4 x 40.5mm diameter knockouts  
and 2 x 16.5mm diameter  
knockouts.

TERMINAL CAPACITY:  
16mm<sup>2</sup> (Rigid stranded cable)  
CONDUIT ENTRY:  
2 x 25mm cable entry  
top and bottom. Supplied with  
2 x 25mm conduit adaptors.  
4 x 20mm, 2 x 25mm knockouts  
for rear cable entry.

AUXILIARY CONTACTS:  
List No: 6813 or 6814

IEC 60947-3: 1999

BS EN 60947-3: 1999

BS EN 60947-3: 1999

M4413, M4414, M4417, M4418 ENCLOSURES ARE POLYCARBONATE

Polycarbonate enclosures provide extremely high levels of impact resistance. Some chemicals and synthetic oils can harm polycarbonate. Call technical hotline for further information.



## range introduction

Commando offers a comprehensive range of industrial plugs, connectors, socket outlets, appliance inlets, Combi and Modular-Combi units.

The Commando range is designed to meet all relevant European and British Standards, whilst offering an excellent choice of ingress protected ratings. The Commando range offers remarkable impact strength by way of its PBT (Polybutylene Terephthalate) or Nylon (Polyamide PA) insulated or aluminium housing\*. Outstanding temperature performance and good resistance to most chemicals make it ideal for the most arduous applications. Contact pins and sleeves are of solid brass with stainless steel springs to keep contacts free of dirt and to ensure constant contact pressure.

## features and benefits

**Reliability**

Features like the calibrated contact sleeves with stainless steel springs, brass screws in brass contacts, and the double earthing screws – all mean that this plug or socket will perform better and longer in difficult conditions

**Ergonomic design**

All edges and corners are rounded to remove sharp edges. Cable protection is improved. New design offers a better and more comfortable grip for connection / disconnection

**Cable protection**

The unified seal and cable protector forms a convex dome that prevents the plug from fastening on objects or collecting debris when dragged

**Easy wiring**

All screws are backed out and retained. Contact carrier marked front and back for easy and correct wiring. Hinged cable clamp and twin contact earth screws

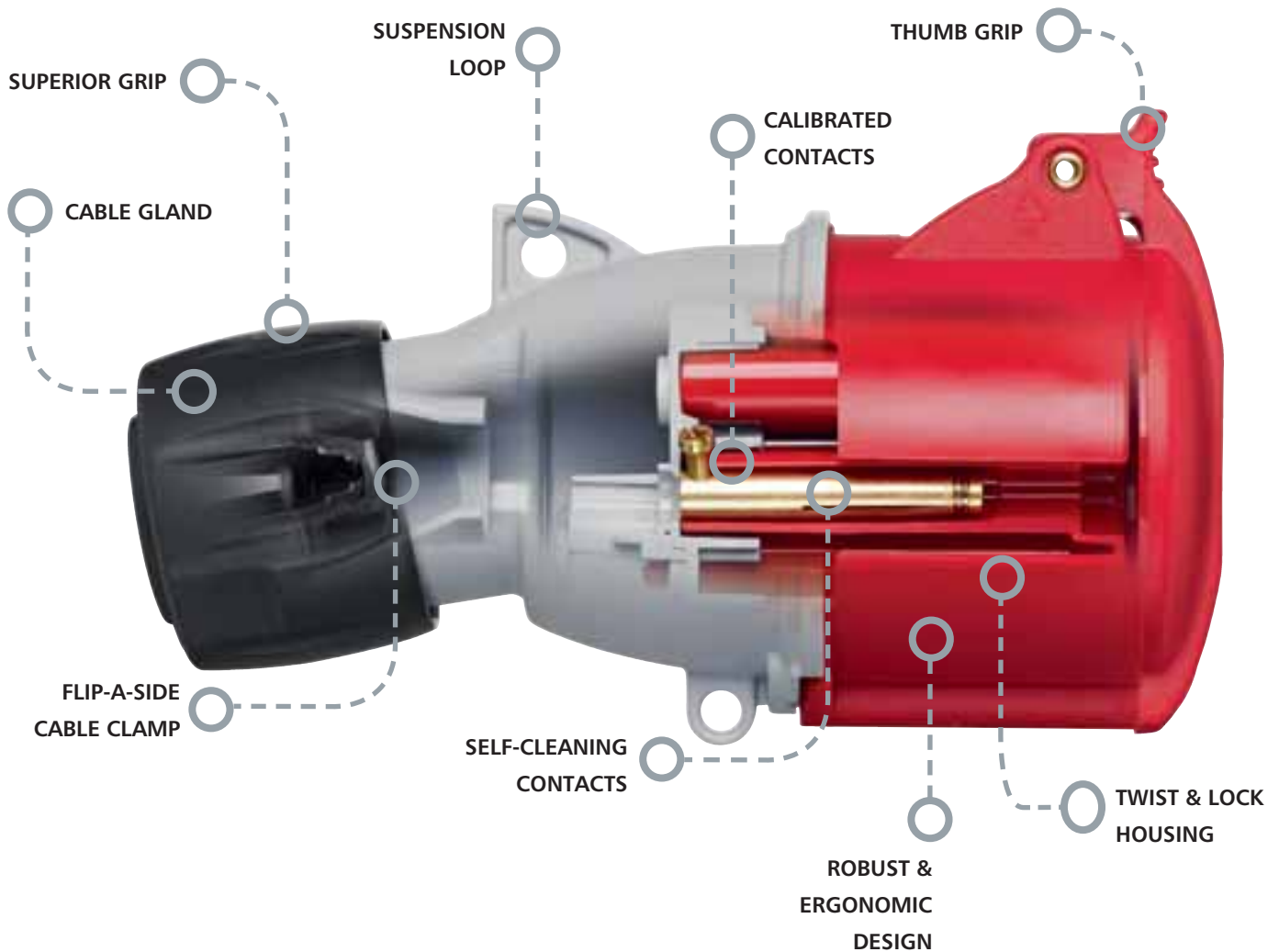
**Outstanding Temperature Performance**

Successful operation guaranteed between -25°C and 55°C

\* 16A and 32A IP44 plug, connector and socket outlet products have housings manufactured from PA

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- **High Quality Materials**

The Commando range offers remarkable impact strength

Outstanding temperature performance and good resistance to chemicals make it ideal for the arduous applications

- **Connection Seal**

Prevent accidental disconnection or theft of equipment

- **Tight and Secure**

The cable gland has an improved locking mechanism that will apply pressure to the cable for the lifetime of the product.

- **Prolonged Earth Connection**

The earth connection is specifically designed, so that in the unlikely event of failure of the cable gland and the wires detach from the terminals the earth terminal will be the last to disconnect.

For extra protection the earth terminal is provided with 2 connection screws

- **Suspension Loop**

Products can be suspended above the floor, helping to keep the workspace in order.

- **Quick and Easy to use**

- **Clear markings and terminal identification**

- **Clear instructions for cable strip length, tightening torque and opening of the product.**

**IP44  
SPLASHPROOF  
100 - 130V  
50 - 60 Hz**

### Plugs



### Connectors



### Socket Outlets

ANGLED

SURFACE



SURFACE – LOOP IN



STRAIGHT

PANEL MOUNTING



Amps Pin. Earth Hour Pos

Amps	Pin. Config-uration	Earth Hour Pos	Plugs	Connectors	Socket Outlets (ANGLED SURFACE)	Socket Outlets (SURFACE – LOOP IN)	Socket Outlets (STRAIGHT PANEL MOUNTING)
16	2P+E	4	<b>K9000YEL</b>	<b>K9100YEL</b>	<b>K9200YEL</b>	<b>K13200YEL</b>	<b>K9400YEL</b>
16	3P+E	4	<b>K9005YEL</b>	<b>K9105YEL</b>	<b>K9205YEL</b>		<b>K9405YEL</b>
16	3P+N+E	4	<b>K9013YEL</b>	<b>K9113YEL</b>	<b>K9213YEL</b>		<b>K9413YEL</b>
32	2P+E	4	<b>K9032YEL</b>	<b>K9132YEL</b>	<b>K9232YEL</b>	<b>K13232YEL</b>	<b>K9432YEL</b>
32	3P+E	4		<b>K9135YEL</b>	<b>K9235YEL</b>		
32	3P+N+E	4	<b>K9043YEL</b>	<b>K9142YEL</b>	<b>K9239YEL</b>		

Fitted with cable entry gland.  
BS EN 60309

Fitted with cable entry gland.  
BS EN 60309

**16A** Top conduit (M20) or rear cable entry, complete with blanking plug.  
**32A** Top conduit (M25) or rear cable entry, complete with blanking plug.  
BS EN 60309

Suitable for top entry 2 x Ø25.  
Fitted with terminals for Loop In 2 x 10mm².  
BS EN 60309

All flanges have the same fixing centres and outside dimensions to assist panel builders.  
Minimised flange option available (see page 258).  
BS EN 60309

**IP67  
WATERTIGHT  
100 - 130V  
50 - 60 Hz**

### Plugs



### Connectors



### Socket Outlets

ANGLED

SURFACE



SURFACE – LOOP IN



PANEL MOUNTING



Amps Pin. Earth Hour Pos

Amps	Pin. Config-uration	Earth Hour Pos	Plugs	Connectors	Socket Outlets (ANGLED SURFACE)	Socket Outlets (SURFACE – LOOP IN)	Socket Outlets (PANEL MOUNTING)
16	2P+E	4	<b>K9023YEL</b>	<b>K9123YEL</b>	<b>K9193YEL</b>	<b>K13023YEL</b>	<b>K9802YEL</b>
32	2P+E	4	<b>K9053YEL</b>	<b>K9155YEL</b>	<b>K9761YEL</b>	<b>K13053YEL</b>	<b>K9865YEL</b>
63	2P+E	4	<b>K9294YEL</b>	<b>K9855YEL</b>			

Suitable for flexible cable only.  
63A:with external clamp.  
BS EN 60309

Suitable for flexible cable only.  
63A:with external clamp.  
BS EN 60309

Suitable for top entry 2 x Ø25 or bottom entry 2 x Ø20.  
Will accept FL13 flange at top.  
BS EN 60309

Suitable for top entry 2 x Ø25  
BS EN 60309

All flanges have the same fixing centres and outside dimensions to assist panel builders.  
BS EN 60309

**IP44  
SPLASHPROOF  
100 - 130V  
50 - 60 Hz  
16 Amps  
2P+E**

### Socket Outlets

TWIN

SURFACE

Prewired

Unwired

**K13143YEL**

**K13043YEL**



Suitable for top entry 2 x Ø25 2 x Ø38  
Bottom entry 3 x 47.5mm  
BS EN 60309

63A plugs and inlets include pilot pins.

63A connectors and sockets with pilot sleeves are available to special order.

All products are available in minimum order quantity of one except K9000 and K9100 (which have a minimum order quantity of 10).

Photographs feature the most representative products.  
Design changes may occur (over different current ratings) from one product to another.



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**Socket Outlets**  
ANGLED

PANEL MOUNTING



**K9767YEL**

**K9769YEL**

16/32A new range has different fixing centres to old range.  
Old range is available for limited period. See technical section for details.  
BS EN 60309

**Switchsocket Outlets**

ANGLED  
INTERLOCKED  
SURFACE



**K9600YEL**  
**K9606YEL**

**K9632YEL**  
**K9638YEL**

Switch can be locked in open or closed position.  
BS EN 60309  
Aluminium Enclosure

SURFACE



**K13600YEL**

**K13632YEL**

Suitable for top entry 2 x Ø25.  
Switch can be locked in open position. Or closed position by removing the tab.  
BS EN 60309

SURFACE



**K9609YEL**

**K9642YEL**

With 25mm knockout at top.  
Will also accept FL13 flange (top).  
Bottom entry M25.  
BS EN 60309

**Appliance Inlets**

ANGLED  
SURFACE



**K9700YEL**

**K9732YEL**

16A Top conduit (M20) or rear cable entry, complete with blanking plug.  
32A Top conduit (M25) or rear cable entry, complete with blanking plug.  
BS EN 60309

**Switchsocket Outlets**

ANGLED  
INTERLOCKED  
SURFACE



**K9356YEL**

With 32mm knockouts top and bottom.  
Will also accept FL13 flange (top).  
Switch can be locked in open position. In closed position by removing the tab.  
BS EN 60309

**Switchsocket Outlets**

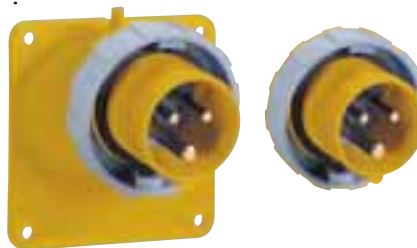
SURFACE



**K13623YEL**  
**K13653YEL**

Suitable for top entry 2 x Ø25.  
Switch can be locked in open position. In closed position by removing the tab.  
BS EN 60309

**Appliance Inlet Panels**



**K9780YEL**  
**K9784YEL**

BS EN 60309

**K9788YEL**

BS EN 60309

See page 258 for details of spare or alternative FL type flanges.

**IP44  
SPLASHPROOF  
200 - 250V  
50 - 60 Hz**

### Plugs



### Connectors



### Socket Outlets ANGLED

**SURFACE**



**SURFACE-LOOP IN**



**STRAIGHT  
PANEL  
MOUNTING**



Amps Pin. Earth Hour Pos  
Config-uration

Amps	Pin. Config-uration	Earth Hour Pos	Plugs	Connectors	Socket Outlets ANGLED SURFACE	Socket Outlets ANGLED SURFACE-LOOP IN	Socket Outlets STRAIGHT PANEL MOUNTING
16	2P+E	6	<b>K9001BLU</b>	<b>K9101BLU</b>	<b>K9201BLU</b>	<b>K13201BLU</b>	<b>K9401BLU</b>
16	3P+E	9	<b>K9006BLU</b>	<b>K9106BLU</b>	<b>K9206BLU</b>		<b>K9406BLU</b>
16	3P+N+E	9	<b>K9014BLU</b>	<b>K9114BLU</b>	<b>K9214BLU</b>		<b>K9414BLU</b>
32	2P+E	6	<b>K9033BLU</b>	<b>K9133BLU</b>	<b>K9233BLU</b>	<b>K13233BLU</b>	<b>K9433BLU</b>
32	3P+E	9	<b>K9036BLU</b>	<b>K9136BLU</b>	<b>K9236BLU</b>		
32	3P+N+E	9	<b>K9044BLU</b>	<b>K9143BLU</b>	<b>K9240BLU</b>		<b>K9444BLU</b>
63	2P+E	6	<b>K9063BLU</b>	<b>K9172BLU</b>	<b>K9274BLU</b>		<b>K9472BLU</b>
63	3P+E	9	<b>K9065BLU</b>	<b>K9164BLU</b>	<b>K9264BLU</b>		

**16A/32A** Fitted with cable entry gland.

**63A** Fitted with cable entry gland.

Thread size M48.

BS EN 60309

**16A/32A** Fitted with cable entry gland.

**63A** Fitted with cable entry gland.

Thread size M48.

BS EN 60309

**16A** Top conduit (M20) or rear cable entry, complete with blanking plug.

**32A** Top conduit (M25) or rear cable entry, complete with blanking plug.

**63A** Top conduit (M32) or rear cable entry, complete with blanking plug.

BS EN 60309

Suitable for top entry 2 x Ø25.

Fitted with terminals for Loop In 2 x 10mm<sup>2</sup>.

BS EN 60309

**16/32A** All flanges have the same fixing centres and outside dimensions to assist panel builders.

Minimised flange option available (see page 258).

BS EN 60309

**IP67  
WATERTIGHT  
200 - 250V  
50 - 60 Hz**

### Plugs



### Connectors



### Socket Outlets ANGLED

**SURFACE**



**SURFACE - LOOP IN**



**STRAIGHT**

**PANEL MOUNTING**



Amps Pin. Earth Hour Pos  
Config-uration

Amps	Pin. Config-uration	Earth Hour Pos	Plugs	Connectors	Socket Outlets ANGLED SURFACE	Socket Outlets ANGLED SURFACE - LOOP IN	Socket Outlets STRAIGHT PANEL MOUNTING
16	2P+E	6	<b>K9024BLU</b>	<b>K9124BLU</b>	<b>K9194BLU</b>	<b>K13024BLU</b>	
32	2P+E	6	<b>K9054BLU</b>	<b>K9156BLU</b>	<b>K9762BLU</b>	<b>K13054BLU</b>	
63	2P+E	6	<b>K9298BLU</b>	<b>K9856BLU</b>	<b>K9857BLU</b>		<b>K9828BLU</b>
63	3P+E	9					
125	2P+E	6	<b>K9099BLU</b>	<b>K9189BLU</b>		<b>K9190BLU</b>	<b>K9483BLU</b>

Suitable for flexible cable only 63A and 125A. With external clamp.

BS EN 60309

Suitable for flexible cable only 63A and 125A. With external clamp.

BS EN 60309

Suitable for top entry 2 x Ø25 or bottom entry 2 x Ø20.

Will accept FL13 flange at top.

BS EN 60309

**16/32A** Suitable for top entry 2 x Ø25

**125A** 2 x 23/47mm knockouts top and bottom.

BS EN 60309

**IP44  
SPLASHPROOF  
200 - 250V  
50 - 60 Hz  
16 Amps  
2P + E**

### Socket Outlets ANGLED TWIN

**SURFACE**

Prewired Unwired

**K13144BLU K13044BLU**



Suitable for top entry 2 x Ø25 / 2 x Ø38

Bottom entry 3 x 47.5mm

BS EN 60309

63/125A plugs and inlets include pilot pins.

63A connectors and sockets with pilot sleeves are available to special order.

125A Switchsocket interlocked outlets with pilot sleeves are available to special order.

All products are available in minimum order quantity of one except K9001 and K9101 which have minimum order quantities of 10.

Photographs feature the most representative products.

Design changes may occur (over different current ratings) from one product to another.

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## Socket Outlets

ANGLED  
PANEL  
MOUNTING



## Switchsocket Outlets

ANGLED  
INTERLOCKED  
SURFACE



SURFACE



SURFACE



## Appliance Inlets

ANGLED  
SURFACE



K9771BLU  
K9772BLU  
K9773BLU  
K9774BLU

K9601BLU  
K9607BLU  
K9633BLU  
K9639BLU

K13601BLU  
K13633BLU

K9610BLU  
K9643BLU  
K9306BLU  
K9311BLU

K9701BLU  
K9710BLU  
K9733BLU  
K9740BLU  
K9775BLU

16/32A new range has different fixing centres to old range.  
Old range is available for limited period. See technical section for details.  
BS EN 60309

Switch can be locked in open or closed position  
BS EN 60309  
Aluminium Enclosure

Suitable for top entry 2 x Ø25.  
Switch can be locked in open position. Or closed position by removing the tab.  
BS EN 60309

16/32A With 25mm knockout at top.  
Will also accept FL13 flange (top).  
Bottom entry M25.  
BS EN 60309

16A Top conduit (M20) or rear cable entry, complete with blanking plug.  
32A Top conduit (M25) or rear cable entry, complete with blanking plug.  
63A Top conduit (M32) or rear cable entry, complete with blanking plug.  
BS EN 60309

## Socket Outlets

ANGLED  
PANEL MOUNTING



## Switchsocket Outlets

ANGLED  
INTERLOCKED  
SURFACE



SURFACE



## Appliance Inlets

ANGLED  
SURFACE



SURFACE



## Appliance Inlet Panels



K9803BLU  
K9866BLU  
K9825BLU

K13624BLU  
K13654BLU  
K9688BLU

K9324BLU  
K9369BLU  
K9355BLU

K9883BLU

K9826BLU

K9781BLU  
K9785BLU  
K9789BLU\*  
K9792BLU\*

16/32A All flanges have the same fixing centres and outside dimensions to assist panel builders.  
BS EN 60309

16/32A Suitable for top entry 2 x Ø25.  
125A 2 x 23/47mm knockouts top and bottom.  
Switch can be locked in open position. In closed position by removing the tab.  
BS EN 60309

16/32A With 29mm knockout at top Will also accept FL13 flange (top).  
Bottom entry M25.  
63A With 32mm knockouts top and bottom. Will accept FL13 flange top and bottom.  
BS EN 60309

2 x 23/47mm knockouts top and bottom.  
BS EN 60309

Will accept FL13 flanges top and bottom.  
BS EN 60309

\*Note: 63 and 125A versions do not include a flange (See page 247 for photograph).  
BS EN 60309

**IP44  
SPLASHPROOF  
380 - 415V  
50 - 60 Hz**

## Plugs



## Connectors



## Socket Outlets

ANGLED

SURFACE



SURFACE – LOOP IN



STRAIGHT

PANEL MOUNTING



Amps Pin.  
Config-  
uration Earth  
Hour  
Pos

16	2P+E	9	<b>K9002RED</b>	<b>K9102RED</b>	<b>K9202RED</b>		
16	3P+E	6	<b>K9007RED</b>	<b>K9107RED</b>	<b>K9207RED</b>	<b>K13207RED</b>	<b>K9407RED</b>
16	3P+N+E	6	<b>K9015RED</b>	<b>K9115RED</b>	<b>K9215RED</b>	<b>K13215RED</b>	<b>K9415RED</b>
32	3P+E	6	<b>K9037RED</b>	<b>K9137RED</b>	<b>K9237RED</b>	<b>K13237RED</b>	<b>K9437RED</b>
32	3P+N+E	6	<b>K9045RED</b>	<b>K9144RED</b>	<b>K9241RED</b>	<b>K13241RED</b>	<b>K9445RED</b>
63	3P+E	6	<b>K9066RED</b>	<b>K9165RED</b>	<b>K9265RED</b>		<b>K9465RED</b>
63	3P+N+E	6	<b>K9071RED</b>	<b>K9170RED</b>	<b>K9269RED</b>		<b>K9470RED</b>

**16A/32A** Fitted with cable entry gland.

**63A** Fitted with cable entry gland.

Thread size M48.

**16A/32A** Fitted with cable entry gland.

**63A** Fitted with cable entry gland.

Thread size M48.

**16A** Top conduit (M20) or rear cable entry, complete with blanking plug.

**32A** Top conduit (M25) or rear cable entry, complete with blanking plug.

**63A** Top conduit (M32) or rear cable entry, complete with blanking plug.

Suitable for top entry 2 x Ø25.

Fitted with terminals for Loop In 2 x 10mm<sup>2</sup>.

**16/32A** All flanges have the same fixing centres and outside dimensions to assist panel builders.

Minimised flange option available (see page 258).

**IP67  
WATERTIGHT  
380 - 415V  
50 - 60 Hz**

## Plugs



## Connectors



## Socket Outlets

ANGLED

SURFACE



SURFACE – LOOP IN



STRAIGHT

PANEL MOUNTING



Amps Pin.  
Config-  
uration Earth  
Hour  
Pos

16	3P+E	6	<b>K9025RED</b>	<b>K9125RED</b>	<b>K9763RED</b>	<b>K13025RED</b>	
16	3P+N+E	6	<b>K9026RED</b>	<b>K9126RED</b>	<b>K9764RED</b>	<b>K13026RED</b>	
32	3P+E	6	<b>K9055RED</b>	<b>K9157RED</b>	<b>K9765RED</b>	<b>K13055RED</b>	
32	3P+N+E	6	<b>K9056RED</b>	<b>K9158RED</b>	<b>K9766RED</b>	<b>K13056RED</b>	
63	3P+E	6	<b>K9282RED</b>	<b>K9842RED</b>	<b>K9858RED</b>		<b>K9812RED</b>
63	3P+N+E	6	<b>K9292RED</b>	<b>K9852RED</b>	<b>K9859RED</b>		<b>K9822RED</b>
125	3P+E	6	<b>K9092RED</b>	<b>K9182RED</b>		<b>K9191RED</b>	<b>K9481RED</b>
125	3P+N+E	6	<b>K9097RED</b>	<b>K9187RED</b>		<b>K9192RED</b>	<b>K9482RED</b>

Suitable for flexible cable only. 63A and 125A have external clamp.

Suitable for flexible cable only. 63A and 125A have external clamp.

2 x 29/37mm knockouts (top), 1 x Ø29 and 1 x Ø23 knockout (bottom).

Will accept FL13 flanges top and bottom.

**16/32A** Fitted with terminals for Loop In. Suitable for top entry 2 x Ø25.

**125A** Fitted with terminals for Loop In. 2 x 23/47mm knockouts top and bottom for looping 2 x 10mm<sup>2</sup>.

63/125A plugs and inlets include pilot pins.

63A connectors and sockets with pilot sleeves are available to special order.

125A Switchsocket interlocked outlets include pilot sleeves are available to special order.

All products are available in minimum order quantity of one.

Photographs feature the most representative products.

Design changes may occur (over different current ratings) from one product to another.

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## Socket Outlets

ANGLED

PANEL MOUNTING



## Switchsocket Outlets

ANGLED  
INTERLOCKED  
SURFACE



SURFACE



SURFACE



## Appliance Inlets

ANGLED  
SURFACE



**K9777RED**

**K9778RED**

**K9779RED**

**K9751RED**

**K9752RED**

**K9565RED**

**K9570RED**

**K9602RED**

**K9608RED**

**K9634RED**

**K9640RED**

**K9665RED**

**K9670RED**

**K13607RED**

**K13615RED**

**K13637RED**

**K13641RED**

**K9611RED**

**K9612RED**

**K9644RED**

**K9645RED**

**K9312RED**

**K9322RED**

**K9706RED**

**K9711RED**

**K9736RED**

**K9741RED**

**K9768RED**

**16/32A** new range has different fixing centres to old range.  
Old range is available for limited period. See technical section for details.

Switch can be locked in open or closed position.  
Aluminium Enclosure

Suitable for top entry 2 x Ø25.  
Switch can be locked in open position. In closed position by removing the tab.

**16/32A**  
With 25mm knockout at top. Will also accept FL13 flange top.  
Bottom entry M25.

**16A** Top conduit (M20) or rear cable entry, complete with blanking plug.  
**32A** Top conduit (M25) or rear cable entry, complete with blanking plug.  
**63A** Top conduit (M32) or rear cable entry, complete with blanking plug.

## Socket Outlets

ANGLED

PANEL MOUNTING



## Switchsocket Outlets

ANGLED INTERLOCKED

SURFACE



SURFACE



## Appliance Inlets

ANGLED

SURFACE



SURFACE



## Appliance Inlet Panels



**K9807RED**

**K9815RED**

**K9870RED**

**K9873RED**

**K9582RED**

**K9592RED**

**K9691RED**

**K13625RED**

**K13626RED**

**K13655RED**

**K13656RED**

**K9694RED**

**K9327RED**

**K9330RED**

**K9359RED**

**K9362RED**

**K9342RED**

**K9352RED**

**K9884RED**

**K9829RED**

**K9827RED**

**K9829RED**

**K9827RED**

**K9793RED\***

**K9782RED**

**K9783RED**

**K9786RED**

**K9787RED**

**K9790RED\***

**K9791RED\***

**16/32A** All flanges have the same fixing centres and outside dimensions to assist panel builders.

**16/32A** Suitable for top entry 2 x Ø25.  
**125A** 2 x 23/47mm knockouts top and bottom.  
Switch can be locked in open position. In closed position by removing the tab.

**16/32A** With 29mm knockout at top will also accept FL13 flange at top. Bottom. Conduit entry M25.  
**63A** With 32mm knockouts top and bottom. Will accept FL13 flange top and bottom.

2 x 23/47mm knockouts top and bottom.

1 x M40/M32  
2 x M20 top  
2 x M40/M32  
1 x M20 bottom

Will accept FL13 flanges top and bottom.

\*Note: 63 and 125A versions do not include a flange (See page 247 for photograph).

See page 258 for details of spare or alternative FL type flanges.

**IP44  
SPLASHPROOF  
440 - 460V  
60 Hz**

**SUITABLE FOR  
MARINE  
INSTALLATIONS**

Amps	Pin. Config- uration	Earth Hour Pos
------	----------------------------	----------------------

16	3P+E	11
16	3P+N+E	11
32	3P+E	11
32	3P+N+E	11

### Plugs



### Connectors



### Socket Outlet

ANGLED  
SURFACE



STRAIGHT  
PANEL MOUNTING



ANGLED  
PANEL MOUNTING



Fitted with cable entry gland.

Fitted with cable entry gland.

**16A** Top conduit (M20) or rear cable entry, complete with blanking plug.  
**32A** Top conduit (M25) or rear cable entry, complete with blanking plug.

All flanges have the same fixing centres and outside dimensions to assist panel builders.  
Minimised flange option available (see page 258).

**16/32A** new range has different fixing centres to old range.

Old range is available for limited period. See technical section for details.

**IP44  
SPLASHPROOF  
440 - 460V  
60 Hz**

**SUITABLE FOR  
MARINE  
INSTALLATIONS**

Amps	Pin. Config- uration	Earth Hour Pos
------	----------------------------	----------------------

16	3P+E	11
16	3P+N+E	11
32	3P+E	11
32	3P+N+E	11

### Switchsocket Outlets

Interlocked  
SURFACE



Switch can be locked in open or closed position. Aluminium Enclosure.

**IP67  
WATERTIGHT  
440 - 460V  
60 Hz**

**SUITABLE FOR  
MARINE  
INSTALLATIONS**

Amps	Pin. Config- uration	Earth Hour Pos
------	----------------------------	----------------------

63	3P+E	11
63	3P+N+E	11
125	3P+E	11

### Plugs



### Connectors



### Socket Outlets

ANGLED  
SURFACE



### Switchsocket Outlets

ANGLED INTERLOCKED

SURFACE



SURFACE



Suitable for flexible cable only. With external clamp.

Suitable for flexible cable only. With external clamp.

2 x 23/47mm knockouts top and bottom.

2 x 23/47mm knockouts top and bottom.

With 32mm knockouts top and bottom.

63/125A plugs and inlets include pilot pins.  
63A connectors and sockets with pilot sleeves are available to special order.  
125A Switchsocket interlocked outlets with pilot sleeves are available to special order.

All products are available in minimum order quantity of one. Photographs feature the most representative products. Small design changes may occur (over different current ratings) from one product to another.

Switch can be locked in open position. In closed position by removing the tab.

Will accept FL13 flange top and bottom.

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**IP44  
SPLASHPROOF  
480 - 500V  
50 - 60 Hz**

### Plugs

### Connectors

### Socket Outlets

ANGLED  
SURFACE



Amps	Pin. Configuration	Earth Hour Pos
16	3P+E	7
32	3P+E	7

16	3P+E	7	<b>K9009BLK</b>	<b>K9109BLK</b>	<b>K9209BLK</b>
32	3P+E	7	<b>K9039BLK</b>	<b>K9139BLK</b>	<b>K9238BLK</b>

Fitted with cable entry gland.

Fitted with cable entry gland.

**16A** Top conduit (M20) or rear cable entry, complete with blanking plug.

**32A** Top conduit (M25) or rear cable entry, complete with blanking plug.

**IP44  
SPLASHPROOF  
480 - 500V  
50 - 60 Hz**

### Switch Socket Outlets

ANGLED  
INTERLOCKED  
SURFACE

### Appliance Inlets

ANGLED  
SURFACE



Amps	Pin. Configuration	Earth Hour Pos
16	3P+E	7
32	3P+E	7

16	3P+E	7			
32	3P+E	7	<b>K9636BLK</b>	<b>K9737BLK</b>	

Switch can be locked in open or closed position.

Aluminium Enclosure

**16A** Top conduit (M20) or rear cable entry, complete with blanking plug.

**32A** Top conduit (M25) or rear cable entry, complete with blanking plug.

**IP67  
WATERTIGHT  
480 - 500V  
50 - 60 Hz**

### Plugs

### Connectors

### Switchsocket Outlets

ANGLED  
INTERLOCKED  
SURFACE



Amps	Pin. Configuration	Earth Hour Pos
63	3P+E	7

63	3P+E	7	<b>K9284BLK</b>	<b>K9844BLK</b>	<b>K9344BLK</b>
----	------	---	-----------------	-----------------	-----------------

Suitable for flexible cable only. With external clamp

Suitable for flexible cable only. With external clamp

63A With 32mm knockouts top and bottom. Will accept FL13 flange top and bottom.

63/125A plugs and inlets include pilot pins. 63A connectors and sockets with pilot sleeves are available to special order. All products are available in a minimum order quantity of one. Design changes may occur (over different current ratings) from one product to another.

**IP44  
SPLASHPROOF  
>50V  
100 - 300 Hz**

### Plugs



### Connectors



### Socket Outlets ANGLED SURFACE



### STRAIGHT PANEL MOUNTING



Amps Pin. Config-uration Earth Hour Pos

16	3P+E	10
----	------	----

**K9010GRN**

**K9110GRN**

**K9210GRN**

**K9410GRN**

Fitted with cable entry gland.

Fitted with cable entry gland.

Top conduit (M20) or rear cable entry, complete with blanking plug.

All flanges have the same fixing centres and outside dimensions to assist panel builders.  
Minimised flange option available (see page 258).

**IP44  
SPLASHPROOF  
>50V  
300 - 500 Hz**

### Plugs



### Connectors



### Socket Outlets ANGLED SURFACE



### STRAIGHT PANEL MOUNTING



Amps Pin. Config-uration Earth Hour Pos

16	3P+E	2
16	3P+N+E	2
32	3P+N+E	2

**K9011GRN**

**K9111GRN**

**K9211GRN**

**K9417GRN**

**K9017GRN**

**K9117GRN**

**K9252GRN**

**K9417GRN**

**K9047GRN**

**K9146GRN**

**K9258GRN**

**K9447GRN**

Fitted with cable entry gland.

Fitted with cable entry gland.

**16A** Top conduit (M20) or rear cable entry, complete with blanking plug.  
**32A** Top conduit (M25) or rear cable entry, complete with blanking plug.

All flanges have the same fixing centres and outside dimensions to assist panel builders.  
Minimised flange option available (see page 258).

**IP44  
SPLASHPROOF  
>50V  
>300 - 500 Hz**

### Switch Socket Outlets ANGLED INTERLOCKED SURFACE



Amps Pin. Config-uration Earth Hour Pos

16	3P+E	2
----	------	---

**K9605GRN**

Switch can be locked in open or closed position. Aluminium Enclosure.



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**IP44  
SPLASHPROOF  
IS TRAN~  
50 - 60 Hz**

**Plugs**

**Connectors**

**Socket Outlets**

**ANGLED  
SURFACE**

**STRAIGHT  
PANEL MOUNTING**

**ANGLED  
PANEL MOUNTING**



Amps	Pin. Configuration	Earth Hour Pos
16	2P+E	12

16	2P+E	12	<b>K9004GRY</b>	<b>K9104GRY</b>	<b>K9204GRY</b>	<b>K9404GRY</b>	<b>K9756GRY</b>
----	------	----	-----------------	-----------------	-----------------	-----------------	-----------------

Fitted with cable entry gland.

Fitted with cable entry gland.

Top conduit (M20) or rear cable entry, complete with blanking plug.

All flanges have the same fixing centres and outside dimensions to assist panel builders. Minimised flange option available (see page 258).

**16/32A** new range has different fixing centres to old range. Old range is available for limited period. See technical section for details.

**IP44  
SPLASHPROOF  
>50 - 250V  
d.c.**

**Plugs**

**Connectors**

**Socket Outlets**

**ANGLED  
SURFACE**

**STRAIGHT  
PANEL MOUNTING**



Amps	Pin. Configuration	Earth Hour Pos
16	2P+E	3

16	2P+E	3	<b>K9003GRY</b>	<b>K9103GRY</b>	<b>K9203GRY</b>	<b>K9403GRY</b>	
----	------	---	-----------------	-----------------	-----------------	-----------------	--

Fitted with cable entry gland.

Fitted with cable entry gland.

Top conduit (M20) or rear cable entry, complete with blanking plug.

All flanges have the same fixing centres and outside dimensions to assist panel builders. Minimised flange option available (see page 258).

All products are available in minimum order quantity of one. Photographs feature the most representative products. Design changes may occur (over different current ratings) from one product to another.

**IP44  
SPLASHPROOF  
25V  
50 - 60 Hz**

**ELV RANGE**

Amps Pin. Config-uration

**Plugs**



**Connectors**



**Socket Outlets  
STRAIGHT  
SURFACE**



**ANGLED  
PANEL MOUNTING**



**Appliance Inlets  
SURFACE**



16	2P		<b>K9018VLT</b>	<b>K9118VLT</b>	<b>K9253VLT</b>	<b>K9518VLT</b>	<b>K9725VLT</b>
16	3P		<b>K9019VLT</b>	<b>K9119VLT</b>	<b>K9254VLT</b>	<b>K9519VLT</b>	<b>K9726VLT</b>

**IP44  
SPLASHPROOF  
50V  
50 - 60 Hz**

**ELV RANGE**

Amps Pin. Config-uration Minor Key Pos

**Plugs**



**Connectors**



**Socket Outlets  
STRAIGHT  
SURFACE**



**ANGLED  
PANEL MOUNTING**



Top conduit or rear cable entry. Supplied with M25 blanking plug/cable entry.

16	2P	12	<b>K9020WHI</b>	<b>K9120WHI</b>	<b>K9255WHI</b>	<b>K9520WHI</b>	
16	3P	12	<b>K9021WHI</b>	<b>K9121WHI</b>	<b>K9256WHI</b>	<b>K9521WHI</b>	

Top conduit or rear cable entry. Supplied with M25 x 1.5 blanking plug/cable entry.

**IP44  
SPLASHPROOF  
25 & 50V  
d.c.**

**ELV RANGE**

Amps Pin. Config-uration Minor Key Pos

**Plugs**



**Connectors**



**Socket Outlets  
STRAIGHT  
SURFACE**



**ANGLED  
PANEL MOUNTING**



16	2P	10	<b>K9022WHI</b>	<b>K9122WHI</b>	<b>K9257WHI</b>	<b>K9522WHI</b>	
----	----	----	-----------------	-----------------	-----------------	-----------------	--

Top conduit or rear cable entry. Supplied with M25 blanking plug/cable entry.

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110 - 130V  
50 - 60 Hz

### Three Way Adaptor

IP44 SPLASHPROOF



### Combi Blocks THREE WAY

IP44 SPLASHPROOF



### TWO WAY

IP57 WATERTIGHT



### TWO WAY 30mA RCD PROTECTED

IP44 SPLASHPROOF



Amps	Pin. Configuration	Earth Hour Pos
16	2P+E	4

16	2P+E	4	<b>K9907YEL</b>
----	------	---	-----------------

<b>13503</b>
--------------

<b>13507</b>
--------------

<b>13505</b>
--------------

**PBT enclosure**  
One appliance inlet and three socket outlets

Rubber housing

Rubber housing

Rubber housing

200 - 250V  
50 - 60 Hz

### Three Way Adaptor

IP44 SPLASHPROOF



### Combi Blocks THREE WAY

IP44 SPLASHPROOF



### TWO WAY

IP57 WATERTIGHT



### TWO WAY 30mA RCD PROTECTED

IP44 SPLASHPROOF



Amps	Pin. Configuration	Earth Hour Pos
16	2P+E	6

16	2P+E	6	<b>K9908BLU</b>
----	------	---	-----------------

<b>13504</b>
--------------

<b>13508</b>
--------------

<b>13506</b>
--------------

**PBT enclosure**  
One appliance inlet and three socket outlets

Rubber housing

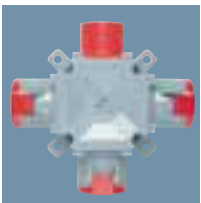
Rubber housing

Rubber housing

380 - 415V  
50 - 60 Hz

### Three Way Adaptor

IP44 SPLASHPROOF



Amps	Pin. Configuration	Earth Hour Pos
16	3P+E	6
16	3P+N+E	6

16	3P+E	6	<b>K9910RED</b>
16	3P+N+E	6	<b>K9911RED</b>

**PBT enclosure**  
One appliance inlet and three socket outlets

### Protective Covers For Inlets



9960BLK

### Minimised and Alternate Flanges



K9996



K9981/2/3

### Spare FL Type Flange Plates Gland Plates And Gaskets



9953GRY

### Earth Lead Adaptors And Blanking Plugs



9933



9936

**9960BLK**  
FOR 2P+E, 16A

**9965BLK**  
FOR ALL 125A (IP67)

**9966BLK**  
2P+E, 3P+E, 32A

**9967BLK**  
FOR ALL 63A (IP44)

1

#### Minimised:

1

**K9996**  
FOR 2P+E, 16A

10

1

#### Alternate:

1

**K9981**  
FOR 2P+E, 16A

10

**K9982**  
FOR 3P+E, 3P+N+E, 16A

10

**K9983**  
FOR 2P+E, 3P+E, 3P+N+E, 32A

10

SUITABLE FOR  
IP44 PANEL SOCKET  
STRAIGHT OUTLETS

**9953GRY**  
GLAND PLATE  
UNDRILLED FL13

1

SUITABLE FOR  
COMMANDO UNITS AND  
SAFETYSWITCHES

**9933**  
M20 X 1.5/ M20 X 1.5 THREAD SIZE  
USED ON ALL 16A SOCKET OUTLETS  
AND APPLIANCE INLETS (EXCEPT  
INTERLOCKED). ALSO USED ON  
16A AND 25A SAFETYSWITCHES

1

**9934**  
M25 x 1.5/ M25 x 1.5 THREAD SIZE  
USED ON ALL 32A SOCKET OUTLETS AND  
APPLIANCE INLETS (EXCEPT INTERLOCKED)

5

**9936**  
PG21/ M25 X 1.5 THREAD SIZE  
USED ON 16A & 32A INTERLOCKED  
SWITCHSOCKET OUTLETS

5

**9937**  
M32 X 1.5/ M32 X 1.5 THREAD SIZE  
USED ON ALL 63A SOCKET OUTLETS AND  
APPLIANCE INLETS

5

9937 must not be used on installations that are  
rated above 63A

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## Commando Industrial Plugs and Sockets



By referring to the chart below, it can be seen that there can be no interchangeability of products as the earth socket tube is placed in a different 'clock' position according to the voltage and frequency. This clock position is determined by looking into a socket-outlet from the front with the key-way at the bottom.

Unless otherwise stated all frequencies are 50-60Hz.

### Pilot Contact

Commando accessories provided with pilot contacts, in accordance with IEC.60309: 1997 and BS EN.60309:1998 have pilot pins shorter than other pins in the unit. Connection to suitable control circuitry will provide electrical interlock as the pilot circuit will make last and break first relative to the mains supply.

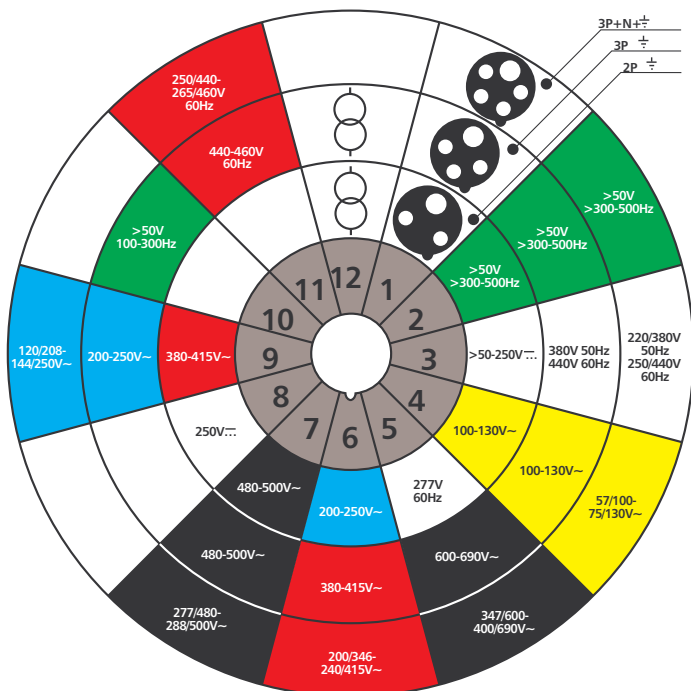
The pilot contact is positioned centrally in 3P + E and 3P+N+E accessories and diametrically opposite the earthing contact in 2P + E accessories.

### Rating Code

The rating code which is found on the rating label of each accessory gives details of rated current, rated (operating) voltage (or range of voltages), rated frequency (if not 50/60Hz) and a symbol to indicate the position of the earth contact.

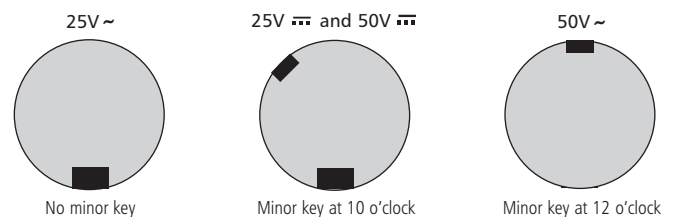
(i) For all products (except extra low voltage) the position given is that of the earth pin when a socket-outlet/connector is viewed from the front with the key-way at the bottom. When viewing a plug/ appliance inlet from the front with the key at the bottom, the position of the earth pin is reversed, i.e., a 10 o'clock will appear at 2 o'clock and other positions are relative.

(ii) For extra low voltage products (i.e., white and violet) the position given is that of the minor key when a socket-outlet is viewed from the front with the major key at the bottom. When viewing a plug/ appliance inlet from the front with the major key-way at the bottom, the position of the minor key-way is reversed, i.e., 10 o'clock will appear as 2 o'clock and other positions are relative.



Voltage	Colour code
25	Blue
50	White
100 - 130	Yellow
200 - 250	Blue
346 - 460	Red
500 - 750	Black
>50, 100 - 500Hz	Green

### MAJOR AND MINOR KEY POSITIONS FOR ELV SOCKETS



**Key for symbols**

a.c.

d.c.

isolating transformer



### range introduction

Commando Combi units offer RCD protection in hazardous environments. Enclosed in PBT boxes, these units offer protection against high impact and are available in IP44 (Splashproof) or IP67 (Watertight), making Commando Combination units some of the safest products available.

### features and benefits

- **High Impact Protection**
- **Available in either IP44 (Splashproof) or IP67 (Watertight) options**
- **Pre-designed, factory built option**

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TOUGH AND  
IMPACT RESISTANT

OPTIONAL RCD  
PROTECTION

LOCKABLE LID

GOOD CHEMICAL  
RESISTANCE

IP44 PRE-CONFIGURED SOCKET  
OUTLETS AVAILABLE

CUSTOM DESIGNED, FACTORY  
BUILT OPTION AVAILABLE  
CONTACT TECHNICAL HOTLINE

IP67 waterproof socket and  
switchsocket outlets

Socket outlet selection includes 16A, 32A  
and 63A angled socket outlets across all  
relevant voltages.



**IP44  
SPLASHPROOF  
100 - 130V  
50 - 60 Hz**

**Socket Outlets**

**SINGLE  
PRE-WIRED WITH  
30mA RCD**

**TWIN  
PRE-WIRED WITH  
30mA RCDs  
INDIVIDUALLY PROTECTED**

**TRIPLE  
PRE-WIRED WITH  
SINGLE  
30mA RCD**

**ANGLED  
TWIN  
SURFACE  
PRE-WIRED**

**ANGLED  
TWIN  
SURFACE  
UNWIRED**



Amps Pin  
Config-uration Earth  
Hour Pos

16	2P+E	4	<b>K13413YEL</b>	<b>K13173YEL</b>	<b>K13193YEL</b>	<b>K13143YEL</b>	<b>K13043YEL</b>
32	2P+E	4					

Suitable for top entry 2 x 25mm

Suitable for top entry 2 x Ø25 / 2 x Ø38  
Bottom entry 3 x 47.5mm

Suitable for top entry 2 x Ø25 / 2 x Ø38  
Bottom entry 3 x 47.5mm

Suitable for top entry 2 x Ø25 / 2 x Ø38  
Bottom entry 3 x 47.5mm

Suitable for top entry 2 x Ø25 / 2 x Ø38  
Bottom entry 3 x 47.5mm

**IP44  
SPLASHPROOF  
200 - 250V  
50 - 60 Hz**

**Socket Outlets**

**SINGLE  
PRE-WIRED WITH  
30mA RCD**

**TWIN  
PRE-WIRED WITH  
30mA RCDs  
INDIVIDUALLY PROTECTED**

**TRIPLE  
PRE-WIRED WITH  
SINGLE  
30mA RCD**

**ANGLED  
TWIN  
SURFACE  
PRE-WIRED**

**ANGLED  
TWIN  
SURFACE  
UNWIRED**



Amps Pin.  
Config-uration Earth  
Hour Pos

16	2P+E	6	<b>K13414BLU</b>	<b>K13174BLU</b>	<b>K13194BLU</b>	<b>K13144BLU</b>	<b>K13044BLU</b>
32	2P+E	6	<b>K13433BLU</b>	<b>K13184BLU</b>			
63	2P+E	6	<b>K13463BLU*</b>				

63A Suitable for top entry 2 x Ø25/2 x Ø38. Bottom entry 3 x 47.5mm  
\*Not as shown – see K13464 RED photo.

16/32A Suitable for top entry 2 x 25mm.  
2 x Ø25/2 x Ø38. Bottom entry 3 x 47.5mm

Suitable for top entry 2 x Ø25 / 2 x Ø38  
Bottom entry 3 x 47.5mm

Suitable for top entry 2 x Ø25 / 2 x Ø38  
Bottom entry 3 x 47.5mm

Suitable for top entry 2 x Ø25 / 2 x Ø38  
Bottom entry 3 x 47.5mm

Suitable for top entry 2 x Ø25 / 2 x Ø38  
Bottom entry 3 x 47.5mm

**IP44  
SPLASHPROOF  
380 - 415V  
50 - 60 Hz**

**Socket Outlets**

**SINGLE  
PRE-WIRED WITH  
30mA RCD**

**TWIN  
PRE-WIRED WITH  
30mA RCDs  
INDIVIDUALLY PROTECTED**



Amps Pin  
Config-uration Earth  
Hour Pos

16	3P+E	6	<b>K13415RED</b>	<b>K13175RED</b>			
16	3P+N+E	6	<b>K13416RED</b>	<b>K13176RED</b>			
32	3P+E	6	<b>K13434RED</b>	<b>K13185RED</b>			
32	3P+N+E	6	<b>K13435RED</b>	<b>K13186RED</b>			
63	3P+E	6			<b>K13464RED</b>		
63	3P+N+E	6			<b>K13465RED</b>		

16/32A Suitable for top entry 2 x 25mm

Suitable for top entry 2 x Ø25 / 2 x Ø38  
Bottom entry 3 x 47.5mm

63A Suitable for top entry. 2 x Ø25/2 x Ø38.  
Bottom entry 3 x 47.5mm



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**Switchsocket Outlet**  
INTERLOCKED  
PRE-WIRED WITH  
30mA RCD

IP44



**K13309YEL**  
**K13342YEL**

Suitable for top entry 2 x Ø25

**Switchsocket Outlet**  
INTERLOCKED  
PRE-WIRED WITH  
30mA RCD

IP44



**K13310BLU**  
**K13343BLU**

Suitable for top entry 2 x Ø25

**Switchsocket Outlets**  
INTERLOCKED  
PRE-WIRED WITH  
30mA RCD

IP44



**K13311RED**  
**K13312RED**  
**K13344RED**  
**K13345RED**

Suitable for top entry 2 x Ø25

**IP67 WATERTIGHT**  
**100 - 130V**  
**50 - 60 Hz**

**Socket Outlet**  
SINGLE  
PRE-WIRED WITH  
30mA RCD



**K13713YEL**

Suitable for top entry 2 x Ø25

**Switchsocket Outlet**  
INTERLOCKED  
PRE-WIRED WITH  
30mA RCD



**K13346YEL**  
**K13347YEL**

Suitable for top entry 2 x Ø25

Amps	Pin Configuration	Earth Hour Pos
16	2P+E	4
32	2P+E	4

**IP67 WATERTIGHT**  
**200 - 250V**  
**50 - 60 Hz**

**Socket Outlet**  
SINGLE  
PRE-WIRED WITH  
30mA RCD



**K13714BLU**  
**K13733BLU**

Suitable for top entry 2 x Ø25

**Switchsocket Outlet**  
INTERLOCKED  
PRE-WIRED WITH  
30mA RCD



**K13348BLU**  
**K13349BLU**

Suitable for top entry 2 x Ø25

Amps	Pin Configuration	Earth Hour Pos
16	2P+E	6
32	2P+E	6

**IP67 WATERTIGHT**  
**380 - 415V**  
**50 - 60 Hz**

**Socket Outlets**  
SINGLE  
PRE-WIRED WITH  
30mA RCD



**K13715RED**  
**K13716RED**  
**K13734RED**  
**K13735RED**

Suitable for top entry 2 x Ø25

**Switchsocket Outlets**  
INTERLOCKED  
PRE-WIRED WITH  
30mA RCD



**K13350RED**  
**K13351RED**  
**K13352RED**  
**K13353RED**

Suitable for top entry 2 x Ø25

Amps	Pin Configuration	Earth Hour Pos
16	3P+E	6
16	3P+N+E	6
32	3P+E	6
32	3P+N+E	6





## range introduction

Offering circuit protection and control products as well as data connection in hazardous environments, Modular Combi units are made to order and can be designed for almost any application.

Enclosed in PBT boxes, these units offer protection against high impact and are IP44 (Splashproof), making Commando Combination units some of the safest products available.

## features and benefits

- **Compact units replace outlets traditionally scattered around walls**
- **Combination of outlets with MCB and RCD protection**
- **High Impact Protection**
- **Custom options make it possible to design a unit for almost any application**

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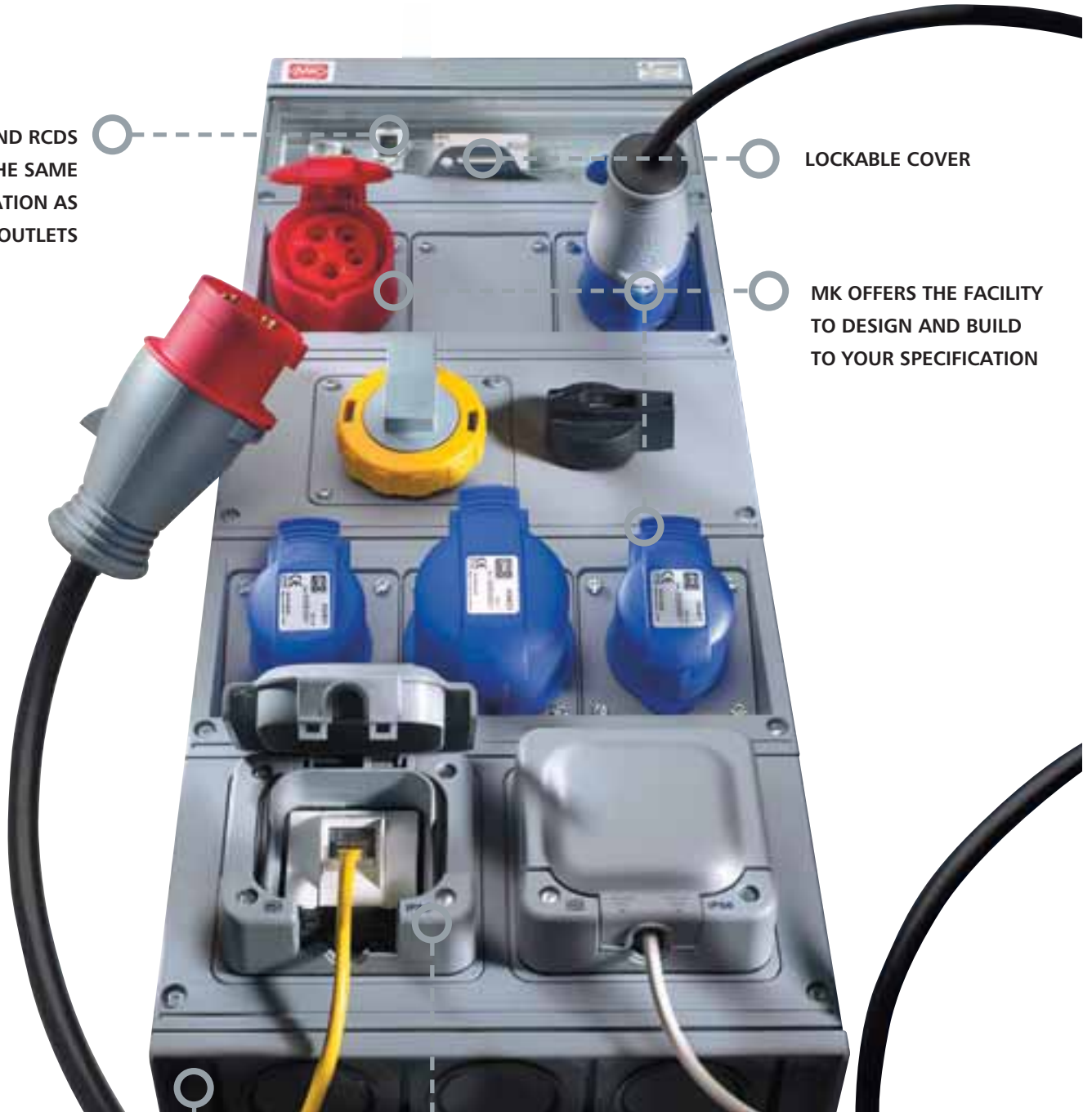
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## EXAMPLE CONFIGURATION

MCBS AND RCDS  
IN THE SAME  
LOCATION AS  
THE OUTLETS

LOCKABLE COVER

MK OFFERS THE FACILITY  
TO DESIGN AND BUILD  
TO YOUR SPECIFICATION



UP TO 5 ROWS PER  
CONFIGURATION

MASTERSEAL OUTLET SELECTION  
INCLUDES ANY 1 GANG MASTERSEAL  
SOCKET, SWITCH OR MODULAR GRID  
ENCLOSURE ALLOWING NUMEROUS  
OPTIONS

## Socket Outlet Selection (IP44)

### Socket Outlets Up to 3 per Row

**100 - 130V  
50 - 60 Hz**

**200 - 250V  
50 - 60 Hz**

**380 - 415V  
50 - 60 Hz**

**440 - 460V  
50 - 60 Hz**

**>50 - 250V  
d.c.**



Amps Pin. Configuration

Earth Hour Pos

Earth Hour Pos

Earth Hour Pos

Earth Hour Pos

Earth Hour Pos

16	2P+E	<b>K9400YEL</b>	4	<b>K9401BLU</b>	6			<b>K9403GRY</b>	3
16	3P+E	<b>K9405YEL</b>	4	<b>K9406BLU</b>	9	<b>K9407RED</b>	6		
16	3P+N+E	<b>K9413YEL</b>	4	<b>K9414BLU</b>	9	<b>K9415RED</b>	6	<b>K9416RED</b>	11
32	2P+E	<b>K9432YEL</b>	4	<b>K9433BLU</b>	6				
32	3P+E					<b>K9437RED</b>	6		
32	3P+N+E			<b>K9444BLU</b>	9	<b>K9445RED</b>	6	<b>K9446RED</b>	11
63	2P+E			<b>K9544BLU*</b>	6				
63	3P+E					<b>K9565RED*</b>	6		
63	3P+N+E					<b>K9570RED*</b>	6		

\*Socket outlet – Angled

## DIN Rail Selection

RCDs, MCBs & Contactor Modules

Switch Disconnecter

MCB Single Pole

MCB\* Double Pole

	Switch Disconnecter		MCB Single Pole					MCB* Double Pole		
			Type B 6kA	Type C 6kA	Type B 10kA	Type C 10kA	Type D* 10kA	Type B 10kA	Type C 10kA	Type D 10kA
	TWO	FOUR	ONE	ONE	ONE	ONE	ONE	TWO	TWO	TWO

RATING

16A

20A

25A

32A

40A

63A

80A

100A

125A



**5916s**

**8716s**

**KB116s**

**KC116s**

**KD116s**

**KB216s**

**KC216s**

**KD216s**

**5932s**

**8732s**

**KB132s**

**KC132s**

**KD132s**

**KB232s**

**KC232s**

**KD232s**

**5560s**

**KB163s**

**KC163s**

**KD163s**

**KB263s**

**KC263s**

**KD263s**

**5500s**

**K51254s**

\* Available for Modular Combination units only

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ingress protected | wiring devices

## Switchsocket Outlets – Interlocked

IS TRAN ~  
50 - 60Hz

> 50V  
100 - 300 Hz

> 50V  
300 - 500 Hz

100 - 130V  
50 - 60 Hz

200 - 250V  
50 - 60 Hz

380 - 415V  
50 - 60 Hz



Earth  
Hour  
Pos



Earth  
Hour  
Pos



Earth  
Hour  
Pos



Earth  
Hour  
Pos



Earth  
Hour  
Pos

Earth  
Hour  
Pos

<b>K9404GRY</b>	12				<b>K9802YEL</b>	4			
		<b>K9410GRN</b>	10						
				<b>K9411GRN</b>	2				<b>K9807RED</b>
				<b>K9417GRN</b>	2				<b>K9815RED</b>
						<b>K9865YEL</b>	4	<b>K9866BLU</b>	6
				<b>K9447GRN</b>	2				<b>K9870RED</b>
									<b>K9873RED</b>

### MCB\* Triple Pole

Type B  
10kA

THREE

Type C  
10kA

THREE

Type D  
10kA

THREE

### RCBO With Solid Neutral RCD 110V Double Pole

Type B  
6kA  
30mA

ONE

10mA

TWO

30mA

TWO

### RCD 230V Double Pole

10mA

TWO

30mA

TWO

### RCD Pulsating DC Fault Current Sensitive

10mA

TWO

30mA

TWO



**KB316s**

**KC316s**

**KD316s**

**7934s**

**6016s**

**6416s**

**6316s**

**5716s**

**6216s**

**6716s**

**KB332s**

**KC332s**

**KD332s**

**7936s**

**6032s**

**6730s**

**6630s**

**KB363s**

**KC363s**

**KD363s**

**5760s**

**5660s**

**5780s**

**7700s**

## DIN Rail Selection

RCDs, MCBs & Contactor Modules

RCD  
230/400V  
Four Pole

30mA

Contactors

FOUR

ONE

TWO

THREE

RATING

16A

20A

25A

32A

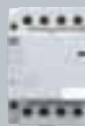
40A

63A

80A

100A

125A



6220s  
6720s\*

6420s

6425s

6440s

7240s

7440s

6463s

7263s

7463s

\* Manual override

## Time Switch Selection

SYNCHRONOUS  
THREE MODULE

QUARTZ  
STABILISED  
THREE MODULE

SYNCHRONOUS  
ONE MODULE

DIGITAL  
ONE CHANNEL  
TWO MODULE

ONE MODULE

DIGITAL  
TWO CHANNEL  
TWO MODULE



**5707s** **1**  
7 DAY DIAL  
MIN SETTING 3 HOURS

**5807s** **1**  
7 DAY DIAL  
MIN SETTING 3 HOURS

**5833s** **1**  
24 HOUR DIAL  
MIN SETTING 30 MINUTES

**5731s** **1**  
24 HOUR/7 DAY DISPLAY  
MIN SETTING 1 MINUTE

**5733s** **1**  
24 HOUR DIAL  
MIN SETTING 1 MINUTE

**5732s** **1**  
24 HOUR/7 DAY DISPLAY  
MIN SETTING 1 MINUTE

**5724s** **1**  
24 HOUR DIAL  
MIN SETTING 30 MINUTES

**5824s** **1**  
24 HOUR DIAL  
MIN SETTING 30 MINUTES

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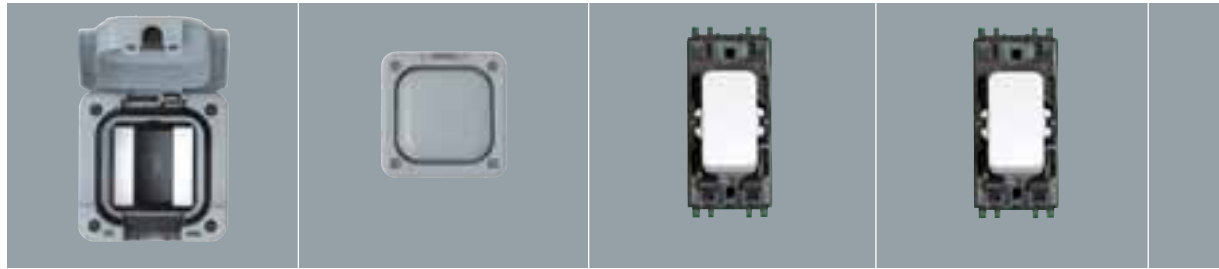
## Masterseal Selection

### Data/Telecom Enclosure Euro Format

### Switches

#### ENCLOSURES

#### SWITCH MODULES



#### 56423GRY

1 GANG  
DATA ENCLOSURE  
FOR ONE MODULE EURO OUTLET  
SUPPLIED WITH 2 X HALF MODULE  
BLANKS

1

#### K56420GRY

1 GANG  
FOR USE WITH ANY  
ONE SWITCH MODULE

#### K56421GRY

1 GANG WITH NEON  
FOR USE WITH ANY  
SWITCH AND ANY  
NEON MODULE

#### K56422GRY

2 GANG  
FOR USE WITH ANY  
TWO SWITCH MODULES

1

#### 56891BLK

20A SP  
ONE-WAY

1

#### 56892BLK

20AP SP  
TWO-WAY

1

#### 56893BLK

20A  
INTERMEDIATE

#### 56896BLK

20A DP  
ONE-WAY

10

#### 56881BLK

10A SP  
ONE-WAY

10

#### 56882BLK

10A SP  
TWO-WAY

10

#### 56883BLK

10A DP  
ONE-WAY

10

10

10

10

Note: Ingress protection of Modular Combi is IP44 even when combined with Masterseal outlets and switches, and switchsocket outlets – interlocked.

For the full range of available Euro Modules, please see the Logic Plus section, page 54

## SUMMARY GUIDE

Please note that the maximum number of rows (i.e. the maximum height) in an enclosure is 5. Enclosure frontplates can only accept Commando socket.

## STEP 1 Choose any type and number of Commando socket outlets

Rating	Pin Config.	SOCKET OUTLETS - STRAIGHT						SOCKET OUTLETS - INTERLOCKED				
		100-130V	200-250V	380-415V	440-460V d.c.	>50-250V 50-60Hz	IS TRAN 100-300Hz	>50V 300-500Hz	>50V	100-130V	200-250V	380-415V
16A	2P+E	K9400YEL	K9401BLU			K9403GRY	K9404GRY			K9802YEL	K9803BLU	
16A	3P+E	K9405YEL	K9406BLU	K9407RED				K9410GRN	K9411GRN			K9807RED
16A	3P+N+E	K9413YEL	K9414BLU	K9415RED	K9416RED				K9417GRN			K9815RED
32A	2P+E	K9432YEL	K9433BLU							K9865YEL	K9866BLU	
32A	3P+E			K9437RED								K9870RED
32A	3P+N+E		K9444BLU	K9445RED	K9446RED				K9447GRN			K9873RED
63A	2P + E		K9544BLU*									
63A	3P+E			K9565RED*								
63A	3P+N+E			K9570RED*								

\*Angled socket outlets

## STEP 2 Choose the type of circuit protection for the outlets

Rating	SWITCH DISCONNECTOR		MCB SINGLE POLE			MCB DOUBLE POLE			MCB TRIPLE POLE				
	2 POLE	4 POLE	6kA	10kA									
			TYPE B	TYPE C	TYPE B	TYPE C	TYPE D	TYPE B	TYPE C	TYPE D	TYPE B	TYPE C	TYPE D
16A			5916s	8716s	KB116s	KC116s	KD116s	KB216s	KC216s	KD216s	KB316s	KC316s	KD316s
25A													
32A			5932s	8732s	KB132s	KC132s	KD132s	KB232s	KC232s	KD232s	KB332s	KC332s	KD332s
40A													
63A	5560s				KB163s	KC163s	KD163s	KB263s	KC263s	KD263s	KB363s	KC363s	KD363s
80A													
100A	5500s												
125A	K5525s	K1254s											

Rating	RCBO One Module SOLID NEUTRAL (30mA)			RCD 110V DOUBLE POLE		RCD 230V DOUBLE POLE		RCD PULSATING		RCD 230/400V FOUR POLE
	6kA	10kA		10mA	30mA	10mA	30mA	10mA	30mA	30mA
	TYPE B	TYPE B	TYPE C							
16A	7934s	KB8116s	KC8716s	6016s	6416s	6316s	5716s	6216s	6716s	
25A										6425s
32A	7936s	KB8116s	KC8132s		6032s		6730s		6630s	
40A										6440s
63A							5760s			6463s
80A							5780s			
100A							7700s			

## STEP 3 Choose the Control Products

RATING	CONTACTORS			TIME SWITCHES						
	ONE MODULE	TWO MODULE	THREE MODULE	SYNCHRONOUS		QUARTZ STABILISED	SYNCHRONOUS	DIGITAL		
				THREE MODULE	THREE MODULE	THREE MODULE	ONE MODULE	TWO MODULE	ONE MODULE	TWO MODULE
16A										
20A	6220s									
	6720s	6420s								
25A										
32A										
40A		7240s								7440s
63A		7263s								7463s

## STEP 4 Choose any Masterseal Products

MASTERSEAL SOCKET OUTLETS		SWITCH ENCLOSURES		SWITCH MODULES	
13AMP	16AMP			20AMP	10AMP
56480GRY	56483GRY	56420GRY		56891	56881
		56421GRY		56892	56882
		56422GRY		56893	56883
		56423GRY (Data/Telecom)		56896	

## Overall Dimensions

Dimensions		DEPTH (with various products)	
HEIGHT	WIDTH		
1 Row 228 mm	252mm	16A SKT OUTLET	139mm
2 Row 358mm	252mm	32A SKT OUTLET	148mm
3 Row 488mm	252mm	16A INTERLOCK	152mm
4 Row 618mm	252mm	32A SKT OUTLET	161mm
5 Row 748mm	252mm	63A SKT OUTLET	167mm
		MASTERSEAL SKT O/T, FCU & DATA	146mm
		MASTERSEAL SWITCH	135mm

## STEP 5 Phone the Technical Helpline (01268 563720) for advice or to place your order



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circuit protection



range introduction

features and benefits

The Sentry range of Consumer Units from MK Electric has been stylishly designed to blend in with its environment. The curved lines and slim-line appearance mean it won't look out of place when installed in hallways, lounges or kitchens of new properties. The expanded range includes a 21-module unit for larger installations and also a 4-module unit to cater for small one-off installations and extensions to existing ones.

The MK Electric Design Service offers a pre-assembly service for custom built boards with all devices fitted, busbars cut and fitted with devices, live and neutral cables terminated. This service is available across the entire range of Metal, Insulated, Flush and Skeleton units.

#### **Supports 17th Edition Compliance**

Full range of products to support compliance with the 17th Edition of the Wiring Regulations including RCBOs and pre-assembled split load boards with a variety of RCD configurations.

#### **Sentry Skeleton Boards for social housing**

For use in a Mantel or Clifton type enclosure, a complete offering of blank and pre-configured skeleton units for use in buildings with multi-occupancy dwellings.

#### **MK Electric Design Service for pre-assembled Consumer Units**

Save time and money by specifying project requirements through the MK Electric Design Service. Pre-assembled custom built boards, with all devices pre-fitted with busbars and cables are available to suit any installation. Available across the entire range of Metal, Insulated, Flush and Skeleton units.

#### **Flush mounting versions**

Flush mounting available for even neater installations.

#### **Protective lid**

Opaque and downward opening lid conceals protective devices and labelling.

#### **Floating busbar system**

Gives maximum installation flexibility.

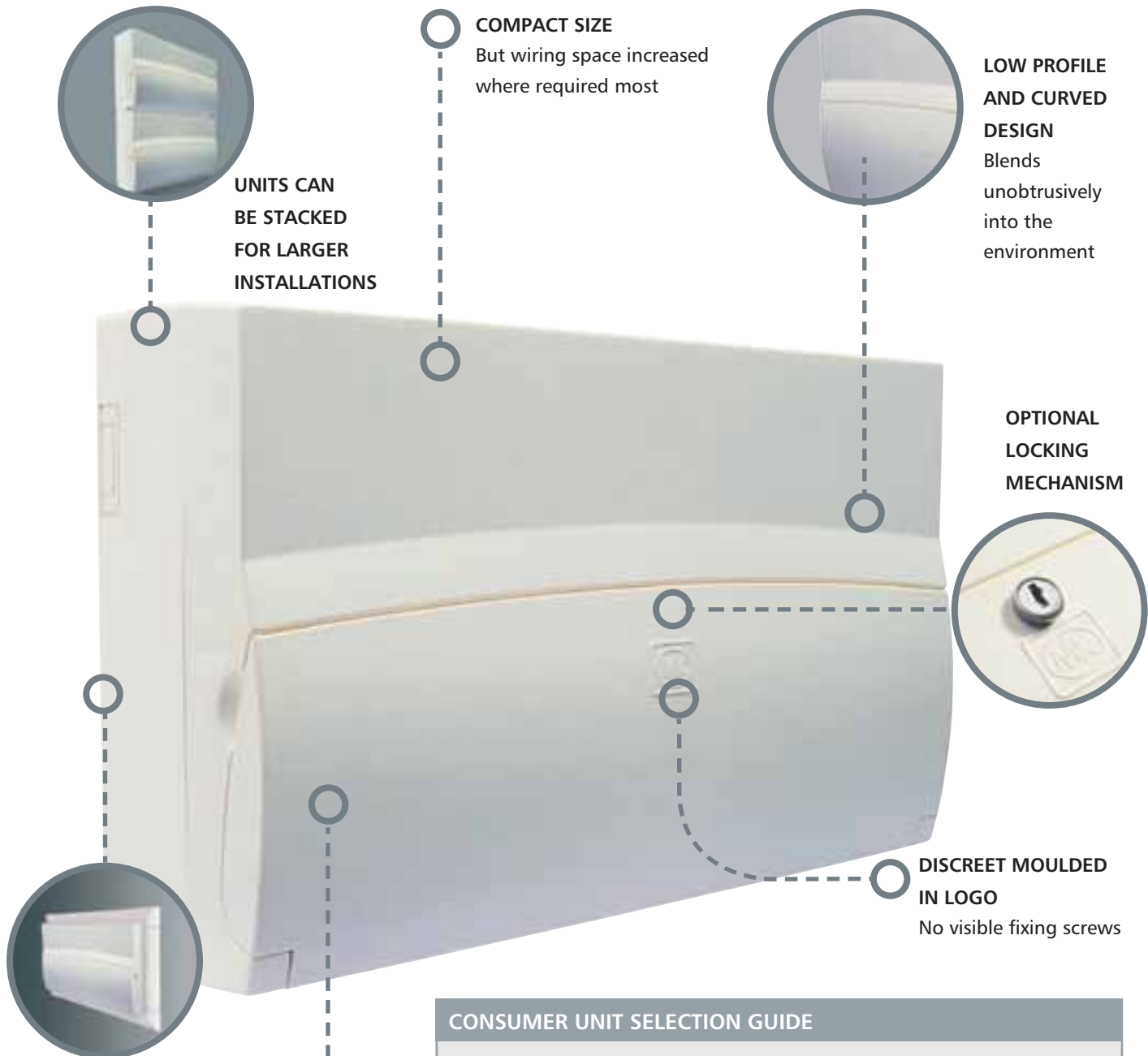
#### **Broad selection of pre-assembled split load units available**

Suits a variety of applications and saves installation time.

#### **Stacking options**

For larger installations dual rail 24, 32 and 42 module units possible in both insulated and metal.

## MK Sentry Consumer Unit Features and Benefits



**UNITS CAN BE STACKED FOR LARGER INSTALLATIONS**

**COMPACT SIZE**  
But wiring space increased where required most

**LOW PROFILE AND CURVED DESIGN**  
Blends unobtrusively into the environment

**OPTIONAL LOCKING MECHANISM**

**DISCREET MOULDED IN LOGO**  
No visible fixing screws

**FLUSH MOUNTABLE OPTIONS**  
For an even neater installation

**OPAQUE AND DOWNWARD OPENING LID**  
Hides labels and devices

### CONSUMER UNIT SELECTION GUIDE

**STEP 1** Determine the type of consumer unit configuration required. e.g Split Load, Standard or combination of split load / single RCD or dual RCD. For each Switch Disconnector or RCD to be used allow 2 modular ways.

**STEP 2** Determine the number of outgoing circuits required. e.g Cooker, Lighting, Ring Main etc. For each circuit to be protected by an MCB or RCBO allow 1 modular way.

**STEP 3** Determine what control products are required. e.g Bell Transformer, Time Delay Switch, contactors, timeswitches etc.

**STEP 4** Determine the number of 'spare' modular ways required for future upgrades. For each 'spare' modular way select 1 Sentry blank module – 5544s or K5545sMAG (cover mounted blanks supplied with consumer units. See page 291).

**STEP 5** Now add together the total number of modular ways required.

**STEP 6** Select from our range of Insulated, Metal, Flush or stacked consumer units (using standard consumer units plus stacking kits). Choose the type and size most appropriate for your requirements.

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circuit protection

**FLEXIBLE NEUTRAL BAR CONFIGURATION**

Enables installer to select a wide combination of protected and unprotected circuits

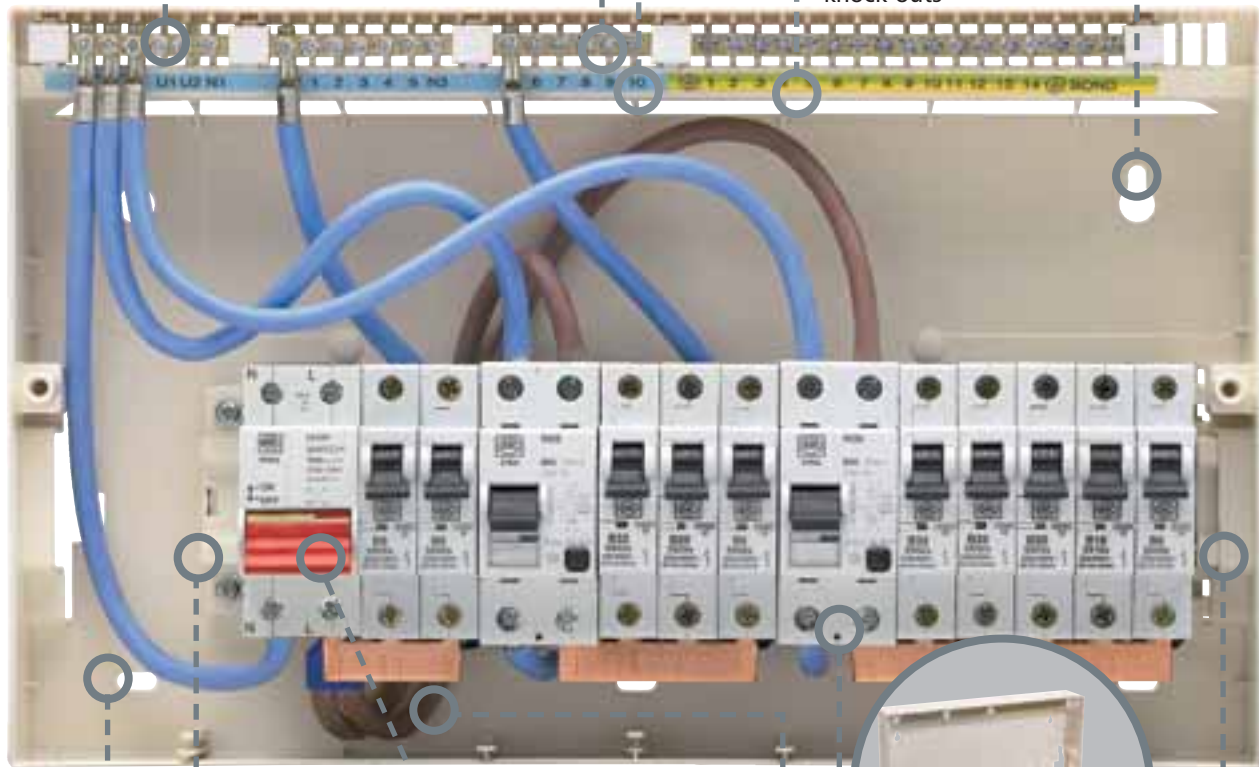


**COLOUR CODED EARTH AND NEUTRAL TERMINAL LOCATED AT TOP OF UNIT FOR EASE OF WIRING**



**BACKED OUT AND CAPTIVE COMBI-HEAD SCREWS**  
Allows speedy installation

**AMPLE 360° KNOCK-OUTS FOR CABLE ROUTING**  
Open cable entry at rear plus optional rear knock-outs



**OFFSET INCOMER**  
Provides additional wiring space making mains input connections easier



**AMPLE WIRING SPACE**

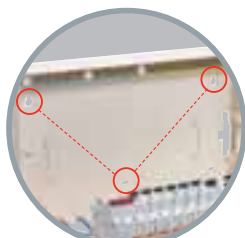
**RAISED DIN-RAIL**  
For improved cable routing

**FLOATING BUSBAR SYSTEM**  
For maximum installation flexibility including acceptance of control modules

**EASILY REMOVABLE DIN-RAIL**  
Improves first fix

**TRIPOD FIXING HOLES**

Allow tripod fixing to cope with uneven surfaces. Hole locations allow access for cordless drills and power drivers



**STACKING OPTIONS AVAILABLE**

For 12, 16 & 21 Module Units ideal for larger applications, or where space may be limited

## The MK Electric Design Service

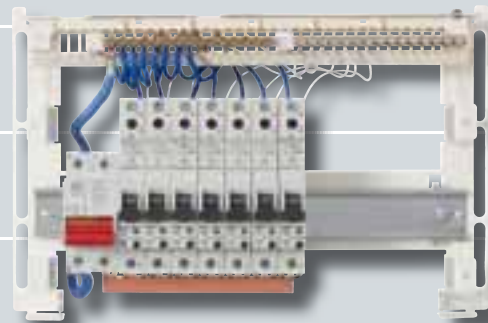
The MK Electric Design Service is perfect for when only a customised solution can meet your requirements, or when fully assembled Consumer Units can be provided for your project to save you installation time.

Our dedicated team can help you to build the best configurations for your project, and then assemble the boards ready for installation. The service is available for all MK Consumer Units – Metalclad, Insulated, Flush and Skeleton. Using standard and non-standard Sentry components we can build and supply fully assembled units to an agreed design. For example, have your split load boards supplied with all the devices pre-fitted with busbars and cables to suit the installation. This service is ideal for housing developers, or any application requiring typically more than twenty units.

- Dedicated team on hand to build configuration to meet your needs
- Service is available for all MK Consumer Units and Skeleton Units
- Ideal for housing developments, or any application requiring typically more than 20 units
- Faster installation time on site
- Fast turnaround – 1 working day response time to initial enquiry

To find out more call the MK Electric Technical Services Team on 01268 563720 or visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk) and follow the links to the Design Service.

<b>STEP 1</b>	Call the MK Electric Technical Services Team on 01268 563720 <b>or</b> visit <a href="http://www.mkelectric.co.uk">www.mkelectric.co.uk</a> and follow the links to the Design Service
<b>STEP 2</b>	Discuss the details of your project and Circuit Protection requirements with a member of the MK Technical Services Team <b>or</b> complete the online enquiry and click send
<b>STEP 3</b>	Within one working day you will have a response to your initial enquiry
<b>STEP 4</b>	Confirm the configurations and quantities
<b>STEP 5</b>	Receive the quote for your order
<b>STEP 6</b>	Place your order with your wholesaler
<b>STEP 7</b>	Your order will be delivered to the wholesaler of your choice. All boards will be fully assembled and ready for installation



## MK Sentry Skeleton Unit Features and Benefits

### FLEXIBLE NEUTRAL BAR CONFIGURATION

Enables a wide combination of protected and unprotected circuits

### SUITABLE FOR USE IN MOST MANTEL AND CLIFTON TYPE ENCLOSURES



### RAISED TERMINAL BAR

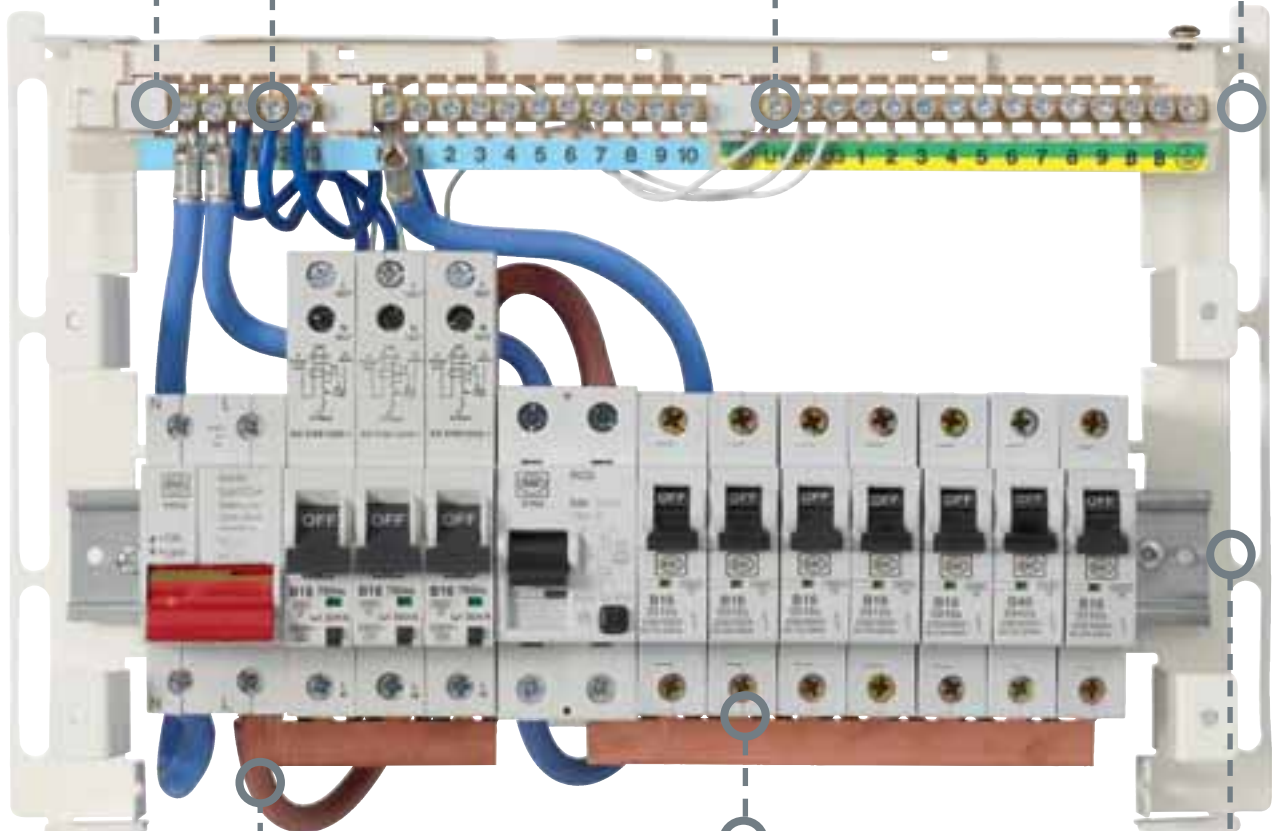
Allows easier wiring of devices into the terminals

### BACKED OUT AND CAPTIVE COMBI-HEAD SCREWS

Quick and easy to install

### ELONGATED FIXING SLOTS

Allows easy positioning of the unit within the enclosure



### FLOATING BUSBAR SYSTEM

Busbar can be cut according to devices fitted

### EASILY REMOVABLE DIN-RAIL

Improves first fix

### AMPLE WIRING SPACE

Quick and easy to install

## Selecting the right Consumer Unit for your installation

Sentry Consumer Units are designed to be fully flexible and offer a range of configurations.

### Independent Circuit Protection

Boards with Switch Disconnectors and RCBOs give maximum protection and potentially less annoyance to the end user. In the event of fault conditions or nuisance tripping the disconnect will only effect the dedicated circuit.

#### K5612SMAG



#### Consumer unit options

Insulated	Metal	Flush	Number of ways in bare board
K5612sMAG	K5512sMAG	K6512sMAG	12
K5616sMAG	K5516sMAG	K6516sMAG	16
K5621sMAG	K5521sMAG	K6521sMAG	21

#### Typical Enclosure Configuration

SWITCH	RCBO	RCBO	RCBO	RCBO	RCBO	RCBO	RCBO	RCBO	RCBO	RCBO
	Shower	Sockets Upstairs	Sockets Downstairs	Cooker	Outside Sockets	Immersion Heater	Lighting Upstairs	Lighting Downstairs	Burglar Alarm	Smoke Alarm

### Split Load Configurations, up to half Independent Circuits

Split load boards with RCDs, MCBs and RCBOs are ideal for protection of key designated circuits, for example upstairs lighting, downstairs lighting, smoke alarms and showers. Configurations shown include a Switch and RCD, with a further 8 and 12 ways respectively.

#### K5686SMAG17ED



#### Consumer unit options

Insulated	Metal	Number of ways in bare board
K5682sMAG17ED	K5582sMAG17ED	8
K5686sMAG17ED	K5586sMAG17ED	12
K5681sMAG17ED	K5581sMAG17ED	17

#### Some Examples of 8 way Configurations

SWITCH	RCBO	RCD	MCB	MCB	MCB	MCB	MCB	MCB	MCB	SPARE
SWITCH	RCBO	RCBO	RCD	MCB	MCB	MCB	MCB	MCB	MCB	SPARE
SWITCH	RCBO	RCBO	RCBO	RCD	MCB	MCB	MCB	MCB	MCB	MCB

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circuit protection

### Dual RCD Protection, with some independent circuits

Dual RCD boards with MCB's and RCBOs give both general and essential protection. The configurations shown include a Switch and 2 RCDs, with a further 10 and 15 ways respectively.

#### K5681SMAG17ED



#### Consumer unit options

Insulated	Metal	Number of ways in bare board
K5666sMAG17ED	K5566sMAG17ED	10
K5686sMAG17ED	K5586sMAG17ED	10
K5681sMAG17ED	K5581sMAG17ED	15
K5683sMAG17ED	K5583sMAG17ED	15

#### Some Examples of 10 way Configurations

SWITCH	RCBO	RCD	MCB	MCB	MCB	MCB	MCB	RCD	MCB	MCB	MCB	MCB
SWITCH	RCBO	RCBO	RCD	MCB	MCB	MCB	MCB	MCB	RCD	MCB	MCB	MCB
SWITCH	RCD	MCB	MCB	MCB	MCB	MCB	MCB	RCD	MCB	MCB	MCB	MCB

#### Some Examples of 15 way Configurations

SWITCH	RCBO	RCBO	RCD	MCB	MCB	MCB	MCB	MCB	MCB	MCB	MCB	RCD	MCB	MCB	MCB	MCB
SWITCH	RCBO	RCD	MCB	MCB	MCB	MCB	MCB	MCB	MCB	MCB	MCB	MCB	RCD	MCB	MCB	MCB
SWITCH	RCD	MCB	MCB	MCB	MCB	MCB	MCB	MCB	MCB	MCB	MCB	MCB	RCD	MCB	MCB	MCB

These are some examples of Standard, Neutral and Earth bar configurations. Additional labelling is included in the box to allow for further alternatives

#### TERMINAL BAR CONFIGURATION

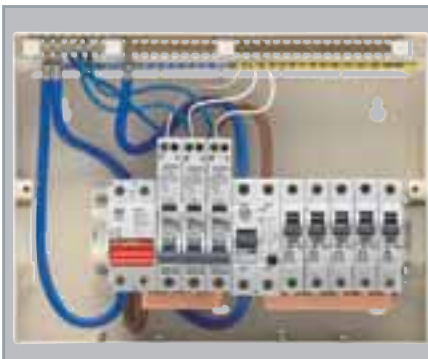
	Modules Empty	Earth Terminals		Neutral Terminals		Total Ways	Unprotected	RCD1	RCD2	RCD3
		Circuits	Bond	Total	Separate Blocks					
K5604sMAG	4	4	1	4	1	2	2	n/a	n/a	n/a
K5608sMAG	8	8	2	8	1	10	6	n/a	n/a	n/a
K5612sMAG	12	12	3	15	6 + 9	8	3 or 10*	8	n/a	n/a
K5616sMAG	16	14	3	19	6 + 7 + 6	16	2 or 7 or 14*	5	5	n/a
K5621sMAG	21	18	3	27	7 + 7 + 7 + 6	21	2 or 7 or 12 or 18*	5	5	3
K5504sMAG	4	4	1	4	1	2	2	n/a	n/a	n/a
K5508sMAG K6508sMAG	8	8	2	8	1	6	6	n/a	n/a	n/a
K5512sMAG K6512sMAG	12	12	3	15	6 + 9	8	3 or 10*	8	n/a	n/a
K5516sMAG K6516sMAG	16	14	3	19	6 + 7 + 6	16	2 or 7 or 14*	5	5	n/a
K5521sMAG K6521sMAG	21	18	3	27	7 + 7 + 7 + 6	21	2 or 7 or 12 or 18*	5	5	3

\* Dependant on RCDs fitted

Note: Additional Terminal labels supplied on main sheet to support alternative terminal configurations

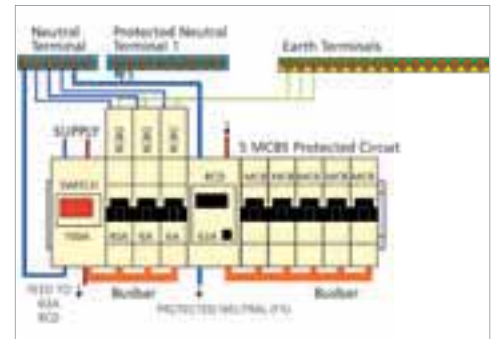
Switch Disconnectors	MCB Single Pole Type B		Type C	RCBO with Solid Neutral Type B	Residential 6kA RCD 230V Double Pole			Industrial 10kA RCD 110V Double Pole	
TWO	ONE	ONE	ONE	ONE	TWO	TWO	TWO	TWO	TWO

RATING									
3A		<b>5903s</b>	<b>8703s</b>						
6A		<b>5906s</b>	<b>8706s</b>	<b>7932s</b>					
10A		<b>5910s</b>	<b>8710s</b>	<b>7933s</b>					
16A		<b>5916s</b>	<b>8716s</b>	<b>7934s</b>	<b>7816s</b>			<b>6016s</b>	<b>6416s</b>
20A		<b>5920s</b>	<b>8720s</b>	<b>7935s</b>					
25A		<b>5925s</b>	<b>8725s</b>						
32A		<b>5932s</b>	<b>8732s</b>	<b>7936s</b>	<b>7832s</b>				<b>6032s</b>
40A		<b>5940s</b>	<b>8740s</b>	<b>7937s</b>	<b>7840s</b>				
45A		<b>5945s</b>		<b>7938s</b>					
50A		<b>5950s</b>	<b>8750s</b>	<b>7939s</b>					
63A	<b>5560s</b>				<b>7860s</b>	<b>7560s</b>	<b>7660s</b>		
80A					<b>7880s</b>	<b>7580s</b>	<b>7680s</b>		<b>6080s</b>
100A	<b>5500s</b>								



TO BUILD A SPLIT LOAD RCD CONSUMER UNIT WITH RCBOs  
e.g. 3+5 split-load

- Requires:**
- K5612sMAG** Insulated Consumer Unit, 12 Mod
  - K5563s** Split Load Cable Kit
  - 5500s** Switch Disconnectors
  - 5780s** RCD, 80A 30mA
- Select up to 3 RCBOs and 5 MCBs.





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circuit protection

Industrial  
10kA RCD  
230V  
Double Pole

Industrial  
10kA RCD  
Pulsating DC Fault  
Current Sensitive

Industrial  
10kA RCD  
Time Delayed  
230V  
Double Pole

Industrial  
10kA RCD  
230/400V  
Four Pole

Note: Only suitable as  
standalone devices, in Sentry  
four module enclosures and  
Commando Combi

10mA	30mA	100mA	300mA	10mA	30mA	100mA	30mA	100mA	300mA
TWO	TWO	TWO	TWO	TWO	TWO	TWO	FOUR	FOUR	FOUR



RATING

3A  
6A  
10A  
16A  
20A  
25A  
32A  
40A  
45A  
50A  
63A  
80A  
100A

6316s

5716s

6216s

6716s

6425s

6730s

6630s

5740s

5640s

6440s

6240s

5760s

6160s

5860s

5660s

6463s

6363s

6263s

5780s

6180s

5880s

6980s

7700s

6600s

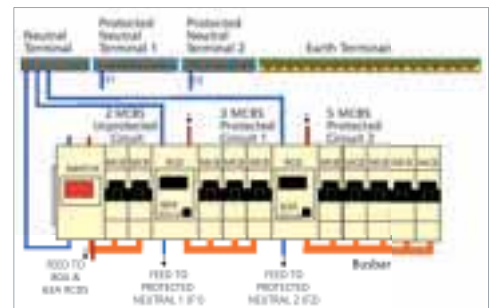
7800s

6400s



### TO BUILD A DUAL RCD CONSUMER UNIT e.g. 2 + 3 + 5 split-load

- Requires:**
- K5616sMAG** Insulated Consumer Unit, 12 Mod
  - K5568s** Split Load Cable Kit twin RCD arrangement
  - 5500s** Switch Disconnector
  - 5780s** RCD, 80A 30mA
  - 5760s** RCD, 63A 30mA
- Select up to 10 MCBs.



## Consumer Units

METAL  
SURFACE

K5504sMAG



K5508sMAG



K5512sMAG



K5516sMAG

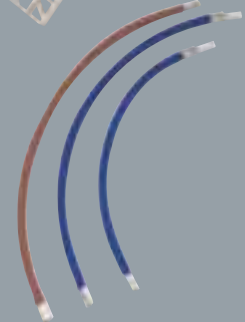


K5521sMAG

## Stacking Kits

FOR METAL AND INSULATED  
CONSUMER UNITS

K6063sMAG



K5561s

**K5504sMAG**

ACCEPTS 4  
ONE MODULE PRODUCTS  
(1 INTEGRAL NEUTRAL BAR)

**K5508sMAG**

ACCEPTS 8  
ONE MODULE PRODUCTS  
(1 INTEGRAL NEUTRAL BAR)

All units are magnolia coloured.

All units feature an enclosure box of welded construction finished in a tough coating of polyester epoxy paint containing ample knockouts in top, bottom, side and rear surfaces.

The units have an impact resistant, flame retardant, thermoplastic cover and lid.

Dual rail units are available for the 12, 16 and 21 module units to enable single tariff and split load (up to 80A) using Stacking Kits K6061sMAG, K6062sMAG and K6063sMAG respectively in between the units.

Degree of Protection to BS EN 60529 to IP2X C

Precautions must be taken to maintain the IP rating, e.g. use of cable glands and knockouts

BS EN 60439-3: 1999

1

**K5512sMAG**

ACCEPTS 12  
ONE MODULE PRODUCTS  
(2 INTEGRAL NEUTRAL BARS  
FITTED WITH LINK)

1

**K5516sMAG**

ACCEPTS 16  
ONE MODULE PRODUCTS  
(3 INTEGRAL NEUTRAL BARS  
FITTED WITH LINK)

1

**K5521sMAG**

ACCEPTS 21  
ONE MODULE PRODUCTS  
(4 INTEGRAL NEUTRAL BARS  
FITTED WITH LINKS)

1

## DIMENSIONS:

	WIDTH	HEIGHT	DEPTH
K5504sMAG:	140	x 230	x 110mm
K5508sMAG:	234	x 230	x 110mm
K5512sMAG:	306	x 230	x 110mm
K5516sMAG:	378	x 230	x 110mm
K5521sMAG:	468	x 230	x 110mm

Thickness of all Stacking Kits: 15mm

Main incomer maximum rating  
K5604sMAG and K5504sMAG: 63A

All other consumer units: 100A

Cover mounted blanks are supplied with ALL consumer units  
(2 off x 1 for 4, 8 and 12 module and  
2 off x 2 for 16 and 21 module)

1

**K6061sMAG**

SUITABLE FOR USE WITH  
12 MODULE UNITS

1

**K6062sMAG**

SUITABLE FOR USE WITH  
16 MODULE UNITS

1

**K6063sMAG**

SUITABLE FOR USE WITH  
21 MODULE UNITS

1

**K5561s**

CABLE KIT FOR STACKED  
SENTRY UNITS

1

DUAL RAIL UNITS CAN BE CREATED USING 12, 16 AND 21 MODULE UNITS AND THE APPROPRIATE STACKING KIT.

Ideal for large applications or if additional capacity is required or for dual tariff applications.

K6061sMAG, K6062sMAG, K6063sMAG Enables two consumer units to be stacked (joined together) to form one integral consumer unit. Includes frame nuts, bolts and earth cable (for bonding earth terminal bars together).

Knockout holes in the base and top of consumer units align, allowing cables to pass through easily.

K5561s Includes 3 cables (2 neutral and 1 live) for use when electronically connecting the upper and lower units of a stacking assembly for either main incomer or split load arrangements.

This kit must be used to ensure compliance with BS EN 60439-3: 1999.



Assembly using a stacking kit

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circuit protection

## Consumer Units

### INSULATED SURFACE

### METAL FLUSH



K5604sMAG



K5608sMAG



K5612sMAG



K5616sMAG



K5621sMAG



K6508sMAG



K6512sMAG



K6516sMAG



K6521sMAG

#### K5604sMAG

ACCEPTS 4  
ONE MODULE PRODUCTS  
(1 INTEGRAL NEUTRAL BAR)

#### K5608sMAG

ACCEPTS 8  
ONE MODULE PRODUCTS  
(1 INTEGRAL NEUTRAL BAR)

All units are magnolia coloured.

All units feature a robust base together with an all over front cover and moulded lid in an impact resistant, flame retardant thermoplastic. Cable entry points are located on top, bottom, side and rear surfaces.

#### DIMENSIONS:

	WIDTH	HEIGHT	DEPTH
K5604sMAG:	140 x	230 x	110mm
K5608sMAG:	234 x	230 x	110mm
K5612sMAG:	306 x	230 x	110mm
K5616sMAG:	378 x	230 x	110mm
K5621sMAG:	468 x	230 x	110mm

Main incomer maximum rating  
K5604sMAG and K5604sMAG: 63A

All other consumer units: 100A

#### 1 K5612sMAG

ACCEPTS 12  
ONE MODULE PRODUCTS  
(2 INTEGRAL NEUTRAL BARS  
FITTED WITH LINK)

#### 1 K5616sMAG

ACCEPTS 16  
ONE MODULE PRODUCTS  
(3 INTEGRAL NEUTRAL BARS  
FITTED WITH LINK)

#### 1 K5621sMAG

ACCEPTS 21  
ONE MODULE PRODUCTS  
(4 INTEGRAL NEUTRAL BARS  
FITTED WITH LINKS)

Degree of protection to BS EN 60529 to IP2XC.

Precautions must be taken to maintain the IP rating, e.g. use of cable glands and knockouts.

BS EN 60439-3: 1999

#### 1 K6508sMAG

ACCEPTS 8  
ONE MODULE PRODUCTS  
(1 INTEGRAL NEUTRAL BAR)

#### 1 K6512sMAG

ACCEPTS 12  
ONE MODULE PRODUCTS  
(2 INTEGRAL NEUTRAL BARS  
FITTED WITH LINK)

All units feature a tough galvanised metal box for insertion into the wall cavity, which can be secured at the rear or panel-mounted using the brackets supplied. The DIN rail embodies a useful alignment adjusting mechanism to make for a speedy installation. The units have an impact resistant, flame retardant, thermoplastic cover, lid and a flush moulded frame is supplied to overlap the exposed cavity to produce a smooth line between unit and wall.

Degree of protection to BS EN 60529 to IP2XC.

Precautions must be taken to maintain the IP rating, e.g. use of cable glands and knockouts.

#### 1 K6516sMAG

ACCEPTS 16  
ONE MODULE PRODUCTS  
(3 INTEGRAL NEUTRAL BARS  
FITTED WITH LINK)

#### 1 K6521sMAG

ACCEPTS 21  
ONE MODULE PRODUCTS  
(4 INTEGRAL NEUTRAL BARS  
FITTED WITH LINKS)

BS EN 60439-3: 1999

#### DIMENSIONS:

	WIDTH	HEIGHT	DEPTH
K6508sMAG:	234 x	230 x	106.5mm
K6512sMAG:	306 x	230 x	106.5mm
K6516sMAG:	378 x	230 x	106.5mm
K6521sMAG:	468 x	230 x	106.5mm

Flush frame adds 38mm per side to the unit

#### WALL CAVITY DIMENSIONS:

	WIDTH	HEIGHT	DEPTH (min)
K6508sMAG:	245 x	235 x	67mm
K6512sMAG:	315 x	235 x	67mm
K6516sMAG:	390 x	235 x	67mm
K6521sMAG:	480 x	235 x	67mm

Depth of flush consumer unit visible on wall: 50mm

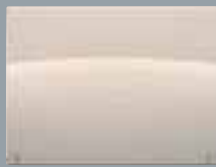
**FACTORY BUILT SERVICE**  
MK can save you time and money by pre-assembling Consumer units with your required Sentry components

Cover mounted blanks are supplied with ALL consumer units  
(2 off x 1 for 4, 8 and 12 module and 2 off x 2 for 16 and 21 module)

## Consumer Units

WITH SPLIT-LOAD SINGLE  
RCD ARRANGEMENTS  
METAL  
SURFACE

WITH SPLIT-LOAD SINGLE  
RCD ARRANGEMENTS  
INSULATED  
SURFACE



K5582sMAG



K5566sMAG



K5586sMAG



K5581sMAG



K5682sMAG



K5662sMAG



K5666sMAG



K5686sMAG



K5681sMAG

### K5582sMAG

100A SWITCH DISCONNECTOR AND 63A 30mA RCD. ACCEPTS A FURTHER 8 ONE MODULE PRODUCTS IN ANY CONFIGURATION OF RCD PROTECTED AND UNPROTECTED CIRCUITS BETWEEN 1/8 AND 6/1

### K5566sMAG

100A SWITCH DISCONNECTOR AND 63A 30mA RCD. ACCEPTS A FURTHER 12 ONE MODULE PRODUCTS IN ANY CONFIGURATION OF RCD PROTECTED AND UNPROTECTED CIRCUITS BETWEEN 1/8 AND 8/1

All units are magnolia coloured.

All units are pre-fitted with a switch disconnecter and RCD together with all necessary split-load cabling. The flexibility of design allows the RCD to be positioned to suit the required configuration of RCD protected and non-protected circuits, subject to the rating of either the switch or RCD not being exceeded. MK recommends the use of RCBOs for non RCD protected circuits to comply with the 17th Edition of the Wiring Regulations.

#### DIMENSIONS:

	WIDTH	HEIGHT	DEPTH
K5582sMAG:	306	x 230	x 110mm
K5566sMAG:	378	x 230	x 110mm
K5586sMAG:	378	x 230	x 110mm
K5581sMAG:	468	x 230	x 110mm

### K5586sMAG

100A SWITCH DISCONNECTOR AND 80A 30mA RCD. ACCEPTS A FURTHER 12 ONE MODULE PRODUCTS IN ANY CONFIGURATION OF RCD PROTECTED AND UNPROTECTED CIRCUITS BETWEEN 1/8 AND 8/1

### K5581sMAG

100A SWITCH DISCONNECTOR AND 80A 30mA RCD. ACCEPTS A FURTHER 17 ONE MODULE PRODUCTS IN ANY CONFIGURATION OF RCD PROTECTED AND UNPROTECTED CIRCUITS BETWEEN 1/14 AND 14/1

Degree of Protection to BS EN 60529 to IP2XC

Precautions must be taken to maintain the IP rating e.g. use of cable glands and knockouts

BS EN 60439-3: 1999

### K5682sMAG

100A SWITCH DISCONNECTOR AND 63A 30mA RCD. ACCEPTS A FURTHER 8 ONE MODULE PRODUCTS IN ANY CONFIGURATION OF RCD PROTECTED & UNPROTECTED CIRCUITS BETWEEN 1/6 AND 6/1

### K5662sMAG

100A SWITCH DISCONNECTOR AND 80A 30mA RCD. ACCEPTS A FURTHER 8 ONE MODULE PRODUCTS IN ANY CONFIGURATION OF RCD PROTECTED & UNPROTECTED CIRCUITS BETWEEN 1/6 AND 6/1

### K5666sMAG

100A SWITCH DISCONNECTOR AND 63A 30mA RCD. ACCEPTS A FURTHER 12 ONE MODULE PRODUCTS IN ANY CONFIGURATION OF RCD PROTECTED & UNPROTECTED CIRCUITS BETWEEN 1/8 AND 8/1

All units are magnolia coloured.

All units are pre-fitted with a switch disconnecter and RCD together with all necessary split load cabling. The flexibility of design allows the RCD to be positioned to suit the required configuration of RCD protected and non-protected circuits, subject to the rating of either the switch or RCD not being exceeded. MK recommends the use of RCBOs for non RCD protected circuits to comply with the 17th Edition of the Wiring Regulations.

### K5686sMAG

100A SWITCH DISCONNECTOR AND 80A 30mA RCD. ACCEPTS A FURTHER 12 ONE MODULE PRODUCTS IN ANY CONFIGURATION OF RCD PROTECTED & UNPROTECTED CIRCUITS BETWEEN 1/8 AND 8/1

### K5681sMAG

100A SWITCH DISCONNECTOR AND 80A 30mA RCD. ACCEPTS A FURTHER 17 ONE MODULE PRODUCTS IN ANY CONFIGURATION OF RCD PROTECTED & UNPROTECTED CIRCUITS BETWEEN 14/1 AND 1/14

#### DIMENSIONS:

	WIDTH	HEIGHT	DEPTH
K5682sMAG:	306	x 230	x 110mm
K5662sMAG:	306	x 230	x 110mm
K5666sMAG:	378	x 230	x 110mm
K5686sMAG:	378	x 230	x 110mm
K5681sMAG:	468	x 230	x 110mm

Degree of protection to BS EN 60529:1992 IP2XC

Precautions must be taken to maintain the IP rating. eg. correct use of cable glands and knockouts

BS EN 60439-3: 1999

Cover mounted blanks are supplied with ALL consumer units (2 off x 1 for 4, 8 and 12 module and 2 off x 2 for 16 and 21 module)

**FACTORY BUILT SERVICE**  
MK can save you time and money by pre-assembling Consumer units with your required Sentry components

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circuit protection

WITH SPLIT LOAD  
DUAL/TRIPLE RCD  
ARRANGEMENT  
METAL  
SURFACE

WITH SPLIT LOAD  
DUAL/TRIPLE RCD  
ARRANGEMENT  
INSULATED  
SURFACE



K5566sMAG17ED



K5586sMAG17ED



K5581sMAG17ED



K5583sMAG17ED



K5584sMAG17ED



K5666sMAG17ED



K5686sMAG17ED



K5688sMAG17ED



K5687sMAG17ED

**K5566sMAG17ED** <sup>1</sup>  
100A SWITCH DISCONNECTOR AND 2 X  
63A 30MA RCDS. ACCEPTS A FURTHER 10  
ONE MODULE PRODUCTS \*

**K5586sMAG17ED** <sup>1</sup>  
100A SWITCH DISCONNECTOR 80A AND  
63A 30MA RCDS. ACCEPTS A FURTHER 10  
ONE MODULE PRODUCTS \*

**K5581sMAG17ED** <sup>1</sup>  
100A SWITCH DISCONNECTOR, 80A AND  
63A 30MA RCDS. ACCEPTS A FURTHER 15  
ONE MODULE PRODUCTS \*

**K5583sMAG17ED** <sup>1</sup>  
100A SWITCH DISCONNECTOR AND 2 X  
63A 30MA RCDS. ACCEPTS A FURTHER 15  
ONE MODULE PRODUCTS \*

**K5584sMAG17ED** <sup>1</sup>  
100A SWITCH DISCONNECTOR, 2 X 63A  
AND ONE 40A 30MA RCDS. ACCEPTS A  
FURTHER 13 ONE MODULE PRODUCTS \*

**K5666sMAG17ED** <sup>1</sup>  
100A SWITCH DISCONNECTOR AND 2 X  
63A 30MA RCDS. ACCEPTS A FURTHER 10  
ONE MODULE PRODUCTS \*

**K5686sMAG17ED** <sup>1</sup>  
100A SWITCH DISCONNECTOR 80A AND  
63A 30MA RCDS. ACCEPTS A FURTHER 10  
ONE MODULE PRODUCTS \*

**K5688sMAG17ED** <sup>1</sup>  
100A SWITCH DISCONNECTOR AND 2 X  
80A 30MA RCDS. ACCEPTS A FURTHER 10  
ONE MODULE PRODUCTS \*

**K5687sMAG17ED** <sup>1</sup>  
100A SWITCH DISCONNECTOR AND 2 X  
80A 30MA RCDS. ACCEPTS A FURTHER 15  
ONE MODULE PRODUCTS \*

All units are magnolia coloured. All units are pre-fitted with a switch disconnector and either two or three RCDs together with all necessary split-load cabling. All units have the capacity to substitute Protected with Unprotected circuits for use with fridges, freezers, burglar alarms and other critical circuits. MK recommends the use of RCBOs for non RCD protected circuits to comply with the 17th Edition of the Wiring Regulations.

#### DIMENSIONS:

	WIDTH	HEIGHT	DEPTH
K5566sMAG17ED:	378	x 230	x 110mm
K5586sMAG17ED:	378	x 230	x 110mm
K5581sMAG17ED:	468	x 230	x 110mm
K5583sMAG17ED:	468	x 230	x 110mm
K5584sMAG17ED:	468	x 230	x 110mm
K5687sMAG17ED:	468	x 230	x 110mm

Degree of Protection to  
BS EN 60529 to IP2XC  
Precautions must be taken to maintain the IP  
rating e.g. use of cable glands and knockouts  
BS EN 60439-3: 1999

All units are magnolia coloured. All units are pre-fitted with a switch disconnector and either two or three RCDs together with all necessary split-load cabling. All units have the capacity to substitute Protected with Unprotected circuits for use with fridges, freezers, burglar alarms and other critical circuits. MK recommends the use of RCBOs for non RCD protected circuits to comply with the 17th Edition of the Wiring Regulations.

#### DIMENSIONS:

	WIDTH	HEIGHT	DEPTH
K5666sMAG17ED:	378	x 230	x 110mm
K5686sMAG17ED:	378	x 230	x 110mm
K5688sMAG17ED:	378	x 230	x 110mm
K5681sMAG17ED:	468	x 230	x 110mm
K5687sMAG17ED:	468	x 230	x 110mm
K5683sMAG17ED:	468	x 230	x 110mm
K5684sMAG17ED:	468	x 230	x 110mm

**\*For potential configurations, please refer to pages 276-277**

## Consumer Units



K5681sMAG17ED



K5683sMAG17ED



K5684sMAG17ED

**K5681sMAG17ED**

100A SWITCH DISCONNECTOR, 80A AND 63A 30MA RCDS. ACCEPTS A FURTHER 15 ONE MODULE PRODUCTS\*

**K5683sMAG17ED**

100A SWITCH DISCONNECTOR AND 2 X 63A 30MA RCDS. ACCEPTS A FURTHER 15 ONE MODULE PRODUCTS\*

**K5684sMAG17ED**

100A SWITCH DISCONNECTOR, TWO 63A AND ONE 40A 30MA RCDS. ACCEPTS A FURTHER 13 ONE MODULE PRODUCTS\*

\*For potential configurations, please refer to pages 276-277

Degree of Protection to  
BS EN 60529 to IP2XC

Precautions must be taken to maintain the IP rating e.g. use of cable glands and knockouts  
BS EN 60439-3: 1999

## DIMENSIONS:

	WIDTH	HEIGHT	DEPTH
K5666sMAG17ED:	378	x 230	x 110mm
K5686sMAG17ED:	378	x 230	x 110mm
K5688sMAG17ED:	378	x 230	x 110mm

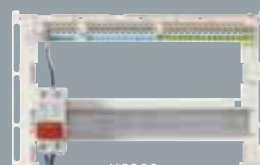
Degree of Protection to  
BS EN 60529 to IP2XC

Precautions must be taken to maintain the IP rating e.g. use of cable glands and knockouts  
BS EN 60439-3: 1999

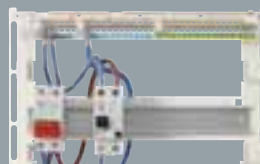
K5681sMAG17ED:	468	x 230	x 110mm
K5687sMAG17ED:	468	x 230	x 110mm
K5683sMAG17ED:	468	x 230	x 110mm
K5684sMAG17ED:	468	x 230	x 110mm

## Skeleton Units

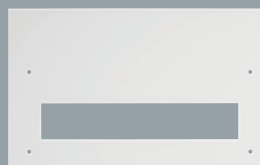
FOR MOUNTING IN A  
MANTEL/CLIFTON TYPE  
ENCLOSURE



K6000s



K6001s



Both K6000s and K6001s are supplied with a 2 piece cover

**K6000s**

INCLUDES 1 X 100A SWITCH DISCONNECTOR ACCEPTS A FURTHER 12 ONE MODULE PRODUCTS IN ANY CONFIGURATION OF RCD PROTECTED AND UNPROTECTED CIRCUITS BETWEEN 2/10 AND 10/2 (NOTE RCDS TAKE TWO SPACES)  
1 INTEGRAL NEUTRAL BAR

**K6001s**

INCLUDES 1 X 100A SWITCH DISCONNECTOR AND 1 X 63A 30MA RCD ACCEPTS A FURTHER 10 ONE MODULE PRODUCTS IN ANY CONFIGURATION OF RCD PROTECTED AND UNPROTECTED CIRCUITS BETWEEN 2/8 AND 8/2 (NOTE RCDS TAKE TWO SPACES)

These units are suitable for use in most Mantel and Clifton type enclosures. Factory assembled units are available for specific installations.

## DIMENSIONS WITH COVER:

	WIDTH	HEIGHT	DEPTH
K6000s:	333	x 216	x 65mm
K6001s:	333	x 216	x 65mm

Degree of Protection to  
BS EN 60529:1992 IP30

Precautions must be taken to maintain the IP rating, eg. correct use of cable glands and knockouts.

BS EN 60439-3:1999

## Garage/Shower Kits

IP65



5702sP1



5702sP2

**5702sP1**

INSULATED 4 MODULE IP65 GARAGE KIT. COMPLETE WITH 40A 30mA RCD AND 2 X MCB (1 X B TYPE 6A, 1 X B TYPE 16A)

**5702sP2**

INSULATED 4 MODULE IP65 SHOWER KIT. COMPLETE WITH 63A 30mA RCD AND 1 X 50A MCB

## DIMENSIONS:

	WIDTH	HEIGHT	DEPTH
5702sP1:	123	x 200	x 112mm
5702sP2:	123	x 200	x 112mm

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circuit protection

## Enclosures

### IP65 WEATHERPROOF ENCLOSURE

### IP30 ENCLOSURE

## Switch Disconnectors Double Pole

## MCBs Single Pole

### TWO MODULE

### TYPE B ONE MODULE



**5702s**  
WEATHERPROOF  
COMPLETE WITH NEUTRAL AND  
EARTH TERMINAL BLOCK  
ACCEPTS UP TO 4 MODULES

**5704s**  
WEATHERPROOF  
COMPLETE WITH NEUTRAL AND  
EARTH TERMINAL BLOCK  
ACCEPTS UP TO 8 MODULES

**1** **5502s**  
INSULATED COMPLETE WITH  
MOUNTING RAIL, NEUTRAL  
AND EARTH TERMINALS  
TWO MODULE

**1** **5504s**  
METAL  
WITH MOUNTING RAIL,  
EARTH TERMINALS AND  
MOULDED FRONT PLATE  
FOUR MODULE

**1** **5604s**  
INSULATED  
WITH MOUNTING RAIL,  
TWO INTEGRAL BLANKING PLATES  
AND TAMPER-PROOFING  
COMPONENTS  
FOUR MODULE

**1** **5500s**  
100A 230V

**1** **5560s**  
63A 230V

**5** **5903s**  
3A 230V

**5** **5906s**  
6A 230V

**5910s**  
10A 230V

**5916s**  
16A 230V

**10** **5920s**  
20A 230V

**10** **5925s**  
25A 230V

**10** **5932s**  
32A 230V

**10** **5940s**  
40A 230V

**10** **5945s**  
45A 230V

**10** **5950s**  
50A 230V

Typical applications for enclosures are house extensions, garages and small workshops. These enclosures will accommodate two or four module Sentry RCDs or a combination of Sentry modules, excluding contactors and RCBOs.

DIMENSIONS:

	WIDTH	HEIGHT	DEPTH
5702s:	123 x	200 x	112mm
5704s:	195 x	200 x	112mm
5502s:	130 x	90 x	90mm
5504s:	188 x	121 x	74mm
5604s:	150 x	110 x	90mm

Degree of Protection to  
BS EN 60529:1992  
5702s: IP65  
5704s: IP65  
5502s: IP30  
5504s: IP30  
5604s: IP30

Precautions must be taken to maintain the IP rating, eg. correct use of cable glands and knockouts  
IP65 enclosures to EN 60670

Suitable for installation in Sentry Consumer Units and two or four module enclosures. Accepts direct to busbar or cable-in / cable-out connection. Category of duty: AC22A for switching of resistive and inductive loads.

Positive contact status indication in accordance with 17th Edition IEE Wiring Regulations (537.2.2.2 and 537.3.2.2)

DIMENSIONS:  
81 x 36 x 76mm

CABLE CAPACITY:  
50mm<sup>2</sup>

BS EN 60947-3: 1999

Suitable for installation in Sentry Consumer Units and two or four module enclosures.

Positive contact status indication in accordance with 17th Edition IEE Wiring Regulations (537.2.2.2 and 537.3.2.2)

DIMENSIONS:  
83 x 18 x 74mm

CABLE CAPACITY:  
3, 6, 10, 16A: 35mm<sup>2</sup>

Short-circuit breaking capacity: 6KA

BS EN 60898: 2003

Suitable for installation in Sentry Consumer Units and two or four module enclosures.

Positive contact status indication in accordance with 17th Edition IEE Wiring Regulations (537.2.2.2 and 537.3.2.2)

DIMENSIONS:  
83 x 18 x 74mm

CABLE CAPACITY:  
20, 32, 40, 50A: 35mm<sup>2</sup>

Short-circuit breaking capacity: 6KA

BS EN 60898: 2003

## MCB Single Pole

TYPE C  
ONE MODULE



8703s 8706s



8720s 8732s



8710s 8716s



8740s 8750s

- 8703s** 3A 230V **10**
- 8706s** 6A 230V **10**
- 8710s** 10A 230V **10**
- 8716s** 16A 230V **10**
- 8720s** 20A 230V **10**
- 8725s** 25A 230V **10**
- 8732s** 32A 230V **10**
- 8740s** 40A 230V **10**
- 8750s** 50A 230V **10**

Suitable for installation in Sentry Consumer Units and two or four module enclosures.

Positive contact status indication in accordance with 17th Edition IEE Wiring Regulations (537.2.2.2 and 537.3.2.2)

DIMENSIONS:  
83 x 18 x 74mm

CABLE CAPACITY:  
3, 6, 10, 16A: 35mm<sup>2</sup>

Short-circuit breaking capacity: 6KA

BS EN 60898: 2003

Suitable for installation in Sentry Consumer Units and two or four module enclosures.

Positive contact status indication in accordance with 17th Edition IEE Wiring Regulations (537.2.2.2 and 537.3.2.2)

DIMENSIONS:  
83 x 18 x 74mm

CABLE CAPACITY:  
20, 32, 40, 50A: 35mm<sup>2</sup>

Short-circuit breaking capacity: 6KA

BS EN 60898: 2003

## RCBOs With Solid Neutral Single Pole

TYPE B  
ONE MODULE



7932s 7933s 7934s 7935s



7936s 7937s 7938s 7939s

- 10** **7932s** 6A 230V  
30mA TRIPPING CURRENT
- 10** **7933s** 10A 230V  
30mA TRIPPING CURRENT
- 10** **7934s** 16A 230V  
30mA TRIPPING CURRENT
- 1** **7935s** 20A 230V  
30mA TRIPPING CURRENT
- 1** **7936s** 32A 230V  
30mA TRIPPING CURRENT
- 1** **7937s** 40A 230V  
30mA TRIPPING CURRENT
- 1** **7938s** 45A 230V  
30mA TRIPPING CURRENT
- 1** **7939s** 50A 230V  
30mA TRIPPING CURRENT

Suitable for installation in Sentry Consumer Units.

Positive contact status indication in accordance with 17th Edition IEE Wiring Regulations (537.2.2.2 and 537.3.2.2)

DIMENSIONS:  
119 x 18 x 73mm

CABLE CAPACITY:  
Live 25mm<sup>2</sup>,  
Neutral 25mm<sup>2</sup>

Short circuit breaking capacity: 6KA

BS EN 61009-1

BS IEC61009-2-2

## Residential 6kA RCD Double Pole

16 AMP  
TWO MODULE



7816s

32 AMP  
TWO MODULE



7832s

40 AMP  
TWO MODULE



7840s

- 1** **7816s** 16A 230V  
30mA TRIPPING CURRENT
- 1** **7832s** 32A 230V  
30mA TRIPPING CURRENT
- 1** **7840s** 40A 230V  
30mA TRIPPING CURRENT





technical hotline +44 (0)1268 563720

circuit protection

Industrial  
10kA  
RCDs  
Double Pole

63 AMP TWO MODULE    80 AMP TWO MODULE    16 AMP TWO MODULE    32 AMP TWO MODULE    40 AMP TWO MODULE    63 AMP TWO MODULE    80 AMP TWO MODULE    100 AMP TWO MODULE



- |   |  |   |   |   |  |  |   |          |
|---|--|---|---|---|--|--|---|----------|
| <b>7860s</b><br>63A 230V<br>30mA TRIPPING<br>CURRENT  | <b>1</b> <b>7880s</b><br>80A 230V<br>30mA TRIPPING<br>CURRENT  | <b>1</b> <b>6016s</b><br>16A 110V<br>10mA TRIPPING<br>CURRENT | <b>1</b> <b>6032s</b><br>32A 110V<br>30mA TRIPPING<br>CURRENT | <b>1</b> <b>5740s</b><br>40A 230V<br>30mA TRIPPING<br>CURRENT | <b>1</b> <b>5760s</b><br>63A 230V<br>30mA TRIPPING<br>CURRENT  | <b>1</b> <b>6080s</b><br>80A 110V<br>30mA TRIPPING<br>CURRENT  | <b>1</b> <b>7700s</b><br>100A 230V<br>30mA TRIPPING<br>CURRENT  | <b>1</b> |
| <b>7560s</b><br>63A 230V<br>100mA<br>TRIPPING CURRENT | <b>1</b> <b>7580s</b><br>80A 230V<br>100mA TRIPPING<br>CURRENT | <b>1</b> <b>6416s</b><br>16A 110V<br>30mA TRIPPING<br>CURRENT | <b>1</b> <b>6730s</b><br>32A 230V<br>30mA TRIPPING<br>CURRENT | <b>1</b>  | <b>1</b> <b>6160s</b><br>63A 230V<br>100mA TRIPPING<br>CURRENT | <b>1</b> <b>5780s</b><br>80A 230V<br>30mA TRIPPING<br>CURRENT  | <b>1</b> <b>6600s</b><br>100A 230V<br>100mA TRIPPING<br>CURRENT | <b>1</b> |
| <b>7660s</b><br>63A 230V<br>300mA TRIPPING<br>CURRENT | <b>1</b> <b>7680s</b><br>80A 230V<br>300mA TRIPPING<br>CURRENT | <b>1</b> <b>6316s</b><br>16A 230V<br>10mA TRIPPING<br>CURRENT | <b>1</b>  |   | <b>1</b> <b>5860s</b><br>63A 230V<br>300mA TRIPPING<br>CURRENT | <b>1</b> <b>6180s</b><br>80A 230V<br>100mA TRIPPING<br>CURRENT | <b>1</b> <b>7800s</b><br>100A 230V<br>300mA TRIPPING<br>CURRENT | <b>1</b> |
|   |  | <b>5716s</b><br>16A 230V<br>30mA TRIPPING<br>CURRENT          | <b>1</b>  |   |  | <b>5880s</b><br>80A 230V<br>300mA TRIPPING<br>CURRENT          | <b>1</b>  |          |

Suitable for installation in Sentry Consumer Units and two or four module enclosures.

Positive contact status indication in accordance with 17th Edition IEE Wiring Regulations (537.2.2.2 and 537.3.2.2)

Dimension  
85 x 36 x 75mm

CABLE CAPACITY:  
50mm<sup>2</sup>

BS EN 61008: 1995

Industrial 10kA RCDs  
Pulsating D.C.  
Fault Current Sensitive  
Double Pole

TWO MODULE

Industrial  
10kA RCDs  
Time  
Delayed  
Double  
Pole

TWO MODULE

Industrial 10kA  
RCDs  
Four Pole

25 AMP

FOUR MODULE

40 AMP

FOUR MODULE



6216s



6716s



5640s



6980s



6425s



6440s



6630s



5660s



6400s



6240s

**6216s**  
16A 230V  
10mA TRIPPING CURRENT

**6716s**  
16A 230V  
30mA TRIPPING CURRENT

**1** **6630s**  
32A 230V  
30mA TRIPPING CURRENT

**1** **5640s**  
40A 230V  
30mA TRIPPING CURRENT

**5660s**  
63A 230V  
30mA TRIPPING CURRENT

**1** **6980s**  
80A 230V  
100mA TRIPPING  
CURRENT  
TIME DELAYED

**1** **6400s**  
100A 230V  
100mA TRIPPING  
CURRENT  
TIME DELAYED

**1** **6425s**  
25A 230/400V  
30mA TRIPPING CURRENT

**1** **6440s**  
40A 230/400V  
30mA TRIPPING CURRENT

**1** **6240s**  
40A 230/400V  
100mA TRIPPING CURRENT

Suitable for installation  
in Sentry Consumer Units  
and two or four module  
enclosures.

Positive contact status  
indication in accordance  
with 17th Edition IEE  
Wiring Regulations  
(537.2.2.2 and 537.3.2.2)

DIMENSIONS:  
85 x 36 x 75mm

CABLE CAPACITY:  
50mm<sup>2</sup>

BS EN 61008:1995

Suitable for installation  
in Sentry Consumer  
Units and Four Module  
enclosures. When  
used as a mains  
incomer these units will  
provide discrimination  
with downstream  
instantaneously  
operating 10mA or  
30 mA RCD's. For  
example, they can be  
used as main incomers  
on split load consumer  
units where it is not  
desirable, because  
of the possibility of  
unwanted tripping, to  
place all of the circuits  
on an instantaneous  
30mA RCD, but where  
earth leakage protection  
is still required for  
these circuits or  
where compliance is

Suitable for installation in Sentry four module  
enclosures and Commando Combi.

Positive contact status indication in  
accordance with 17th Edition IEE Wiring  
Regulations  
(537.2.2.2 and 537.3.2.2)

DIMENSIONS:  
85 x 72 x 75mm

CABLE CAPACITY:  
50mm<sup>2</sup>

BS EN 61008:1995

required to the indirect contact  
protection requirements of the  
IEE wiring regulations.

DIMS: 81 x 36 x 76mm

CABLE CAPACITY: 50mm<sup>2</sup>

BS EN 61008: 1995

NOT TO BE USED FOR  
PERSONAL PROTECTION  
AGAINST ELECTRIC SHOCK

## FACTORY BUILT SERVICE

MK can save you time and money by pre-assembling Consumer units  
with your required Sentry components

technical hotline +44 (0)1268 563720

circuit protection

Industrial 10kA RCD  
Pulsating D.C.  
Fault Current  
Sensitive  
Four Pole

Contactors

63 AMP

FOUR MODULE

FOUR MODULE

ONE MODULE TWO MODULE THREE MODULE



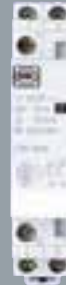
6463s



6640s



6363s



6220s



7240s



7440s



6720s



7263s



7463s

**6463s**

63A 230/400V  
30mA TRIPPING CURRENT

**6363s**

63A 230/400V  
100mA TRIPPING CURRENT

**6263s**

63A 230/400V  
300mA TRIPPING CURRENT

1

**6640s**

40A 230/400V  
30mA TRIPPING CURRENT

1

Suitable for installation in Sentry two or four module enclosures.

Positive contact status indication in accordance with 17th Edition IEE Wiring Regulations (537.2.2.2 and 537.3.2.2)

DIMENSIONS:  
85 x 72 x 75mm

CABLE CAPACITY:  
50mm<sup>2</sup>

BS EN 61008: 1995

1

1

**6220s**

20A  
DOUBLE POLE

**6720s**

20A  
DOUBLE POLE  
WITH MANUAL  
OVERRIDE

Suitable for installation in Sentry Consumer Units and two or four module enclosures. Automatically switches higher loads than possible with a time switch eg; off peak tariffs.

A manual override enables the temporary setting of the contactor in either the on or off position in addition to normal automatic operation.

When a contactor is mounted alongside an MCB of greater than 10 amp current rating or two contactors are mounted alongside an MCB or side by side, it is necessary to insert a blank module between them (list no.5544s)

1

**6420s**

20A  
FOUR POLE

1

**7240s**

40A  
DOUBLE POLE

**7263s**

63A  
DOUBLE POLE

**CONTACTOR RATINGS:**

List no	6220s 6420s 6720s	7240s 7440s	7263s 7463s
RATED CURRENT I <sub>th</sub>	20A	40A	63A
HEATING: Single phase 230V Three phase 400V	5.4kW 16kW	8.6kW 26kW	13.6kW 41kW
MOTORS: Single phase 230V Three phase 400V	1.1kW 4kW	2.2kW 7.5kW	4kW 11kW
LIGHTING: Incandescent and Halogen lamps: Fluorescent Lamps: (Electronic Ballast)	2,800W 2,000W	7,000W 4,200W	10,000W 6,300W
VOLTAGE RATING: (coil)	230V 50Hz	230V 50Hz	230V 50Hz
CABLE CAPACITY:	6mm <sup>2</sup> rigid	25mm <sup>2</sup> rigid	25mm <sup>2</sup> rigid

BS EN 61095

**DIMENSIONS:**

6220s: 84 x 18 x 66mm 6420s: 84 x 36 x 66mm 6720s: 84 x 18 x 66mm  
7240s: 84 x 36 x 66mm 7263s: 84 x 36 x 66mm 7440s: 84 x 54 x 66mm  
7463s: 84 x 54 x 66mm (including half module blank)

1

1

1

**7440s**

40A  
FOUR POLE

1

**7463s**

63A  
FOUR POLE

1

## Bell Transformer

## Time Switches

**TWO MODULE**      **SYNCHRONOUS THREE MODULE**      **QUARTZ STABILISED THREE MODULE**      **SYNCHRONOUS ONE MODULE**      **DIGITAL ONE CHANNEL TWO MODULE**      **DIGITAL ONE CHANNEL ONE MODULE**      **DIGITAL TWO CHANNEL TWO MODULE**



5711s



5707s



5824s



5833s



5731s



5733s



5732s



5724s

**5711s** **1**  
RATING 1A AT 8V  
PRIMARY  
220 – 240V A.C.50Hz

Suitable for installation in Sentry Consumer Units and two or four module enclosures.

Note: When installed in a consumer unit, ensure that output cables inside the enclosures are suitable for a 230V environment, either by sleeving the bell wire to BS 2848 or using 230V cable.

Complete with terminal covers. Also suitable for surface mounting.

DIMENSIONS:  
88 x 36 x 67mm  
CABLE CAPACITY:  
1 x 2.5mm<sup>2</sup>  
EN 61558-2-8

**5707s** **1**  
7 DAY DIAL  
MIN SETTING 3 HOURS

**5724s** **1**  
24 HOUR DIAL  
MIN SETTING 30 MINUTES

Suitable for DIN rail mounting in Sentry Consumer Units or four module enclosures.

VOLTAGE RATING:  
220-240Va.c. 50Hz

CURRENT RATING:  
Resistive load 16A  
Inductive load 4A  
Tungsten lamps 6A (1350W)  
Fluorescent lamps 1350W  
DIMENSIONS:  
85 x 54 x 68mm  
CABLE CAPACITY:  
2 x 2.5mm<sup>2</sup> or 4 x 1.5mm<sup>2</sup>

**5824s** **1**  
24 HOUR DIAL  
MIN SETTING 30 MINUTES

Suitable for DIN rail mounting in Sentry Consumer Units and two or four module enclosures.  
Power reserve 150 hours

VOLTAGE RATING:  
220-240Va.c. 50-60Hz

CURRENT RATING:  
Resistive load 16A  
Inductive load 4A  
Tungsten lamps 6A (1350W)  
Fluorescent lamps 1350W  
DIMENSIONS:  
85 x 54 x 68mm  
CABLE CAPACITY:  
2 x 2.5mm<sup>2</sup> or 4 x 1.5mm<sup>2</sup>  
EN 60730-2-7: 1993

**5833s** **1**  
24 HOUR DIAL  
MIN SETTING 30 MINUTES

Suitable for DIN rail mounting in Sentry Consumer Units and two or four module enclosures

VOLTAGE RATING:  
240V 50Hz

CURRENT RATING:  
Resistive load 16A  
Inductive load 4A  
Tungsten lamps 6A (1350W)  
Fluorescent lamps 1350W  
DIMENSIONS:  
90 x 18 x 68mm  
CABLE CAPACITY:  
2 x 2.5mm<sup>2</sup> or 4 x 1.5mm<sup>2</sup>  
EN 60730-2-7: 1993

**5731s** **1**  
24 HOUR/7 DAY DISPLAY  
MIN SETTING 1 MINUTE

Pre-programmed with UK time and automatic summer/winter adjustment.

Provides 50 programming selections. Freely selectable day grouping facility. Manual override, winter/summer time adjustment.

Power reserve of 3 years.  
Suitable for DIN-rail mounting in Sentry Consumer Units and two or four module enclosures.

VOLTAGE RATING:  
240V 50/60Hz

CURRENT RATING:  
Resistive load 16A  
Inductive load 2.5A  
Tungsten lamps 5A (1000W)  
Fluorescent lamps 1000W  
DIMENSIONS:  
85 x 36 x 68mm  
CABLE CAPACITY:  
2 x 2.5mm<sup>2</sup> or 4 x 1.5mm<sup>2</sup>  
EN 60730-2-7: 1993

**5733s** **1**  
24 HOUR DIAL  
MIN SETTING 1 MINUTE

Provides 50 programming selections. Freely selectable day grouping facility. Manual override, winter/summer time adjustment, holiday programme and random generator are standard facilities.

Power reserve of 150 hours.  
Suitable for DIN rail mounting in Sentry Consumer Units and two or four module enclosures

VOLTAGE RATING:  
240V 50/60Hz

CURRENT RATING:  
Resistive load 16A  
Inductive load 2.5A  
Tungsten lamps 5A (1000W)  
Fluorescent lamps 1000W  
DIMENSIONS:  
90 x 18 x 74mm  
CABLE CAPACITY:  
2 x 2.5mm<sup>2</sup> or 4 x 1.5mm<sup>2</sup>  
EN 60730-2-7: 1993

**5732s** **1**  
24 HOUR/7 DAY DISPLAY  
MIN SETTING 1 MINUTE

Pre-programmed with UK time and automatic summer/winter adjustment.

Provides 50 programming selections. Freely selectable day grouping facility. Manual override, winter/summer time adjustment.  
Power reserve of 3 years.  
Suitable for DIN-rail mounting in Sentry Consumer Units and two or four module enclosures.

VOLTAGE RATING:  
240V 50/60Hz

CURRENT RATING:  
Resistive load 16A  
Inductive load 2.5A  
Tungsten lamps 5A (1000W)  
Fluorescent lamps 1000W  
DIMENSIONS:  
85 x 36 x 68mm  
CABLE CAPACITY:  
2 x 2.5mm<sup>2</sup> or 4 x 1.5mm<sup>2</sup>  
EN 60730-2-7: 1993

technical hotline +44 (0)1268 563720

circuit protection

## Time Delay Switches

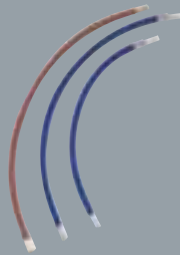
## Consumer Unit Cable Kits

## Accessories

### ONE MODULE



5650s



K5563s



K5565s



5562s



K8041s



K5593s



5544s



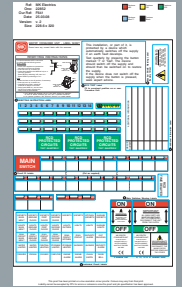
K5545sMAG



K5511s



KAX26s



K5597s



K5599s

**5650s**  
DELAY RANGE  
1 - 7 MINUTES (APPROX)

Suitable for installation in Sentry Consumer Units and two or four module enclosures. Offers time delay control for complete circuits of either tungsten or fluorescent lighting with any number of standard push switches. It can also be used to control fans in bathrooms without a window. Delay setting can be overridden by setting to 'Perm-on' mode, or by fitting a remote overriding switch. Switch has a switching capacity of 16A Resistive loads (upf) Fluorescent lamps uncompensated Series compensated 1300W Parallel compensated 480W CFLS 100W Max. Maximum of 9 units can be connected Incandescent lamps 2000W Neon glow lamp load (locating lamp for Push Switch) 50mA max VOLTAGE RATING: 230V 50Hz DIMENSIONS: 84 x 18 x 70mm CABLE CAPACITY: 1 x 4mm<sup>2</sup> or 2 x 1.5mm<sup>2</sup>

**1** **K5563s**  
SPLIT-LOAD KIT  
Consists of 3 cables (2 neutral and 1 live) for use when assembling a split load arrangement.

**5** **K5565s**  
MULTI-INCOMER KIT  
Consists of a blue flexible cable with pre-fitted terminal for the neutral return from switch or RCD to second or third neutral bar.

**5** **K5568s**  
17th Edition cable kit for switch and twin RCD arrangement

**5** **K5567s**  
A&D cable kit for switch plus triple RCD arrangement

**K5563s**  
For use when assembling split-load arrangement.

**K5565s**  
For use when assembling a consumer unit in a multi-incomer arrangement with separate supply to each incomer.

These kits must be used to ensure compliance with BS EN 60439-3

**5** **5562s**  
EXTENSION TERMINAL  
For use when assembling a consumer unit as a distribution board. Enables direct connection of cables to the neutral bar. Consists of a 25mm<sup>2</sup> capacity terminal with clamp screw.

**5** **K8041s**  
LOCKING DEVICE  
For use when locking a Sentry MCB, RCBO, RCD or switch disconnector in either the on or off position.

**5** **K5593s**  
BARREL LOCK AND KEY KIT  
Suitable for securing 'K' series Sentry Consumer Unit lids.

**1** **5544s**  
MCB BLANK – GREY  
Designed to fill unused modules in Sentry Consumer Units and small enclosures. DIN-rail mounted.

**10** **K5545sMAG**  
COVER MOUNTED BLANK  
For filling spaces in the 'K' series Sentry consumer unit cover, where there are unused modules.

**10** **K5511s**  
BUSBAR  
11 module.

**1** **K5590s**  
BUSBAR  
20 module.

**1** **KAX26s**  
BUSBAR COVER  
Suitable for insulating the busbars K5511s and K5590s 20 module.

**5** **K5597s**  
CONSUMER UNIT LABELS  
Additional printed and blank labels, for identifying devices and circuits on Dual & Triple RCD boards

**5** **K5599s**  
CONSUMER UNIT LABELS  
Additional printed and blank labels, for identifying devices and circuits on single RCD boards.

**10** **K5599s**  
CONSUMER UNIT LABELS  
Additional printed and blank labels, for identifying devices and circuits on single RCD boards.

**1**

**1**

**10**



## range introduction

Sentrysocket provides a high level of protection against electrocution and is available in 4 MK wiring device ranges to suit most applications.

## features and benefits

**Active Control Circuit**

This version of Sentrysocket incorporates a 'RE-SET' mechanism and is mains failure sensitive ie. it will function under all normal conditions expected of an RCD but it will also trip in the event of a power cut or a dramatic reduction in mains voltage. This makes it ideal for use where hazardous situations could occur due to equipment such as rotating machinery and heat developing apparatus becoming suddenly energised after a power cut.

**Passive Control Circuit**

This version of Sentrysocket incorporates a 'STAY-SET' mechanism and is mains failure proof ie. it will function under all normal conditions expected of an RCD but will not trip in the event of a power cut. This makes it suitable for freezers or use in inaccessible or unmanned locations.

**ALL SENTRYSOCKETS ARE PULSATING D.C. AND A.C. FAULT CURRENT SENSITIVE PRODUCTS**

technical hotline +44 (0)1268 563720

circuit protection

## RCD Protected Switchsocket Outlets

**13 AMP LOGIC PLUS FLUSH**

**ALBANY PLUS FLUSH**

**METALCLAD PLUS SURFACE**

**MASTERSEAL PLUS IP66 SURFACE**



K6300WHI



K6301BRC



K6102ALM



K6211ALM



K56301GRY



K6303WHI



K6304BRC



K6302ALM



K6231ALM



K56231BLK



K6231WHI



K6304BSS



K6305ALM



K6233ALM



K56231WHI

- K6300WHI** 1  
1 GANG, 30mA RATED, TRIPPING CURRENT, ACTIVE CONTROL CIRCUIT
- K6303WHI** 1  
1 GANG, 30mA RATED, TRIPPING CURRENT, PASSIVE CONTROL CIRCUIT
- K6211WHI** 1  
2 GANG, 10mA RATED, TRIPPING CURRENT, ACTIVE CONTROL CIRCUIT
- K6231WHI** 1  
2 GANG, 30mA RATED, TRIPPING CURRENT, ACTIVE CONTROL CIRCUIT
- K6233WHI** 1  
2 GANG, 30mA RATED, TRIPPING CURRENT, PASSIVE CONTROL CIRCUIT

- K6301BRC** 1  
1 GANG  
30mA RATED TRIPPING CURRENT ACTIVE CONTROL CIRCUIT
- K6304BRC** 1  
**K6304BSS** 1  
1 GANG  
30mA RATED TRIPPING CURRENT PASSIVE CONTROL CIRCUIT

- K6102ALM** 1  
1 GANG  
10mA RATED TRIPPING CURRENT ACTIVE CONTROL CIRCUIT
- K6302ALM** 1  
1 GANG  
30mA RATED TRIPPING CURRENT ACTIVE CONTROL CIRCUIT
- K6305ALM** 1  
1 GANG  
30mA RATED TRIPPING CURRENT PASSIVE CONTROL CIRCUIT

- K6211ALM** 1  
2 GANG  
10mA RATED TRIPPING CURRENT ACTIVE CONTROL CIRCUIT
- K6231ALM** 1  
2 GANG  
30mA RATED TRIPPING CURRENT ACTIVE CONTROL CIRCUIT
- K6233ALM** 1  
2 GANG  
30mA RATED TRIPPING CURRENT PASSIVE CONTROL CIRCUIT

- K56301GRY** 1  
**K56301WHI** 1  
**K56301BLK** 1  
1 GANG DP  
30mA RATED TRIPPING CURRENT ACTIVE CONTROL CIRCUIT
- K56231GRY** 1  
**K56231WHI** 1  
**K56231BLK** 1  
2 GANG  
30mA RATED TRIPPING CURRENT ACTIVE CONTROL CIRCUIT
- K56233GRY** 1  
**K56233WHI** 1  
**K56233BLK** 1  
2 GANG  
30mA RATED TRIPPING CURRENT PASSIVE CONTROL CIRCUIT

### MOUNTING BOXES

**MOUNTING BOXES:**  
FLUSH: 886ZIC - 35mm deep  
SURFACE: K2140WHI, 30mm deep

These a.c. and pulsating d.c. fault current sensitive products have up to 15mm thick frontplates and are suitable for 35mm deep boxes and supply voltages of 240V a.c., 50Hz.

Boxes must have a minimum depth of 30mm

Refer to Sentrysocket section for more information on active and passive control circuits.

**DIMENSIONS:** 86 x 146mm  
**FIXING CENTRES:** 120.6mm  
**BS 7288: 1990**

FLUSH: 886ZIC  
Boxes must have a minimum depth of 30mm

**SURFACE (BRC)**  
WITH KNOCKOUTS: K897ALM  
WITHOUT KNOCKOUTS: K830ALM

It is important to ensure that the correct control circuit, active or passive, is selected for each application.

Only suitable for supply voltage of 240V a.c., 50Hz.

**DIMENSIONS:** 86 x 146mm  
**FIXING CENTRES:** 120.6mm  
**BS 7288: 1990**

It is important to ensure that the correct control circuit, active or passive, is selected for each application.

Suitable for supply voltage of 240V a.c., 50Hz.

**DIMENSIONS:** 86 x 147 x 54mm

**KNOCKOUTS:** 8 x 20mm  
Three in top side, two in bottom side, one in each end and one in base.

**SPARE BOX:** K897ALM  
**BS 7288: 1990**

It is important to ensure that the correct control circuit, active or passive, is selected for each application.

Suitable for supply voltage of 240V a.c., 50Hz.

**DIMENSIONS:** 86 x 147 x 54mm

**KNOCKOUTS:** 8 x 20mm  
Three in top side, two in bottom side, one in each end and one in base.

**SPARE BOX:** K897ALM  
**BS 7288: 1990**

RCD protected sockets are pulsating d.c. and a.c. fault current sensitive.

Fixing holes are for No.8 woodscrews (not supplied).

Supplied with an earth terminal in the back box. The Sentrysocket has 5 entries. Suitable for supply voltage of 240V a.c. 50Hz.

Standard Shutters.

**DIMENSIONS:** 157 x 175 x 89mm  
**BS 7288: 1990**  
**IP66 BS EN 60529: 1992**

Prestige 3D is a family of three compartment trunking from MK Electric, which satisfies the growing demands of cable management installations, as well as providing greater trunking depth to cater for Cat 5e, 6 and 7 structured cabling. Prestige 3D is rich in unique features offering up to 40% faster installation time compared to Prestige Plus, greater cabling capacity and improved aesthetics.



PRESTIGE 3D DADO AND SKIRTING

PRESTIGE 3D ANTIBAC BLUE

PRESTIGE 3D COMPACT

PRESTIGE 3D ALUMINIUM

### Prestige 3D Dado and Skirting

Prestige 3D Dado and Skirting offers a comprehensive range of Cat 5e, 6 and 7 compliant full 3 compartment trunking with maximum cable capacity.

### Prestige 3D Antibac Blue

Prestige 3D Antibac Blue offers an antibacterial cable management solution for power and data distribution in environments where hygiene is a priority. Prestige 3D Antibac Blue is designed to kill bacteria which can grow on surfaces such as trunking systems. It uses a silver based additive inherent within the PVCu which acts as an effective weapon in fighting harmful bacteria such as MRSA. Independent laboratory tests show kill rate of >99.9% over a 24 hour period for MRSA, and Klebsiella pneumoniae.

### Prestige 3D Compact

Prestige 3D Compact is a Dado system which has a smaller footprint and offers a solution where space is restricted such as above radiators and below window sills. Cables are run in the top and bottom compartments allowing the full depth of the centre compartment for termination to devices. The Compact range is a lower price alternative especially if there are low quantities of cable to manage.

### Prestige 3D Aluminium

New to the Prestige 3D family, this 3 compartment Dado and Skirting satisfies the needs of a Cat 5e, 6 and 7 compliant trunking system. With pre-drilled bases and hinged lids this system is suitable for commercial offices, educational facilities and laboratories.

- **Fully Cat 5e, 6 and 7 compliant**
- **Unique design features provide 40%\* faster installation time**
- **Patented Data Sweep maximises cable capacity without the need for bulbous corners**
- **Improved aesthetics with single piece covers**
- **All PVC extrusions manufactured from 90% recycled materials\*\***
- **10 Year guarantee**

\* Independently verified as 40% faster to install than Prestige Plus

\*\* Based on 2008 consumption



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## range introduction

Prestige 3D Dado and Skirting offers a comprehensive range of Cat 5e, 6 and 7 compliant compartment trunking with maximum cable capacity.

Prestige 3D meets both the demands for easier and faster installation while maintaining high aesthetics.

## features and benefits

- **Faster installation – 40% quicker than Prestige Plus**
- **Cat 5e, 6 and 7 compliant flexible Internal and External Corners, moulded Flat Angles and Tees**
- **Unique 'open box' mounting frames combined with divider knockouts to provide unhindered tool-free cable entry**
- **Innovative External Corner Data Sweep allows continuous cable capacity and maintains the minimum trunking depth**
- **Hinged lid to support cables during installation**
- **Pre-punched bases**
- **Curved outer covers that complement MK Logic Plus accessories**
- **All extrusions manufactured from 90% recycled material\***
- **10 Year guarantee**

\* based on 2008 consumption

**END CAPS**

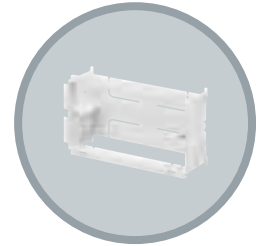
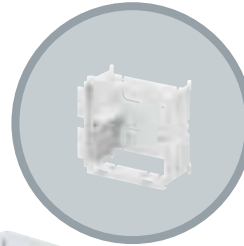
Neatly finishes runs of trunking. (Moulding provides internal location for extra security from optional screw fixing).

**DIVIDER KNOCKOUTS**

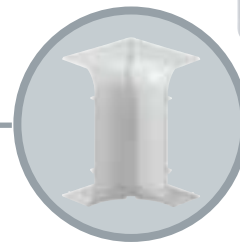
Wiring is also made easy with 50 x 21mm knockouts at 100mm intervals along compartment dividers, providing instant access to mounting boxes, with no drilling or cutting.

**BACK BOXES**

The 1 and 2 gang 35mm and 45mm deep back boxes, 3 gang 45mm deep back box and 1 and 2 gang 40mm frames ensure Cat 5e, 6 and 7 compliance and ease of connection to power and data devices. The open top/bottom allows unhindered tool free cable entry, through the trunking compartment divider knockout. The back box can slide to align with appropriate knockout (see technical pages for restrictions on use).

**PRE-PUNCHED BASES**

Wall fixing is simplified by the inclusion of pre-punched oval holes at 100mm intervals, ensures no drilling is required.

**INTERNAL CORNER**

Designed to accommodate irregularities in the squareness of the corner with a +/- 5 degrees flexibility range. The centre split gives maximum adjustment. Covers are radiused and compatible with Cat 5e, 6 and 7 data cabling requirements.

**PART M**

Compliance to Part M building regulations can be achieved using Part M flange, charcoal devices or charcoal straight cover.

**SCREW FIXING KIT**

Where higher security is required, e.g. schools, all fitting covers can be secured using the Screw Fixing Kit. The Screw Fixing Kit is self-locating on the styling line of the system and has a cover to hide the screw head.

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## FLAT TEES AND ANGLES

The ingenuity of the patented tee design allows a variety of cable drop permutations. The tee's bridge can be fitted in two positions increasing the versatility of cable runs whilst maintaining the correct segregation and Cat 5e, 6 and 7 compliance. Screw fixing hole locations have a protective shroud to prevent the chafing of cables. Both the Flat Angle and Tee compartment divider walls are curved (Cat 5e, 6 and 7 compliant) to allow data cables to lay in with no loss of capacity. The covers are one piece and clip securely into place, and the base is also a single moulded item, giving more strength than fabrication. Joint covers are not required where the tee/angle meets the trunking as the moulded covers now overlap the junction.



## ELECTROMAGNETIC INTERFERENCE

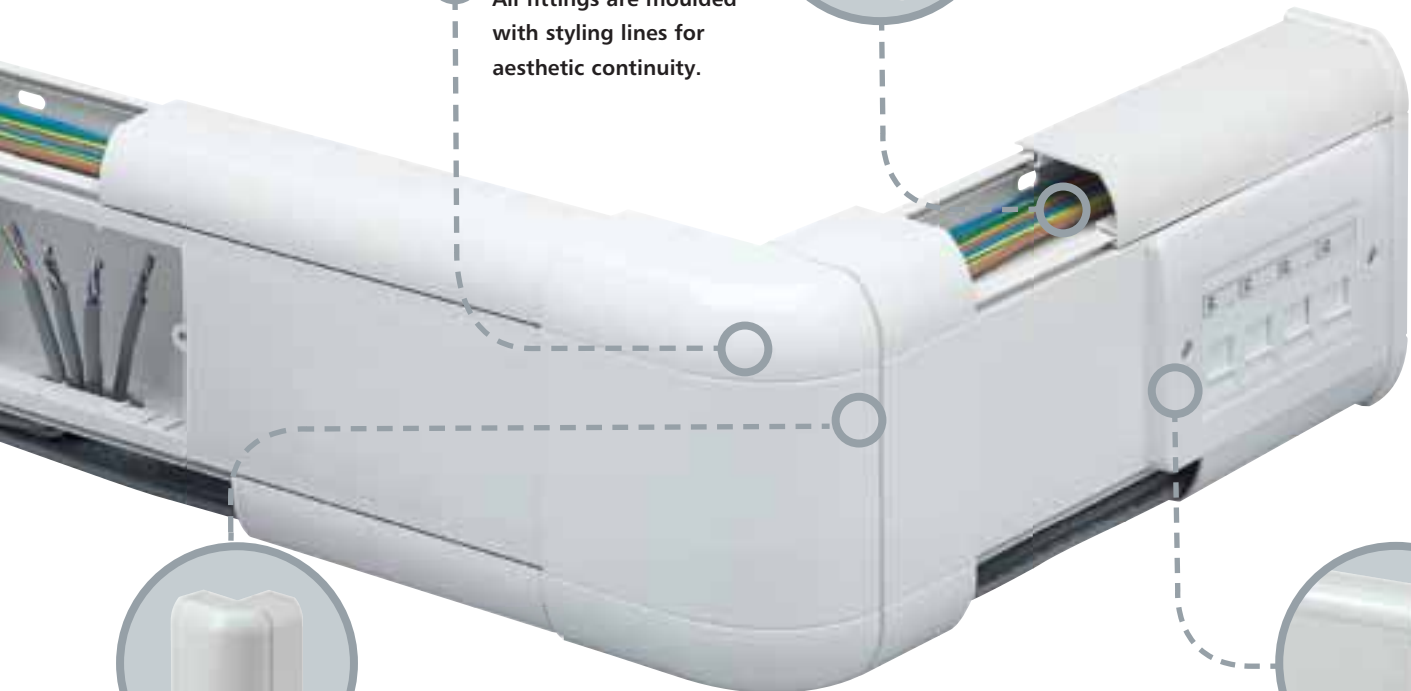
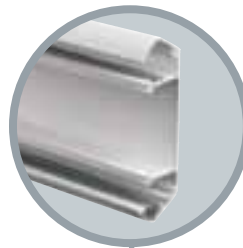
Additional data cable/signal protection is provided by fitting screening divider VP30.

## TRUNKING HINGE LIDS

A two stage location gives a hinge effect, enabling cables to be supported by the trunking cover during the installation. Cover design avoids dust traps and makes cleaning easier, and continues the aesthetics of the trunking.

## STYLING LINES

All fittings are moulded with styling lines for aesthetic continuity.



## EXTERNAL CORNER

External Corners accommodate +/- 5 degree irregularities in the squareness of a corner. Corners come ready assembled to click into place, and offset side splits hide the effect of the split line for aesthetics.

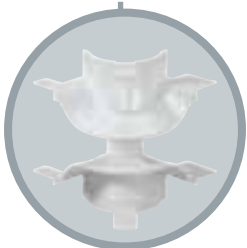
## DATA SWEEP

The unique patented Data Sweep provides Cat 5e, 6 and 7 data cabling compliance, with no loss of capacity and without the need for bulky, protruding corner covers.

## CHOICE OF TWO PROFILES

Available in Dado and Skirting profiles to suit most installations.

Available in white, charcoal and choice of RAL colours\*.



**Component  
Selector  
Chart**

**PROFILE LENGTHS**

**FITTINGS**

Main  
Carrier

Straight  
Cover

Curved  
Cover

Square  
Cover

Flexible  
Internal  
Corner

3 METRES

6m

3 METRES

30m

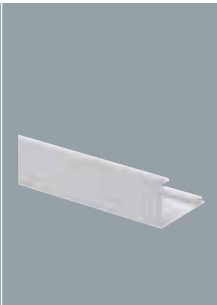
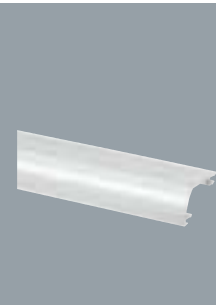
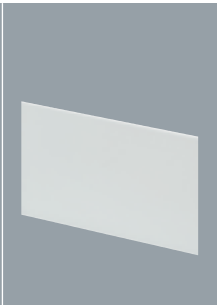
3 METRES

30m

3 METRES

30m

2



VP180WHI  
VP180CHA

VP100WHI  
VP100CHA\*

VP110WHI x2  
VP110CHA x2

VP181WHI  
VP181CHA



VP180WHI  
VP180CHA

VP100WHI  
VP100CHA\*

VP110WHI  
VP110CHA

VP115WHI  
VP115CHA

VP191WHI  
VP191CHA

\* Use Charcoal lid to help achieve compliance to Part M

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## Flexible External Corner

CONSISTS OF COVER AND DATA SWEEP

2

## End Cap

SUPPLIED AS LEFT AND RIGHT-HAND PAIR

1

## Joint Cover

5

## Flat Angle

CONSISTS OF COVER AND CARRIER

1

## Flat Tee

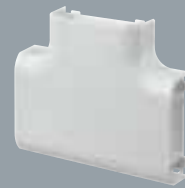
CONSISTS OF COVER AND CARRIER

1

## Adaptor

SUITABLE FOR 20 AND 25MM CONDUIT AND YT2 AND YT4 MINI-TRUNKING

10



VP182WHI  
VP182CHA

VP183WHI  
VP183CHA

VP184WHI  
VP184CHA

VP185WHI  
VP185CHA

VP187WHI  
VP187CHA

VP188WHI  
VP188CHA

VP192WHI  
VP192CHA

VP193WHI  
VP193CHA

VP194WHI  
VP194CHA

Flat Angle Up  
VP195WHI  
VP195CHA

Flat Angle Down  
VP196WHI\*\*  
VP196CHA\*\*

VP197WHI  
VP197CHA

VP198WHI  
VP198CHA

## ACCESSORIES

## Socket Spacer



**VP129WHI** 50  
**VP129CHA** 50  
 SOCKET SPACER 25MM WIDE  
 Visible width is 9mm after installation.

## Part M Flange and Socket Spacer



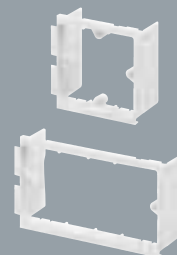
**VX40CHA** 20  
**VX40BLU** 20  
 1 GANG MOUNTING FLANGE  
**VX41CHA** 10  
**VX41BLU** 10  
 2 GANG SOCKET SPACER  
 Provides colour contrast with wiring device to comply with Part M.  
 Visible width is 25mm after installation.

## Open Back Boxes



**VP121WHI\*** 25  
**VP121CHA\*** 25  
**VP124WHI\*\*** 25  
**VP124CHA\*\*** 25  
 1 GANG OPEN BACK BOX  
**VP122WHI\*** 10  
**VP122CHA\*** 10  
**VP125WHI\*\*** 10  
**VP125CHA\*\*** 10  
 2 GANG OPEN BACK BOX  
**VP123WHI\*** 5  
**VP123CHA\*** 5  
 3 GANG OPEN BACK BOX  
 \*45mm deep  
 \*\*35mm deep

## Open Mounting Frames\*



**VP131WHI** 25  
**VP131CHA** 25  
 1 GANG 40MM OPEN MOUNTING FRAME  
**VP132WHI** 10  
**VP132CHA** 10  
 2 GANG 40MM OPEN MOUNTING FRAME  
 1 Gang frame is used in vertical applications.  
 Wings may be removed for greater wiring space.  
 \*Open mounting frames are only suitable where services running in the centre compartment are the same as that of the accessory.

## MCB/RCD Housing



**VP35WHI** 1  
 MCB/RCD HOUSING WITH COVER (ACCESSORY NOT SUPPLIED)  
 Mounts directly to central compartment of trunking to accept up to 2 x one module products from the Sentry range of MCBs and RCDs (excluding one module RCBOs).

## Cable Retainer



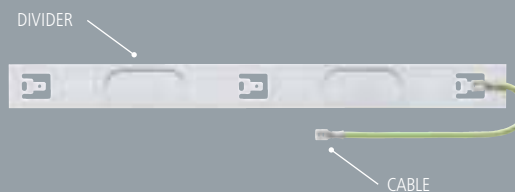
**VP105WHI** 50  
 CABLE RETAINER

## Screw Fixing Kit



**VTS1000** 20  
 SCREW FIXING KIT

## Screening Divider



**VP30\*\*** 15m  
 1.5M SCREENING DIVIDER

**VX31** 10  
 300MM SCREEN CONNECTING CABLE

**VX32** 10  
 500MM SCREEN CONNECTING BRAID

**VX33** 10  
 500MM SCREEN CONNECTING CABLE

\*\* Cable not included

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Prestige 3D Antibac Blue installed with Logic Plus Part M Switchsocket Outlets

## range introduction

New from MK Electric, Prestige 3D Antibac Blue offers an antibacterial cable management solution for power and data distribution in environments where hygiene is a priority. With ongoing concern over hospital acquired infections such as MRSA, the demand for antibacterial products continues to rise. Prestige 3D Antibac Blue is designed to kill bacteria which can grow on surfaces such as trunking systems. It uses a silver based additive inherent within the PVCu which acts as an effective weapon in fighting harmful bacteria such as MRSA, and Klebsiella pneumoniae.

MK offer a complete antibacterial solution, by complementing Prestige 3D Antibac Blue with Logic Plus wiring devices, the entire installation will meet the requirements of an antibacterial specification. The trunking and wiring devices are both open to contact, therefore the control of the spread of bacteria and infections can only be effective with a complete solution.

MK's Prestige 3D Antibac Blue range will meet the demands of the Healthcare Trusts, Infection Control Departments or Facilities Managers specifying antibacterial products, as well as providing the fastest installation for Contractors, the range has been independently verified as 40% faster than similar competitor systems to install\*.

## features and benefits

- **The only manufacturer to offer a complete antibacterial solution**
- **>99.9% kill rate against MRSA, and Klebsiella pneumoniae**
- **Unique patent pending fluorescence under UV light, providing customer confidence**
- **Fully Cat 5e, 6 and 7 compliant**
- **Patented Data Sweep maximises cable capacity**
- **Screw fixing kit available for installations where higher security is required, e.g. public buildings, hospitals, schools**
- **Part M compliance achievable utilising Logic Plus graphite wiring devices, or the Part M Flange or Socket Spacer**
- **Independently verified as 40% faster to install\***
- **10 Year guarantee**

\* Independently verified as 40% faster to install than Prestige Plus

Reports show 300,000 healthcare associated infections were contracted in the UK in 2008, with an annual investment of £270million in infection control.

- Healthcare associated infections cause 5000 deaths a year, at a cost of £1billion.
- Patients recovering from such infections spend on average 10 extra days in hospital, which costs the NHS three times their original treatment.
- The use of antibacterial products supports the existing infection control initiatives such as hand hygiene and barrier nursing.



PRESTIGE 3D ANTIBAC BLUE INSTALLED WITH MEIGAN SOCKET OUTLETS

### How does Prestige 3D Antibac Blue work?

**Prestige 3D Antibac Blue is an antibacterial 3 compartment power and data trunking system designed to kill bacteria which can grow on surfaces.**

It uses a silver based additive inherent within the PVCu which acts as an effective weapon in fighting bacteria such as MRSA and other harmful bacteria. The silver additive is a bactericide and will therefore kill bacteria instead of just restricting their growth.

As the additive is inherent within the PVCu compound the antibacterial protection runs throughout the products themselves. There is no loss of protection where the trunking lengths are cut on-site or if the trunking surface becomes scuffed or scratched.

The antibacterial additive depends on intimate contact between surfaces of the trunking and the user, so any barriers such as dirt or grime will reduce or negate the antibacterial effect.

Prestige 3D Antibac Blue is not intended to replace standard cleaning regimes. It is an additional protection which can only operate efficiently if the surfaces are kept free of dirt and grime.

The antibacterial additive used in Prestige 3D Antibac Blue is registered with the Environmental Protection Agency (EPA) and compliant with the European Biocidal Products Directive (BPD).

The additive provides effective protection against both gram positive and gram negative bacteria, unlike some other anti-bacterial additives which are only effective against gram positive bacteria.



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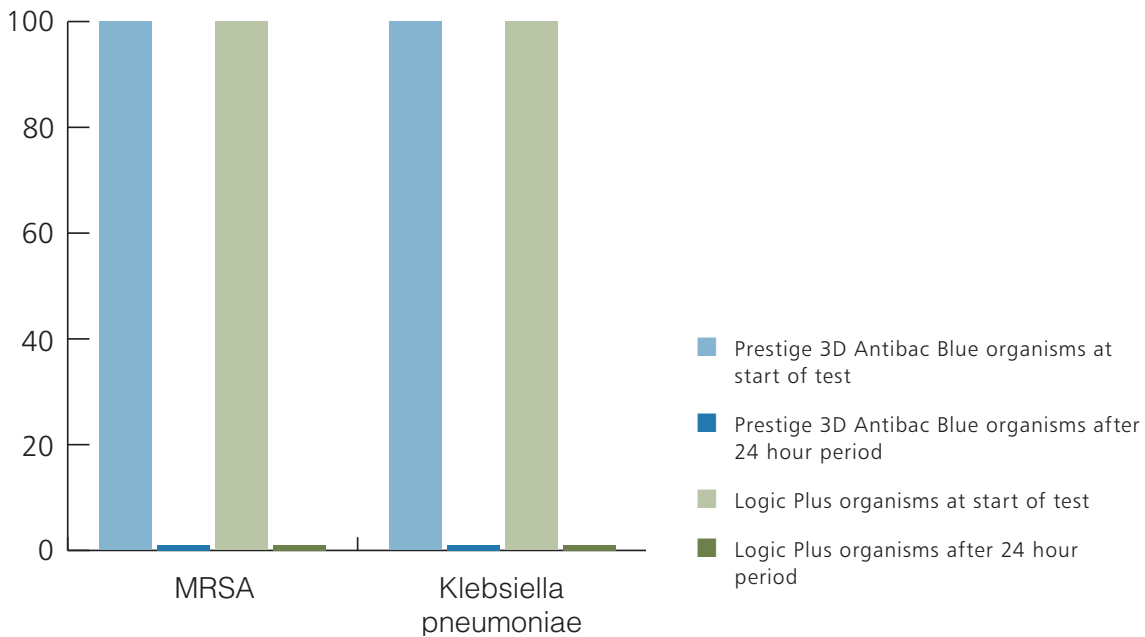
MK Electric have commissioned independent tests to verify the antibacterial properties of Prestige 3D Antibac Blue. The results, collected over a 24 hour period shows results of >99.9% kill rates on the organisms MRSA, and Klebsiella pneumoniae.

MK Electric have also commissioned independent tests to verify the antibacterial properties of Logic Plus. The results, collected over a 24 hour period shows results of 99.9% kill rates on the organism MRSA and 98.9% kill rates on the organism Klebsiella pneumoniae.

	PRESTIGE 3D ANTIBAC BLUE		LOGIC PLUS	
	% Organisms at start of test	% Organisms after 24 hour period	% Organisms at start of test	% Organisms after 24 hour period
MRSA	100	<0.1	100	0.1
Klebsiella pneumoniae	100	<0.1	100	1.1



LOGIC PLUS SWITCHSOCKET OUTLET



**END CAPS**

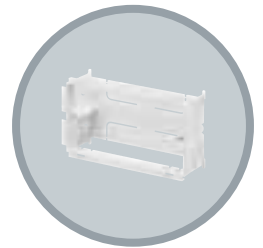
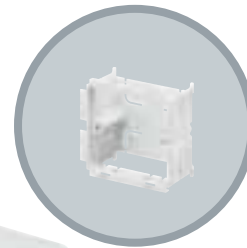
Neatly finishes runs of trunking. (Moulding provides internal location for extra security from optional screw fixing).

**DIVIDER KNOCKOUTS**

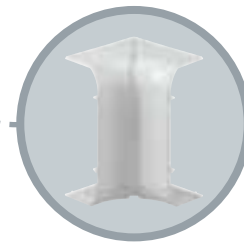
Wiring is also made easy with 50 x 21mm knockouts at 100mm intervals along compartment dividers, providing instant access to mounting boxes, with no drilling or cutting.

**BACK BOXES**

The 1 and 2 gang 35mm and 45mm deep back boxes, 3 gang 45mm deep back box and 1 and 2 gang 40mm frames ensure Cat 5e, 6 and 7 compliance and ease of connection to power and data devices. The open top/bottom allows unhindered tool free cable entry, through the trunking compartment divider knockout. The back box can slide to align with appropriate knockout (see technical pages for restrictions on use).

**PRE-PUNCHED BASES**

Wall fixing is simplified by the inclusion of pre-punched oval holes at 100mm intervals, ensures no drilling is required.

**INTERNAL CORNER**

Designed to accommodate irregularities in the squareness of the corner with a +/- 5 degrees flexibility range. The centre split gives maximum adjustment. Covers are radiused and compatible with Cat 5e, 6 and 7 data cabling requirements.

**PART M**

Compliance to Part M building regulations can be achieved using Part M flange or charcoal devices.

**SCREW FIXING KIT**

Where higher security is required, e.g. schools, all fitting covers can be secured using the Screw Fixing Kit. The Screw Fixing Kit is self-locating on the styling line of the system and has a cover to hide the screw head.

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## UNIQUE FLUORESCENCE

For complete customer confidence, Prestige 3D Antibac Blue features a patent pending fluorescent additive which glows bright blue under a UV light, unlike standard PVCu which glows dull purple.



Prestige 3D Antibac Blue



Prestige 3D

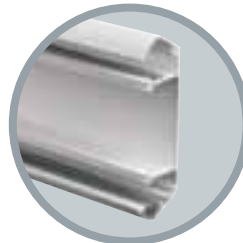
## FLAT TEES AND ANGLES

The ingenuity of the patented tee design allows a variety of cable drop permutations. The tee's bridge can be fitted in two positions increasing the versatility of cable runs whilst maintaining the correct segregation and Cat 5e, 6 and 7 compliance. Screw fixing hole locations have a protective shroud to prevent the chafing of cables. Both the Flat Angle and Tee compartment divider walls are curved (Cat 5e, 6 and 7 compliant) to allow data cables to lay in with no loss of capacity. The covers are one piece and clip securely into place, and the base is also a single moulded item, giving more strength than fabrication. Joint covers are not required where the tee/angle meets the trunking as the moulded covers now overlap the junction.



## TRUNKING HINGE LIDS

A two stage location gives a hinge effect, enabling cables to be supported by the trunking cover during the installation. Cover design avoids dust traps and makes cleaning easier, and continues the aesthetics of the trunking.



## STYLING LINES

All fittings are moulded with styling lines for aesthetic continuity.

## CHOICE OF TWO PROFILES

Available in Dado and Skirting profiles to suit most installations.

## EXTERNAL CORNER

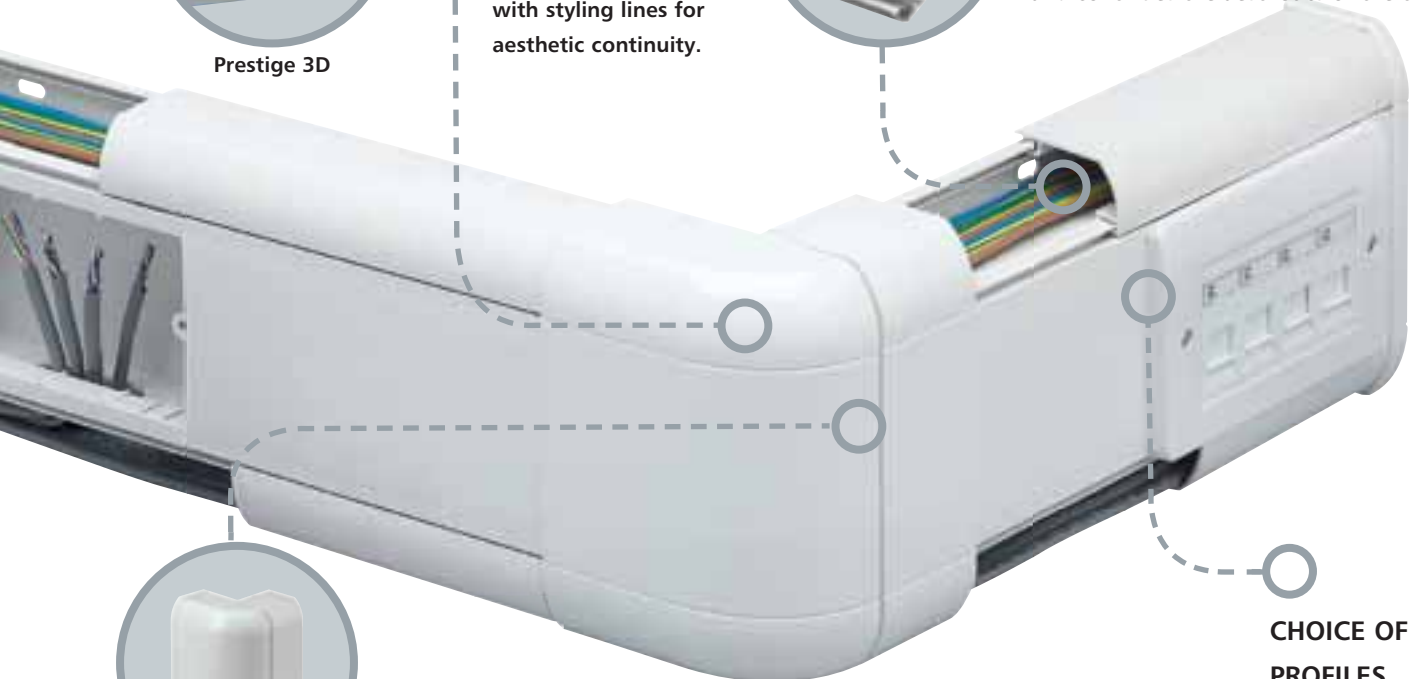
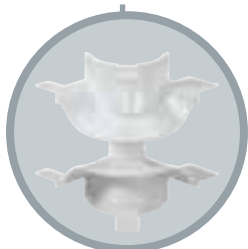
External Corners accommodate +/- 5 degree irregularities in the squareness of a corner. Corners come ready assembled to click into place, and offset side splits hide the effect of the split line for aesthetics.

## DATA SWEEP

The unique patented Data Sweep provides Cat 5e, 6 and 7 data cabling compliance, with no loss of capacity and without the need for bulky, protruding corner covers.

## ELECTROMAGNETIC INTERFERENCE

Additional data cable/signal protection is provided by fitting screening divider VP30.



**Component Selector Chart**

**PROFILE LENGTHS**

Main Carrier\*

Straight Cover

Curved Cover

Square Cover

**FITTINGS**

Flexible Internal Corner

Flexible External Corner

End Cap

3 METRES  
6m

3 METRES  
30m

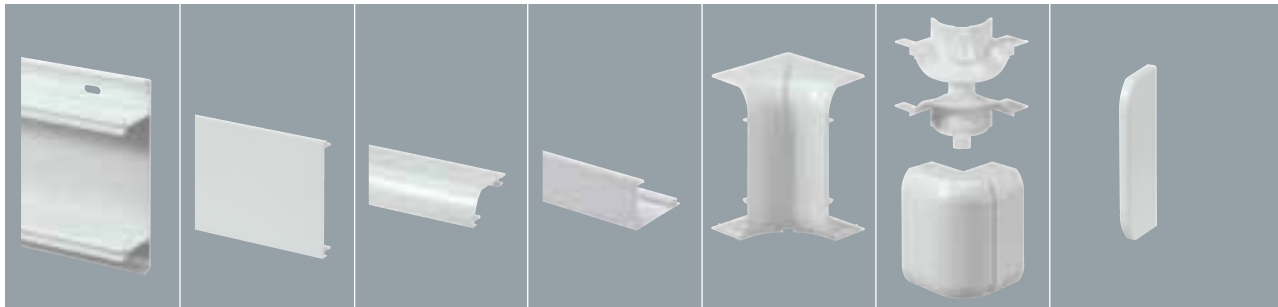
3 METRES  
30m

3 METRES  
30m

2

CONSISTS OF COVER AND DATA SWEEP  
2

SUPPLIED AS LEFT AND RIGHT-HAND PAIR  
1



VP180WHI	VPAB100WHI	VPAB110WHI x2		VPAB181WHI	VPAB182WHI	VPAB183WHI
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VP180WHI	VPAB100WHI	VPAB110WHI	VPAB115WHI	VPAB191WHI	VPAB192WHI	VPAB193WHI
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\* Carrier components do not require the antibacterial additive as they have no exposure once the installation is complete. As such, the standard main carrier is sufficient, as are standard back boxes, mounting frames and cable retainers. The carrier components of the External Corner, Flat Angle and Flat Tee are also standard PVCu due to no exposure once installation is complete.

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## ACCESSORIES

Joint Cover

Flat Angle

Flat Tee

Flange and Socket Spacer

Open Back Boxes

Open Mounting Frames\*

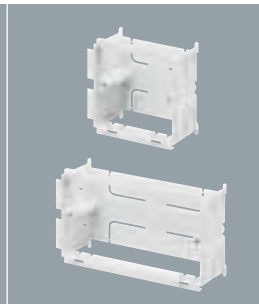
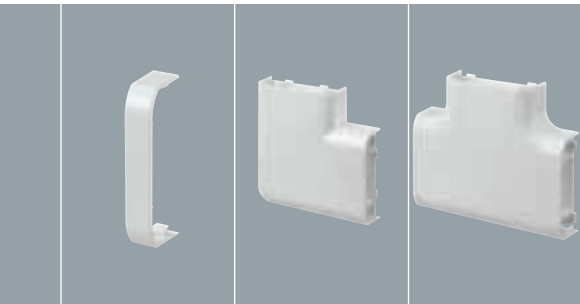
CONSISTS OF COVER AND CARRIER

CONSISTS OF COVER AND CARRIER

5

1

1



VPAB184WHI

VPAB185WHI

VPAB187WHI

**VXAB40CHA\*** 20  
PART M FLANGE FITTED BOTH SIDES OF A DEVICE

**VXAB41CHA\*** 10  
PART M SOCKET SPACER

**VPAB129WHI\*\*** 50  
SOCKET SPACER

Provides colour contrast with wiring device to comply with Part M.

\* Visible width is 25mm after installation.

\*\* Visible width is 9mm after installation.

**VP121WHI\*** 25  
**VP124WHI\*\*** 25  
1 GANG OPEN BACK BOX

**VP122WHI\*** 10  
**VP125WHI\*\*** 10  
2 GANG OPEN BACK BOX

**VP123WHI\*** 5  
3 GANG OPEN BACK BOX  
\*45mm deep  
\*\*35mm deep

**VP131WHI** 25  
1 GANG 40MM OPEN MOUNTING FRAME

**VP132WHI** 10  
2 GANG 40MM OPEN MOUNTING FRAME

1 Gang frame is used in vertical applications.

Wings may be removed for greater wiring space.

\*Open mounting frames are only suitable where services running in the centre compartment are the same as that of the accessory.

VPAB194WHI

Flat Angle Up  
VPAB195WHI

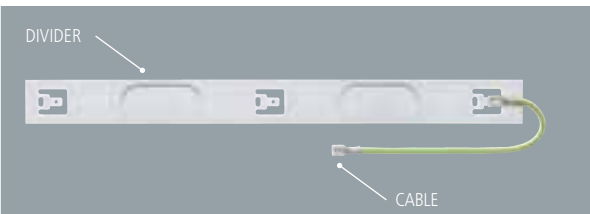
Flat Angle Down  
VPAB196WHI

VPAB197WHI

Cable Retainer

Screw Fixing Kit

Screening Divider



**VP105WHI** 50  
CABLE RETAINER

**VTSAB1000WHI** 20  
SCREW FIXING KIT

**VP30\*\*** 15m  
1.5M SCREENING DIVIDER

**VX31** 10  
300MM SCREEN CONNECTING CABLE

**VX32** 10  
500MM SCREEN CONNECTING BRAID

**VX33** 10  
500MM SCREEN CONNECTING CABLE

\*\*Cable not included



## Glasgow Royal Infirmary Gets A Healthy Dose Of Prestige 3D Antibac Blue

Infection control is a major concern in the healthcare sector. To help reduce the risk of spreading infections, bacteria and more, Glasgow Royal Infirmary's Intensive Care Unit installed more than 55 metres of Prestige 3D Antibac Blue during a recent refurbishment — becoming the first hospital in the UK to improve patient and staff safety through antibacterial cabling.

### COMPLETE SOLUTION

Only MK Electric offers a complete antibacterial solution that includes both wiring devices and cable management, but the single course for every product was just one of the reasons that the Glasgow Royal Infirmary chose Prestige 3D Antibac Blue. The product is also complete in that it offers effective protection against both gram-positive and gram-negative bacteria rather than just one.

### BEYOND HEALTHCARE

Of course, the hospital would not have chosen Prestige 3D Antibac Blue if it wasn't also an outstanding cable management solution above and beyond its health benefits. Like any healthcare facility, Glasgow Royal Infirmary's Intensive Care Unit has a large number of people moving about at any given time. The cable management provided by MK Electric not only ensures proper cabling to all equipment, but also ensures a clean, uncluttered work area for added safety.

For Glasgow Royal Infirmary's Intensive Care Unit, Prestige 3D Antibac Blue is an investment that's sure to have a healthy return.

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## range introduction

Prestige 3D Compact completes the 3D offering with all the 3D benefits of faster installation, Cat 5e, 6 and 7 compliance and improved aesthetics, but in a smaller footprint & ideal for confined locations. The new concept uses the full trunking depth with a sliding open box (frame) principle to ease power and data connections.

## features and benefits

- **Faster installation – 40% quicker than Prestige Plus**
- **Cat 5e, 6 and 7 compliant flexible Internal and External Corners, moulded Flat Angles and Tees**
- **Patented unique 'open box' mounting frames combined with divider knockouts to provide unhindered tool-free cable entry**
- **Innovative patented External Corner Data Sweep allows continuous cable capacity and maintains the Compact minimum trunking depth**
- **Patented hinged lid to support cables during installation**
- **Pre-punched bases**
- **Curved outer covers that complement MK Logic Plus accessories**
- **All extrusions manufactured from 90% recycled material\***
- **10 Year guarantee**

\* Based on 2008 consumption.

### END CAPS

Neatly finishes runs of trunking. Moulding provides internal location for extra security from optional screw fixing.

### DIVIDER KNOCKOUTS

Wiring is also made easy with 50mm x 21mm knockouts at 100mm intervals along compartment dividers, providing instant access to mounting boxes with no drilling or cutting.

### MOUNTING FRAMES

1 gang and 2 gang 'open box' mounting frames use the full trunking depth allowing ease of connection to power and data devices. The open top/bottom allows unhindered tool free cable entry through the trunking compartment divider knockout. The frame can slide to align with appropriate knockout.

### PRE-PUNCHED BASES

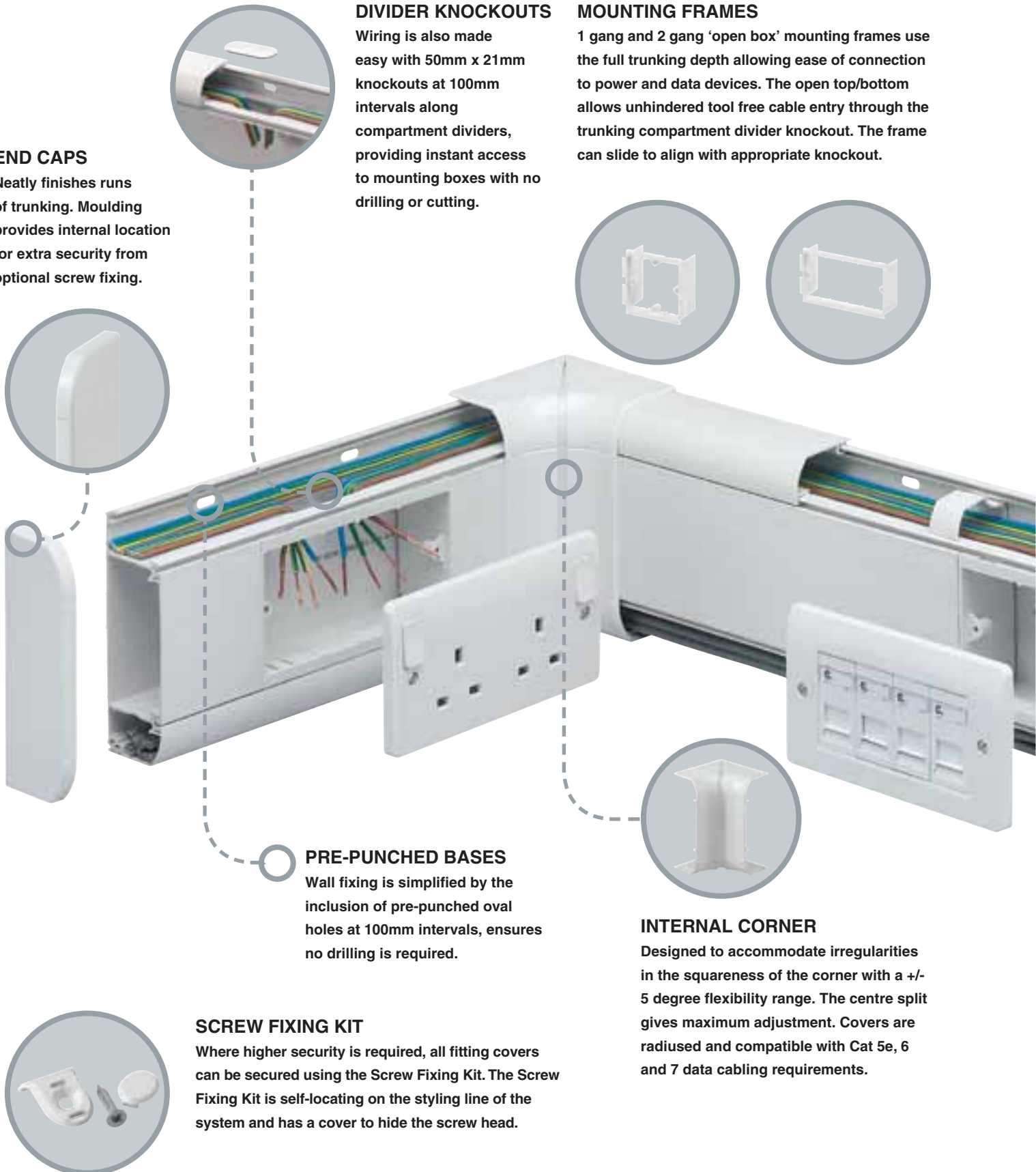
Wall fixing is simplified by the inclusion of pre-punched oval holes at 100mm intervals, ensures no drilling is required.

### SCREW FIXING KIT

Where higher security is required, all fitting covers can be secured using the Screw Fixing Kit. The Screw Fixing Kit is self-locating on the styling line of the system and has a cover to hide the screw head.

### INTERNAL CORNER

Designed to accommodate irregularities in the squareness of the corner with a +/- 5 degree flexibility range. The centre split gives maximum adjustment. Covers are radiused and compatible with Cat 5e, 6 and 7 data cabling requirements.





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## FLAT TEES AND ANGLES

The ingenuity of the patented tee design allows a variety of cable drop permutations. The tee's bridge can be fitted in two positions increasing the versatility of cable runs whilst maintaining the correct separation and Cat 5e, 6 and 7 compatibility. Screw fixing hole locations have a protective shroud to prevent the chafing of cables. Both the Flat Angle and Tee compartment divider walls are curved (Cat 5e, 6 and 7 compliant) to allow data cables to lay in with no loss of capacity. The covers are one piece and clip securely into place, bases are also single mouldings giving more strength than an equivalent fabrication. Joint covers are not required where the tee/angle meets the trunking as the moulded covers now overlap the junction.

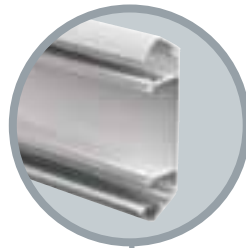


## ELECTROMAGNETIC INTERFERENCE

Additional data cable/signal protection is provided by fitting screening divider VCT30.

### STYLING LINES

All fittings are moulded with styling lines for aesthetic continuity.



## TRUNKING HINGED LIDS

A patented two stage location gives a hinge effect, enabling cables to be supported by the trunking cover during the installation. Cover design avoids dust traps and makes cleaning easier and continues the aesthetics of the trunking.



## EXTERNAL CORNER

External Corners accommodate +/- 5 degree irregularities in the squareness of a corner. Corners come ready assembled to click into place and offset side split hides the effect of the split line for aesthetics.



## DATA SWEEP

The unique patented Data Sweep provides Cat 5e, 6 and 7 data cabling compliance, with no loss of capacity and without the need for bulky protruding corner covers.

## CHOICE OF TWO PROFILES

140 x 45mm and 160 x 45mm choice of profile to suit more confined locations and installation needs around the wall and below the window.



**Component  
Selector  
Chart**

**PROFILE LENGTHS**

Main Carrier

Extension  
Carrier

Straight  
Cover

Curved  
Cover

Extension  
Cover

3 METRES

6m

3 METRES

15m

3 METRES

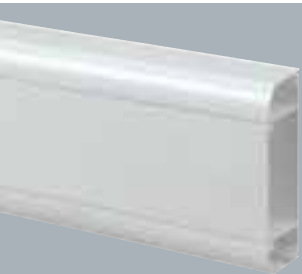
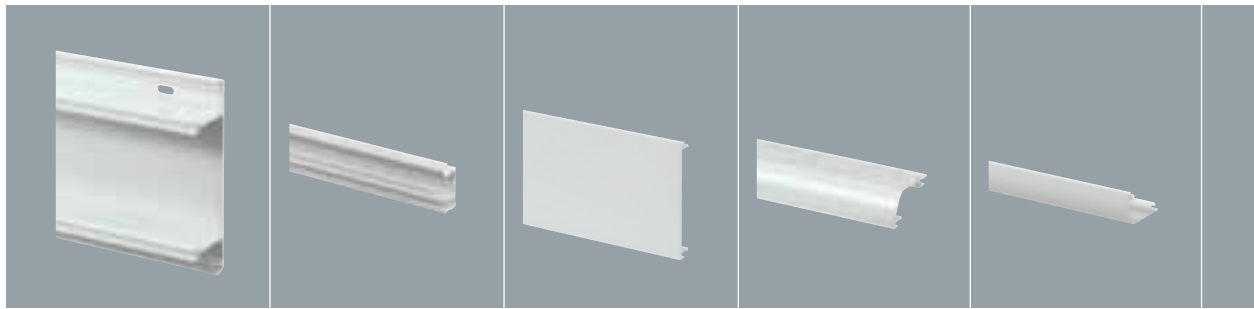
30m

3 METRES

30m

3 METRES

15m

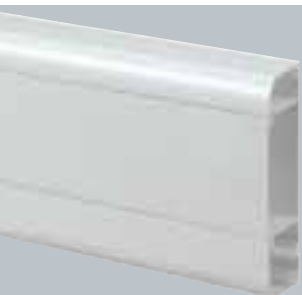


**DADO**  
140 x 45mm

VCT140WHI

VCT100WHI

VCT110WHI X2



**Extended Dado**  
160 x 45mm

VCT140WHI

VCT160WHI

VCT100WHI

VCT110WHI

VCT120WHI

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## FITTINGS

Flexible Internal Corner

Flexible External Corner

End Cap

Joint Cover

Flat Angle Up

Flat Angle Down

Flat Tee Up

CONSISTS OF COVER AND DATA SWEEP

SUPPLIED AS PAIR OF LEFT AND RIGHT-HAND END CAPS

CONSISTS OF COVER AND CARRIER

CONSISTS OF COVER AND CARRIER

CONSISTS OF COVER AND CARRIER

2

2

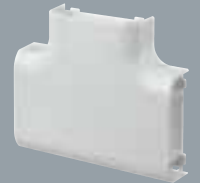
2

5

2

2

1



VCT141WHI

VCT142WHI

VCT143WHI

VCT144WHI

VCT145WHI

VCT145WHI

VCT147WHI  
UP/DOWN

VCT161WHI

VCT162WHI

VCT163WHI  
(2X L/R PAIRS)

VCT164WHI

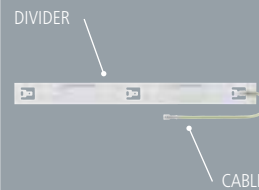
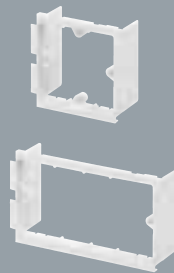
VCT165WHI

VCT166WHI

VCT167WHI

## ACCESSORIES

## Socket Spacer

Part M Flange and  
Socket SpacerOpen Mounting  
FramesScreening  
Divider**VCT25WHI**  
SOCKET SPACER

Visible width is 9mm after installation.

10

**VX40CHA****VX40BLU**

PART M FLANGE FITTED  
BOTH SIDES OF A DEVICE

**VX41CHA****VX41BLU**

PART M SOCKET SPACER

Provides colour contrast with wiring  
device to comply with Part M.

Visible width is 25mm after  
installation.

20

20

10

10

**VCT121WHI**

1 GANG 40MM  
OPEN MOUNTING FRAME

**VCT122WHI**

2 GANG 40MM  
OPEN MOUNTING FRAME

Wings may be removed for increased  
wiring space.

25

10

**VCT30\***

1.5M SCREENING DIVIDER

**VX31**

300MM SCREEN CONNECTING  
CABLE

**VX32**

500MM SCREEN CONNECTING  
BRAID

**VX33**

500MM SCREEN CONNECTING  
CABLE

\* Cable not included

10

10

10

10

## Adaptors

SUITABLE FOR 20 AND  
25MM CONDUIT AND  
YT2 AND YT4 MINI-  
TRUNKING. CONSISTS  
OF COVER AND CENTRE  
COMPARTMENT CABLE  
BRIDGE

Cable  
RetainerScrew  
Fixing Kit

## MCB/RCD Housing

**VCT148WHI**

FOR USE WITH COVER VCT110WHI

**VCT168WHI**

FOR USE WITH COVER VCT120WHI  
EXTENSION COVER

10

10

**VCT105WHI**

CABLE RETAINER

50

**VTS1000**

SCREW FIXING KIT

20

**VCT35WHI**

MCB/RCD HOUSING WITH COVER  
(ACCESSORY NOT SUPPLIED)

Mounts directly to central  
compartment of trunking to accept  
up to 2 x one module products from  
the Sentry range of MCBs and RCDs  
(excluding one module RCBOs).

1

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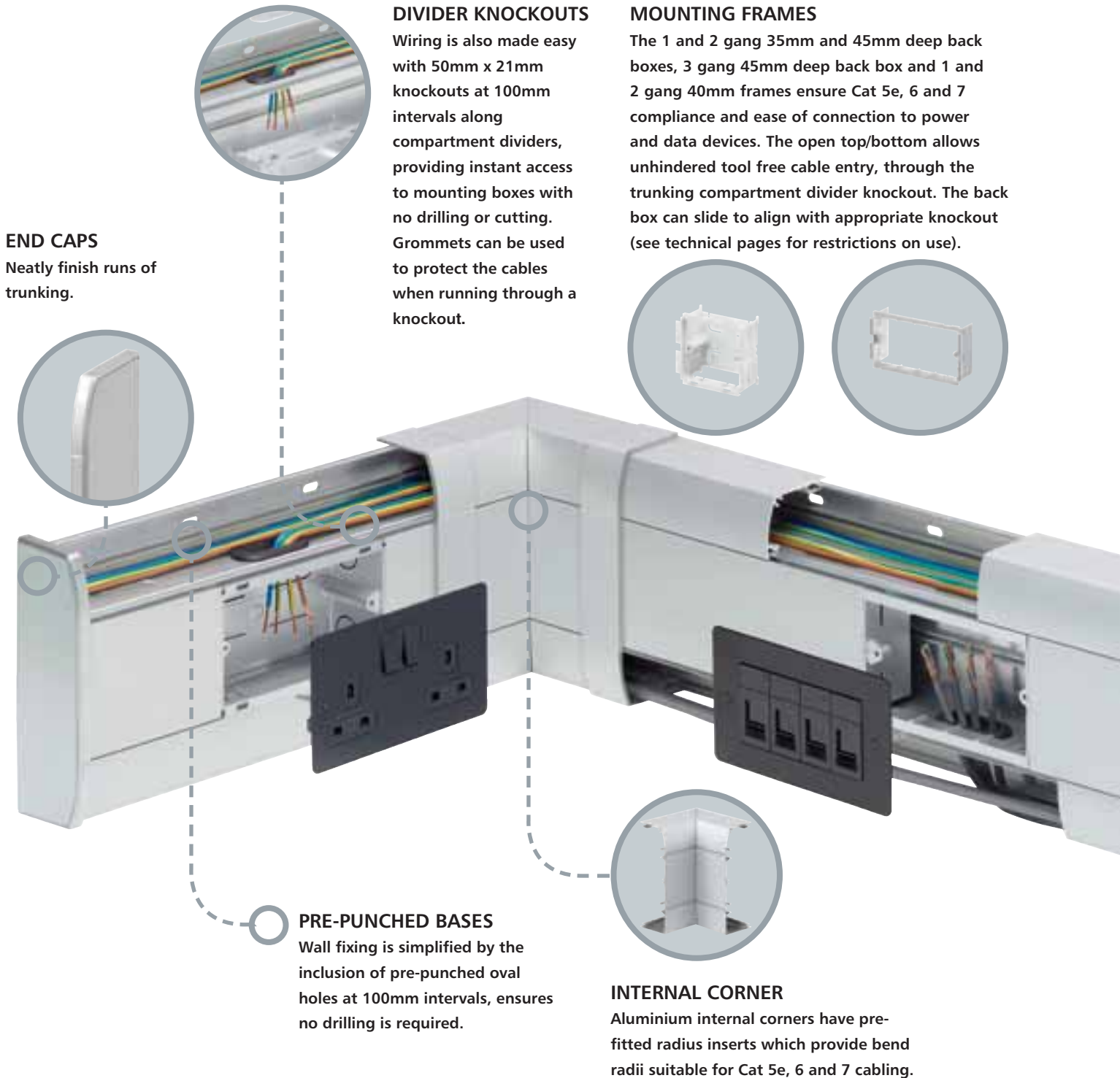
## range introduction

New to the Prestige 3D family, this 3 compartment Dado and Skirting Trunking satisfies the needs of a Cat 5e, 6 and 7 compliant trunking system. With pre-drilled bases and hinged lids this system is suitable for commercial offices, educational facilities and laboratories.

Manufactured from precision extruded aluminium, the choice of 2 profiles includes all of the adaptability and suitability that are associated with the Prestige 3D family.

## features and benefits

- **Choice of 2 profiles - Dado and skirting**
- **Available in natural anodised aluminium or powder coated white**
- **Fittings available in both PVC and Aluminium**
- **Fully Cat 5e, 6 and 7 compliant**
- **Pre-punched bases**
- **Hinged lid to support cable during installation**
- **Unique 'open box' mounting frames combined with divider knockouts to provide unhindered tool-free cable entry**
- **10 Year guarantee**

**END CAPS**

Neatly finish runs of trunking.

**DIVIDER KNOCKOUTS**

Wiring is also made easy with 50mm x 21mm knockouts at 100mm intervals along compartment dividers, providing instant access to mounting boxes with no drilling or cutting. Grommets can be used to protect the cables when running through a knockout.

**MOUNTING FRAMES**

The 1 and 2 gang 35mm and 45mm deep back boxes, 3 gang 45mm deep back box and 1 and 2 gang 40mm frames ensure Cat 5e, 6 and 7 compliance and ease of connection to power and data devices. The open top/bottom allows unhindered tool free cable entry, through the trunking compartment divider knockout. The back box can slide to align with appropriate knockout (see technical pages for restrictions on use).

**PRE-PUNCHED BASES**

Wall fixing is simplified by the inclusion of pre-punched oval holes at 100mm intervals, ensures no drilling is required.

**INTERNAL CORNER**

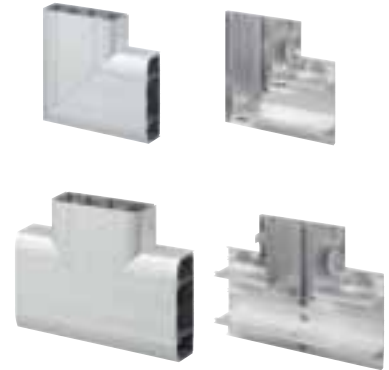
Aluminium internal corners have pre-fitted radius inserts which provide bend radii suitable for Cat 5e, 6 and 7 cabling.

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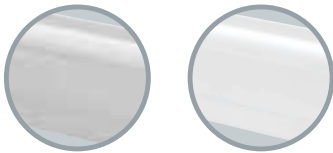
### FLAT TEES AND ANGLES

These enable the trunking configuration to follow the contours of the installation in a vertical plane. In accordance with the demands of data cable installation, Cat 5e, 6 and 7 Flat Angles and Tees have been factory fitted with 32mm radius inserts.



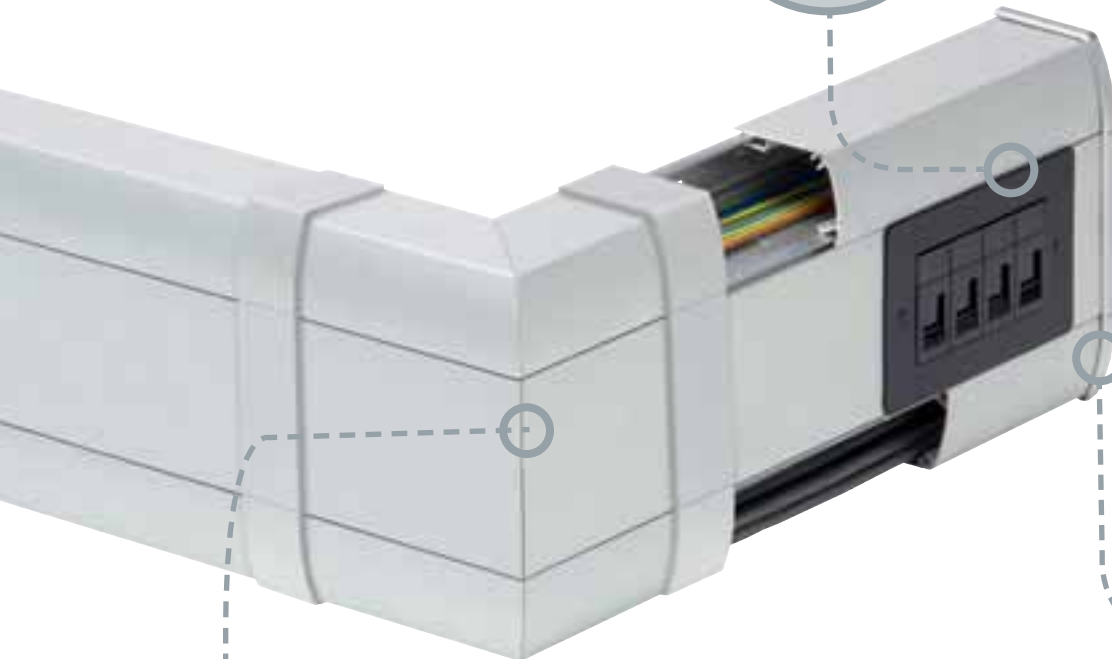
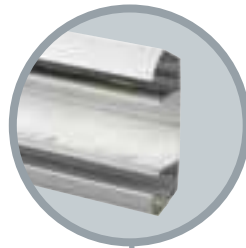
### CHOICE OF TWO COLOURS

ALUMINIUM AND WHITE



### TRUNKING HINGED LIDS

A patented two stage location gives a hinge effect, enabling cables to be supported by the trunking cover during the installation. Cover design avoids dust traps and makes cleaning easier and continues the aesthetics of the trunking.



### DADO



### CHOICE OF TWO PROFILES

Available in Dado and Skirting profiles to suit most installations. Available in Aluminium, white and choice of RAL colours.

### SKIRTING



### EXTERNAL CORNER

External corners include 32mm radius inserts to manage data cables and eliminate potential cable damage.



## Component Selector Chart

### Main carrier

Base Earth Connectors (VP220 x 2) are required to electrically join lengths

3 METRE LENGTHS

6m

### Straight Cover

3 METRE LENGTHS

30m

### Curved Cover

3 METRE LENGTHS

30m

### Square Cover

3 METRE LENGTHS

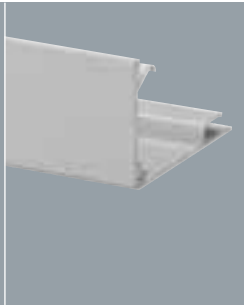
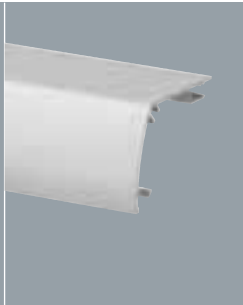
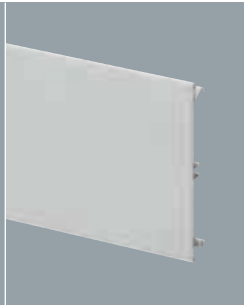
30m

### Joint Cover

5

Components are supplied individually for each of the main trunking assemblies.

The Component Selector Chart lists each component required to make up a length of main trunking.



**DADO**  
170 X 57mm

VP100ALM

VP110ALM

VP180ALM

VP184GRY

VP100ALMW

VP110ALMW

VP184WHI



**SKIRTING**  
170 X 57mm

VP100ALM

VP110ALM

VP115ALM

VP180ALM

VP194 GRY

VP100ALMW

VP110ALMW

VP115ALMW

VP194WHI

**COLOURS:**

Natural Anodised Aluminium (ALM), White (ALMW), PVC White (WHI), or Painted PVC Grey (GRY)

**Customised colours are available in a choice of over 180 RAL colours. Contact our technical hotline +44 (0)1268 563720**



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## FITTINGS

End Caps  
Assembly

Internal  
Corner  
Assembly

External  
Corner  
Assembly

Flat Tee  
Up

Flat Angle  
Up

Flat Angle  
Down

SUPPLIED AS SET  
OF RIGHT AND  
LEFT HAND  
PAIRS

1

CONSISTS OF  
COVER AND  
CARRIER

2

CONSISTS OF  
COVER AND  
CARRIER

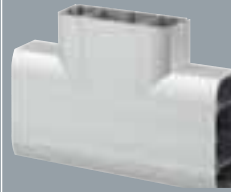
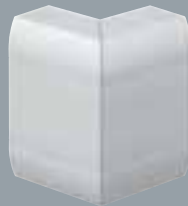
1

CONSISTS OF  
COVER AND  
CARRIER

1

CONSISTS OF  
COVER AND  
CARRIER

1



VP202ALM

VP200ALM

VP201ALM

VP205ALM

VP204ALM

VP202GRY

VP181GRY\*

VP182GRY\*

VP187GRY

VP185GRY

VP202ALMW

VP200ALMW

VP201ALMW

VP205ALMW

VP204ALMW

VP202WHI

VP181WHI\*

VP182WHI\*

VP187WHI

VP185WHI

VP212ALM

VP210ALM

VP211ALM

VP216ALM

VP214ALM

VP215ALM

VP212GRY

VP191GRY\*

VP192GRY\*

VP197GRY

VP195GRY

VP212ALMW

VP210ALMW

VP211ALMW

VP216ALMW

VP214ALMW

VP215ALMW

VP212WHI

VP191WHI\*

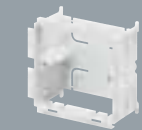
VP192WHI\*

VP197WHI

VP195WHI

\* PVC Flexible Corners

### Open Back Boxes



VP121WHI



VP122WHI

### Open Mounting Frames\*



VP131WHI



VP132WHI

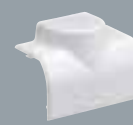
### MCB/RCD Housing



VP35WHI

### Mini Trunking Adaptors

SUITABLE FOR  
20 AND 25MM  
CONDUIT AND  
YT2 AND YT4  
MINI-TRUNKING

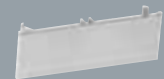


VP189WHI



VP189GRY

### Accessories



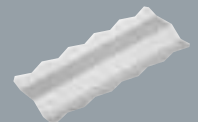
VP129ALM



VP217



VP218



VP220

<b>VP121WHI*</b>	<b>25</b>
<b>VP121CHA*</b>	<b>25</b>
<b>VP124WHI**</b>	<b>25</b>
<b>VP124CHA**</b>	<b>25</b>
1 GANG OPEN BACK BOX	
<b>VP122WHI*</b>	<b>10</b>
<b>VP122CHA*</b>	<b>10</b>
<b>VP125WHI**</b>	<b>10</b>
<b>VP125CHA**</b>	<b>10</b>
2 GANG OPEN BACK BOX	
<b>VP123WHI*</b>	<b>5</b>
<b>VP123CHA*</b>	<b>5</b>
3 GANG OPEN BACK BOX	

\*45mm deep  
\*\*35mm deep

<b>VP131WHI</b>	<b>25</b>
<b>VP131CHA</b>	<b>25</b>
1 GANG 40MM OPEN MOUNTING FRAME	
<b>VP132WHI</b>	<b>10</b>
<b>VP132CHA</b>	<b>10</b>
2 GANG 40MM OPEN MOUNTING FRAME	

1 Gang frame is used in vertical applications.

Wings may be removed for greater wiring space.

\*Open mounting frames are only suitable where services running in the centre compartment are the same as that of the accessory.

Material: PVCu

<b>VP35WHI</b>	<b>1</b>
MCB/RCD HOUSING WITH COVER (ACCESSORY NOT SUPPLIED)	

Mounts directly to central compartment of trunking to accept up to 2 x one module products from the Sentry range of MCBs and RCDs (excluding one module RCBOs).

<b>VP189WHI</b>	<b>10</b>
<b>VP189GRY</b>	<b>10</b>
SUITABLE FOR 20 AND 25MM CONDUIT AND YT2 AND YT4 MINI TRUNKING	

<b>VP129ALM</b>	<b>50</b>
<b>VP129ALMW</b>	<b>50</b>
<b>VP217</b>	<b>20</b>
GROMMET	
<b>VP218</b>	<b>1</b>
EARTH KIT	
<b>VP219</b>	<b>1</b>
EARTH KIT FOR FLAT ANGLE AND FLAT TEE	
<b>VP220</b>	<b>20</b>
BASE CARRIER EARTH CONNECTOR	

1 pack of VP218 and VP219 contains 20 cable kits

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Prestige 3D Dado Cable Management installed with Part M Compliant Graphite Logic Plus Socket Outlets with Outboard Rockers, alongside USB Outlets for convenient charging of mobile phones and other portable devices. This system is an ideal specification for a project with high sustainability credentials. Prestige 3D extrusions are manufactured from 90% recycled content\* and the whole system is made in the UK. Logic Plus Socket Outlets are also made in the UK offering a much reduced carbon footprint when compared to some imported products.

To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)

\*Based on 2008 Consumption



Edge 1 gang Freeform Design – brushed stainless steel

Available on a worldwide basis, the MK Design Service is supported by a dedicated team to ensure the seamless delivery of your chosen products. To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)

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range introduction

features and benefits

Prestige 2com trunking is designed to meet the needs of current and future data cabling.

Prestige 2com is Cat 5e, 6 and 7 compliant and provides maximum capacity for data cabling.

#### **Cat 6 compliant**

50mm radius bends on all corners so cables lie in trunking correctly to avoid any deformation which may result in signal distortion and loss. Complies with and exceeds Cat 5e wiring regulations. Ideal also for future refurbishments using upgraded data cables – Cat 6A/7

#### **Maximises capacity**

60mm deep trunking with two equal compartments to maximise data channel cabling

#### **Flexible accessories**

Accessories can be mounted on either or both compartments – enables maximum use of wiring space in one compartment

#### **Frames maximise space**

Mounting frames for LUU6/Euro data outlets to maximise use of space

#### **Stylish and robust**

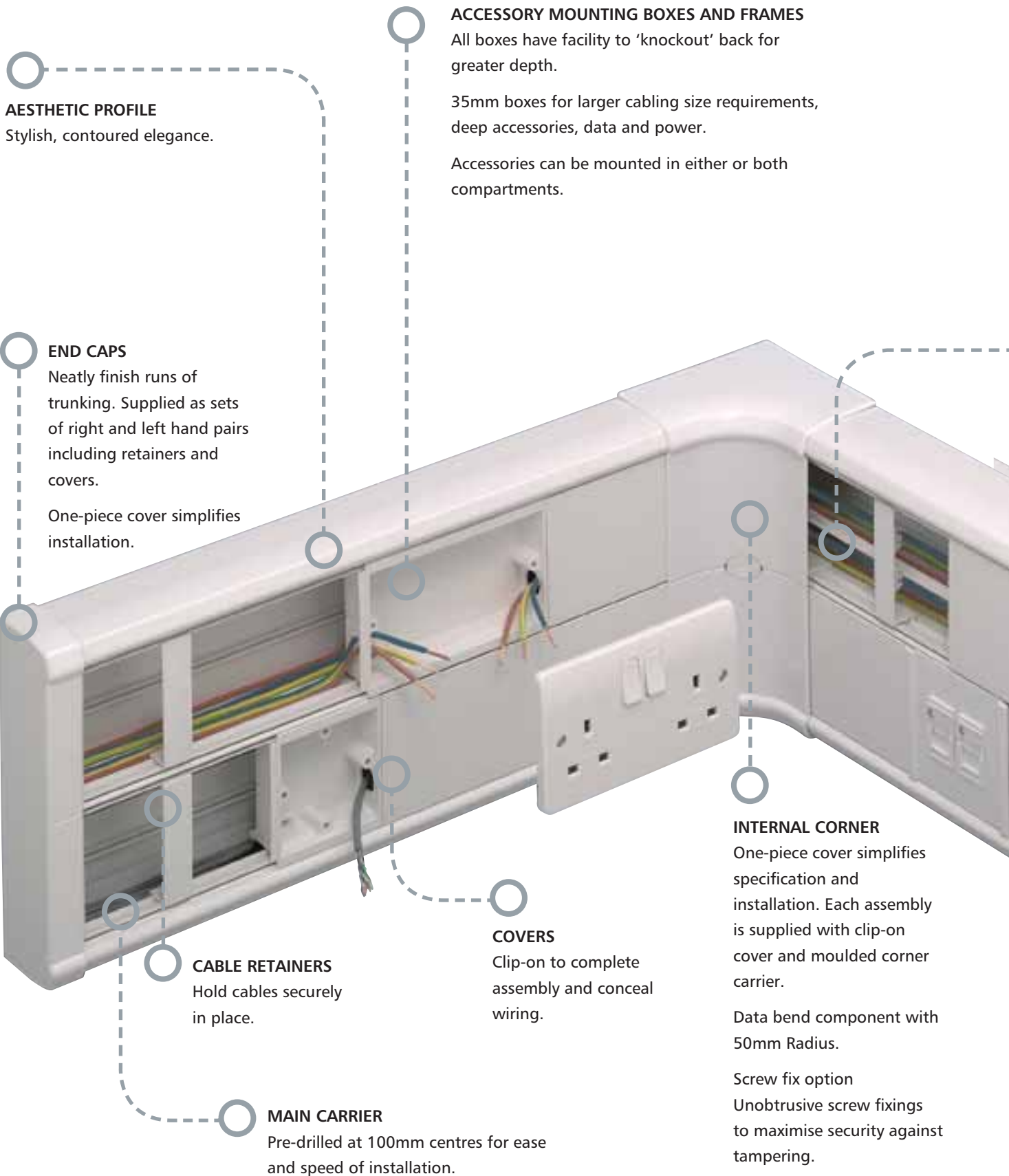
Single piece end caps, corners and couplers for improved aesthetics and solid construction. Screw fix option for security of corner fittings

#### **Pre-drilled trunking bases**

Eliminates the need to measure and drill fixing holes on site thus reducing installation time

#### **All extrusions manufactured from 90% recycled material\***

\* Based on 2008 consumption.

**AESTHETIC PROFILE**

Stylish, contoured elegance.

**END CAPS**

Neatly finish runs of trunking. Supplied as sets of right and left hand pairs including retainers and covers.

One-piece cover simplifies installation.

**ACCESSORY MOUNTING BOXES AND FRAMES**

All boxes have facility to 'knockout' back for greater depth.

35mm boxes for larger cabling size requirements, deep accessories, data and power.

Accessories can be mounted in either or both compartments.

**CABLE RETAINERS**

Hold cables securely in place.

**MAIN CARRIER**

Pre-drilled at 100mm centres for ease and speed of installation.

**COVERS**

Clip-on to complete assembly and conceal wiring.

**INTERNAL CORNER**

One-piece cover simplifies specification and installation. Each assembly is supplied with clip-on cover and moulded corner carrier.

Data bend component with 50mm Radius.

Screw fix option

Unobtrusive screw fixings to maximise security against tampering.

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### EXTERNAL CORNER

One-piece cover component for ease of assembly and styling. Each assembly is supplied with clip-on cover and moulded corner carriers.

Data bend component with 50mm Radius.

Screw fix option: unobtrusive screw fixings to maximise security against tampering.

### FLAT TEES AND ANGLES

These enable the Prestige 2com trunking configuration to follow the contours of the installation in the vertical plane and include 50mm radius inserts to ensure continued data cable protection.



### CABLE DIVIDER

Sub-divides internal compartments.

### 2 COMPARTMENTS

For maximum data cable capacity complete compartment area can be used.

### MINI TRUNKING ADAPTORS

For cable distribution to and from Prestige 2com a range of MK mini trunking and Egatube Conduit can be used.

### COUPLER

One-piece cover component for ease of assembly. Each assembly is supplied with carrier moulding and clip-on cover (shown below).

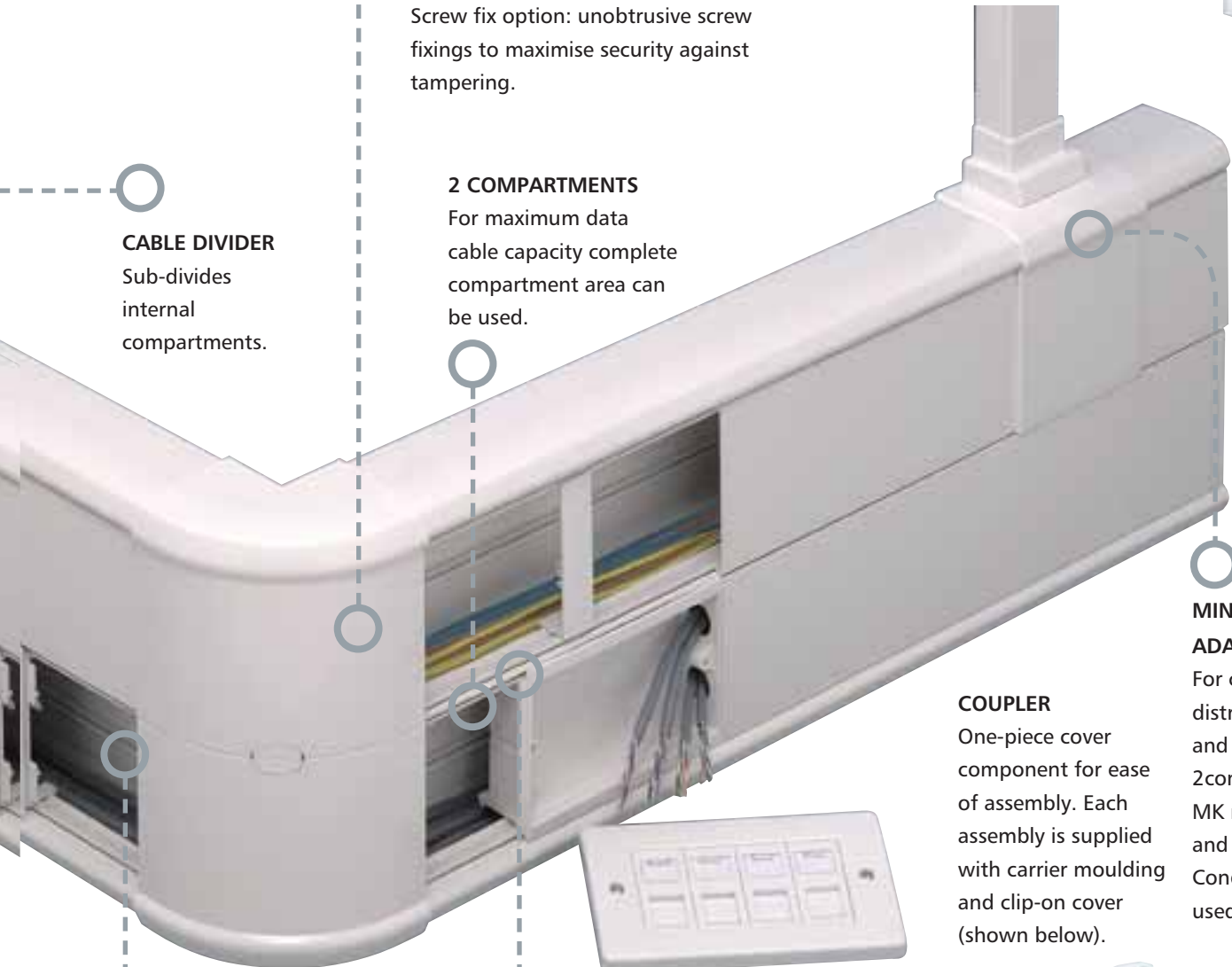
### CROSSOVER BRIDGE

Permits cabling to cross from one cable compartment to another within the assembly, whilst maintaining segregation.



### EMC SCREENING

Aluminium screening inserts provide an effective screen for computer service cables and can be used in either compartment.



### Main Carrier

**DIMENSIONS**  
210 X 60MM

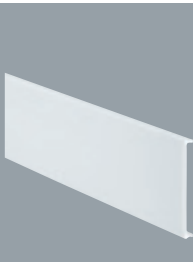


**VTS2001WHI** **6m**  
3 METRE LENGTHS

**VTS2001D1WHI** **4m**  
2 METRE LENGTHS  
FOR (NON UK) MARKETS

NOT SUPPLIED WITH  
LID (COVER)

### Straight Cover



**VTS5WHI** **30m**  
3 METRE LENGTHS

**VTS5D1WHI** **20m**  
2 METRE LENGTHS  
FOR (NON UK) MARKETS

NOTE each main carrier  
requires two straight covers

### Coupler Assembly



**VTS2005WHI** **2**

### Lid Joint Cover



**VTS2010WHI** **10**  
USED TO JOIN 2 COVER  
PIECES AT REMOTE POINT  
FROM COUPLER

### Internal Corner Assembly



CONSISTS OF  
COVER AND  
CARRIER

**VTS2004WHI** **1**  
INCLUDES ADDITIONAL  
SCREW FIXING FOR  
EXTRA SECURITY  
50MM RADIUS BEND

### External Corner Assembly



CONSISTS OF  
COVER, CARRIER  
AND RADIUS  
INSERT

**VTS2003WHI** **1**  
INCLUDES ADDITIONAL  
SCREW FIXING FOR  
EXTRA SECURITY  
50MM RADIUS BEND

### End Cap Assembly



**VTS2006WHI** **2**  
END CAP ASSEMBLY

### End Cap Cover and Retainer



**VTS2015WHI** **1**  
END CAP RETAINER

**VTS2016WHI** **1**  
END CAP COVER

### Cable Retainer



**VTS2011WHI** **10**  
CABLE RETAINER

### Crossover Bridge



**VTS2090WHI** **10**  
CROSSOVER BRIDGE

### Mini Trunking Adaptor



**VTS2081WHI** **10**  
YT1-YT3 MINI TRUNKING  
ADAPTOR.  
USE APPROPRIATE YEA  
ADAPTOR (YEA1-YEA3)  
TO CONNECT  
MINI TRUNKING

**VTS2084WHI** **10**  
YT4 MINI TRUNKING  
ADAPTOR

### Trunking Adaptor 50 X 50mm



**VTS2050WHI** **10**  
50 X 50MM  
TRUNKING ADAPTOR



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## SPARES

Corner Covers

Corner Carrier

Radius Insert

Cable Divider

INTERNAL AND EXTERNAL

INTERNAL AND EXTERNAL

EXTERNAL CORNER

3 METRE LENGTHS



**VTS2030WHI** 1  
EXTERNAL CORNER COVER

**VTS2040WHI** 1  
INTERNAL CORNER COVER

**VTS2018WHI** 10  
**VTS2019WHI** 10  
INTERNAL AND EXTERNAL SCREW COVERS FOR CORNER PIECES

**VTS2007WHI** 1  
INTERNAL CORNER CARRIER

**VTS2008WHI** 1  
EXTERNAL CORNER CARRIER

**VTS2009WHI** 1  
50MM RADIUS BEND INSERT FOR DATA CABLES EXTERNAL CORNER

**VTS50WHI** 30m  
CABLE DIVIDER 3 METRE LENGTHS

Conduit/Blank Adaptor

Socket Spacer

MCB/RCD Housing

Mounting Frames



**VTS2020WHI** 10  
CONDUIT/BLANK ADAPTOR WITH DRILL LOCATION. WILL ACCEPT 2025MM CONDUIT

**VTS25SWHI** 10  
ACCESSORY SOCKET SPACER TO ESTABLISH THE MINIMUM DISTANCE BETWEEN OUTLETS

**VTSKMH1WHI** 1  
**VTSMHWHI** 1  
MCB/RCD HOUSING WITH COVER

**VTS2060WHI** 10  
2 GANG LU6CRJ45 SUPPLIED WITH LID JOINT COVERS

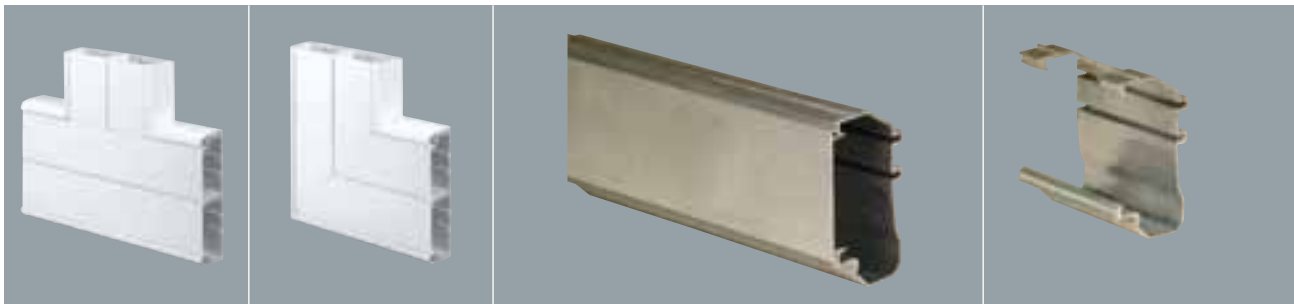
**VTS2070WHI** 10  
2 GANG EURORJ45 SUPPLIED WITH LID JOINT COVERS

**VTS6000WHI** 10  
1 GANG ACCESSORY MOUNTING FRAME

**VTS7000WHI** 5  
2 GANG ACCESSORY MOUNTING FRAME

## Flat Tee

## Flat Angle

EMC  
Screening
**VTS2014WHI**  
50MM RADIUS BEND

1

**VTS2012WHI**  
50MM RADIUS BEND

1

**VTS2111**  
SCREENING INSERT

6m

**21017SST9**  
SPARE BONDING KIT

5

**VTS2112**  
OUTLET BOX ACCESS  
SECTION

1

 Accessory  
Boxes


VTS6035WHI

VTS7035WHI

VTS8028WHI

VTS4545WHI

VTS4545RWHI

VTS2017WHI

**VTS6025WHI**  
1 GANG 25MM DEEP

25

**VTS7025WHI**  
2 GANG 25MM DEEP

10

**VTS8035**  
3 GANG 35MM DEEP

10

**VTS4545WHI**  
FLAT ADAPTOR PLATE  
(NON UK)  
45MM X 45MM APERTURE

10

**VTS6035WHI**  
1 GANG  
35MM DEEP

25

**VTS7035WHI**  
2 GANG 35MM DEEP

10

**K3716**  
BOX EARTH TERMINAL

100

**VTS2017WHI**  
BOX ADAPTOR

10

**VTS8028WHI**  
3 GANG  
28MM DEEP

5

**VTS4545RWHI**  
RAISED ADAPTOR  
PLATE (NON UK)  
45MM X 45MM APERTURE

10

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Echo 2 Channel transmitter - Albany Plus brushed chrome

Available on a worldwide basis, the MK Design Service is supported by a dedicated team to ensure the seamless delivery of your chosen products.

To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)

## Prestige Power Poles

- Power Poles stand between the floor and ceiling and can be integrated with Interact Underfloor Power as part of a co-ordinated Cable Management system
- Particularly suited to raised floors and suspended ceilings, but can also be used with solid floors and ceilings
- Secured to the floor by a load plate
- A jacking assembly allows adjustment for varying ceiling heights as well as to secure it to the ceiling
- An extension bar is required for stability where the height exceeds 3.6 metres
- Outlet boxes can be located at virtually any height on the poles, so power and data points, light switches and accessory housings can be positioned quickly and easily at the optimum level for efficient operation
- All PVC extrusions manufactured from 90% recycled material\*

### Prestige Power Poles

**PPA100WHI**  
POWER POLE ASSEMBLY WITH WHITE PAINTED ALUMINIUM BODY, WHITE PVC-U COVER AND 6 OUTLET BOXES

1

**PPA100ALM**  
POWER POLE ASSEMBLY WITH ANODISED ALUMINIUM BODY, WHITE AND CHARCOAL PVC-U COVERS AND 6 OUTLET BOXES

1



## Prestige Power Posts

- Power Posts stand neatly on the floor and accept cables from below. They are ideal for raised floors but can also be installed on solid surfaces, fed for example from Cablelink Plus Screeded Floor Systems
- Fit unobtrusively under desks, and a single unit will provide up to twelve outlets for any combination of power and data points, light switches and accessory housings
- All PVC extrusions manufactured from 90% recycled material\*

\* Based on 2008 consumption.

### Prestige Power Posts

**PPT650WHI**  
POWER POST ASSEMBLY WITH WHITE PAINTED ALUMINIUM BODY, WHITE PVC-U COVER AND 5 OUTLET BOXES

1

**PPT650ALM**  
POWER POST ASSEMBLY WITH ANODISED ALUMINIUM BODY, WHITE AND CHARCOAL PVC-U COVERS AND 5 OUTLET BOXES

1



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## Accessories for Poles and Posts



To allow flexibility in matching interior design and colour schemes, the pole and post bodies are available in a white epoxy coated or natural anodised aluminium finish, and the PVCu component covers come in charcoal or white.

The bodies accept a variety of co-ordinated accessories from MK's slim profile Edge and flawless Aspect ranges, to the Logic Plus range, as well as all other MK accessory ranges. A matching MCB/RCD housing unit is available, also in charcoal or white.



**PPC20WHI**  
OUTLET BOX ASSEMBLY

1

**PPC10WHI**  
DIVIDING STRIP

3m

**PPC40WHI**  
TOP END COLLAR

1

**PPC60WHI**  
**PPC60CHA**

10

10

POWER POST END CAP

**PPCMHWHI**  
**PPCMHCHA**  
MCB/RCD HOUSING

1

1

AVAILABLE IN A CHOICE OF TWO COLOURS, WHITE OR CHARCOAL  
Accepts up to 4 x one module Sentry products, excluding single module RCBO's, up to a maximum combined rating of 63A (see pages 278-279).  
The Housing unit includes fixing kit, Sentry mounting DIN rail and cover moulding.

**PPA100LIDWHI**

2

SPARE LIDS  
3.6M LENGTHS



PPK1WHI



PPC50WHI

**PPK1WHI**  
EXTENSION BAR  
FIXING KIT (0.9 METRE) FOR  
INSTALLATIONS WHERE THE  
HEIGHT FROM FLOOR TO  
SOLID CEILING (OR TO STRUCTURAL  
CONCRETE WHERE SUSPENDED  
CEILINGS ARE INSTALLED)  
EXCEEDS 3.6 METRES.

1

**PPC50WHI**  
END LOAD PLATE

1



## private residence

This UK-based designer was looking to create a home environment with modern and abstract design touches to the fore.

The highly contemporary interiors demanded something out of the ordinary, something unusual but nevertheless striking. MK was commissioned to manufacture working designs based on sketches from the client.

The outcome was a customised range of products – both sockets and switches – that delivered both a uniqueness of design and that essential modern feel.

Available on a worldwide basis, the MK Design Service is supported by a dedicated team to ensure the seamless delivery of your chosen products. To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)



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range introduction

features and benefits

Powerlink Plus is a busbar trunking system developed to meet the power and data distribution needs of offices, schools and laboratories.

A comprehensive range of unique flush fitting accessories and gently curved covers combine to create a visually unrivalled installation. The system offers flexibility to easily adapt to future needs for the installer.

#### **Choice of 3 profiles**

To suit all your skirting and dado requirements

#### **One-piece corner, couplers and end cap covers**

Simplifies installation and improves aesthetics

#### **63A busbar for plug-on accessories and high protective conductor current compliance**

Quick and easy installation, eliminating the requirement for hard wiring

#### **Unique flush fitting accessories**

Provide an unobtrusive finish

#### **Pre-drilled trunking bases**

Eliminates the need to measure and drill fixing holes on site thus reducing installation time

#### **Large data cabling capability in outer compartments**

For all your communication and data requirements

#### **EMC Screening**

Provides an effective screen for computer service cables

#### **Made from 100% PVCu**

Powerlink Plus is both robust and easily workable on site

#### **All extrusions manufactured from 90% recycled material\***

\* Based on 2008 consumption.



#### PRE-WIRED CABLE ASSEMBLY

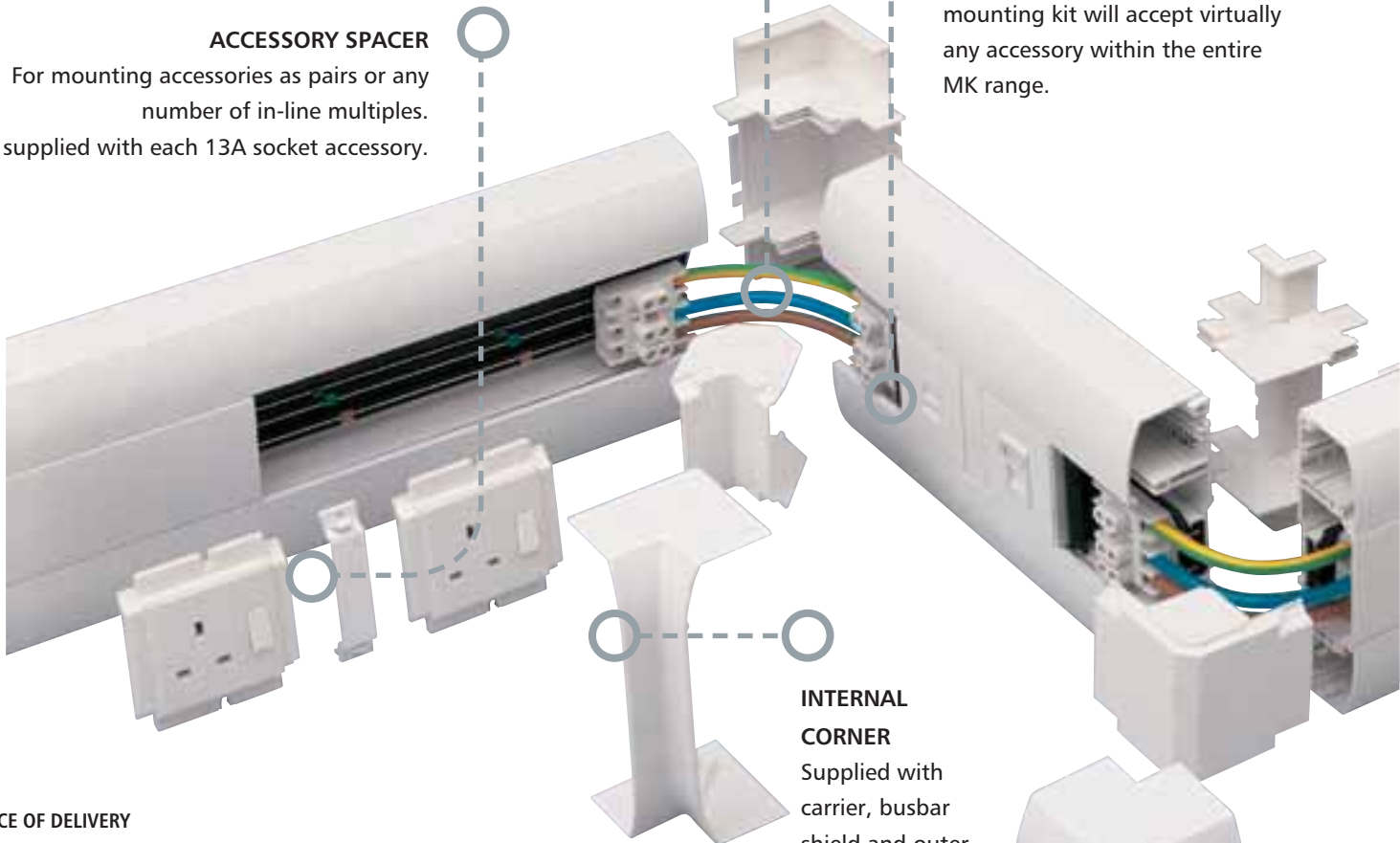
For electrical connection of busbar around corners.

#### FLUSH FITTING ACCESSORIES

Powerlink Plus offers a wide selection of flush fitting accessories, including switch sockets, DP switches, connection units and virtually every type of computer and telecom connector. All power accessories are available as plug-on units or with wire-in terminals. If that is not enough, an optional mounting kit will accept virtually any accessory within the entire MK range.

#### ACCESSORY SPACER

For mounting accessories as pairs or any number of in-line multiples. One supplied with each 13A socket accessory.



#### INTERNAL CORNER

Supplied with carrier, busbar shield and outer clip-on cover.

#### CHOICE OF DELIVERY

With Powerlink Plus the choice is yours – hard wiring or an integral 63A busbar with power accessories that simply plug into place.



#### EXTERNAL CORNER

Supplied with carrier, busbar shield and outer clip-on cover.



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**MCB/RCD**  
Housing mounts directly to central compartment and accepts any one or two module product from the MK Sentry range (excluding RCBOs).



**COUPLER**  
Joins trunking lengths together and to pre-assembled angles, crossovers or special corners. Supplied with busbar shield.

**EMC SCREENING**  
Aluminium screening inserts provide effective screening for computer services cables.

**END CAP**  
Neatly finishes runs of trunking. Supplied with screw fix carrier/busbar shield and clip-on cover.



## Component Selector Chart

Standard length: 3 metres  
 Supplied with covers  
 Trunking size: 170mm (Height) x 50mm (Depth)  
 With extension fitted:  
 212mm (Height) x 50mm (Depth)  
 Material PVCu  
 Colour: White and Charcoal



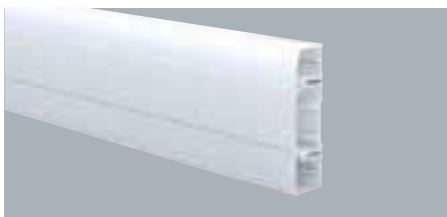
**DADO  
TRUNKING  
WITH  
BUSBARS**



**DADO  
TRUNKING  
WITHOUT  
BUSBARS**



**SKIRTING  
AND DADO  
TRUNKING  
WITH  
BUSBARS**



**SKIRTING  
AND DADO  
TRUNKING  
WITHOUT  
BUSBARS**



**EXTENSION FOR  
SKIRTING AND  
DADO TRUNKING**

## PROFILE LENGTHS

## Trunking

WITH AND  
WITHOUT  
63 AMP  
BUSBARS



## Coupler

WITH BUSBAR  
SHIELD



## End Caps

SUPPLIED  
AS A PAIR



K1963WHI  
K1963CHA

3m  
3m

K1908WHI  
K1908CHA

5  
5

K1904WHI  
K1904CHA

1  
1

K1903WHI  
K1903CHA

3m  
3m

K1908WHI  
K1908CHA

5  
5

K1904WHI  
K1904CHA

1  
1

K1962WHI  
K1962CHA

3m  
3m

K1945WHI  
K1945CHA

5  
5

K1944WHI  
K1944CHA

1  
1

K1902WHI  
K1902CHA

3m  
3m

K1945WHI  
K1945CHA

5  
5

K1944WHI  
K1944CHA

1  
1

K1913WHI  
K1913CHA

6m  
6m

K1918WHI  
K1918CHA

5  
5

K1914WHI  
K1914CHA

1  
1

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## FITTINGS

Internal Corner

External Corner

Internal Special Corner

External Special Corner

Internal 135° Corner

External 135° Corner

WITH BUSBAR SHIELD

WITH BUSBAR SHIELD

Allows continuous installation around corners other than 90°. To order, quote List No. and Angle eg. K1966WHI 150°.

Allows continuous installation around corners other than 90°. To order, quote List No. and Angle eg. K1966WHI 150°.



**K1905WHI** **1**  
**K1905CHA** **1**

Requires 1 x 1919 Cable Link Assembly

**K1906WHI** **1**  
**K1906CHA** **1**

Requires 1 x 1919 Cable Link Assembly

**K1965WHI** **1**  
**K1965CHA** **1**

Requires 2 x K1908 couplers to join to trunking  
Requires 1 x 1919 Cable Link Assembly

**K1966WHI** **1**  
**K1966CHA** **1**

Requires 2 x K1908 couplers to join to trunking  
Requires 1 x 1919 Cable Link Assembly

**K1965WHI135** **1**  
**K1965CHA135** **1**

Requires 2 x K1908 couplers to join to trunking  
Requires 1 x 1919 Cable Link Assembly

**K1966WHI135** **1**

Requires 2 x K1908 couplers to join to trunking  
Requires 1 x 1919 Cable Link Assembly

**K1905WHI** **1**  
**K1905CHA** **1**

**K1906WHI** **1**  
**K1906CHA** **1**

**K1965WHI** **1**  
**K1965CHA** **1**

Requires 2 x K1908 couplers to join to trunking

**K1966WHI** **1**  
**K1966CHA** **1**

Requires 2 x K1908 couplers to join to trunking

**K1965WHI135** **1**  
**K1965CHA135** **1**

Requires 2 x K1908 couplers to join to trunking

**K1966WHI135** **1**

Requires 2 x K1908 couplers to join to trunking

**K1911WHI** **1**  
**K1911CHA** **1**

Requires 1 x 1919 Cable Link Assembly

**K1912WHI** **1**  
**K1912CHA** **1**

Requires 1 x 1919 Cable Link Assembly

**K1961WHI** **1**  
**K1961CHA** **1**

Requires 2 x K1945 couplers to join to trunking  
Requires 1 x 1919 Cable Link Assembly

**K1961WHI135** **1**

Requires 2 x K1945 couplers to join to trunking  
Requires 1 x 1919 Cable Link Assembly

**K1964WHI135** **1**  
**K1964CHA135** **1**

Requires 2 x K1945 couplers to join to trunking  
Requires 1 x 1919 Cable Link Assembly

**K1911WHI** **1**  
**K1911CHA** **1**

**K1912WHI** **1**  
**K1912CHA** **1**

**K1961WHI** **1**  
**K1961CHA** **1**

Requires 2 x K1945 couplers to join to trunking

**K1964WHI** **1**  
**K1964CHA** **1**

Requires 2 x K1945 couplers to join to trunking

**K1961WHI135** **1**  
**K1961CHA135** **1**

Requires 2 x K1945 couplers to join to trunking

**K1915WHI** **1**  
**K1915CHA** **1**

**K1916WHI** **1**  
**K1916CHA** **1**

**K1967WHI** **1**  
**K1967CHA** **1**

Requires 2 x K1918 couplers to join to trunking

**K1968WHI** **1**  
**K1968CHA** **1**

Requires 2 x K1918 couplers to join to trunking

**K1967WHI135** **1**

Requires 2 x K1918 couplers to join to trunking

**K1968WHI135** **1**

Requires 2 x K1918 couplers to join to trunking

Flat Angle

Flat Tee

Flat Cross

Cable Retainers



**DADO TRUNKING WITH BUSBARS**

K1992WHI	1	K1973WHI	1	K1974WHI	1
K1992CHA	1	K1973CHA	1	K1974CHA	1
<b>UP/DOWN</b>		<b>UP</b>			
Requires 1 x 1919 Cable Link Assembly		K1972WHI	1		
		K1972CHA	1		
		<b>DOWN</b>			
		Requires 2 x 1919 Cable Link Assembly			



**DADO TRUNKING WITHOUT BUSBARS**

K1992WHI	1	K1973WHI	1	K1974WHI	1
K1992CHA	1	K1973CHA	1	K1974CHA	1
<b>UP/DOWN</b>		<b>UP</b>			
		K1972WHI	1		
		K1972CHA	1		
		<b>DOWN</b>			



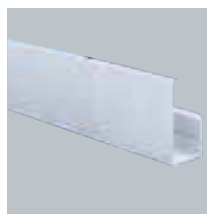
**SKIRTING AND DADO TRUNKING WITH BUSBARS**

K1957WHI	1				
K1957CHA	1				
<b>UP</b>					
K1958WHI	1				
K1958CHA	1				
<b>DOWN</b>					
Requires 1 x 1919 Cable Link Assembly					



**SKIRTING AND DADO TRUNKING WITHOUT BUSBARS**

K1957WHI	1				
K1957CHA	1				
<b>UP</b>					
K1958WHI	1				
K1958CHA	1				
<b>DOWN</b>					



**EXTENSION FOR SKIRTING AND DADO TRUNKING**

K1994WHI	1				
K1994CHA	1				
<b>UP</b>					
K1993WHI	1				
K1993CHA	1				
<b>DOWN</b>					



VTS11



VTS12

**VTS11WHI** 10

CABLE RETAINERS FOR USE WITH EXTENSION TRUNKING

**VTS12WHI** 10

CABLE RETAINERS FOR USE IN OUTER COMPARTMENTS

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## SPARES

Cable Entry Section

Cable Entry Box

MCB/RCD Housing

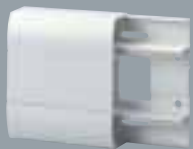
Mini Trunking Adaptors

Conduit Adaptors

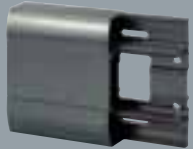
Covers and Cable Divider

FLUSH

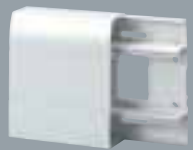
3 METRE LENGTHS



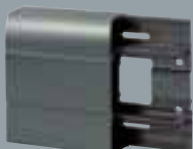
K1920WHI



K1920CHA



K1929WHI



K1929CHA



1922ALM



K1949WHI



K1949CHA



K1926WHI



K1927WHI



K1901WHI



K1907WHI



K1932WHI



K1935WHI



1934WHI



K1936WHI

**K1920WHI** 1  
**K1920CHA** 1  
REAR CABLE ENTRY SECTION DADO TRUNKING

**K1929WHI** 1  
**K1929CHA** 1  
REAR CABLE ENTRY SECTION SKIRTING AND DADO TRUNKING

Predrilled with knockouts in upper and lower compartments and single large aperture in the central compartment.

Supplied complete with covers, central cover fixing screws, and general fixing screw bushes.

TRUNKING SIZE: 152 (Length) x 170 (Height) x 50mm (Depth)

**1922ALM** 5  
CABLE ENTRY BOX FOR USE WITH K1920 AND K1929

Three compartment flush mounted box with adjustable plate. Included in the pack is a template for positioning on site prior to the trunking being installed.

DIMENSIONS: 133 x 133 x 40mm

KNOCKOUTS: 4 x 20mm 4 x 25mm

**K1949WHI** 1  
**K1949CHA** 1

Mounts directly to the centre compartment to accept up to 2 one module products from the MK Sentry range (except RCBOs).

DIMENSIONS: 220mm (Length) x 100mm (Depth) when mounted on trunking.

**K1926WHI** 10  
YT4MINI TRUNKING ADAPTOR

**K1927WHI** 10  
**K1927CHA** 10  
MINI TRUNKING ADAPTOR FOR USE WITH YEA ADAPTORS FOR YT1, YT2 AND YT3 TRUNKING

Accepts MK Ega Mini Trunking adaptors.

**K1901WHI** 10  
20MM CONDUIT ADAPTOR

**K1907WHI** 10  
25MM CONDUIT ADAPTOR

**K1932WHI** 15m  
**K1932CHA** 15m

OUTER COVER SQUARE SUPPLIED IN 3 METRE LENGTHS

**K1935WHI** 15m  
**K1935CHA** 15m

OUTER COVER CURVED SUPPLIED IN 3 METRE LENGTHS

**1934WHI** 15m  
**1934CHA** 15m

CENTRAL COVER STRAIGHT SUPPLIED IN 3 METRE LENGTHS

**K1936WHI** 15m  
**K1936CHA** 15m

EXTENSION COVER SUPPLIED IN 3 METRE LENGTHS

**VTS50WHI** 30m  
COMPARTMENT DIVIDER SUPPLIED IN 3 METRE LENGTHS

## Socket Outlets

## Switchsocket Outlets

'PLUG-ON'  
13 AMP  
STANDARD

'PLUG-ON'  
13 AMP  
STANDARD

'PLUG-ON'  
13 AMP  
NON STANDARD

'WIRE-IN'  
13 AMP  
STANDARD

'WIRE-IN'  
13 AMP  
NON STANDARD



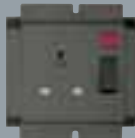
1956WHI



1956CHA



1950WHI



1950CHA



1951WHI



1951CHA



1953WHI



1953CHA



1952WHI



1952CHA



1955WHI



1955CHA

**1956WHI**  
**1956CHA**  
STANDARD  
SOCKET OUTLET



**1950WHI**  
**1950CHA**  
STANDARD SWITCHSOCKET  
WITH NEON



**1953WHI**  
**1953CHA**  
NON STANDARD  
SWITCHSOCKET



**1952WHI**  
**1952CHA**  
STANDARD SWITCHSOCKET



**1955WHI**  
**1955CHA**  
NON STANDARD  
SIDE WIRED SWITCHSOCKET



**1951WHI**  
**1951CHA**  
STANDARD SWITCHSOCKET



For plugging onto the busbars.  
Supplied complete with one  
accessory spacer and fixing screws.

For plugging onto the busbars.  
Supplied complete with one  
accessory spacer and fixing screws.

For plugging onto the busbars.  
With a 'T' shape earth pin aperture  
and for use only with the non  
standard 13A Safetyplug,  
list no. 647. Supplied complete  
with one accessory spacer and  
fixing screws.

Fitted with screw terminals for  
independent wiring. Supplied  
complete with one accessory  
spacer and fixing screws.

Fitted with screw terminals for  
independent wiring. With a 'T'  
shape earth pin aperture and for  
use only with the non standard  
13A Safetyplug, list no. 647.  
Supplied complete with one  
accessory spacer and  
fixing screws.

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## Connection Units

DP SWITCHED  
'PLUG-ON'



1970CHA



1971WHI

## DP Switches

32 AMP  
'PLUG-ON'



1943WHI



1943CHA

## Two Way Switch

20 AMP SP



1942WHI



1942CHA

## Telephone Socket Outlets



1980WHI



1980CHA



1995WHI



1995CHA

## Isolated Co-axial Socket Outlets



1981WHI



1981CHA

**1970WHI**  
**1970CHA**  
WITH NEON AND  
13A FUSE

5  
5

**1971WHI**  
**1971CHA**  
WITH NEON  
FLEX OUTLET AND  
13A FUSE

5  
5

**1943WHI**  
**1943CHA**  
WITH NEON

5  
5

**1942WHI**  
**1942CHA**

5  
5

**1980WHI**  
**1980CHA**  
MASTER SOCKET

5  
5

**1995WHI**  
**1995CHA**  
HANDSET POLARISED  
SOCKET OUTLET

5  
5

**1999WHI**  
**1999CHA**  
RJ11  
TELEPHONE/DATA SOCKET

5  
5

**1981WHI**  
**1981CHA**

5  
5

For feeding from the busbars and controlling remote equipment. Supplied complete with fixing screws.

For plugging onto the busbars. Can be used either as a busbar switch disconnector or for feeding and controlling remote equipment. The switch can accommodate up to 10mm<sup>2</sup> cables. Supplied complete with fixing screws.

Can be used for lighting and remote equipment. It is not connected to the busbars and requires separate cables. Supplied complete with fixing screws.

**1980** Supplied complete with enclosure box together with fixing screws, connecting tool, cable tie and fixing screws for mounting on to the dado trunking. A full list of instructions with wiring diagrams is supplied in every pack. Approved for use with telecommunication systems run by BT in accordance with the conditions in the instructions for use.

**1995** Supplied complete with enclosure box together with fixing screws, connecting tool, cable tie and fixing screws for mounting on to the dado trunking. Approved for use with telecommunication branch systems in accordance with the conditions in the instructions for use.

Isolated single co-axial outlet for direct connection to single TV or FM co-axial down lead. Supplied complete with enclosure box together with all the necessary fixing screws for mounting on to the dado trunking.

## Data Outlets

ELV  
Blank Plates

## Data Outlets

RJ45

BNC

FOR EXTENSION  
TRUNKING  
RJ45

BNC



1978WHI



1976CHA



1976WHI



1947CHA



1985WHI



1985CHA



1986WHI



1986CHA



K1941WHI



K1941CHA



K1977WHI



K1977CHA



K1989WHI



K1989CHA

**1978WHI**

5

**1978CHA**

5

RJ45 CATEGORY 5e  
COMPUTER/DATA SOCKET**1976WHI**

5

**1976CHA**

5

RJ45/EURO OUTLET  
TWO MODULE UNSERVICED**1947WHI**

5

**1947CHA**

5

RJ45/LJU6C OUTLET  
TWO MODULE, UNSERVICED**1978** Data socket to  
Category 5e.**K1976** Euro 50x50mm  
(accommodates 2 outlets).**K1947** Cut out dimensions LJU6C  
22x37mm for each outlet.**1985WHI**

5

**1985CHA**

5

BNC TYPE

Supplied complete with enclosure  
box together with all necessary  
fixing screws for mounting on to  
the trunking.Crimped connections.  
Impedance 50Ω.

5

**1986WHI**

5

**1986CHA**

ELV BOX AND COVER

Can be punched for use with any  
ELV accessory that can be mounted  
over the busbars.Supplied complete with enclosure  
box together with fixing screws for  
mounting on to the trunking.

5

5

**K1941WHI**

5

**K1941CHA**

5

RJ45/LJU6C  
TELEPHONE/DATA OUTLET  
(UNSERVICED) TWO MODULE**K1977WHI**

5

**K1977CHA**

5

RJ45/EURO  
TELEPHONE/DATA OUTLET  
(UNSERVICED) TWO MODULEPlates for mounting clip in RJ45/  
LJU6C and RJ45/Euro data modules.

Accessory modules not supplied.

CUT OUT DIMENSIONS:  
**K1941** 22mm x 37mm for  
each outlet.**K1977** 50x50mm which  
accommodates 2 outlets.**K1989WHI**

5

**K1989CHA**

5

BNC TYPE

Crimped connections.  
Impedance 50Ω.



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## ELV Blank Plates

## Flush Accessory Mounting Frames

## EMC Screening Inserts

## Trunking Accessories and Plug in Cable Terminations (3 Pole)

## Trunking Components and Spares

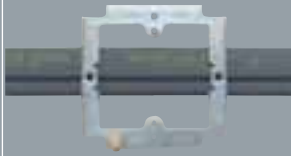
FOR EXTENSION TRUNKING



K1987WHI



K1987CHA



1928



1946WHI



1998



12024SLT9



VTSSX



VTSSXI



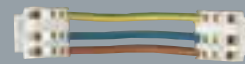
VTSSXE



VTSSO1



K1925WHI



1919



1924WHI

K1937CHA

1923WHI



1909

1909

CHA

WHI



1930

WHI



1933WHI

**K1987WHI**  
**K1987CHA**  
ELV COVER

5  
5

**1928**  
1 GANG ACCESSORY MOUNTING KIT WITH BUSBAR SHIELD

10

**1946WHI**  
2 GANG ACCESSORY MOUNTING KIT WITH FRAME AND PATTRISS

5

**1998**  
1 GANG MOUNTING FRAME & BOX FOR ELV ACCESSORIES

5

**12024SLT9**  
MOUNTING FRAME FOR 2 GANG ACCESSORY

10

**1928** For fixing standard single gang accessories to the trunking. The accessories can be connected to the busbars by using one of the cable termination components or wired separately. Complete with fixing screws.

**1946** For fixing Sentrysockets, Filtered sockets and two gang accessories to the trunking. Supplied with busbar terminations and cover, mounting frame and extension pattress together with fixing screws.

**1998** For fixing standard single gang extra low voltage outlets to the trunking. Supplied complete with enclosure box together with all the necessary fixing screws.

**VTSS**  
TRUNKING (LENGTH 3m)

6m

**VTSSXI**  
INTERNAL CORNER

1

**VTSSXE**  
EXTERNAL CORNER

1

**21016SST9**  
SPARE BONDING LINKS

25

**VTSSO1**  
OUTLET BOX ASSEMBLY

1

**VTSSX**  
EXTENSION TRUNKING 3 METRE LENGTH

6m

**VTSSXI**  
INTERNAL CORNER FOR EXTENSION TRUNKING

1

**VTSSXE**  
EXTERNAL CORNER FOR EXTENSION TRUNKING

1

**VTSSXO1**  
OUTLET BOX ASSEMBLY FOR EXTENSION TRUNKING

1

Screening Inserts can be used as a screen for computer services cables.

Not for use with power cables.

Lengths include earth lead and fixing screws.

VTSS fits top and bottom data compartments only. Box not supplied.

**K1925WHI**  
PLUG IN BUSBAR COUPLER

10

**1919**  
CABLE LINK ASSEMBLY

5

**K1937CHA**  
CABLE CROSSING BARRIER

5

**1923WHI**  
10mm² CABLE TERMINATION

10

**1924WHI**  
25mm² CABLE TERMINATION

10

**1924WHI**  
25mm² CABLE TERMINATION

10

**K1925** To connect lengths of individual busbars together. Rating 63A.

**1919** Prewired corner cable link for internal and external corners. Rating 63A.

**1937** Suitable for bridging the central compartment, where there are no busbars (Busbars are coupled by cables passing underneath).

**1939** To maintain segregation between the wall and the busbars or cables when installing Powerlink around a pillar of less than 125mm.

**1923** To connect the busbar to the mains supply or to electrical accessories mounted onto mounting frames. Rating: 50A.

**1924** To connect the busbars to the mains supply and for connecting the busbars around corners (two required). Rating: 63A.

**1909WHI**  
**1909CHA**  
CENTRAL COVER COUPLER

10  
10

**1930WHI**  
ACCESSORY SPACER

10

**1933WHI**  
BUSBAR SECTION for dado trunking without busbars. Supplied in 3m lengths.

3m

**11750PST9**  
COVER SCREWS

100

**11816PS**  
ACCESSORY SCREWS

100

**11817PS**  
CABLE TERMINATION & BUSBAR COVER SCREWS

100

**11827PS**  
FIXING SCREW BUSHES

100

Can be punched to accommodate ELV outlets.



## range introduction

When it comes to providing direct bench top access to low voltage electrical, communications and data services, MK Pinnacle is the flexible and versatile solution.

Styled to the same high standards as the MK Logic Plus range, it features a high quality finish, a curved design and twin segregated compartments. These features mean MK Pinnacle is the bench top solution for laboratories, schools and workshops.

## features and benefits

**Unique curved appearance**

Total physical and visual integration with the MK Logic Plus range

**Designed to meet the "Heavy Duty" requirements of BS 4678 Part 4**

Offers high levels of mechanical protection and electrical safety

**Versatility**

MK Pinnacle is versatile. Available in single or double configuration, it can be installed with a choice of two profile heights and fascia angles

**Made from 100% PVCu**

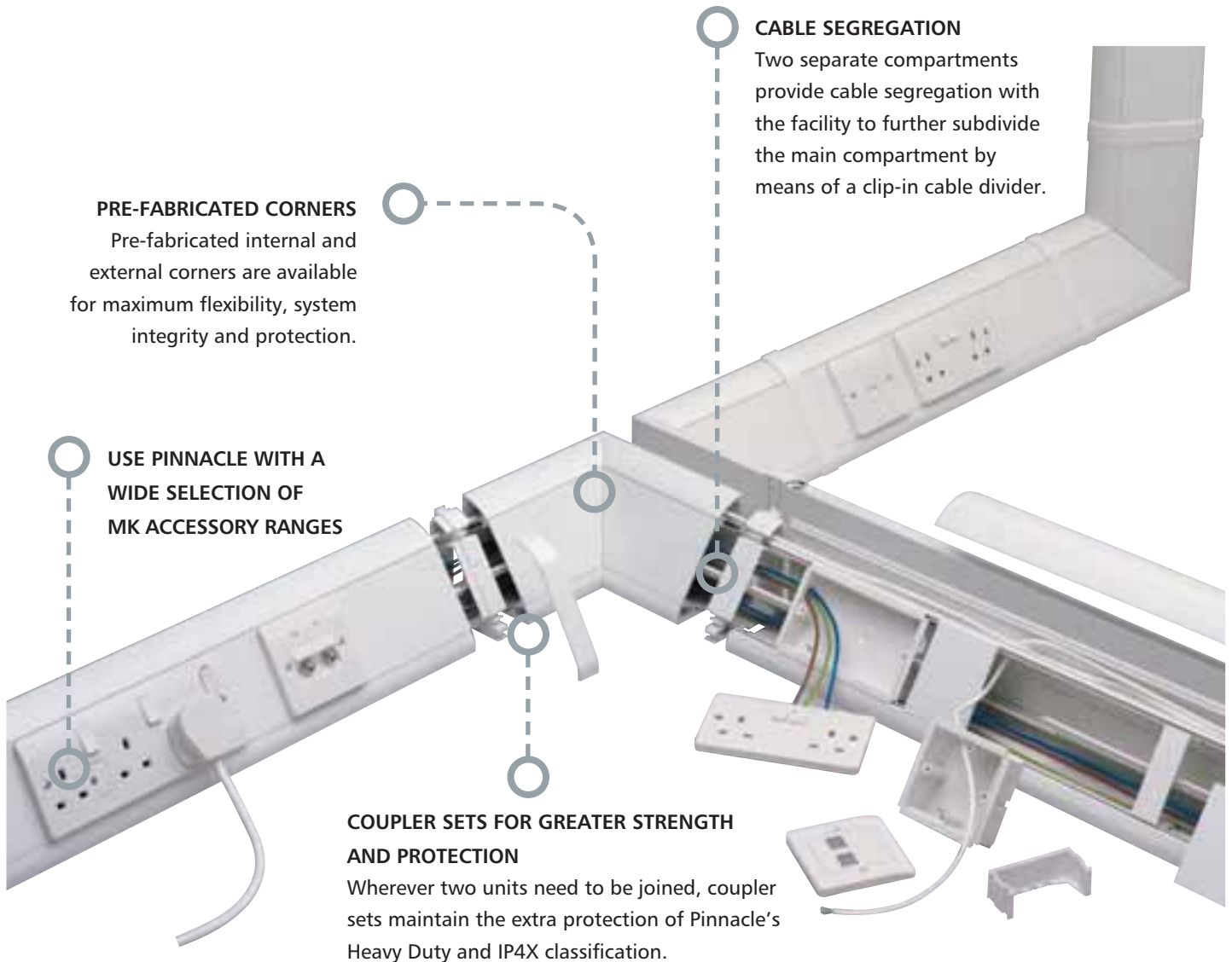
Pinnacle is robust, easily manipulated on site and non-corrosive

**All extrusions manufactured from 90% recycled material\***

\* Based on 2008 consumption.

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**PRE-FABRICATED CORNERS**

Pre-fabricated internal and external corners are available for maximum flexibility, system integrity and protection.

**USE PINNACLE WITH A WIDE SELECTION OF MK ACCESSORY RANGES**

**CABLE SEGREGATION**

Two separate compartments provide cable segregation with the facility to further subdivide the main compartment by means of a clip-in cable divider.

**COUPLER SETS FOR GREATER STRENGTH AND PROTECTION**

Wherever two units need to be joined, coupler sets maintain the extra protection of Pinnacle's Heavy Duty and IP4X classification.

**BENCH UNITS**

One gang, two gang, two gang plus one gang and three gang bench units are available as single and two sided assemblies.

**VERSATILITY**

Available in single or double configuration, Pinnacle can be installed with a choice of two profile heights and fascia angles. The system may be installed horizontally or vertically.

**UNDERSHELF**

Pinnacle can be installed safely in any orientation, even conveniently tucked away under a shelf, giving easy and discreet access to power and data outlets.



## Component Selector Chart

## Trunking



Pinnacle trunking is available in a choice of colours, White (WHI) and Special (COL).

The special (COL) offers a choice of over 180 RAL paint colours. Specify your choice when ordering. Minimum Order Quantities apply.



**PTS2WHI**

**4m**

**PTS2COL**

**4m**

SINGLE TRUNKING 2 METRE LENGTH  
SUPPLIED WITH LIDS  
90MM HIGH X 105MM WIDE

**PTS3WHI**

**6m**

**PTS3COL**

**6m**

SINGLE TRUNKING 3 METRE LENGTH  
SUPPLIED WITH LIDS  
90MM HIGH X 105MM WIDE



**PTS2WHI**

**4m**

**PTS2COL**

**4m**

SINGLE TRUNKING 2 METRE LENGTH  
SUPPLIED WITH LIDS  
105MM HIGH X 90MM WIDE

**PTS3WHI**

**6m**

**PTS3COL**

**6m**

SINGLE TRUNKING 3 METRE LENGTH  
SUPPLIED WITH LIDS  
105MM HIGH X 90MM WIDE



**PTD2WHI**

**2m**

**PTD2COL**

**2m**

DOUBLE TRUNKING 2 METRE LENGTH  
SUPPLIED WITH LIDS  
105MM HIGH X 180MM WIDE

**PTD3WHI**

**3m**

**PTD3COL**

**3m**

DOUBLE TRUNKING 3 METRE LENGTH  
SUPPLIED WITH LIDS  
105MM HIGH X 180MM WIDE

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## End Caps

## Coupler Set\*

## Internal Corner

## External Corner

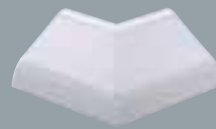
## Cable Divider

## Cable Retainer

FABRICATED

FABRICATED

2 METRE LENGTHS



**PECSWHI**  
**PECSCOL**  
SUPPLIED AS  
RIGHT AND  
LEFT HAND PAIR

**10**  
**10**

**PCWHI**  
**PCCOL**  
CONSISTS OF COUPLER  
AND JOINT COVER

**10**  
**10**

**PICLWHI**

**1**

**PECLWHI**

**1**

**PD2WHI**

**20m**

**VTS11WHI**

**10**

\*COUPLER SETS  
TO MAINTAIN HEAVY DUTY  
AND IP4X CLASSIFICATION  
BOTH COUPLER AND JOINT  
COVER MUST BE USED

**PECSWHI**  
**PECSCOL**  
SUPPLIED AS  
RIGHT AND  
LEFT HAND PAIR

**10**  
**10**

**PCWHI**  
**PCCOL**  
CONSISTS OF COUPLER  
AND JOINT COVER

**10**  
**10**

**PICHWHI**

**1**

**PECHWHI**

**1**

**PD2WHI**

**20m**

**VTS11WHI**

**10**

\*COUPLER SETS  
TO MAINTAIN HEAVY DUTY  
AND IP4X CLASSIFICATION  
BOTH COUPLER AND JOINT  
COVER MUST BE USED

**PECDWHI**  
**PECDCOL**  
SUPPLIED AS  
RIGHT AND LEFT HAND PAIR

**5**  
**5**

**PCWHI**  
**PCCOL**  
CONSISTS OF COUPLER  
AND JOINT COVER

**10**  
**10**

**PD2WHI**

**20m**

**VTS11WHI**

**10**



\*COUPLER SETS  
TO MAINTAIN HEAVY DUTY  
AND IP4X CLASSIFICATION  
BOTH COUPLER AND JOINT  
COVER MUST BE USED

## Bench Units

ONE GANG  
AND  
TWO GANGTWO GANG  
PLUS  
ONE GANG

## THREE GANG



PBUS1WHI

PBUD1WHI



PBUS2WHI



PBUD2WHI



PBUS21WHI



PBUD21WHI



PBUS3 WHI



PBUD3WHI

**PBUS1WHI** **1**  
1 GANG  
SINGLE BENCH UNIT WITH  
1 GANG ACCESSORY BOX  
(VTS6035)

**PBUD1WHI** **1**  
**PBUD1COL** **1**  
1 GANG  
DOUBLE BENCH UNIT WITH  
2 X 1 GANG ACCESSORY  
BOXES (VTS6035)

**PBUS2WHI** **1**  
2 GANG  
SINGLE BENCH UNIT WITH  
2 GANG ACCESSORY BOX  
(VTS7025)

**PBUD2WHI** **1**  
**PBUD2COL** **1**  
2 GANG  
DOUBLE BENCH UNIT WITH  
2 X 2 GANG ACCESSORY  
BOXES (VTS7025)

**PBUS21WHI** **1**  
**PBUS21COL** **1**  
2 + 1 GANG  
SINGLE BENCH UNIT  
WITH A 2 GANG (VTS7025)  
AND A  
1 GANG (VTS6035)  
ACCESSORY BOX

**PBUD21WHI** **1**  
2 + 1 GANG  
DOUBLE BENCH UNIT  
WITH 2 X 2 GANG  
(VTS7025)  
AND  
2 X 1 GANG (VTS6035)  
ACCESSORY BOXES

**PBUS3WHI** **1**  
3 GANG  
SINGLE BENCH UNIT  
WITH 3 GANG  
ACCESSORY BOX  
(VTS8028)

**PBUD3WHI** **1**  
3 GANG  
DOUBLE BENCH UNIT  
WITH 2 X 3 GANG  
ACCESSORY BOXES  
(VTS8028)

Supplied complete with  
accessory boxes, end caps  
and pre-cut lids.

Supplied complete with  
accessory boxes, end caps  
and pre-cut lids.

Supplied complete with  
accessory boxes, end caps  
and pre-cut lids.

Supplied complete with  
accessory boxes, end caps  
and pre-cut lids.

Supplied complete with  
accessory boxes, end caps  
and pre-cut lids.

Supplied complete with  
accessory boxes, end caps  
and pre-cut lids.

## DIMENSIONS:

**PBUS1:**  
105mm high  
90mm deep  
130mm wide

**PBUD1:**  
105mm high  
185mm deep  
130mm wide

## DIMENSIONS:

**PBUS2:**  
105mm high  
90mm deep  
190mm wide

**PBUD2:**  
105mm high  
185mm deep  
190mm wide

## DIMENSIONS:

**PBUS21:**  
105mm high  
90mm deep  
290mm wide

## DIMENSIONS:

**PBUD21:**  
105mm high  
185mm deep  
290mm wide

## DIMENSIONS:

**PBUS3:**  
105mm high  
90mm deep  
250mm wide

## DIMENSIONS:

**PBUD3:**  
105mm high  
185mm deep  
250mm wide

Pinnacle (COL) offers a choice of over 180 RAL paint colours.  
Please specify your choice when ordering.

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## Accessory Boxes

## Mounting Frames

## Trunking Cover Spares

2 AND 3 METRE LENGTHS



VTS6035WHI



VTS25SWHI



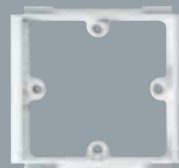
VTS7035WHI



VTS8028 WHI



VTS2060WHI



VTS6000WHI



VTS2070WHI



VTS7000 WHI



PSC2WHI



PCCS2WHI



PCCD2WHI

**VTS6025WHI** 25  
1 GANG OUTLET BOX  
25MM DEEP  
HORIZONTAL AND  
VERTICAL MOUNTING

**VTS6035WHI** 25  
1 GANG OUTLET BOX  
35MM DEEP  
HORIZONTAL AND  
VERTICAL MOUNTING

**VTS7025WHI** 10  
2 GANG OUTLET BOX  
25MM DEEP

**VTS8035** 5  
3 GANG OUTLET BOX  
35MM DEEP

**VTS7035WHI** 10  
2 GANG  
OUTLET BOX  
35MM DEEP

**VTS8028WHI** 5  
3 GANG  
OUTLET BOX  
28MM DEEP

**VTS25SWHI** 10  
SOCKET SPACER  
TO ESTABLISH THE  
MINIMUM DISTANCE  
BETWEEN ACCESSORIES

**K3716** 100  
BOX EARTH TERMINAL

**VTS2060WHI** 10  
2 GANG LJU6C/RJ45  
SUPPLIED WITH  
LID JOINT COVERS

**VTS2070WHI** 10  
2 GANG EURO/RJ45  
SUPPLIED WITH  
LID JOINT COVERS

**VTS6000WHI** 10  
1 GANG  
ACCESSORY MOUNTING  
FRAME

**VTS7000WHI** 5  
2 GANG  
ACCESSORY MOUNTING  
FRAME

**PSC2WHI** 20m  
STRAIGHT COVER

**PCCS2WHI** 20m  
CURVED COVER  
FOR SINGLE  
TRUNKING (2M)

**PSC3WHI** 30m  
STRAIGHT COVER (3M)

**PCCS3WHI** 30m  
CURVED COVER  
FOR SINGLE  
TRUNKING (3M)

**PCCD2WHI** 10m  
CURVED COVER  
FOR DOUBLE  
TRUNKING (2M)

**PCCD3WHI** 30m  
CURVED COVER  
FOR DOUBLE  
TRUNKING (3M)



**VTSKM1WHI** 1  
MCB/RCD HOUSING  
WITH COVER  
(ACCESSORIES NOT  
PROVIDED)

Mounts directly to trunking to accept up to 2 x one module products from the Sentry range of MCBs and RCDs (excluding one module RCBOs).



**PINNACLEPILLAR**  
IS A VERSATILE VERTICAL  
MULTI-COMPARTMENT  
SYSTEM PROVIDING  
LV POWER, DATA AND  
TELECOM SERVICES FROM  
CEILING OR FLOOR VOIDS  
TO PERIMETER LOCATIONS  
OR AT DESK HEIGHT FOR  
PERIMETER WORK STATIONS.  
SEE PAGE 350.

## Pinnacle Pillars



Pinnacle Pillars are versatile, vertical multi compartment systems providing a means to supply LV power, data and telecom services from ceiling or floor voids to specific perimeter locations.

Manufactured from PVCu, Pinnacle units have been designed to provide a high level of protection and conform to the heavy duty requirements of BS 4678 Part 4 and the IP4X classification of BS EN 60529.

Supplied in either 3 metre or 630mm lengths the units have two permanently segregated compartments with the facility to further subdivide the main compartment by means of a clip-in divider strip.

Units are supplied complete with clip in 35mm deep single gang accessory boxes which will accept most standard single gang power and data wiring devices including MK Logic Plus, Edge, Aspect and Albany Plus product ranges.

All extrusions manufactured from 90% recycled material.\*

### Warning

Pinnacle Pillars are not designed for free standing and must be installed against a wall or partitioning as per the installation instructions.

**PTPS630WHI** **1**  
PINNACLE  
SINGLE PILLAR  
630MM LENGTH

Pinnacle 630 Single pillar is supplied complete with base, lids, end caps, plus:

0.75m cable divider  
2 cable retainers (VTS11)  
3 socket spacers (VTS25S)  
4 outlet boxes (VTS6035)

Accessories are not supplied  
See Logic Plus and Aspect.

**PTPD630WHI** **1**  
PINNACLE  
DOUBLE PILLAR  
630MM LENGTH

Pinnacle 630 Double pillar is supplied complete with base, lids, end caps, plus:

1.5m cable divider  
4 cable retainers (VTS11)  
6 socket spacers (VTS25S)  
8 outlet boxes (VTS6035)

Accessories are not supplied  
See Logic Plus and Aspect.

**PTPS3000WHI** **1**  
PINNACLE  
SINGLE PILLAR  
3 METRE LENGTH

**PSC3WHI** **30m**  
SPARE LID  
STRAIGHT COVER  
3 METRE LENGTH

**PCCS3WHI** **30m**  
SPARE LID  
CURVED COVER SINGLE  
3 METRE LENGTH

Pinnacle 3000 Single pillar is supplied complete with base, lids, end caps, plus:

4m cable divider  
6 cable retainers (VTS11)  
3 socket spacers (VTS25S)  
4 outlet boxes (VTS6035)

Accessories are not supplied  
See Logic Plus and Aspect.

**PTPD3000WHI** **1**  
PINNACLE  
DOUBLE PILLAR  
3 METRE LENGTH

**PCCD3WHI** **30m**  
SPARE LID  
CURVED COVER DOUBLE  
3 METRE LENGTH

Pinnacle 3000 Double pillar is supplied complete with base, lids, end caps, plus:

6m cable divider  
12 cable retainers (VTS11)  
6 socket spacers (VTS25S)  
8 outlet boxes (VTS6035)

Accessories are not supplied  
See Logic Plus and Aspect.



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## grand lisboa hotel, macau

Say it with style. Guests at Macau's latest hotel, the splendid Grand Lisboa Hotel, need only look at the various room switches to appreciate what they do.

The highly polished chrome Aspect switches have been etched with discreet symbols to depict various functions, many of them unique to the hotel. Given a brief to design a range of wiring devices that provided the necessary functionality with a modern, sleek look, MK produced a number of concept switches based on the contemporary Aspect range, applying the polished chrome finish to create a sophisticated and upmarket feel.

MK was also able to supply standard wiring accessories to complement the bespoke range.

Available on a worldwide basis, the MK Design Service is supported by a dedicated team to ensure the seamless delivery of your chosen products.

To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)





## range introduction

Premier is a modern integrated trunking system which provides the means to distribute power, data and telecom services around buildings.

A wide range of snap fit mouldings, including reducers, make it easy to run continuous lengths of trunking as cable feeders and, where required, to provide dado trunking with the necessary power, data and telecom outlets.

Premier trunking is also compliant with Cat 5e and 6 data cable installation, and the MK Aspect and Logic Plus accessory ranges complement the style and finish of Premier Trunking.

## features and benefits

**Simple, clean lines**

Stylish and unobtrusive finish

**Wide range of integrated components**

Maximises versatility in application

**Clip-on covers provide continuous access for wiring modifications**

Easy to assemble and install

**Data corners provide 32mm radius compatible with Cat 5e and Cat 6 data cables**

Enables data cables to perform to their maximum capabilities (NCT1050 only)

**Tapered joints provide complete protection at junctions masking cut ends**

Uniform and neat finish to any installation

**Made from 100% PVCu**

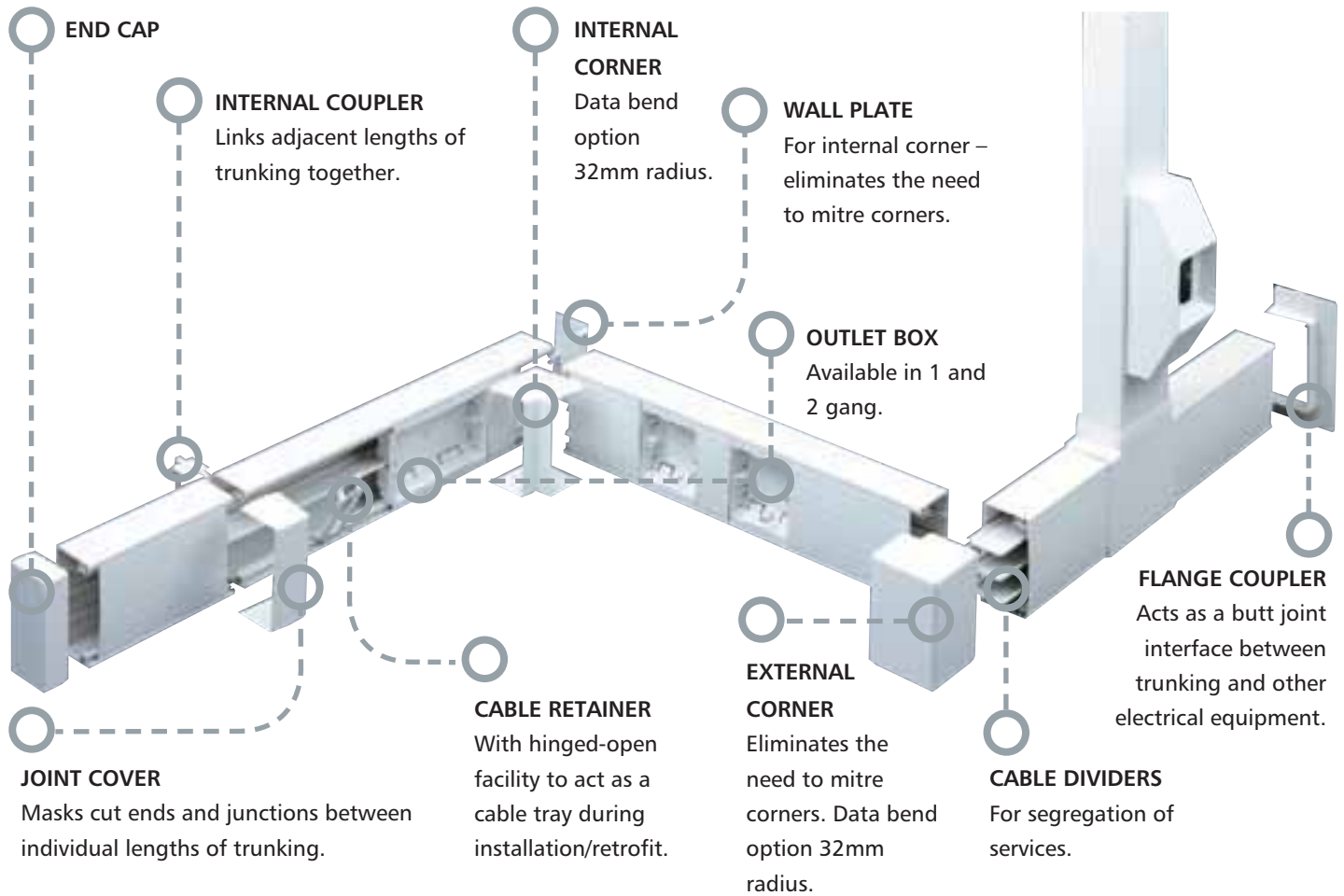
Premier is both robust and easily workable on site

**All extrusions manufactured from 90% recycled material\***

\* Based on 2008 consumption.

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Components are available in a choice of over 180 RAL paint colours. Specify your choice when ordering.



Adaptors provide integration with Ega Mini and Communication Trunking for local distribution.

Reducers are used to connect different sizes of trunking.

Moulded flat cross available for all distribution trunking.



## Trunking

MATERIAL: PVCu  
COLOUR: White

3 METRE  
LENGTHS

2 METRE  
LENGTHS

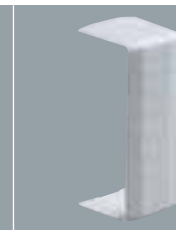
SPARE  
TRUNKING LID  
3 METRE  
LENGTHS

Internal  
Coupler

MOULDED

Joint  
Cover

MOULDED



50 x 50mm	<b>NCT5050WHI</b>	<b>12m</b>	<b>NCT5050D1WHI*</b>	<b>12m</b>	<b>NCT50LIDWHI</b>	<b>12m</b>	<b>NCI5050WHI</b>	<b>5</b>	<b>NJC5050WHI</b>	<b>10</b>
75 x 50mm	<b>NCT7550WHI</b>	<b>12m</b>	<b>NCT7550D1*</b>	<b>12m</b>	<b>NCT50LIDWHI</b>	<b>12m</b>	<b>NCI7550WHI</b>	<b>5</b>	<b>NJC7550WHI</b>	<b>10</b>
75 x 75mm	<b>NCT7575WHI</b>	<b>12m</b>	<b>NCT7575D1*</b>	<b>8m</b>	<b>NCT75LIDWHI</b>	<b>12m</b>	<b>NCI7575WHI</b>	<b>5</b>	<b>NJC7575WHI</b>	<b>10</b>
100 x 40mm	<b>NCT1040WHI</b>	<b>12m</b>	<b>NCT1040D1*</b>	<b>8m</b>	<b>NCT100LIDWHI</b>	<b>12m</b>	<b>NCI1040WHI</b>	<b>5</b>	<b>NJC1040WHI</b>	<b>5</b>
100 x 50mm	<b>NCT1050WHI</b>	<b>12m</b>	<b>NCT1050D1*</b>	<b>8m</b>	<b>NCT100LIDWHI</b>	<b>12m</b>	<b>NCI1050WHI</b>	<b>5</b>	<b>NJC1050WHI</b>	<b>5</b>
100 x 100mm	<b>NCT1010WHI</b>	<b>12m</b>	<b>NCT1010D1*</b>	<b>8m</b>	<b>NCT100LIDWHI</b>	<b>12m</b>	<b>NCI1010WHI</b>	<b>5</b>	<b>NJC1010WHI</b>	<b>5</b>

\* 2 metre lengths are available  
for NON UK markets.

External  
Corner

MOULDED

WITH  
DATA CORNER  
MOULDED

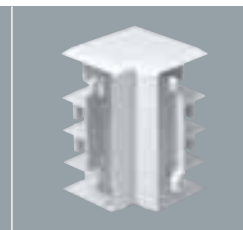
Internal  
Corner

MOULDED

WITH  
DATA CORNER  
MOULDED

## Flat Angle

MOULDED



50 x 50mm	<b>NAE5050WHI</b>	<b>2</b>		<b>NAI5050WHI</b>	<b>2</b>		<b>NAF5050WHI</b>	<b>2</b>
75 x 50mm	<b>NAE7550WHI</b>	<b>2</b>		<b>NAI7550WHI</b>	<b>2</b>		<b>NAF7550WHI</b>	<b>2</b>
75 x 75mm	<b>NAE7575WHI</b>	<b>2</b>		<b>NAI7575WHI</b>	<b>2</b>		<b>NAF7575WHI</b>	<b>2</b>
100 x 40mm	<b>NAE1040WHI</b>	<b>2</b>		<b>NAI1040WHI</b>	<b>2</b>		<b>NAF1040WHI</b>	<b>2</b>
100 x 50mm	<b>NAE1050WHI</b>	<b>2</b>	<b>NDAE1050WHI</b>	<b>2</b>	<b>NAI1050WHI</b>	<b>2</b>	<b>NDAI1050WHI</b>	<b>2</b>
100 x 50mm	<b>NFAE1050WHI*</b>	<b>2</b>		<b>NFAI1050WHI*</b>	<b>2</b>		<b>NFAF1050WHI*</b>	<b>2</b>
100 x 100mm	<b>NAE1010WHI*</b>	<b>1</b>		<b>NAI1010WHI*</b>	<b>1</b>		<b>NAF1010WHI*</b>	<b>1</b>

\* Fabricated.

Data corner provides  
32mm (1 1/4" or 1.25")  
radius compatible with  
Cat 5e and 6 data cables.

\* Fabricated.

Data corner provides  
32mm (1 1/4" or 1.25")  
radius compatible with  
Cat 5e and 6 data cables.

\* Fabricated.

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### Cable Retainer

MOULDED

### Cable Divider

3 METRE LENGTHS

### End Cap

UNIVERSAL FOR USE AT EITHER END MOULDED

### Underbox Divider

1 GANG 2 GANG  
USED TO MAINTAIN CABLE SEGREGATION BEHIND SOCKET OUTLETS



NBP50WHI	10	NVS50WHI	36m	NEP5050WHI	5		
NBP75WHI	10	NVS50WHI	36m	NEP7550WHI	5		
NBP75WHI	10	NVS75WHI	36m	NEP7575WHI	5		
NBP100WHI	10	NVS40WHI	36m	NEP1040WHI	5	NUB401WHI	10
NBP100WHI	10	NVS50WHI	36m	NEP1050WHI	5	NUB501WHI	10
NBP100WHI	10	NVS100WHI	36m	NEP1010WHI	5	NUB1002WHI	10

### Flat Tee

WITH DATA CORNER MOULDED

MOULDED

### Double Set

FABRICATED

### Internal Tee

FABRICATED

### External Tee

FABRICATED



	NTF5050WHI	2		NMD5050WHI	2	NTI5050WHI	1	NTE5050WHI	1
	NTF7550WHI	2				NTI7550WHI	1	NTE7550WHI	1
	NTF7575WHI	2				NTI7575WHI	1	NTE7575WHI	1
	NTF1040WHI	2				NTI1040WHI	1	NTE1040WHI	1
NDAF1050WHI	2	NTF1050WHI	2	NDTF1050WHI	2	NTI1050WHI	1	NTE1050WHI	1
	NFTF1050WHI*	2							
	NFTF1010WHI*	1				NTI1010WHI	1	NTE1010WHI	1

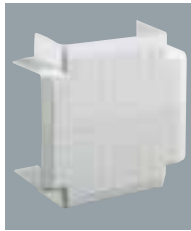
Data corner provides 32mm (1 1/4" or 1.25") radius compatible with Cat 5e and 6 data cables

\* Fabricated.

Data corner provides 32mm (1 1/4" or 1.25") radius compatible with Cat 5e and 6 data cables.

Flat  
Cross

MOULDED

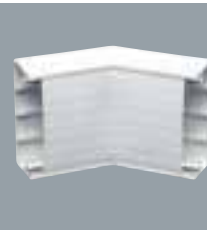


Flange  
Coupler



Angles

INTERNAL  
135°  
FABRICATED



EXTERNAL  
135°  
FABRICATED



FLAT  
135°  
FABRICATED



50 x 50mm	<b>NCU5050WHI</b>	<b>1</b>	<b>NFC5050WHI</b>	<b>1</b>	<b>NMI5050WHI</b>	<b>1</b>	<b>NMO5050WHI</b>	<b>1</b>	<b>NMT5050WHI</b>	<b>1</b>
75 x 50mm	<b>NCU7550WHI</b>	<b>1</b>	<b>NFC7550WHI</b>	<b>1</b>	<b>NMI7550WHI</b>	<b>1</b>	<b>NMO7550WHI</b>	<b>1</b>	<b>NMT7550WHI</b>	<b>1</b>
75 x 75mm	<b>NCU7575WHI</b>	<b>1</b>	<b>NFC7575WHI</b>	<b>1</b>	<b>NMI7575WHI</b>	<b>1</b>	<b>NMO7575WHI</b>	<b>1</b>	<b>NMT7575WHI</b>	<b>1</b>
100 x 40mm	<b>NCU1040WHI</b>	<b>1</b>	<b>NFC1040WHI</b>	<b>1</b>	<b>NMI1040WHI</b>	<b>1</b>			<b>NMT1040WHI</b>	<b>1</b>
100 x 50mm	<b>NCU1050WHI</b>	<b>1</b>	<b>NFC1050WHI</b>	<b>1</b>	<b>NMI1050WHI</b>	<b>1</b>	<b>NMO1050WHI</b>	<b>1</b>	<b>NMT1050WHI</b>	<b>1</b>
100 x 100mm	<b>NCU1010WHI</b>	<b>1</b>	<b>NFC1010WHI</b>	<b>1</b>	<b>NMI1010WHI</b>	<b>1</b>	<b>NMO1010WHI</b>	<b>1</b>	<b>NMT1010WHI</b>	<b>1</b>

MCB/RCD  
Housings



**NMH100WHI** **1**

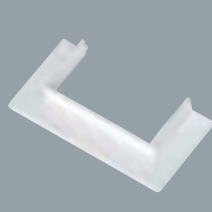


**VTSKMH1WHI** **1**

VTS/KMH includes cover.  
Accessory not provided.

Mini  
Trunking  
Adaptor

FOR YEA AND  
CMA ADAPTORS



**NYT100WHI** **10**

Partition  
Wall Cover

FOR TRUNKING  
100MM X 40MM



**NWC1040WHI** **5**

Accessory  
Boxes

ONE GANG  
25 & 35MM  
DEEP FOR  
100MM WIDE  
TRUNKING



**VTS6025WHI** **25**

**VTS6035WHI** **25**

35mm deep boxes are only  
for use in 100 x 50mm and  
100 x 100mm trunking.

TWO GANG  
25 & 35MM  
DEEP FOR  
100MM WIDE  
TRUNKING



**VTS7025WHI** **10**

**VTS7035WHI** **10**

35mm deep boxes are only  
for use in 100 x 50mm and  
100 x 100mm trunking.

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## Wall Plates

FOR INTERNAL  
CORNERS  
MOULDED



## Reducers

50 X 50MM  
FABRICATED



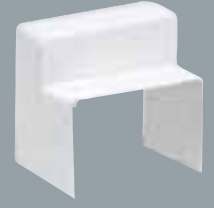
75 X 50MM  
FABRICATED



75 X 75MM  
FABRICATED



100 X 50MM  
FABRICATED



<b>NWP5050WHI</b>	<b>5</b>				
<b>NWP7550WHI</b>	<b>5</b>	<b>NTR21WHI</b>	<b>1</b>		
<b>NWP7575WHI</b>	<b>5</b>	<b>NTR31WHI</b>	<b>1</b>	<b>NTR32WHI</b>	<b>1</b>
<b>NWP1040WHI</b>	<b>5</b>				
<b>NWP1050WHI</b>	<b>5</b>	<b>NTR41WHI</b>	<b>1</b>	<b>NTR42WHI</b>	<b>1</b>
		<b>NTR61WHI</b>	<b>1</b>	<b>NTR62WHI</b>	<b>1</b>
				<b>NTR63WHI</b>	<b>1</b>
				<b>NTR64WHI</b>	<b>1</b>

## Mounting Frames

THREE GANG  
28MM & 35MM  
DEEP FOR  
100MM WIDE  
TRUNKING



## Accessory Spacer



<b>VTS8028WHI</b>	<b>5</b>	<b>VTS6000WHI</b>	<b>10</b>	<b>NSP100WHI</b>	<b>10</b>
<b>VTS8035</b>	<b>5</b>	1 GANG ACCESSORY MOUNTING FRAME		ACCESSORY SPACER FOR 100MM WIDE TRUNKING	
<b>K3716</b>	<b>100</b>	<b>VTS7000WHI</b>	<b>5</b>		
BOX EARTH TERMINAL		2 GANG ACCESSORY MOUNTING FRAME			

Norwich Trunking is a very popular system for use in schools, offices and commercial installations, because of its durability and the facility to retrofit extra sockets and outlets as required.

STANDARD LENGTH: 3 metres  
MATERIAL: PVCu  
COLOUR: White

- **2 sizes with one or two compartments**
- **Easy to add sockets and outlets once installed**
- **Secure lid fit enables wall or ceiling mounting**
- **Unobtrusive and neat**
- **Easy to assemble and install**
- **Durable and impact resistant to Heavy Classification BS 4678 Part 4**
- **All extrusions manufactured from 90% recycled material\***

## PROFILE LENGTHS

### Single Compartment Trunking

3 METRE LENGTHS



**NBT3WHI** 12m  
100 X 25MM  
SINGLE COMPARTMENT

3 METRE LENGTHS



**NBT4WHI** 12m  
100 X 40MM  
SINGLE COMPARTMENT

### Two Compartment Trunking

3 METRE LENGTHS

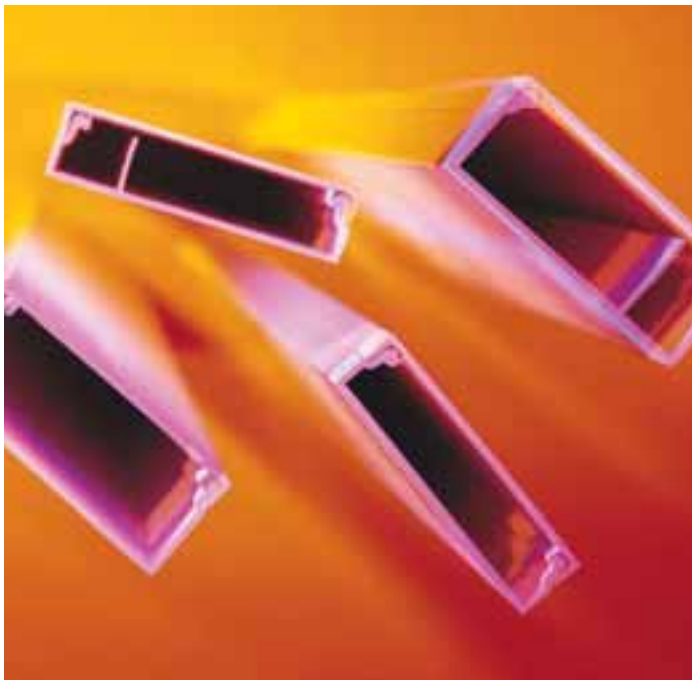


**NBT3TCWHI** 12m  
100 X 25MM  
TWO COMPARTMENT

3 METRE LENGTHS

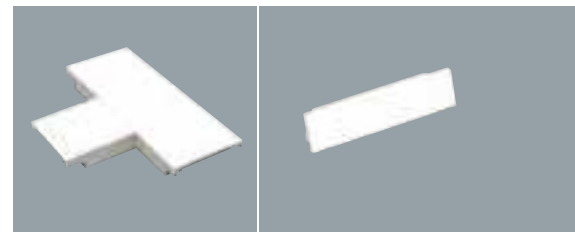


**NBT4TCWHI** 12m  
100 X 40MM  
TWO COMPARTMENT



### Flat Tees

### End Caps



1 com	100 x 25mm	<b>NTF3WHI</b>	<b>1</b>	<b>NEP3WHI</b>	<b>10</b>
1 com	100 x 40mm	<b>NTF4WHI</b>	<b>1</b>	<b>NEP4WHI</b>	<b>10</b>
2 com	100 x 25mm	<b>NTF3TCWHI</b>	<b>1</b>	<b>NEP3WHI</b>	<b>10</b>
2 com	100 x 40mm	<b>NTF4TCWHI</b>	<b>1</b>	<b>NEP4WHI</b>	<b>10</b>

\* Based on 2008 consumption.



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## FITTINGS

Flat Angle

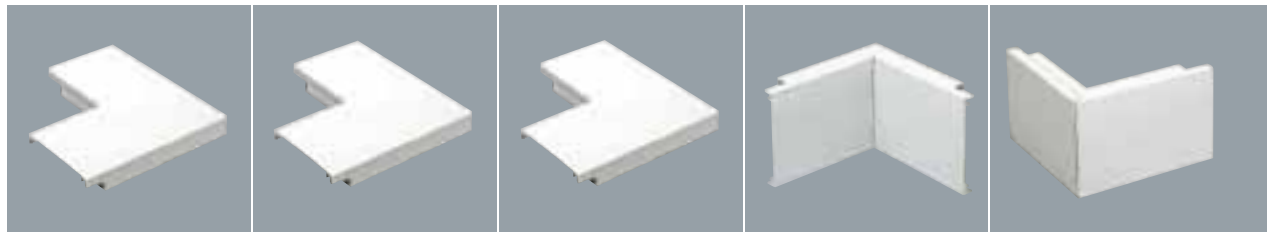
Flat Angle

Internal  
Corner

External  
Corner

SMALL  
COMPARTMENT  
TO OUTSIDE

SMALL  
COMPARTMENT  
TO INSIDE



1 com	100 x 25mm	<b>NAF3WHI</b>	<b>1</b>			<b>NAI3WHI</b>	<b>1</b>	<b>NAE3WHI</b>	<b>1</b>		
1 com	100 x 40mm	<b>NAF4WHI</b>	<b>1</b>			<b>NAI4WHI</b>	<b>1</b>	<b>NAE4WHI</b>	<b>1</b>		
2 com	100 x 25mm			<b>NAF3TCWHI</b>	<b>1</b>	<b>NAF3TCSIWHI</b>	<b>1</b>	<b>NAI3TCWHI</b>	<b>1</b>	<b>NAE3TCWHI</b>	<b>1</b>
2 com	100 x 40mm			<b>NAF4TCWHI</b>	<b>1</b>	<b>NAF4TCSIWHI</b>	<b>1</b>	<b>NAI4TCWHI</b>	<b>1</b>	<b>NAE4TCWHI</b>	<b>1</b>

Internal  
Couplings

Accessory  
Mounting  
Frames

Accessory  
Mounting  
Frame with  
Backbox

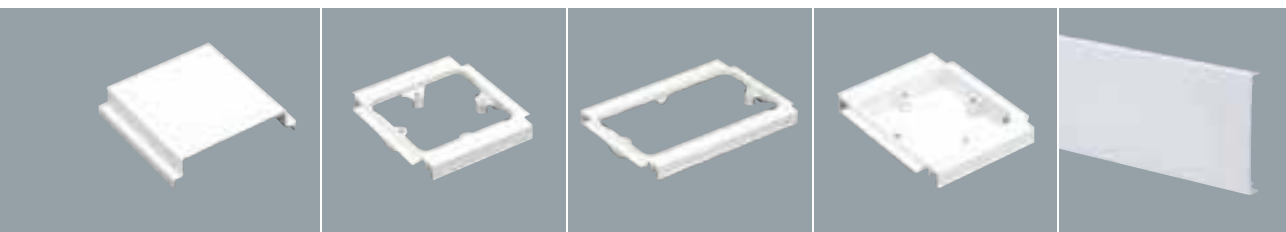
Spare  
Trunking  
Lid

1 GANG

2 GANG

1 GANG

3 METRE  
LENGTHS



<b>NCI3WHI</b>	<b>10</b>	<b>NSO1WHI</b>	<b>10</b>	<b>NSO2WHI</b>	<b>5</b>	<b>NSO1TWHI</b>	<b>5</b>	<b>NBT100LIDWHI</b>	<b>12m</b>
<b>NCI4WHI</b>	<b>10</b>	<b>NSO1WHI</b>	<b>10</b>	<b>NSO2WHI</b>	<b>5</b>	<b>NSO1TWHI</b>	<b>5</b>	<b>NBT100LIDWHI</b>	<b>12m</b>
<b>NCI3WHI</b>	<b>10</b>	<b>NSO1WHI</b>	<b>10</b>	<b>NSO2WHI</b>	<b>5</b>	<b>NSO1TWHI</b>	<b>5</b>	<b>NBT100LIDWHI</b>	<b>12m</b>
<b>NCI4WHI</b>	<b>10</b>	<b>NSO1WHI</b>	<b>10</b>	<b>NSO2WHI</b>	<b>5</b>	<b>NSO1TWHI</b>	<b>5</b>	<b>NBT100LIDWHI</b>	<b>12m</b>

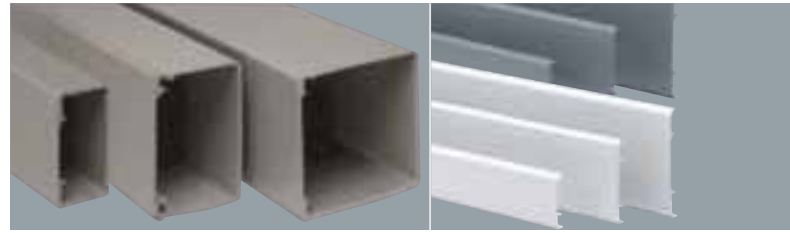


### Trunking

**3 METRE LENGTHS**  
TO ORDER, USE  
GRY OR WHI  
SUFFIX,  
E.G. CLT1WHI

### Spare Trunking Lid

**3 METRE LENGTHS**  
TO ORDER, USE  
GRY OR WHI  
SUFFIX,  
E.G. CLT1WHI



50 x 50mm	<b>CLT1</b>	<b>12m</b>	<b>CLT50LID</b>	<b>12m</b>
75 x 50mm	<b>CLT2</b>	<b>12m</b>	<b>CLT75LID</b>	<b>12m</b>
75 x 75mm	<b>CLT3</b>	<b>12m</b>	<b>CLT75LID</b>	<b>12m</b>
100 x 50mm	<b>CLT4</b>	<b>12m</b>	<b>CLT100LID</b>	<b>12m</b>
100 x 75mm	<b>CLT5</b>	<b>6m</b>	<b>CLT100LID</b>	<b>12m</b>
100 x 100mm	<b>CLT6</b>	<b>6m</b>	<b>CLT100LID</b>	<b>12m</b>
150 x 75mm	<b>CLT7</b>	<b>6m</b>	<b>CLT150LID</b>	<b>12m</b>
150 x 100mm	<b>CLT8</b>	<b>3m</b>	<b>CLT150LID</b>	<b>12m</b>
150 x 150mm	<b>CLT9</b>	<b>3m</b>	<b>CLT150LID</b>	<b>12m</b>

Ega Heavy Duty Industrial Cable Trunking is used extensively for industrial wiring purposes. It is available in a large variety of sizes and has found wide acceptance throughout the world. Its durability, safety and strength are well proven. All trunkings have a clip-on cover which enables fast, efficient installation.

All extrusions manufactured from 90% recycled material.\*

Manufactured in accordance with BS 4678 Part 4.

STANDARD LENGTH: 3 metres

MATERIAL: PVCu

COLOUR: Grey and White

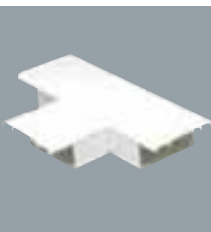
When ordering, use colour suffix GRY or WHI, e.g. FTF1WHI

### Flat Tee

**MOULDED**  
GRY OR WHI



**FABRICATED**  
GRY OR WHI



### External Tee

**FABRICATED**  
GRY OR WHI



### Internal Tee

**FABRICATED**  
GRY OR WHI



\* Based on 2008 consumption.

50 x 50mm	<b>FTF1</b>	<b>1</b>	<b>FTE1</b>	<b>1</b>	<b>FTI1</b>	<b>1</b>
75 x 50mm	<b>FTF2</b>	<b>1</b>		<b>1</b>		<b>1</b>
75 x 75mm	<b>FTF3</b>	<b>1</b>	<b>FTE3</b>	<b>1</b>	<b>FTI3</b>	<b>1</b>
100 x 50mm		<b>FTF4</b>	<b>1</b>	<b>FTE4</b>	<b>1</b>	<b>FTI4</b>
100 x 75mm		<b>FTF5</b>	<b>1</b>		<b>1</b>	<b>1</b>
100 x 100mm		<b>FTF6</b>	<b>1</b>	<b>FTE6</b>	<b>1</b>	<b>FTI6</b>
150 x 75mm		<b>FTF7</b>	<b>1</b>		<b>1</b>	<b>1</b>
150 x 100mm		<b>FTF8</b>	<b>1</b>		<b>1</b>	<b>1</b>
150 x 150mm		<b>FTF9</b>	<b>1</b>		<b>1</b>	<b>1</b>

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## Flat Cross

**MOULDED**  
GRY OR WHI



**FABRICATED**  
GRY OR WHI

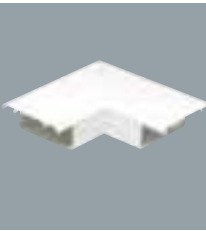


## Flat Angle

**MOULDED**  
GRY OR WHI

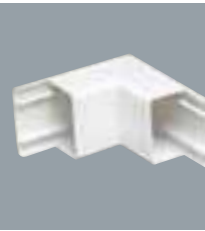


**FABRICATED**  
GRY OR WHI



## External Corner

**FABRICATED**  
GRY OR WHI



## Internal Corner

**FABRICATED**  
GRY OR WHI



FCU1	1	FAF1	1	FAE1*	1	FAI1*	1		
FCU2	1	FAF2	1	FAE2	1	FAI2	1		
FCU3	1	FAF3	1	FAE3	1	FAI3	1		
			FAF4	1	FAE4	1	FAI4	1	
	FCU5	1		FAF5	1	FAE5	1	FAI5	1
	FCU6	1		FAF6	1	FAE6	1	FAI6	1
				FAF7	1	FAE7	1	FAI7	1
				FAF8	1	FAE8	1	FAI8	1
	FCU9	1		FAF9	1	FAE9	1	FAI9	1

\* Moulded.

\* Moulded.

## Reducers

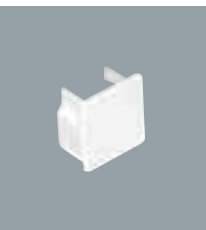
When selecting reducers the size of the small end must be specified. Be sure to state both trunking sizes. E.g. TR2/1

**FABRICATED**  
GRY OR WHI



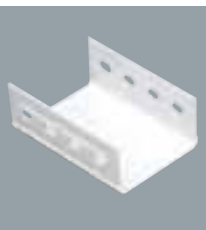
## End Cap

**MOULDED**  
GRY OR WHI

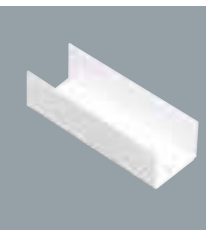


## Couplings

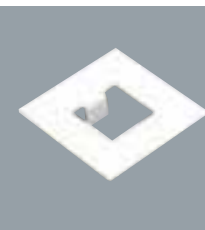
EXTERNAL WITH RIVETS  
**MOULDED**  
GRY OR WHI



INTERNAL PLAIN  
GRY OR WHI



FLANGED  
GRY OR WHI



## Accessories

**EGF5WHI** 10  
1 GANG ACCESSORY FRAME

**EGF6WHI** 10  
2 GANG ACCESSORY FRAME

	TEP1	10		TCI1	10	TFC1	5		
TR21	1	TEP2	10		TCI2	10			
TR31	1	TEP3	5		TCI3	5	TFC3	5	
TR41	1	TEP4	5		TCI4	5	TFC4	5	
		TEP5	5		TCI5	5			
TR61, TR64	1	TEP6	5	TCE6	5	TCI6	5	TFC6	1
		TEP7*	1	TCE7*	1				
TR86	1	TEP8*	1	TCE8*	1				
TR96	1	TEP9*	1	TCE9*	1				

\* Fabricated.

\* Fabricated Couplings must be purchased separately for fabricated fittings. Moulded fittings do not require couplings.

**TPR1GRY** 200  
PUSH IN RIVETS  
GREY PLASTIC  
HOLE SIZE 7.2MM

**TPR1WHI** 200  
PUSH IN RIVETS  
WHITE PLASTIC  
HOLE SIZE 7.2MM

**RK1WHI** 100  
EXPANDING RIVETS  
WHITE NYLON  
DRILL SIZE 10



Ega Cornice is designed for surface mounting at the wall/ceiling junction as a functional and decorative covering.

It is compatible with Ega Mini Trunking. The smaller, single compartment trunking is ideal for domestic rewires whereas the larger three compartment trunking is best suited to commercial and sheltered housing applications.

- **Two trunking profiles**
- **Wide range of integrated components maximises versatility of application**
- **Neat and unobtrusive**
- **Accessories designed to overlap edge of trunking cover, hiding joint line**
- **Easy to assemble and install**
- **Durable and impact resistant**
- **All extrusions manufactured from 90% recycled material\***

\* Based on 2008 consumption.

### Trunking 40 x 40mm

**SINGLE  
COMPARTMENT  
3 METRE  
LENGTHS**



40 x 40mm

**CT1WHI****30m**

90 x 90mm

### Mini Trunking Adaptors

**FOR USE WITH  
YEA ADAPTOR  
CA2 SUPPLIED WITH  
ONE BLANKING PLATE**



40 x 40mm

**CA1****10**

90 x 90mm

**CA2****10**

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Trunking  
90 x 90mm

THREE  
COMPARTMENT  
3 METRE  
LENGTHS

End Caps

Internal  
Corners

External  
Corners

Cable  
Retaining  
Straps

Joint  
Covers



		CEP1WHI	10	CIP1WHI	10	CXP1WHI	10	CST1WHI	25	CJC1WHI	10
CT2WHI	12m	CEP2WHI	10	CIP2WHI	10	CXP2WHI	10	CST2WHI	10	CJC2WHI	10

Intersection  
CT2 to YT2 Mini  
Trunking

Intersection  
CT2 to YT3  
Mini Trunking

Intersection

LEFT HAND

RIGHT HAND

LEFT HAND

RIGHT HAND



				C11WHI	10
CAL22WHI	1	CAR22WHI	1	CAL23WHI	1
				CAR23WHI	1

## Egatube high impact PVCu conduit offers a cost effective solution for both new building and refurbishment contracts.

The wide range of fittings and ancillary products means that almost any installation can be specified with confidence.

- **Wide range of sections and sizes**
- **Oval, round and corrugated sections are compatible**
- **Simple and fast installation**
- **Very wide range of components maximises versatility of application**
- **Very durable and impact resistant**
- **3 grades of round conduit to suit various site conditions**
- **All extrusions manufactured from 90% recycled material\***

\* Based on 2008 consumption.

### Normal Bends

**HEAVY GAUGE  
FITTED WITH  
TWO COUPLINGS  
BLK OR WHI**

Where there is a choice of colour state the appropriate suffix with the list number when ordering e.g. HIP2BLK  
For 16mm sizes use 20mm fittings with reducers. (Ref. ER1).



16mm		
20mm	<b>ENB2</b>	<b>25</b>
25mm	<b>ENB3</b>	<b>10</b>
32mm	<b>ENB4</b>	<b>5</b>
38mm	<b>ENB5</b>	<b>2</b>
50mm	<b>ENB6</b>	<b>2</b>

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## Egatube Round Conduit

### High Impact Conduit Heavy Gauge

### High Impact Conduit Light Gauge

### Heavy Gauge Coupling

### Expansion Coupling

### Inspection Coupling

3 METRE LENGTHS  
BLK OR WHI

3 METRE LENGTHS  
WHI ONLY

BLK OR WHI

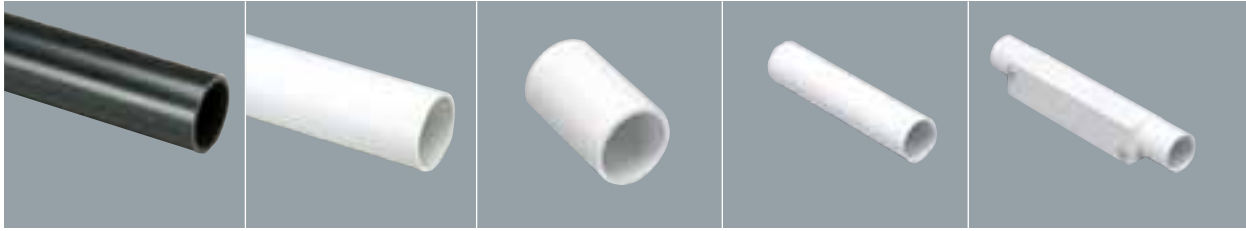
BLK OR WHI

BLK OR WHI

Manufactured in accordance with BS 4607 and BS EN 50085, Parts 1 and 2.

STANDARD LENGTH: 3 metres.

MATERIAL: PVCu



16mm	<b>HIP1</b>	<b>90m</b>	<b>HLG1WHI</b>	<b>90m</b>	<b>ESC1</b>	<b>50</b>	<b>EEC1BLK</b>	<b>25</b>		
20mm	<b>HIP2</b>	<b>90m</b>	<b>HLG2WHI</b>	<b>90m</b>	<b>ESC2</b>	<b>100</b>	<b>EEC2</b>	<b>100</b>	<b>EIS2</b>	<b>25</b>
25mm	<b>HIP3</b>	<b>90m</b>	<b>HLG3WHI</b>	<b>90m</b>	<b>ESC3</b>	<b>50</b>	<b>EEC3</b>	<b>50</b>	<b>EIS3</b>	<b>25</b>
32mm	<b>HIP4</b>	<b>30m</b>	<b>HLG4WHI</b>	<b>30m</b>	<b>ESC4</b>	<b>50</b>	<b>EEC4</b>	<b>10</b>	*	
38mm	<b>HIP5BLK</b>	<b>30m</b>	<b>HLG5WHI</b>	<b>30m</b>	<b>ESC5</b>	<b>25</b>	<b>EEC5</b>	<b>10</b>	*	
50mm	<b>HIP6BLK</b>	<b>30m</b>	<b>HLG6WHI</b>	<b>30m</b>	<b>ESC6</b>	<b>20</b>	<b>EEC6</b>	<b>10</b>	*	

Wall thickness (nominal mm)  
HIP1 1.7 HIP4 2.5  
HIP2 1.8 HIP5 2.5  
HIP3 1.9 HIP6 3.2

Wall thickness (nominal mm)  
HLG1 1.1 HLG4 1.5  
HLG2 1.2 HLG5 1.5  
HLG3 1.5 HLG6 1.8

\* For 32/38/50mm use square junction boxes (ERB page 369).

### Spacer Bar Saddle

### Spring Clip Saddle

### Strap Saddle

### Quickfit Spacer Saddle

### Conduit Clip

LIGHT GAUGE  
COUPLINGS NOT  
REQUIRED  
WHI ONLY

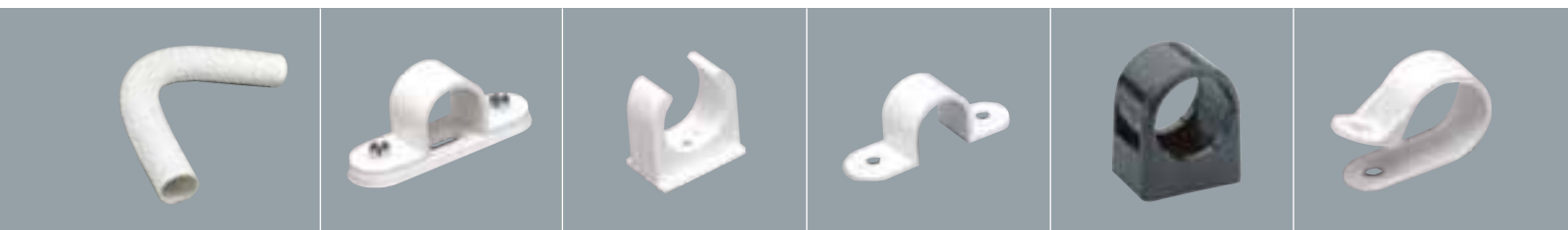
BLK OR WHI

BLK OR WHI

BLK OR WHI

BLK OR WHI

BLK OR WHI



<b>LNB1WHI</b>	<b>25</b>	<b>ESB1</b>	<b>50</b>		<b>ES1</b>	<b>100</b>		<b>ECC1</b>	<b>50</b>		
<b>LNB2WHI</b>	<b>100</b>	<b>ESB2</b>	<b>100</b>	<b>MEC2</b>	<b>100</b>	<b>ES2</b>	<b>100</b>	<b>EQS2</b>	<b>100</b>	<b>ECC2</b>	<b>50</b>
<b>LNB3WHI</b>	<b>50</b>	<b>ESB3</b>	<b>100</b>	<b>MEC3</b>	<b>50</b>	<b>ES3</b>	<b>100</b>	<b>EQS3</b>	<b>100</b>	<b>ECC3</b>	<b>50</b>
<b>LNB4WHI</b>	<b>50</b>	<b>ESB4</b>	<b>50</b>	<b>MEC4</b>	<b>25</b>	<b>ES4</b>	<b>50</b>			<b>ECC4</b>	<b>50</b>
<b>LNB5WHI</b>	<b>25</b>	<b>ESB5</b>	<b>25</b>			<b>ES5</b>	<b>50</b>			<b>ECC5WHI</b>	<b>50</b>
<b>LNB6WHI</b>	<b>25</b>	<b>ESB6</b>	<b>25</b>			<b>ES6</b>	<b>50</b>				

Inspection Elbow

Quick Fit Inspection Elbow

Inspection Tee

Quick Fit Tee

Inspection Bend

BLK OR WHI

BLK OR WHI

BLK OR WHI

BLK OR WHI

BLK OR WHI



16mm										
20mm	EIE2	25	EQE2	25	EIT2	25	EQT2	25	EIB2	25
25mm					EIT3	25	EQT3	25	EIB3	25
32mm										
38mm										
50mm										

Compression Gland

Adaptor Male Thread

Adaptor Female Thread

Clip-in Adaptor

Bell Mouth Bush

\*BLK OR WHI  
\*\*WITH LOCK RING

PLAIN PUSH IN WITH MALE BUSHES  
\*20MM MALE THREAD WITH 16MM ENTRY  
BLK OR WHI

WITH LOCK RINGS  
BLK OR WHI

WHI ONLY

WHI ONLY



16mm	ECG1BLK	7-10.5	50	EMA1*	50						
20mm	ECG2*	7-10.5	100	EMA2	100	EFA2	100	CEA2WHI	50	BMB2WHI	50
25mm	ECG3BLK	8-13	50	EMA3	50	EFA3	50				
32mm	ECG4BLK**	18-24.5	50	EMA4	25	EFA4	25				
38mm				EMA5	25	EFA5	25				
50mm				EMA6	10	EFA6	10				



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Quick Fit Inspection Bend

Plug Plain

Plug Screwed

Locknut

Lockring

Reducer

BLK OR WHI

BLK OR WHI

BLK OR WHI

GRY ONLY

BLK OR WHI

BLK OR WHI



EQB2	25	EP2	100	EP2S	100	EHL1GRY	100	ECL2	100	ER1	20 x 16	50
EQB3	25	EP3	100	EP3S	100	EHL2GRY	100	ECL3	100	ER2	25 x 20	50
						EHL3GRY	100	ECL4	50	ER3	32 x 25	25
						EHL4GRY	50	ECL5	25	ER5WHI	38 x 32	10
						EHL5GRY	25	ECL6	25	ER7	50 x 38	10

Sleeve for Bell Mouth Bush

Male Bush Plain

Male Bush Screwed

Female Bush Screwed

Bending Springs

WHI ONLY

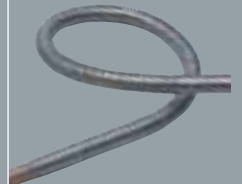
BLK OR WHI

BLK ONLY

BLK ONLY

GREEN  
HEAVY GAUGE  
FOR HIP  
AND ESP

RED  
LIGHT GAUGE  
FOR HLG



BMS2WHI	50	MPB2	100	SMB2BLK	50	EBF2BLK	100	ESS2	1	ELS2	1
		MPB3	100	SMB3BLK	50	EBF3BLK	100	ESS3	1	ELS3	1
				SMB4BLK	50	EBF4BLK	50				
				SMB5BLK	25	EBF5BLK	50				
				SMB6BLK	25						

## Circular Boxes

## Terminal Boxes

## Through Boxes

## Branch Boxes

## Angle Boxes

BLK OR WHI

BLK OR WHI

BLK OR WHI

BLK OR WHI

BLK OR WHI



2ECR1



ECR12EL



2ECR2



2ECR7



2ECR3



2ECR8



2ECR19



2ECR17



2ECR18



2ECR4



2ECR9

**2ECR13**  
**2ECR13ELWHI\***  
20mm LOOP-IN

20  
20

**2ECR1**  
**2ECR1ELWHI\***  
20mm BACK OUTLET

20  
20

**3ECR1**  
25mm BACK OUTLET

10

**ECR12**  
**ECR12EL\***  
NO SPOUT

10  
10

**2ECR2**  
**2ECR2ELWHI\***  
20mm ONE WAY

20  
20

**3ECR2**  
25mm ONE WAY

20  
20

**2ECR7**  
**2ECR7EL\***  
20mm ONE WAY AND  
BACK OUTLET

10

**3ECR7**  
25mm ONE WAY AND  
BACK OUTLET

10  
10

20  
20

**2ECR3**  
**2ECR3ELWHI\***  
20mm TWO WAY

20  
20

**3ECR3**  
25mm TWO WAY

10

**2ECR8**  
**2ECR8EL\***  
20mm TWO WAY AND  
BACK OUTLET

20  
20

**3ECR8**  
25mm TWO WAY AND  
BACK OUTLET

10

10

20  
20

10

**2ECR17**  
20mm 'U' TWO WAY

20

**2ECR18**  
20mm 'Y' THREE WAY

20

**2ECR4**  
20mm TWO WAY

20

**3ECR4**  
25mm TWO WAY

10

**2ECR9**  
20mm TWO WAY AND  
BACK OUTLET

20

**3ECR9**  
25mm TWO WAY AND  
BACK OUTLET

10

\* Fixed external lugs.  
20mm Loop-in boxes have  
4 x 20mm knockouts on underside.

\* Swivel lug.

\* Swivel lug.

\* Swivel lug.

**ALL CIRCULAR BOXES**

MATERIAL:  
PVCu

LID FIXING CENTRES:  
50.8mm

PILLAR THREAD SIZE:  
M4 (Brass inserts)

All boxes contain a moulded  
recess for earth terminal

For 16mm sizes use 20mm fittings with  
reducers.  
(Ref. ER/1)

Some circular boxes are available  
with extended lugs for the support of  
heavy loads.

Available in Black or White.  
When ordering use colour suffix  
BLK or WHI.

LOAD SUSPENSION:  
Standard circular box:  
3kg. @ 60°C max.  
Extended Lug Box:  
10kg. @ 60°C max.

For enclosed lighting  
fittings see 'Heat  
Resistant Box' on  
page 370 or use  
'Steel Insert Clips' on  
page 371.

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## Tee Boxes

## Intersection Boxes

## Tangent Boxes

## Square Junction Boxes

BLK OR WHI

BLK OR WHI

BLK OR WHI

BLK OR WHI

BLK OR WHI



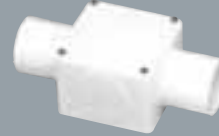
3ECR5



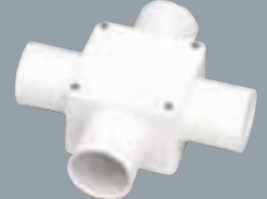
3ECR6



3ECR14



ERB2



ERB11WHI



3ECR10



3ECR11



3ECR15



ERB5



ERB14



ERB7

**2ECR5**  
**2ECR5EL\***

20mm THREE WAY

**3ECR5**  
25mm THREE WAY

**2ECR10**  
20mm THREE WAY AND BACK OUTLET

**3ECR10**  
25mm THREE WAY AND BACK OUTLET

\* Swivel lug.

20  
20

**2ECR6**  
**2ECR6EL\***

20mm FOUR WAY

**3ECR6**  
25mm FOUR WAY

**3ECR11**  
25mm FOUR WAY AND BACK OUTLET

\* Swivel lug.

10

20

10

20  
20

**2ECR14**  
20mm ANGLE

**3ECR14**  
25mm ANGLE

**2ECR15**  
20mm TEE

**3ECR15**  
25mm TEE

\* Swivel lug.

10

10

20

10

20

10

**ERB1**  
32mm THROUGH

**ERB2**  
38mm THROUGH

**ERB3**  
50mm THROUGH

**ERB4**  
32mm ANGLE

**ERB5**  
38mm ANGLE

**ERB6**  
50mm ANGLE

**ERB7**  
32mm TEE

**ERB8BLK**  
38mm TEE

Available in Black or White.  
When ordering use colour suffix  
BLK or WHI.

MATERIAL:  
PVCu

Square Junction Boxes are designed to enable interconnection and directional changes of 32mm, 38mm and 50mm circular conduits.

BOX SIZES:  
ERB1,2,4,5,7,8,10,11,13,14  
75 x 75mm

ERB3,6,9,12,15  
100 x 100mm

10

10

2

10

10

2

5

5

**ERB9**  
50mm TEE

**ERB10**  
32mm FOUR-WAY

**ERB11WHI**  
38mm FOUR-WAY

**ERB12**  
50mm FOUR-WAY

**ERB13**  
32mm TERMINAL

**ERB14**  
38mm TERMINAL

**ERB15**  
50mm TERMINAL

1

5

4

1

10

10

2

MATERIAL:  
PVCu

LID FIXING CENTRES:  
50.8mm

PILLAR THREAD SIZE:  
M4 (Brass inserts)

All boxes contain a moulded recess for earth terminal.

### ALL CIRCULAR BOXES

For 16mm sizes use 20mm fittings with reducers. (Ref. ER1)

Some circular boxes are available with extended lugs for the support of heavy loads.

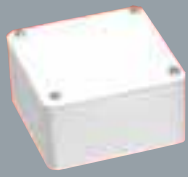
Available in Black or White.  
When ordering use colour suffix  
BLK or WHI.

LOAD SUSPENSION  
Standard circular box:  
3kg. @ 60°C max.  
Extended Lug Box:  
10kg. @ 60°C max.

For enclosed lighting fittings see 'Heat Resistant Box' on page 370 or use 'Steel Insert Clips' on page 371.

### Adaptable Boxes

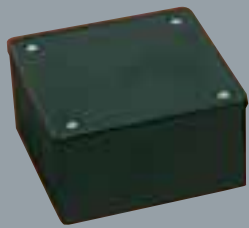
BLK OR WHI



MAB1



MAB2



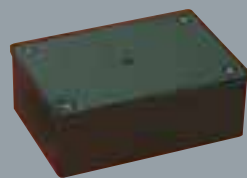
MAB3



MAB4



MAB5



MAB6

**MAB1**  
EXTERNAL SIZE  
75 x 75 x 41mm

5

**MAB2**  
EXTERNAL SIZE  
75 x 75 x 53mm

5

**MAB3**  
INTERNAL SIZE  
100 x 100 x 50mm

5

**MAB4**  
INTERNAL SIZE  
100 x 100 x 75mm

5

**MAB5**  
INTERNAL SIZE  
150 x 75 x 50mm

5

**MAB6**  
INTERNAL SIZE  
150 x 100 x 50mm

5

**MAB7**  
INTERNAL SIZE  
150 x 150 x 75mm

5

**MAB8**  
INTERNAL SIZE  
225 x 225 x 75mm

5

Available in Black or White.  
When ordering use colour suffix  
BLK or WHI.  
MATERIAL:  
PVCu  
Note: Boxes are not IP Rated.

### Heat-Resistant Boxes

BLK ONLY



2ECR25

**2ECR25BLK**  
20mm FLAT BASED WITH  
20mm CUT-OUTS FOR  
CONDUIT ENTRY

5

Available in Black only.  
MATERIAL:  
Noryl/PVCu  
LID FIXING CENTRES:  
50.8mm  
PILLAR THREAD SIZE:  
M4 (metal inserts)  
LOAD SUSPENSION:  
10kg. @ 100°C max.  
All Heat Resistant Boxes include  
keying facility.

### Earth Electrode Box

BLK ONLY



EEB1

**EEB1BLK**  
75 x 75 x 70mm

10

Available in Black only.  
MATERIAL:  
PVCu  
The Egatube Earth Electrode Box  
is to protect the connection to an  
earth electrode.

### Circular Lids Gaskets and Screws

BLK OR WHI



EL1



EL2



EL3

**EL1**  
LIDS 66mm DIA

100

**EL2**  
OVERLAPPING LIDS  
85mm DIA

50

**EL3**  
RUBBER GASKETS  
66mm DIA

50

**M4X10SS**  
SCREWS FOR  
CIRCULAR BOXES

100

**EL1/EL2**  
Available in Black or White.  
When ordering use colour suffix  
BLK or WHI.  
**EL3** is available in Black only.  
MATERIAL:  
EL/1 and EL/2: PVCu  
EL/3: Rubber  
LID FIXING CENTRES:  
50.8mm

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## Extension Rings

## Pendant Dome Cover

## Accessories

## Sundries

BLK OR WHI

BLK OR WHI



EER3



EER6



EER7



EDC1



SIC



BET1



BET2



EWPLUS



ECT1



DRA10

**EER3**  
NOM DEPTH 12.5mm

25

**EER5**  
NOM DEPTH 19mm

25

**EER6**  
NOM DEPTH 25mm

25

**EER7**  
NOM DEPTH 32mm

25

**EER8**  
NOM DEPTH 38mm

25

**EER9**  
NOM DEPTH 50mm

25

Available in Black or White.

When ordering use colour suffix BLK or WHI.

MATERIAL:  
PVCu

FIXING CENTRES:  
50.8mm

To suit circular conduit boxes.

**EER6-EER9** are fitted with slots to suit Steel Insert Clips.

**EDC1**  
PENDANT DOME COVER

25

Available in Black or White.

When ordering use colour suffix BLK or WHI.

FIXING CENTRES:  
50.8mm

To suit circular conduit boxes.  
20mm conduit female thread only.

**SIC**  
STEEL INSERT CLIP

100

**BET1**  
BRASS EARTHING  
TERMINALS  
5 AMP

50

**BET2**  
BRASS EARTHING  
TERMINALS  
15 AMP

50

**Steel Insert Clip**  
Fits most Egatube circular boxes through base knock-outs. Provides additional support for heavy pendants.

Tapped M4

Note: Must be fitted before installation of box.

**Brass Earthing Terminals**  
Fits standard circular boxes and switch/socket boxes.

Supplied complete with screws.

**EWPLUS**  
EGAWELD PLUS  
0.25 LITRE

1

**Egaweld Plus** is a specially prepared waterproof vinyl solvent cement for making watertight joints between PVC conduit, trunking and fittings.

COSSH information is available on the MK website:  
[www.mkelectric.co.uk](http://www.mkelectric.co.uk)

**ECT1**  
EGASNIP CUTTING TOOL

1

**DRA10**  
NYLON DRAW TAPE  
10m LENGTH

1

**DRA20**  
NYLON DRAW TAPE  
20m LENGTH

1

**Egasnip** is a cutting tool which enables conduit, up to 32mm in diameter, and mini trunking, up to 40mm x 25mm, to be cut easily and precisely giving a clean finish with no swarf.

Single handed operation.  
Two types of anvil.  
Replaceable blade (List No. BLADE).  
Accurate mitre capability.

**Nylon Draw Tapes**  
An eyelet is fitted.

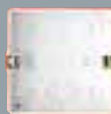
## Round Corner Accessory Boxes

16mm  
PLASTER DEPTH  
FLUSH



ESU61WHI

25mm  
FLUSH



ESU9MLWHI



ESU92MLWHI

35mm  
FLUSH



ESU8MLWHI



ESU82MLWHI

25mm  
SURFACE



ESU241WHI



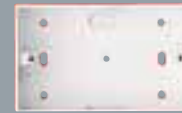
ESU242WHI

## Square Corner Accessory Boxes

25mm  
SURFACE



ESU261WHI

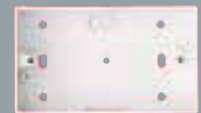


ESU262WHI

32mm  
SURFACE



ESU281WHI



ESU282WHI

**ESU61WHI** **25**  
1 GANG  
ONE FIXED PILLAR AND  
ONE ADJUSTABLE LUG

**ESU9MLWHI** **25**  
1 GANG  
ADJUSTABLE LUGS

**ESU92MLWHI** **10**  
2 GANG  
ADJUSTABLE LUGS

**ESU81WHI** **25**  
1 GANG  
FIXED LUGS

**ESU8MLWHI** **25**  
1 GANG  
ADJUSTABLE LUGS

**ESU82MLWHI** **10**  
2 GANG  
ADJUSTABLE LUGS

**ESU241WHI** **25**  
1 GANG

**ESU242WHI** **10**  
2 GANG

**ESU261WHI** **25**  
1 GANG

**ESU262WHI** **10**  
2 GANG

**ESU281WHI** **25**  
1 GANG

**ESU282WHI** **10**  
2 GANG

**KNOCKOUTS:**  
One 16mm oval and  
one 20mm oval

**MATERIAL:**  
PVCu

**DIMENSIONS:**  
1 gang: 73 x 73mm

**FIXING CENTRES:**  
1 gang: 60.3mm

BS 4662 and BS 5733  
where applicable.

**KNOCKOUTS:**  
1 gang:  
Six 20mm round  
2 gang:  
Seven 20mm round and  
one 25mm oval

**MATERIAL:**  
PVCu

**DIMENSIONS:**  
1 gang: 73 x 73mm  
2 gang: 73 x 134mm

**FIXING CENTRES:**  
1 gang: 60.3mm  
2 gang: 120.6mm

BS 4662 and BS 5733  
where applicable.

**KNOCKOUTS:**  
1 gang:  
Eight 20mm round  
2 gang:  
Nine 20mm round and  
one 25mm oval

**MATERIAL:**  
PVCu

**DIMENSIONS:**  
1 gang: 73 x 73mm  
2 gang: 73 x 134mm

**FIXING CENTRES:**  
1 gang: 60.3mm  
2 gang: 120.6mm

BS 4662 and BS 5733  
where applicable.

**KNOCKOUTS:**  
1 gang:  
One 20mm round and  
one mini trunking entry  
2 gang:  
One 20mm round and  
three mini trunking entries

**MATERIAL:**  
PVCu

**DIMENSIONS:**  
1 gang: 86 x 86mm  
2 gang: 86 x 146mm

**FIXING CENTRES:**  
1 gang: 60.3mm  
2 gang: 120.6mm

BS 4662 and BS 5733  
where applicable.

**KNOCKOUTS:**  
ESU261:  
One 20mm round  
ESU262:  
One 20mm round

**MATERIAL:**  
PVCu

**DIMENSIONS:**  
1 gang: 86 x 86mm  
2 gang: 86 x 146mm

**FIXING CENTRES:**  
1 gang: 60.3mm  
2 gang: 120.6mm

BS 4662 and BS 5733  
where applicable.

**KNOCKOUTS:**  
1 gang:  
One 20mm round  
2 gang:  
One 20mm round and  
one mini trunking entry

**MATERIAL:**  
PVCu

**DIMENSIONS:**  
1 gang: 86 x 86mm  
2 gang: 86 x 146mm

**FIXING CENTRES:**  
1 gang: 60.3mm  
2 gang: 120.6mm

BS 4662 and BS 5733  
where applicable.

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## Oval Conduit

## Coupling

## Oval to Round Adaptor

### 3 METRE LENGTHS



Manufactured in accordance with BS 4607 Part 5.

STANDARD LENGTH:  
3 metres

MATERIAL:  
PVCu

COLOUR:  
White

All extrusions manufactured from 90% recycled material.\*

\* based on 2008 consumption.

13mm	<b>EOC1WHI</b>	<b>150m</b>			
16mm	<b>EOC2WHI</b>	<b>150m</b>			
20mm	<b>EOC3WHI</b>	<b>150m</b>	<b>CO3WHI</b>	<b>50</b>	<b>OA3WHI</b>
25mm	<b>EOC4WHI</b>	<b>150m</b>	<b>CO4WHI</b>	<b>50</b>	
25mm	<b>EOC5WHI</b>	<b>150m</b>			

## Bellmouth Bush

## Saddle

## External Spring Clip Oval



16mm		<b>OS2WHI</b>	<b>100</b>	<b>XC2WHI</b>	<b>100</b>
20mm	<b>BOB3WHI</b>	<b>50</b>	<b>OS3WHI</b>	<b>100</b>	<b>XC3WHI</b>
25mm		<b>OS4WHI</b>	<b>100</b>	<b>XC4WHI</b>	<b>100</b>

## Egaflex

Corrugated  
PVCu  
ConduitAdaptor  
Nylon

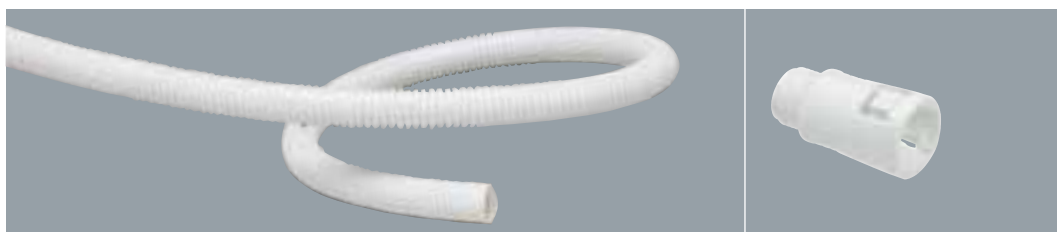
The Egaflex PVCu conduit range is a corrugated flexible system which can be used for the connection of vibrating equipment or to provide tight bends for interconnecting conduits. The range can be surface mounted or cast-in concrete and can also be used with standard conduit fittings.

Manufactured in accordance with:  
BS EN 61386-1  
BS EN 61386-22

MATERIAL:  
PVCu

COLOUR:  
White

STANDARD LENGTH:  
50 metres coil.



16mm	<b>EF1WHI</b>	<b>50m</b> Coil	<b>FAB1WHI</b>	<b>50</b>
20mm	<b>EF2WHI</b>	<b>50m</b> Coil	<b>FAB2WHI</b>	<b>50</b>
25mm	<b>EF3WHI</b>	<b>50m</b> Coil	<b>FAB3WHI</b>	<b>50</b>

Rectangular  
Channelling

WALL THICKNESS:  
0.9mm

MATERIAL:  
PVCu

COLOUR:  
White

STANDARD LENGTH:  
2 metres

Other lengths can be supplied  
against quantity orders.

## 2 METRE LENGTHS

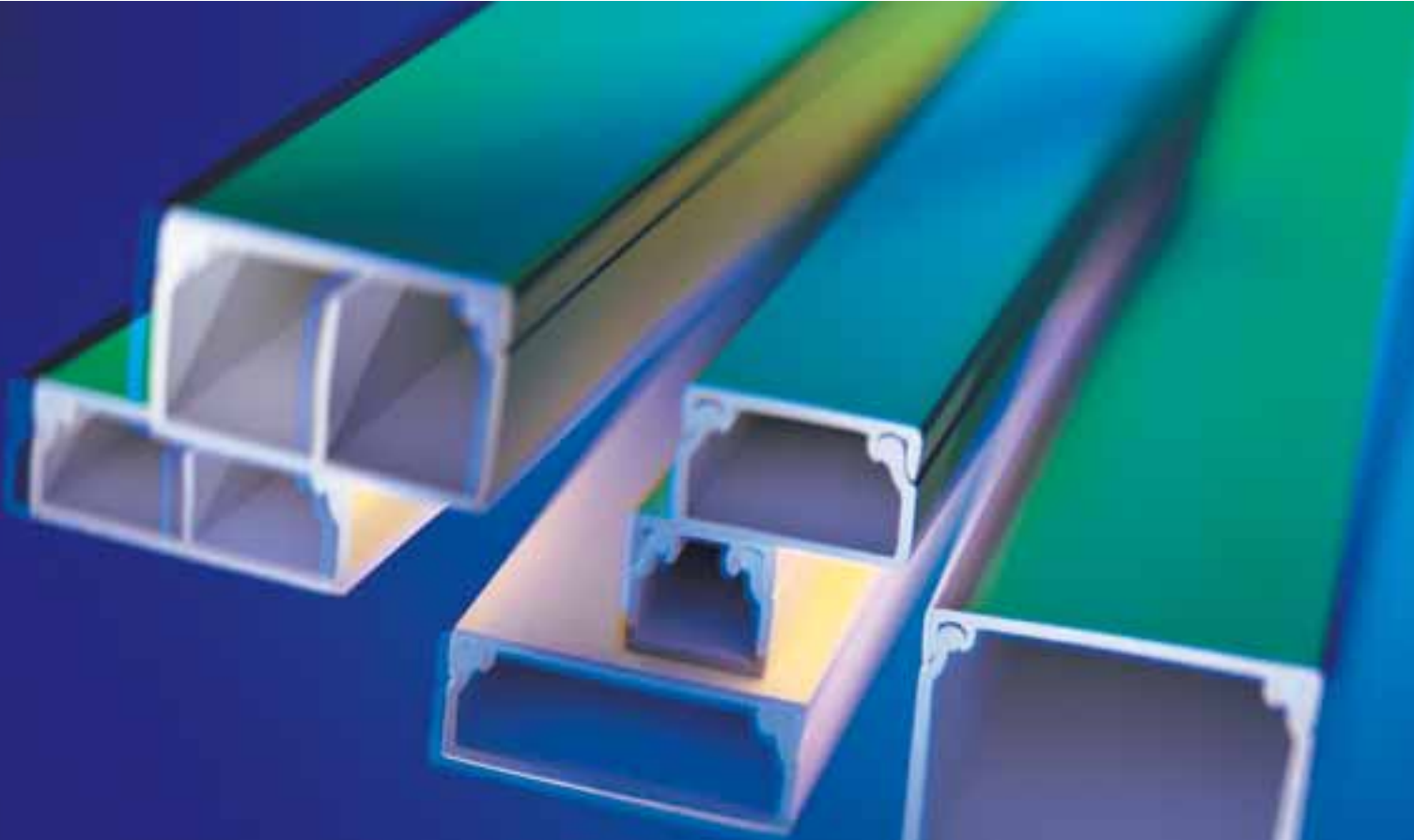


12mm	(8mm depth approx)	<b>REC1WHI</b>	<b>150m</b>
25mm	(8mm depth approx)	<b>REC2WHI</b>	<b>150m</b>
38mm	(9.5mm depth approx)	<b>REC3WHI</b>	<b>150m</b>



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## range introduction

Ega Mini Trunking consists of a range of sizes of extruded PVCu sections for the containment of electrical and data cabling for surface wiring.

The products are ideally suited for refurbishment programmes as well as new installation projects, both in the domestic and commercial sectors.

Speedfix Mini Trunking is complete with an acrylic foam adhesive for fast location of power circuits and secure containment of low voltage wiring.

## features and benefits

- **Wide range of trunking profiles**
- **Wide range of integrated components maximises versatility of application**
- **Easy to assemble and install**
- **Durable and impact resistant**
- **Speedfix options allow fast installation**
- **All extrusions manufactured from 90% recycled material\***

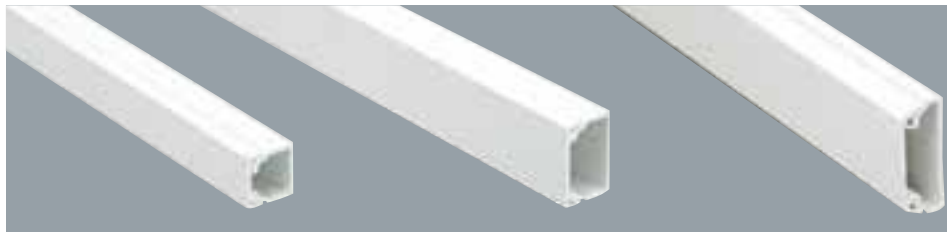
\* Based on 2008 consumption.

Mini  
 Trunking

 3 METRE  
 LENGTHS

 2 METRE  
 LENGTHS  
 (FOR NON UK  
 MARKETS)

Manufactured in accordance with BS EN 50085 Part 1.  
 STANDARD LENGTH: 3 metres  
 Available in 2 metre lengths for NON UK Markets.  
 MATERIAL: PVC-U



16 x 16mm	<b>YT1WHI</b>	<b>90m</b>		<b>YT1D1WHI</b>	<b>60m</b>	
25 x 16mm	<b>YT2WHI</b>	<b>90m</b>	<b>YT2CHA</b>	<b>30m</b>	<b>YT2D1WHI</b>	<b>60m</b>
32 x 12.5mm	<b>YT200WHI</b>	<b>30m</b>			<b>YT200D1WHI</b>	<b>32m</b>
40 x 16mm	<b>YT3WHI</b>	<b>45m</b>			<b>YT3D1WHI</b>	<b>32m</b>
40 x 25mm	<b>YT4WHI</b>	<b>45m</b>	<b>YT4CHA</b>	<b>30m</b>	<b>YT4D1WHI</b>	<b>32m</b>
40 x 40mm	<b>YT5WHI</b>	<b>45m</b>			<b>YT5D1WHI</b>	<b>32m</b>
50 x 25mm	<b>YT6WHI</b>	<b>30m</b>			<b>YT6D1WHI</b>	<b>32m</b>
50 x 32mm	<b>YT7WHI</b>	<b>30m</b>			<b>YT7D1WHI</b>	<b>32m</b>
50 x 50mm	<b>YT8WHI</b>	<b>12m</b>				

 Speedfix  
 Mini  
 Trunking

 3 METRE  
 LENGTHS

 2 METRE  
 LENGTHS

 Twin  
 Compartment  
 Trunking

 3 METRE  
 LENGTHS

Manufactured in accordance with BS EN 50085 Part 1.  
 STANDARD LENGTH: 3 metres  
 Available in 2 metre lengths for NON UK Markets.  
 MATERIAL: PVC-U

Self Adhesive Tape should not be relied upon for permanent fixing of the Speedfix range. A permanent means (such as screws) should also be used.



16 x 16mm	<b>SPF1WHI</b>	<b>60m</b>	<b>SPF1D1WHI</b>	<b>60m</b>		
25 x 16mm	<b>SPF2WHI</b>	<b>30m</b>	<b>SPF2D1WHI</b>	<b>60m</b>		
32 x 12.5mm						
40 x 16mm	<b>SPF3WHI</b>	<b>30m</b>	<b>SPF3D1WHI</b>	<b>32m</b>	<b>ZT3WHI</b>	<b>30m</b>
40 x 25mm	<b>SPF4WHI</b>	<b>30m</b>			<b>ZT4WHI</b>	<b>30m</b>
40 x 40mm						
50 x 25mm						
50 x 32mm						
50 x 50mm						

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## Coupling

## End Cap

## Internal Corner

## Internal Data Corner

## External Corner

## External Data Corner

MOULDED

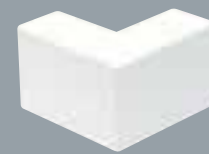
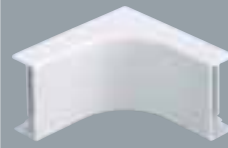
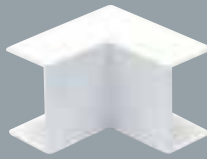
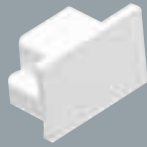
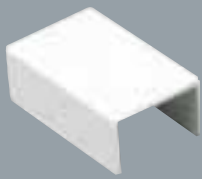
MOULDED

MOULDED

MOULDED

MOULDED

MOULDED



YC1WHI	20	YEP1WHI	20	YAI1WHI	20		YAE1WHI	20			
YC2WHI or CHA	20	YEP2WHI or CHA	20	YAI2WHI or CHA	20		YAE2WHI or CHA	20			
YC200WHI	20	YEP200WHI	20	YAI200WHI	20		YAE200WHI	20			
YC3WHI	10	YEP3WHI	20	YAI3WHI	5	YDAI3WHI	10	YAE3WHI	5	YDAE3WHI	5
YC4WHI	10	YEP4WHI or CHA	20	YAI4WHI or CHA	5		YAE4WHI or CHA	5			
YC5WHI	10	YEP5WHI	20	YAI5WHI	5		YAE5WHI	5			
		YEP6WHI	10	YAI6WHI	5		YAE6WHI	5			
		YEP7WHI	10	YAI7WHI (fabricated)	5		YAE7WHI (fabricated)	5			
YC8WHI	10	YEP8WHI	10	YAI8WHI	5		YAE8WHI	5			

## Flat Angle

## Flat Data Angle

## Flat Tee

## Flat Data Tee

2 METRE LENGTHS

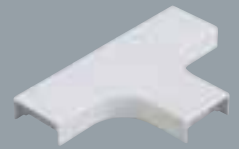
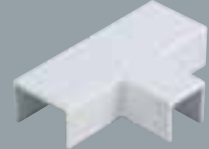
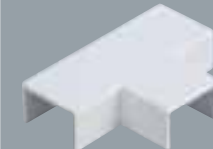
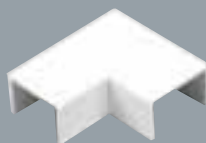
MOULDED

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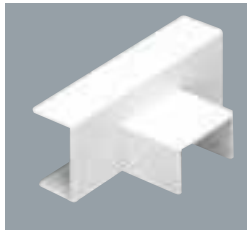


	YAF1WHI	20		YTF1WHI	20			
	YAF2WHI or CHA	20		YTF22WHI or CHA	20	YTF21WHI	20	
	YAF200WHI	20		YTF200WHI	20			
	YAF3WHI	5	YDAF3WHI	10	YTF3WHI	5	YDTF3WHI	10
ZT4D1WHI	32m	YAF4WHI or CHA	5	YTF4WHI or CHA	5	YTF42WHI or CHA	5	
	YAF5WHI	5		YTF5WHI	5			
	YAF6WHI	5		YTF6WHI	5			
	YAF7WHI (fabricated)	5		YTF7WHI (fabricated)	1			
	YAF8WHI	5		YTF8WHI	1			

Flat Tee vertical aperture sizes: YTF21WHI 16 x 16mm YTF42WHI 25 x 16mm

## Side Tee

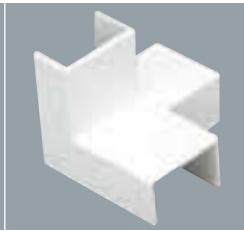
MOULDED



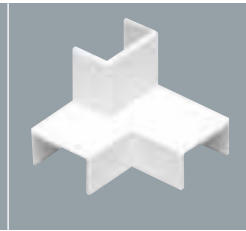
MOULDED

Intersection  
3 Way  
Left Hand

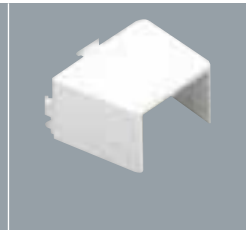
MOULDED

Intersection  
3 Way  
Right Hand

MOULDED



## Adaptors

FOR USE WITH  
MINI TRUNKING  
BOXES  
MOULDED

16 x 16mm								YEA1WHI	25	
25 x 16mm	YST21WHI	10	YST22WHI	10	YAL2WHI	10	YAR2WHI	10	YEA2WHI or CHA	25
32 x 12.5mm					YAL200WHI	10	YAR200WHI	10	YEA200WHI	25
40 x 16mm									YEA3WHI	25

Side Tees (perpendicular)  
Aperture Sizes  
YST21WHI: 16 x 16mm  
YST22WHI: 25 x 16mm

## Adaptors

MOULDED

Adaptors  
Side MountingFOR USE WITH  
MINI TRUNKING  
BOXES  
MOULDEDAdaptors  
YT/1 Square to  
20mm Round

MOULDED

Circular  
Boxes

MOULDED



MOULDED



16 x 16mm	UEA1WHI	25	YSA1WHI	10	YTO12WHI	10	YCR1ELWHI	10		
25 x 16mm	UEA2WHI	25	YSA2WHI	10			YCR1ELWHI	10		
32 x 12.5mm			YSA200WHI	10			YCR2001EL	10	YCR2002EL	10
40 x 16mm	UEA3WHI	25	YSA3WHI	5			YCR1ELWHI	10		

**UEA Adaptors**  
are for fixing with adhesive.  
They are particularly useful  
when spurring off from a  
larger trunking section.

**YSA Adaptors**  
are for use with Ega Mini  
Trunking Boxes (page 379)  
and incorporate removable  
end caps for right and left  
hand mounting.

**Circular Boxes** accept standard ceiling roses,  
pull switches and plug-in lighting fittings.  
The base incorporates an earth terminal facility  
(order terminal separately, see page 370).

LID FIXING CENTRES: 50.8mm  
PILLAR THREAD SIZE: M4 (Metal inserts)  
LOAD SUSPENSION: 5kg @ 60°C max.

YCR2001EL is a One Way box  
YCR2002EL is a Through box

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Round  
Corner  
Accessory  
Boxes

Square  
Corner  
Accessory  
Boxes

Egaline  
Wall Box  
Assemblies

SURFACE

SURFACE

SURFACE

SIDE MOUNTING  
SURFACE

FOR AMERICAN  
ACCESSORIES



ESU231WHI



ESU2311WHI



ESU2323WHI



ESU3511WHI



ESU3523WHI



ESU2211WHI



ESU2512WHI



ESU2523WHI



ESU2713WHI



ESU2721WHI



ESU4423WHI



ESU32140WHI



ESU32225WHI



ESUUSB17WHI



ESUUSB19WHI



ESUUSB22WHI



ESUUSB53WHI

**ESU231WHI** 25  
1 GANG 25MM  
ONE ENTRY  
CENTRE (TOP)

**ESU2311WHI** 25  
1 GANG 25MM  
ONE ENTRY (SIDE)

**ESU2323WHI** 10  
2 GANG 25MM  
THREE ENTRIES  
(TOP & BOTH SIDES)

**ESU3511WHI** 25  
1 GANG 32MM  
ONE ENTRY  
CENTRE (TOP)

**ESU3523WHI** 10  
2 GANG 32MM  
THREE ENTRIES.  
(TOP, BOTTOM & SIDE)

**ESU2211WHI** 25  
1 GANG 25MM  
ONE ENTRY (SIDE)

**ESU2512WHI** 25  
1 GANG 25MM  
TWO ENTRIES  
(TOP & BOTTOM)

**ESU2223WHI** 10  
2 GANG 25MM  
THREE ENTRIES  
(TOP & BOTH SIDES)

**ESU2523WHI** 10  
2 GANG 25MM  
THREE ENTRIES  
(TOP & BOTTOM)

**ESU2713WHI** 10  
1 GANG 32MM  
THREE ENTRIES  
(TOP & BOTTOM)

**ESU2721WHI** 10  
2 GANG 32MM  
ONE ENTRY  
CENTRE (TOP)

**ESU4423WHI** 5  
2 GANG 41MM  
THREE ENTRIES  
(TOP & BOTH SIDES)

Ega Round and Square  
Corner boxes are for use  
in conjunction with mini  
trunking adaptors,  
reference:  
YEA- straight entry and  
YSA- side entry.

MATERIAL:  
PVC-U

DIMENSIONS:  
1 gang: 86 x 86mm  
2 gang: 86 x 146mm

FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm

BS 4662 and BS 5733  
where applicable.

**ESU32125WHI** 10  
1 GANG TO FIT 25 x 16mm  
TRUNKING. TWO ENTRIES

**ESU32140WHI** 10  
1 GANG TO FIT 40 x 16mm  
TRUNKING. TWO ENTRIES

**ESU32225WHI** 10  
2 GANG TO FIT 25 x 16mm  
TRUNKING. TWO ENTRIES

**ESU32240WHI** 10  
2 GANG TO FIT 40 x 16mm  
TRUNKING. TWO ENTRIES

Side mounting boxes do not  
require adaptors and can be  
used with 25mm x 16mm  
and 40 x 16mm mini  
trunking.

MATERIAL:  
PVC-U

DIMENSIONS:  
1 gang: 86\* x 86mm  
2 gang: 86\* x 146mm

\* excluding plinth

FIXING CENTRES:  
1 gang: 60.3mm  
2 gang: 120.6mm

BS 4662 and BS 5733  
where applicable.

**ESUUSB17WHI** 5  
1 GANG  
38MM DEPTH  
FOUR ENTRIES (NON UK)

**ESUUSB19WHI** 5  
1 GANG  
45MM DEPTH  
FOUR ENTRIES (NON UK)

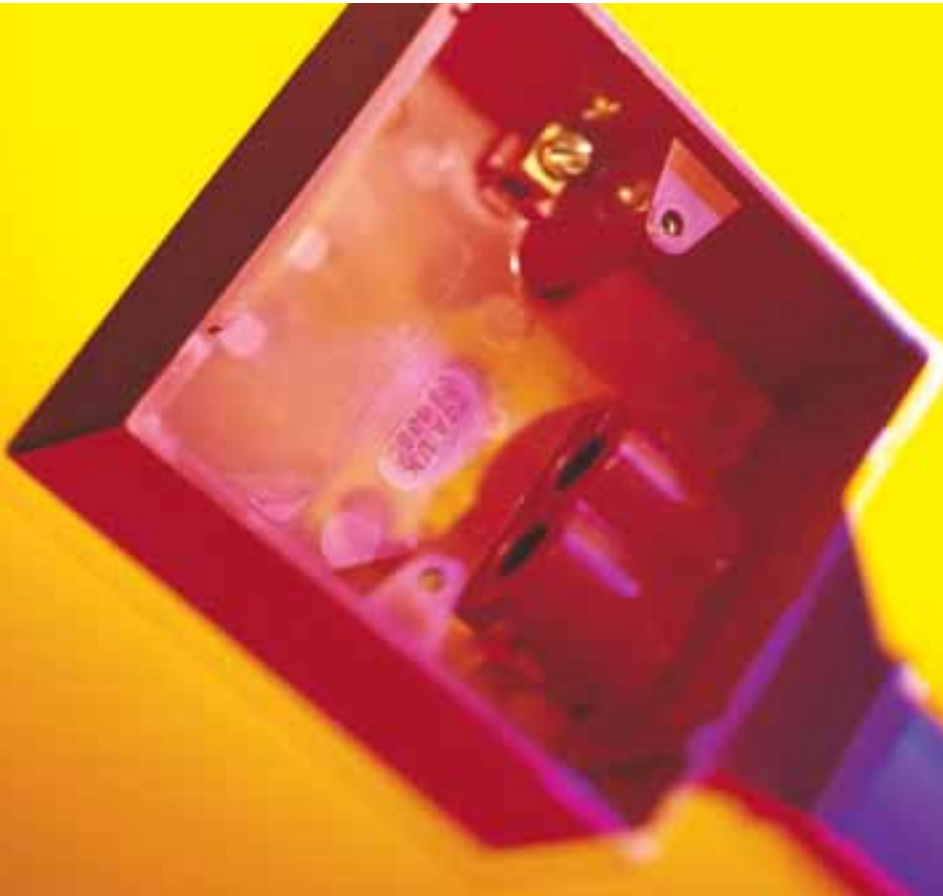
**ESUUSB22WHI** 5  
1 GANG  
51MM DEPTH  
FOUR ENTRIES (NON UK)

**ESUUSB53WHI** 5  
2 GANG  
DEEP BOX  
FOUR ENTRIES (NON UK)

Egaline Wall Box assemblies  
are for use in conjunction  
with Mini Trunking Spout  
adaptors reference:  
YEA-straight entry and  
YSA-side entry.

MATERIAL:  
PVC-U

DIMENSIONS:  
1 gang: 124 x 79mm



### range introduction

Based on MK's well proven Ega Mini Trunking System, Red Alert brings all of the benefits in reducing the installation time on call points, computer and power supply switches, water heaters, boiler switches, emergency stops, panic alarms, smoke detectors, sounders and warning lights.

Manufactured in PVCu, the Red Alert Mini Trunking System meets the growing specification requirement for alarm circuit identification. In addition it affords extra mechanical protection to cables, dramatically improves the overall appearance of Mineral Insulated surface wiring and further serves, where necessary, to highlight the locations of manual call points.

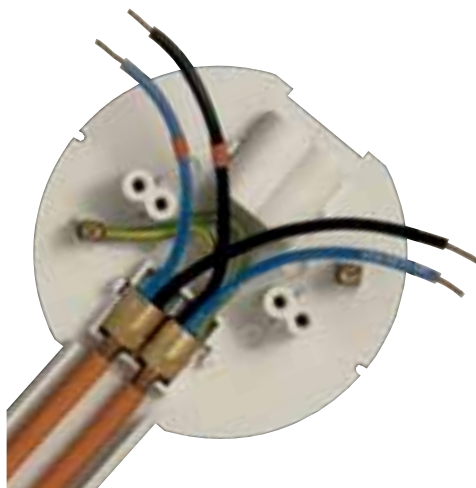
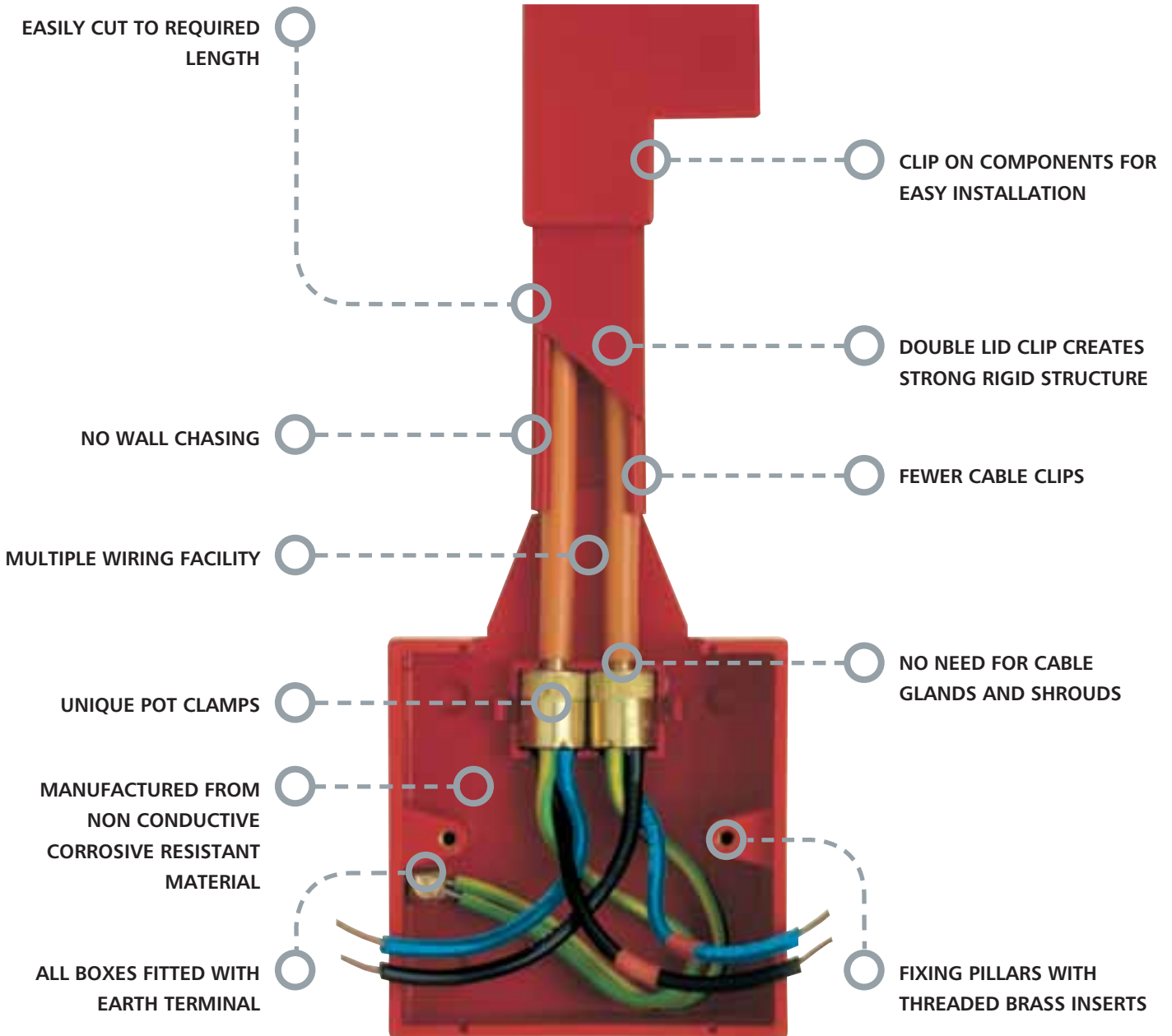
### features and benefits

- **Red Alert profile for alarm circuits**
- **Unobtrusive and neat**
- **Easy to assemble and install**
- **Durable and impact resistant**
- **All extrusions manufactured from 90% recycled material\***

\* Based on 2008 consumption.

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alarm and communication | cable management



## Trunking

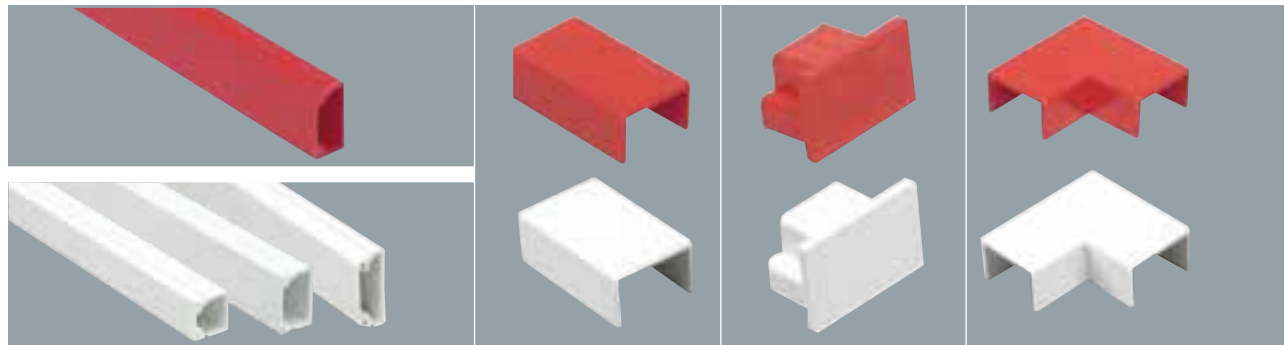
## Coupling

## End Cap

## Flat Angle

## 3 METRE LENGTHS

RED TRUNKING AND FITTINGS ARE ONLY AVAILABLE IN THE 25 x 16MM PROFILE



16 x 16mm	<b>YT1WHI</b>	<b>90m</b>	<b>YC1WHI</b>	<b>20</b>	<b>YEP1WHI</b>	<b>20</b>	<b>YAF1WHI</b>	<b>20</b>
25 x 16mm	<b>YT2RED</b>	<b>30m</b>	<b>YC2RED</b>	<b>20</b>	<b>YEP2RED</b>	<b>20</b>	<b>YAF2RED</b>	<b>20</b>
	<b>YT2WHI</b>	<b>90m</b>	<b>YC2WHI</b>	<b>20</b>	<b>YEP2WHI</b>	<b>20</b>	<b>YAF2WHI</b>	<b>20</b>
32 x 12.5mm	<b>YT200WHI</b>	<b>30m</b>	<b>YC200WHI</b>	<b>20</b>	<b>YEP200WHI</b>	<b>20</b>	<b>YAF200WHI</b>	<b>20</b>
40 x 16mm	<b>YT3WHI</b>	<b>45m</b>	<b>YC3WHI</b>	<b>10</b>	<b>YEP3WHI</b>	<b>20</b>	<b>YAF3WHI</b>	<b>5</b>

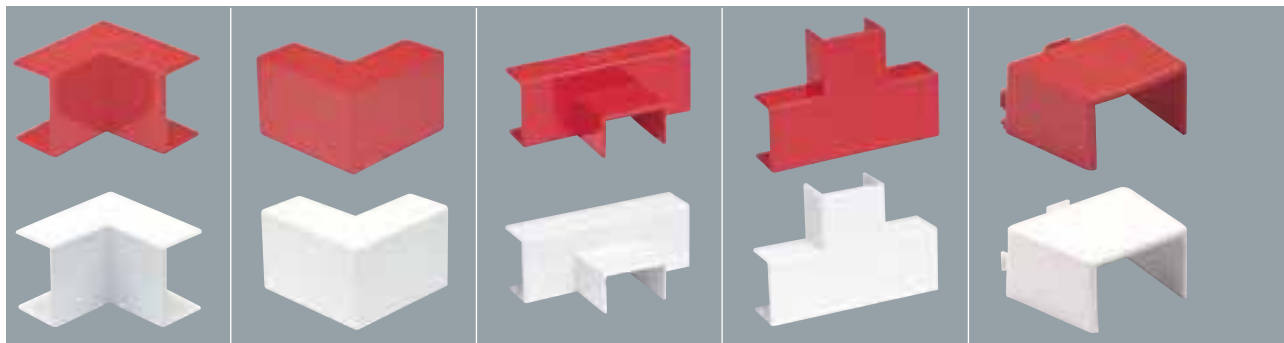
## Internal Corner

## External Corner

## Side Tee

## Flat Tee

## Adaptors



16 x 16mm	<b>YAI1WHI</b>	<b>20</b>	<b>YAE1WHI</b>	<b>20</b>		<b>YST21WHI</b>	<b>10</b>	<b>YTF1WHI</b>	<b>20</b>	<b>YEA1WHI</b>	<b>25</b>
25 x 16mm	<b>YAI2RED</b>	<b>20</b>	<b>YAE2RED</b>	<b>20</b>		<b>YST22RED</b>	<b>10</b>	<b>YTF21WHI</b>	<b>20</b>	<b>YEA2RED</b>	<b>25</b>
	<b>YAI2WHI</b>	<b>20</b>	<b>YAE2WHI</b>	<b>20</b>		<b>YST22WHI</b>	<b>10</b>	<b>YTF22WHI</b>	<b>20</b>	<b>YEA2WHI</b>	<b>25</b>
32 x 12.5mm	<b>YAI200WHI</b>	<b>20</b>	<b>YAE200WHI</b>	<b>20</b>				<b>YTF200WHI</b>	<b>20</b>	<b>YEA200WHI</b>	<b>25</b>
40 x 16mm	<b>YAI3WHI</b>	<b>5</b>	<b>YAE3WHI</b>	<b>5</b>				<b>YTF3WHI</b>	<b>5</b>	<b>YEA3WHI</b>	<b>25</b>

Aperture sizes  
YST21WHI: 16 x 16mm  
YST22: 25 x 16mm

Aperture sizes  
YTF21WHI: 16 x 16mm  
YTF22: 25 x 16mm



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## Boxes

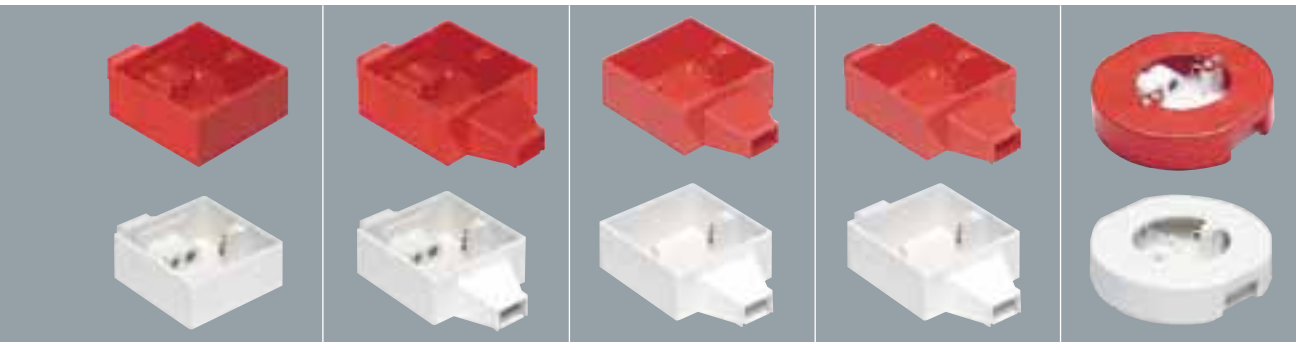
MI ACCESSORY  
BOX  
(1 ENTRY)

MI ACCESSORY  
BOX  
(2 ENTRY)

STANDARD  
ACCESSORY BOX  
(1 ENTRY)

STANDARD  
ACCESSORY BOX  
(2 ENTRY)

CIRCULAR  
ACCESSORY BOX  
(1/2 ENTRY)



ESU501RED

5

ESU502RED

5

ESU503RED

5

ESU504RED

5

YCR502RED

5

ESU501WHI

5

ESU502WHI

5

ESU503WHI

5

ESU504WHI

5

YCR502WHI

5

### SQUARE ACCESSORY BOXES

ACCESSORY FIXING CENTRES: 60.3mm  
EXTERNAL DIMENSIONS: 86 x 86 x 38mm  
PILLAR THREAD SIZE: M3.5

### CIRCULAR ACCESSORY BOXES

ACCESSORY FIXING CENTRES: 50.8mm and 70.0mm  
EXTERNAL DIMENSIONS: 134mm diameter  
PILLAR THREAD SIZE: M4  
LOAD SUSPENSION: 3kg at 60°C max





Ega Communication trunking is a series of unobtrusive low profile PVCu trunkings designed to contain the smaller diameter cables used for telecommunication and signal purposes. There are three sizes available and the systems are complete with fittings to enable them to be used in conjunction with the mini trunking boxes.

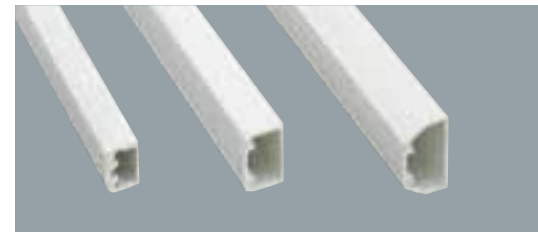
All extrusions manufactured from 90% recycled material.\*

\* Based on 2008 consumption.

## Communication Trunking

3 METRE LENGTHS

2 METRE LENGTHS (NON UK)



11 x 8mm	<b>CMT1WHI</b>	<b>60m</b>	<b>CMT1D1WHI</b>	<b>60m</b>
16 x 10mm	<b>CMT3WHI</b>	<b>60m</b>		
20 x 12.5mm	<b>CMT4WHI</b>	<b>60m</b>		

STANDARD LENGTH: 3 metres  
2 metre lengths are available for Non UK Markets.

Available in 2 metre lengths for non UK markets.

MATERIAL: PVCu  
COLOUR: White

## Speedfix™ Trunking

3 METRE LENGTHS

2 METRE LENGTHS (NON UK)

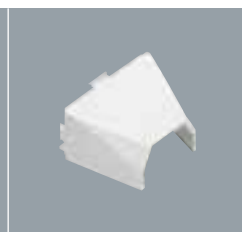
Self adhesive tape should not be relied upon for permanent fixing of the Speedfix range. Additional fixing means (such as screws) should be used.



11 x 8mm	<b>SMT1WHI</b>	<b>60m</b>	<b>SMT1D1WHI</b>	<b>60m</b>
16 x 10mm	<b>SMT3WHI</b>	<b>60m</b>	<b>SMT3D1WHI</b>	<b>60m</b>
20 x 12.5mm	<b>SMT4WHI</b>	<b>60m</b>	<b>SMT4D1WHI</b>	<b>60m</b>

Available in 2 metre lengths for non UK markets.

## Spout Adaptor



Spout adaptors are for use with switch and socket boxes.

## Circular Box

ONE ENTRY



## Circular Box Through

TWO ENTRY



				<b>CMA1WHI</b>	<b>25</b>		
				<b>CMA3WHI</b>	<b>25</b>		
				<b>CMA4WHI</b>	<b>25</b>	<b>YCR1001ELWHI</b>	<b>10</b>
						<b>YCR1002ELWHI</b>	<b>10</b>

Circular boxes accept standard ceiling roses and pull switches. The base incorporates earth terminal facility (order terminal separately, see page 370).

LID FIXING CENTRES: 50.8mm

PILLAR THREAD SIZE: M4 (Metal inserts)

LOAD SUSPENSION: 5kg @ 60°C max

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Edge enhanced combination plate in Brushed Stainless Steel

Available on a worldwide basis, the MK Design Service is supported by a dedicated team to ensure the seamless delivery of your chosen products.

To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)

## Range

## Technical Data

## Wiring Devices

### MK Astral, advanced lighting system

A versatile and intelligent system incorporating Zensys RF communications technology

388-416

### Echo

Wireless, batteryless, self-powered switch technology

417-422

## White

### Logic Plus

Widest selection of wiring devices in one range

423-456

### Sensors

A range of energy saving and lighting management products

457-467

### Heating Controls

A range of temperature control products for domestic heating applications

468-474

### Ceiling Accessories

Lampholders, pendant sets and ceiling switches

475-477

### Link

Plug-in connection and distribution system for lighting

478-479

### Clearshave Plus

Shaverlights and luminaires for bathrooms

480-481

## Decorative

### Aspect

Range of slimline, flawless profile devices

423-456,  
482-483

### Edge

Function and style with very slim profile frontplate

423-456, 482,  
484-487

### Alloy

A range of wiring devices with modern styling and finishes

423-456, 482

### Albany Plus

Satin Gold and Brushed Chrome devices

423-456, 482

## Range

## Technical Data

### Modular

#### Grid Plus

Modular switching and monitoring system

488-493

### Lighting Controls

#### High Power Dimmer

Range of dimmers to control large lighting loads

494-496

### Boxes and Ancillary Products

#### Boxes

Wide selection of surface and flush mounted, metal and PVC boxes

N/A

#### Ancillary Products

A selection of miscellaneous wiring devices

N/A

### Surface

#### Metalclad Plus

Tough, impact resistant surface mounted devices

423-456

### Portable Power

#### Duraplug

Durable, strong and reliable accessories

498-500

#### Plugs and Adaptors

High quality plugs and adaptors

501

### Ingress Protected

#### Masterseal Plus

Award winning range of weatherproof wiring devices

502-513

#### MK Shield

Ingress protected wiring devices for domestic or small commercial applications

514-515

#### Commando Safetyswitch

Impact resistant switches for indoors or outdoors

516-517

#### Commando Plugs and Sockets

Comprehensive selection of industrial plugs and connectors

518-532

#### Commando Combination Units

RCD protection with high impact PBT units

533-534

#### Commando Modular Combi

Factory built modular system for industrial and service applications

535-536

## Programming Overview

The MK Astral™ lighting control system provides flexible control of lighting to create the right ambience for any occasion. You can control lights individually or as a group, instantly setting the mood or scene, or turn all the lights in a home off with the touch of one button.

There are just four easy steps to building your MK Astral™ system.

**step 1 Selection**  
Select your system's primary controller

**step 2 Inclusion**  
Add all devices to the system

**step 3 Replication**  
Copy the routing table to all controllers

**step 4 Association**  
Create groups and scenes

**step 1 Select primary controller**

Every network must have a Primary Controller; this is used to add all devices into the system.

We recommend the Primary Controller to be a Remote Control, though it can also be a Battery Controller.

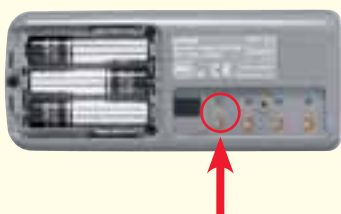


**step 2 Inclusion**

All devices must be included into the Primary Controller.

On the Primary Controller press **Inc** until the indicator turns **yellow** – Inclusion Mode.

Holding the Primary Controller within two metres of the device being added, press any button on the front of that device; the **Inc** indicator on the Primary Controller will flash **green** three times. This should now be repeated for all new devices to be added into the system.



Once all devices have been added, press **Inc** once again on the Primary Controller until the LED extinguishes. The Primary Controller now leaves Inclusion Mode.



**step 3 Replication**

The information held within the Primary Controller must be replicated to all other controllers; this step is only undertaken if you have further controllers in your system.

On the Primary Controller press **Exc** and **Asc** until the indicators turn **yellow** – Replication Transmit Mode.

Hold the Primary Controller within two metres of the secondary controller. Press **Inc** and **Asc** on the secondary controller until the indicators turn **yellow** – Replication Receive Mode.

Whilst the routing table is copied the indicators flash **yellow** and then extinguish – the Controllers now leave Replication Mode.

This should now be repeated for all Controllers in the system.



**step 4 Association (detailed for a Remote Control)**

The devices included within the system can now be set up within groups and scenes.

On the Remote Control press **Asc** until the indicator turns **yellow** – Association Mode.

Select the desired button for the group or scene that you wish to control, the button will illuminate blue.

Hold the Remote Control within two metres of the device being added and set the light level of that particular device to how you wish it to be in the group or scene the Status and **Asc** indicators will flash **green**.

This light level adjustment should now be repeated for all devices in that group or scene.

Once the group or scene is complete press **Asc** until the LED extinguishes and the Remote Control will leave Association Mode.

This should now be repeated for all groups or scenes you wish to configure.



## Lighting Compatibility

Lamp type	Compatible with MK Astral™ switches
<b>Incandescent</b>	
GLS, Tungsten Filament, Reflector lamps	✓
Tungsten Halogen Tube	✓
LED lighting	✓ N
<b>Compact Fluorescent</b>	
Non dimmable	✓ N
Dimmable	✓ N (switching only)
<b>Fluorescent Tube</b>	
With conventional ferro-magnetic ballast (Non dimmable)	✓ N
With HF electronic ballasts (Non dimmable)	✓ N
With HF electronic ballasts (Dimmable)	✓ N (switching only)
<b>Mains GU10</b>	
Tungsten Filament	✓
CFL based	✓ N
LED based	✓ N
<b>12V ELV Tungsten Halogen</b>	
With non-dimmable wire-wound ferro-magnetic transformers	✓
With dimmable wire-wound ferro-magnetic transformers	✓
With non-dimmable electronic transformers	✓
With dimmable electronic transformers	✓

N Neutral connection or Low Energy Lighting Adaptor may be required

Note: Some compact fluorescents lamps will operate correctly without the need for a Neutral connection. However, due to the wide variety of lamps available and the varying ballast technology used within these lamps a Neutral connection is always recommended to ensure operate with most makes compact fluorescent lamps.

MK Astral™ Advanced Lighting Control dims a variety of lamps including GLS, Tungsten Filament, Reflector Lamps, Tungsten Halogen Tubes and 12V ELV with dimmable Wirewound and Electronic Transformers. For further details on dimming compatibility please visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)

## Remote control



LRC14U	Remote Control, 868.4MHz, UK/UAE
LRC14S	Remote Control, 868.4MHz, Singapore
LRC14M	Remote Control, 868.1MHz, Malaysia
LRC14H	Remote Control, 919.8MHz, Hong Kong
LRC14I	Remote Control, 865.2MHz, India

### Accessories:

LRC130	Alternative printed Group/Scene buttons
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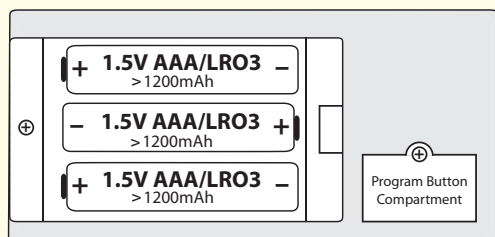
### Features and Benefits

- Fully portable - can be used from any location in the system
- Can be the system Primary Controller
- Up to 75m RF range (open field)
- Can control up to 64 devices in total
- Can control up to four groups and four scenes
- Battery-powered
- Low battery indicator Long battery life, up to two years (under normal operating conditions)
- System ALL OFF control Supplied with wall and wall box mounting brackets, batteries and all fixings
- Alternative pre-printed group and scene buttons available to customise the keypad

### Installation

#### Slide off battery cover and fit batteries as shown below:

Do not fit old and new batteries or batteries of different types. Not suitable for NiMH or NiCd rechargeable batteries.




### Operation

#### 1) Select group or scene

#### 2) While selected group/scene button is illuminated use centre rocker to control.

- Short press on top: Group-On / Set-scene
- Long press on top: Dim-up
- Long press on bottom: Dim-down
- Short press on bottom: OFF

System ALL-OFF: press  for 2s

### Command Status Indications

Flash red 1 time Device not included in the network

Flash green 3 times Command received by all target switches and dimmers

Flash red 3 times: At least 1 target device has not confirmed receipt of the command.

Flash yellow 5 times Low battery

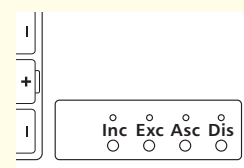
### Program Buttons and Functions

#### Program buttons:

Located on rear of product in program compartment.

#### Program functions:

Include	Replicate transmit
Exclude	Replicate receive
Associate	Duplicate transmit
Disassociate	Duplicate receive
Delete group/scene	Network rediscovery
Controller ID	Update request to SUC/SIS
NVM reset	



### Power Supply

Power Source	Battery
Rated voltage	4.5V
Batteries	3 x 1.5V AAA / LR03
Battery Type	Alkaline <i>Note: Not suitable for NiMH or NiCd rechargeable batteries</i>
Battery Capacity	1200mA or greater
Typical battery life	Up to 2 years. <i>Note: Based on normal operation of 12 events per day and ambient temperature of 20-25°C. Additional operation or programming use and lower temperatures will reduce life</i>
Low battery signal	Status indicator flashes yellow 5 times after operation

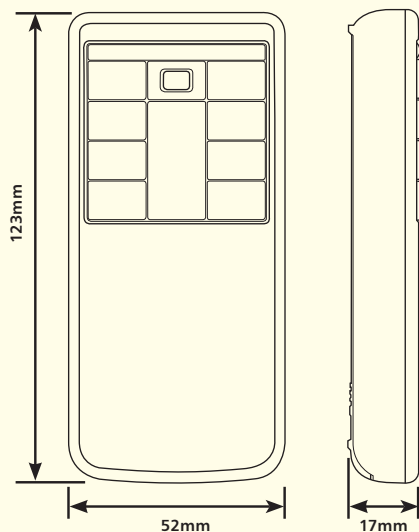


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RF Performance	
RF operating frequency	
LRC14U	868.4MHz for use in UK, Ireland, UAE
LRC14S	868.4MHz for use in Singapore
LRC14M	868.1MHz for use in Malaysia
LRC14H	919.8MHz for use in Hong Kong
LRC14I	865.2MHz for use in India
RF Specification	
RF range	Up to 75m (open field)
Modulation	FM
Radiated power	<1mW

Mechanical and Environmental	
Dimensions	
123(h) x 52(w) x 17(d)mm	
Weights	
85g (excluding batteries)	
Temperature and Humidity	
Operating	0°C to +45°C
Storage	-20°C to +60°C
Humidity	95% (non condensing)



Certification and Approvals	
Certification	
CE marked	Yes
EU Directives	LVD, EMC and R&TTE
LVD	(BS) EN 60950-1 (MS) IEC 60950-1
EMC	(BS) EN 61000-6-1 / 3 (MS) IEC 61000-6-1 / 3 ETSI EN 301489-1 / 2
R&TTE	ETSI EN 300220-1 / 2
Local Regional and Other Approvals	
UK, Ireland	None required
UAE	TRA
Singapore	IDA
Malaysia	CMST
Hong Kong	None required
India	None required
Zensys	Z-Wave® compliant and interoperable

## Zensys

### Z-Wave® device type

- Basic class: Portable controller
- Generic class: Remote switch
- Specific class: Portable remote controller

### Z-Wave® command classes

- All switch, (C)
- Association, (C)
- Basic, (C)
- Battery, (S)
- Indicator, (S)
- Manufacturer specific, (S/C)
- Multi-channel, (C)
- Multi-channel association, (S)
- Multi-level switch, (C)
- Version, (S)
- Wake Up, (S)

Where: S = Supported, C = controlled

 Note: Please refer to [www.mkelectric.co.uk](http://www.mkelectric.co.uk) for the latest data and information

### Associations

Control modes: Can be configured for group or scene control

No of groups/scenes: 4 groups and 4 scenes

No of Associations: 64

Note: The device can support associations to up to 64 other devices in total.  
Each group/scene may be associated to a maximum of 64 end points from the 64 devices.

### Association Command class support

It is not possible to create or remove associations on the remote control using another controller. Associations can only be created or removed using the Remote Control's devices own internal Associate and Disassociate modes.

### Inclusion

To activate device's Inclusion Mode press Inc for 2s, (only if device is the primary controller).

To include device into another system press any operation button.

### Exclusion

To activate device's Exclusion Mode press Exc for 2s, (only if device is the primary controller).

To exclude device from a system press Exc button twice in 1s.

### Association

To activate device's association mode press Asc for 2s.

To create associations using another controller press normal operation button/rocker of required channel.

### Disassociation

To activate device's disassociation mode press Dis for 2s.

To remove associations using another controller press normal operation button/rocker of required channel.

### Replicate transmit

To activate device's replicate transmit mode press Exc and Asc buttons for 2s, (only if device is the primary controller).

### Replicate receive

To activate device's replicate receive mode press Inc and Asc buttons for 2s, (only if device is a secondary controller).

### Duplicate transmit

To activate device's duplicate transmit mode press Exc and Dis buttons for 2s, (Astral™ products only).

### Duplicate receive

To activate device's duplicate receive mode press Inc and Dis buttons for 2s, (Astral™ products only).

### SUC/SIS updates

Periodic and routine update will be requested every 36 operations

- To initiate a manual wake-up and update request press Dis

Note: Only available if SUC/SIS in network.

Wake Up Command Class Support: A wake up period setting of 0x000000 seconds only is supported. i.e. The device will contact the specified device whenever we wake up under the above conditions.

### Response to indicator request:

On receipt of an indicator request command from another Z-Wave® device each group/scene button will illuminate blue for 1s in a continuous sequence for 30s.

### Z-Wave® programming power

This product is supplied preset to Low Power Configuration Mode.

Low power range: 2 - 5m.

### Z-Wave® compatibility

MK Astral™ products are tested and certified as Z-Wave® compliant and are designed to work with other manufacturers Z-wave® compliant and interoperable products. Z-Wave® products of other types and applications can be added to the system and will act as repeaters if they support this functionality. This enables the system to grow and expand to other application areas as your needs develop.

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## LIB1, LIB2 Battery Controller



LIB1U	1 Gang Battery Controller, 868.4MHz, UK/UAE
LIB2U	2 Gang Battery Controller, 868.4MHz, UK/UAE
LIB1S	1 Gang Battery Controller, 868.4MHz, Singapore
LIB2S	2 Gang Battery Controller, 868.4MHz, Singapore
LIB1M	1 Gang Battery Controller, 868.1MHz, Malaysia
LIB2M	2 Gang Battery Controller, 868.1MHz, Malaysia
LIB1H	1 Gang Battery Controller, 919.8MHz, Hong Kong
LIB2H	2 Gang Battery Controller, 919.8MHz, Hong Kong
LIB1I	1 Gang Battery Controller, 865.2MHz, India
LIB2I	2 Gang Battery Controller, 865.2MHz, India

### Compatible with Astral™ dimmer fascias (supplied separately)

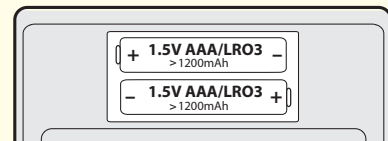
	LDF21	1 Gang Metal Dimmer Fascia		LDF11	1 Gang Plastic Dimmer Fascia
	LDF22	2 Gang Metal Dimmer Fascia		LDF12	2 Gang Plastic Dimmer Fascia

### Features and Benefits

- 1 and 2 Gang versions available
- Fully portable - can be used from any location in the system
- Can be the systems primary controller
- Can control either a group or scene
- Up to 75m RF range (open field)
- Can control to up to 64 devices in total
- Maximum of 64 devices per control channel
- Battery powered
- Low battery indicator
- Long battery life, up to two years (under normal operating conditions)
- System ALL OFF control
- Astral™ holiday mode control
- Supplied with wall and wall box mounting brackets, batteries and all fixings
- Use Astral™ dimmer fascia

### Installation

Unclip battery cover and fit batteries as shown below



Do not fit old and new batteries or batteries of different types.  
Not suitable for NiMH or NiCd rechargeable batteries.

### Operation

#### Normal Operation

Short press ON/SET SCENE  
Long press DIM UP

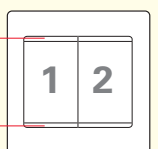
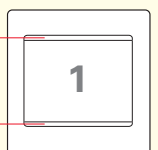
Short press OFF  
Long press DIM DOWN

#### Default Functionality

System ALL-OFF  
Long press

Holiday mode  
ON Long press  
OFF Short press

Only available if no associations are created on Channel 1



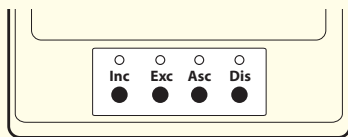
### Command Status Indications

<b>Flash red 1 time</b>	Device not included in the network
<b>Flash green 3 times</b>	Command received by all target switches and dimmers
<b>Flash red 3 times:</b>	At least 1 target device has not confirmed receipt of the command
<b>Flash yellow 5 times</b>	Low battery

### Program Buttons and Functions

#### Program buttons

Located on rear of product in program compartment



#### Program functions

Include	NVM reset
Exclude	Replicate transmit
Associate	Replicate receive
Disassociate	Duplicate transmit
Delete group/scene	Duplicate receive
Group/Scene control select	Network rediscovery
Controller ID	Update request to SUC/SIS

### RF Performance

#### RF operating frequency

LIB1U, LIB2U	868.4MHz for use in UK, Ireland, UAE
LIB1S, LIB2S	868.4MHz for use in Singapore
LIB1M, LIB2M	868.1MHz for use in Malaysia
LIB1H, LIB2H	919.8MHz for use in Hong Kong
LIB1I, LIB2I	865.2MHz for use in India

#### RF Specification

RF range	Up to 75m (open field)
Modulation	FM
Radiated power	<1mW

### Mechanical and Environmental

#### Dimensions

with metal fascia	86(h) x 86(w) x 15(d)mm
with plastic fascia	86(h) x 86(w) x 17.5(d)mm

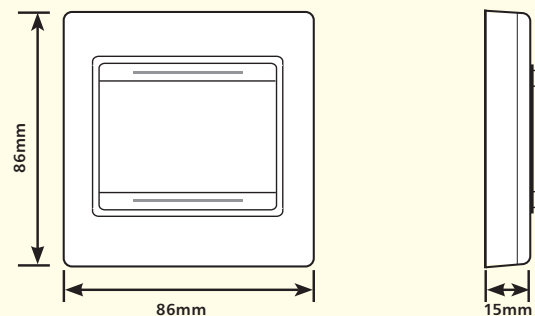
#### Weights

1 Gang Controller (excluding batteries)	62g
2 Gang Controller (excluding batteries)	64g
Metal Fascia	54g
Plastic Fascia	30g

#### Temperature and Humidity

Operating	0°C to +45°C
Storage	-20°C to +60°C
Humidity	95% (non condensing)

Power Supply	
Power Source	Battery
Rated voltage	3.0V
Batteries	2 x 1.5V AAA / LR03
Battery Type	Alkaline <i>Note: Not suitable for NiMH or NiCd rechargeable batteries</i>
Battery Capacity	1200mA or greater
Typical battery life	Up to 2 years. <i>Note: Based on normal operation of 12 events per day and ambient temperature of 20-25°C. Additional operation or programming use and lower temperatures will reduce life</i>
Low battery signal	Status indicator flashes yellow 5 times after operation



\*Shown with metal fascia installed; with plastic fascia installed, product is 15mm thick

Certification and Approvals	
<b>Certification</b>	
CE marked	Yes
EU Directives	LVD, EMC and R&TTE
LVD	(BS) EN 60950-1 (MS) IEC 60950-1
EMC	(BS) EN 61000-6-1 / 3 (MS) IEC 61000-6-1 / 3 ETSI EN 301489-1 / 2
R&TTE	ETSI EN 300220-1 / 2
<b>Local Regional and Other Approvals</b>	
UK, Ireland	None required
UAE	TRA
Singapore	IDA
Malaysia	CMST
Hong Kong	None required
India	None required
Zensys	Z-Wave® compliant and interoperable

## Zensys

### Z-Wave® device type

- Basic class: Portable controller
- Generic class: Remote switch
- Specific class: Portable remote controller

### Z-Wave® command classes

- All switch, (C)
- Association, (C)
- Basic, (C)
- Battery, (S)
- Indicator, (S)
- Manufacturer specific, (S/C)
- Multi-channel, (C)
- Multi-channel association, (S)
- Multi-level switch, (C)
- Version, (S)
- Wake Up, (S)

Where: S = Supported, C = controlled

## Associations

Control modes: Can be configured for group or scene control

No of groups/scenes: One per channel

No of Associations: 64

Note: The device can support associations to up to 64 other devices in total. Each group/scene may be associated to a maximum of 64 end points from the 64 devices.

## Inclusion

To activate device's Inclusion Mode press Inc for 2s, (only if device is the primary controller).

To include device into another system press any operation button.

## Exclusion

To activate device's Exclusion Mode press Exc for 2s, (only if device is the primary controller).

To exclude device from a system press Exc button twice in 1s.

## Association

To activate device's association mode press Asc for 2s.

To create associations using another controller press normal operation button/rocker of required channel.

## Disassociation

To activate device's disassociation mode press Dis for 2s

To remove associations using another controller press normal operation button/rocker of required channel.

## Replicate transmit

To activate device's replicate transmit mode press Exc and Asc buttons for 2s, (only if device is the primary controller).

## Replicate receive

To activate device's replicate receive mode press Inc and Asc buttons for 2s, (only if device is a secondary controller).

## Duplicate transmit

To activate device's duplicate transmit mode press Exc and Dis buttons for 2s, (Astral™ products only).

## Duplicate receive

To activate device's duplicate receive mode press Inc and Dis buttons for 2s, (Astral™ products only).

**SUC/SIS updates**

Periodic and routine update will be requested every

- 24 operations on 1 Gang Products
- 36 operations on 2 Gang Products
- To initiate a manual wake-up and update request press Dis

Note: Only available if SUC/SIS in network.

Wake Up Command Class Support: A wake up period setting of 0x000000 seconds only is supported. i.e. The device will contact the specified device whenever we wake up under the above conditions.

**Response to indicator request**

On receipt of an indicator request command from another Z-Wave® device each channel status indicator will illuminate green for 1s in a continuous sequence for 30s.

**Z-Wave® programming power**

This product is supplied preset to Low Power Configuration Mode.

Low power range: 2 - 5m.

**Z-Wave® compatibility**

MK Astral™ products are tested and certified as Z-Wave® compliant and are designed to work with other manufacturers Z-wave® compliant and interoperable products. Z-Wave® products of other types and applications can be added to the system and will act as repeaters if they support this functionality. This enables the system to grow and expand to other application areas as your needs develop.

Note: Please refer to [www.mkelectric.co.uk](http://www.mkelectric.co.uk) for the latest data and information

## LIM1, LIM2 Mains Controller



LIM1U	1 Gang Mains Controller, 868.4MHz, UK/UAE
LIM2U	2 Gang Mains Controller, 868.4MHz, UK/UAE
LIM1S	1 Gang Mains Controller, 868.4MHz, Singapore
LIM2S	2 Gang Mains Controller, 868.4MHz, Singapore
LIM1M	1 Gang Mains Controller, 868.1MHz, Malaysia
LIM2M	2 Gang Mains Controller, 868.1MHz, Malaysia
LIM1H	1 Gang Mains Controller, 919.8MHz, Hong Kong
LIM2H	2 Gang Mains Controller, 919.8MHz, Hong Kong
LIM1I	1 Gang Mains Controller, 865.2MHz, India
LIM2I	2 Gang Mains Controller, 865.2MHz, India

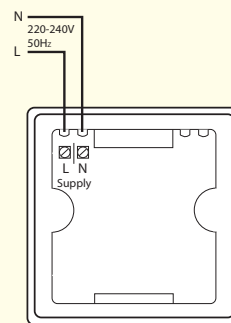
### Compatible with Astral™ dimmer fascias (supplied separately)

	LDF21	1 Gang Metal Dimmer Fascia		LDF11	1 Gang Plastic Dimmer Fascia
	LDF22	2 Gang Metal Dimmer Fascia		LDF12	2 Gang Plastic Dimmer Fascia

### Features and Benefits

- 1 and 2 Gang versions available
- Can control either a group or scene
- Up to 75m RF range (open field)
- Can control to up to 64 devices in total
- Maximum of 64 devices per control channel
- System ALL OFF control
- Astral™ holiday mode control
- Use Astral™ dimmer fascia

### Installation



**IMPORTANT**  
The mains supply must be protected by a 10A class B or C MCB

### Operation

#### Normal Operation

Short press ON/SET SCENE  
Long press DIM UP

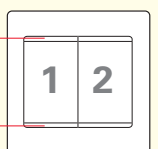
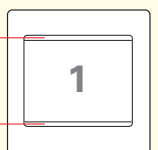
Short press OFF  
Long press DIM DOWN

#### Default Functionality

System ALL-OFF  
Long press

Holiday mode  
ON Long press  
OFF Short press

Only available if no associations are created on Channel 1



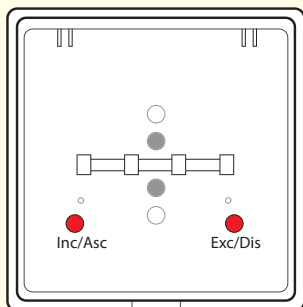
### Command Status Indications

<b>Flash red 1 time</b>	Device not included in the network
<b>Flash green 3 times</b>	Command received by all target switches and dimmers
<b>Flash red 3 times:</b>	At least 1 target device has not confirmed receipt of the command
<b>Low Blue</b>	Night locator (Visible only in low light level conditions.)

### Program Buttons and Functions

#### Program buttons

Located on front of module beneath fascia



#### Program functions

Replicate receive	Controller ID
Group/Scene control select	NVM reset
Delete group/scene	Update request to SUC/SIS

### RF Performance

#### RF operating frequency

LIM1U, LIM2U	868.4MHz for use in UK, Ireland, UAE
LIM1S, LIM2S	868.4MHz for use in Singapore
LIM1M, LIM2M	868.1MHz for use in Malaysia
LIM1H, LIM2H	919.8MHz for use in Hong Kong
LIM1I, LIM2I	865.2MHz for use in India

#### RF Specification

RF range	Up to 75m (open field)
Modulation	FM
Radiated power	<1mW

### Mechanical and Environmental

#### Dimensions

with metal fascia	86(h) x 86(w) x 32(d)mm
with plastic fascia	86(h) x 86(w) x 34.5(d)mm
Wall box depth	35mm (min)

#### Weights

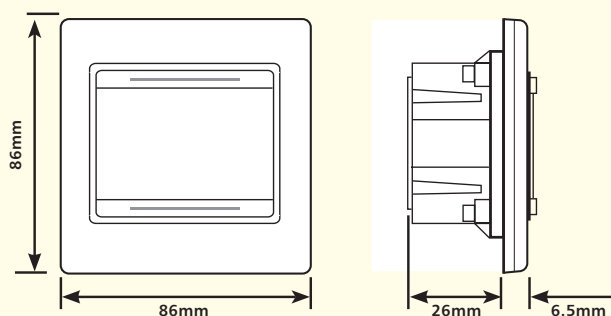
1 Gang Controller	75g
2 Gang Controller	76g
Metal Fascia	54g
Plastic Fascia	30g

#### Temperature and Humidity

Operating	0°C to +45°C
Storage	-20°C to +60°C
Humidity	95% (non condensing)

### Power Supply

Power Source	Mains
Rated voltage	220 - 240Vac / 50Hz
Power Consumption	<1W in standby



\* Shown with metal Fascia. Plastic Fascia is 7.5 mm thick



Certification and Approvals	
<b>Certification</b>	
CE marked	Yes
EU Directives	LVD, EMC and R&TTE
LVD	(BS) EN 60950-1 (MS) IEC 60950-1
EMC	(BS) EN 61000-6-1 / 3 (MS) IEC 61000-6-1 / 3 ETSI EN 301489-1 / 2
R&TTE	ETSI EN 300220-1 / 2
<b>Local Regional and Other Approvals</b>	
UK, Ireland	None required
UAE	TRA
Singapore	IDA
Malaysia	CMST
Hong Kong	None required
India	None required
Zensys	Z-Wave® compliant and interoperable

## Zensys

### Z-Wave® device type

- Basic class: Static controller
- Generic class: Remote switch
- Specific class: Not Used

### Z-Wave® command classes

- All switch, (C)
- Association, (C)
- Basic, (C)
- Indicator, (S)
- Manufacturer specific, (S/C)
- Multi-channel, (C)
- Multi-channel association, (S)
- Multi-level switch, (C)
- Version, (S)

Where: S = Supported, C = controlled

## Associations

Control modes: Can be configured for group or scene control

No of groups/scenes: One per channel

No of Associations: 64

Note: The device can support associations to up to 64 other devices in total. Each group/scene may be associated to a maximum of 64 end points from the 64 devices.

## Inclusion

To include device into another system press any operation button.

## Exclusion

To exclude device from a system press Exc button twice in 1s.

## Association

To create associations using another controller press normal operation button/rocker of required channel.

## Disassociation

To remove associations using another controller press normal operation button/rocker of required channel.

## Replicate transmit

To activate device's replicate receive mode press Inc and Asc buttons for 2s, (only if device is a secondary controller).

## SUC/SIS updates

Periodic and routine update will be requested every

- 24 operations on 1 Gang Products
- 36 operations on 2 Gang Products
- To initiate a manual wake-up and update request press Exc/Dis

Note: Only available if SUC/SIS in network.

Wake Up Command Class Support: A wake up period setting of 0x000000 seconds only is supported. i.e. The device will contact the specified device whenever we wake up under the above conditions.

## Response to indicator request

On receipt of an indicator request command from another Z-Wave® device each channel status indicator will illuminate green for 1s in a continuous sequence for 30s.

## Z-Wave® compatibility

MK Astral™ products are tested and certified as Z-Wave® compliant and are designed to work with other manufacturers Z-wave® compliant and interoperable products. Z-Wave® products of other types and applications can be added to the system and will act as repeaters if they support this functionality. This enables the system to grow and expand to other application areas as your needs develop.

Note: Please refer to [www.mkelectric.co.uk](http://www.mkelectric.co.uk) for the latest data and information

## LSM11, LSM12 10AX Switches



LSM11U	1 Gang 10AX Switch, 868.4MHz, UK/UAE
LSM12U	2 Gang 10AX Switch, 868.4MHz, UK/UAE
LSM11S	1 Gang 10AX Switch, 868.4MHz, Singapore
LSM12S	2 Gang 10AX Switch, 868.4MHz, Singapore
LSM11M	1 Gang 10AX Switch, 868.1MHz, Malaysia
LSM12M	2 Gang 10AX Switch, 868.1MHz, Malaysia
LSM11H	1 Gang 10AX Switch, 919.8MHz, Hong Kong
LSM12H	2 Gang 10AX Switch, 919.8MHz, Hong Kong
LSM11I	1 Gang 10AX Switch, 865.2MHz, India
LSM12I	2 Gang 10AX Sw itch, 865.2MHz, India

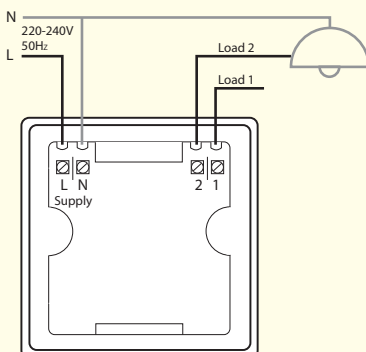
### Compatible with Astral™ switch fascias (supplied separately)

	LSF21	1 Gang Metal Switch Fascia		LSF11	1 Gang Plastic Switch Fascia
	LSF22	2 Gang Metal Switch Fascia		LSF12	2 Gang Plastic Switch Fascia

### Features and Benefits

- 1 and 2 Gang versions available
- Up to 75m RF range (open field)
- Can only control a group
- Can control up to 5 devices in total
- Maximum of 5 devices per control channel
- Mains-powered
- Astral™ holiday mode occupation simulation
- Use Astral™ switch fascias

### Installation



#### IMPORTANT

The mains supply must be protected by a 10A class B or C MCB

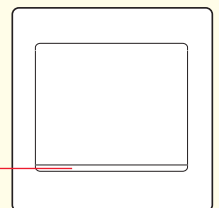
Neutral connection or Low Energy Lighting Adaptor may be required for following load types:

- Fluorescent tubes
- Compact fluorescent energy saving lamps
- ELV tungsten halogen lamps with electronic transformers

### Operation

#### Normal Operation

press ON  
press OFF



#### Command Status Indications

**Flash red 1 time** Device not included in the network

**Flash green 3 times** Command received by all target switches and dimmers

**Flash red 3 times:** At least 1 target device has not confirmed receipt of the command

**High level blue** Load ON

**Low Blue** Night locator  
(Visible only in low light level conditions.)

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### Command Status Indications

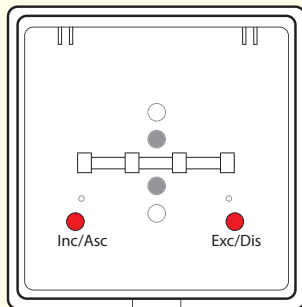
**Red flash every 3s** Load switched OFF due to detection of overload or short circuit condition on load side of switch

**Alternating High/Low: blue every second** Holiday mode active

### Program Buttons and Functions

#### Program buttons

Located on front of module beneath fascia



#### Program functions

Delete group/scene

Update request to SUC/SIS

NVM reset

Power Supply	
Power Source	Mains
Rated voltage	220 - 240Vac / 50Hz
Power Consumption	<1W in standby

### Load Specification

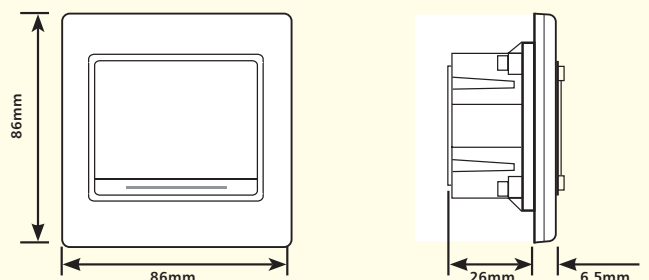
Suitable for use with the following load types and maximum load ratings only.

- GLS / Tungsten filament 25 - 2400W
- Tungsten halogen 25 - 2000W
- ELV Tungsten halogen ferro-magnetic or electronic transformers \* 25 - 1500VA
- Fluorescent tubes with ferro-magnetic ballast and power factor correction 25 - 1800W
- Maximum load capacitance 140μF

- Fluorescent tubes with electronic ballast \* 18 - 540W (eg 30 x 18W tubes/ballasts)
  - Compact fluorescent (low energy) lamps \* 25 - 750W
- \* requires Neutral connection to switch or Low Energy Lighting Adaptor.

RF Performance	
<b>RF operating frequency</b>	
LSM1U, LSM2U	868.4MHz for use in UK, Ireland, UAE
LSM1S, LSM2S	868.4MHz for use in Singapore
LSM1M, LSM2M	868.1MHz for use in Malaysia
LSM1H, LSM2H	919.8MHz for use in Hong Kong
LSM1I, LSM2I	865.2MHz for use in India
<b>RF Specification</b>	
RF range	Up to 75m (open field)
Modulation	FM
Radiated power	<1mW

Mechanical and Environmental	
<b>Dimensions</b>	
With metal fascia	86(h) x 86(w) x 32(d)mm
With plastic fascia	86(h) x 86(w) x 34.5(d)mm
Wall box depth	35mm (min)
<b>Weights</b>	
1 Gang Switch	100g
2 Gang Switch	115g
Metal Fascia	54g
Plastic Fascia	30g
<b>Temperature and Humidity</b>	
Operating	0°C to +45°C
Storage	-20°C to +60°C
Humidity	95% (non condensing)



\* Shown with metal Fascia. Plastic Fascia is 7.5 mm thick

Certification and Approvals	
<b>Certification</b>	
CE marked	Yes
EU Directives	LVD, EMC and R&TTE
LVD	(BS) EN 60669-2-1 (MS) IEC 60669-2-1 SS227-2-1
EMC	(BS) EN 61000-6-1 / 3 (MS) IEC 61000-6-1 / 3 ETSI EN 301489-1 / 2
R&TTE	ETSI EN 300220-1 / 2
<b>Local Regional and Other Approvals</b>	
UK, Ireland	None required
UAE	TRA
Singapore	IDA
Malaysia	CMST
Hong Kong	None required
India	None required
Zensys	Z-Wave® compliant and interoperable

## Zensys

### Z-Wave® device type

- Basic class: Routing Slave
- Generic class: Binary Switch
- Specific class: Binary Power Switch

### 2 Gang Products

- Basic class: Routing Slave
- Generic class: End point 1: Binary Switch channel 1  
End point 2: Binary Switch channel 2
- Specific class: End point 1: Binary Power Switch channel 1  
End point 2: Binary Power Switch channel 2

### Z-Wave® command classes

- All switch, (S)
- Basic, (S/C)
- Binary switch, (S)
- Indicator, (S)
- Manufacturer specific, (S/C)
- Multi-channel, (S/C)
- Multi-channel association, (S)
- Node Naming & Location, (S)
- Version, (S)

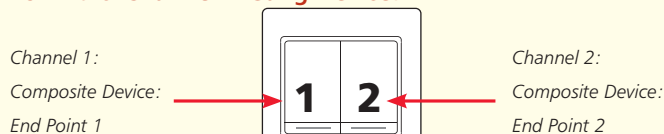
Where: S = Supported, C = controlled

## Associations

- Control modes: Can be configured for group control only
- No of groups/scenes: One per channel
- No of Associations: 5

Note: The device can support associations to up to 5 other devices in total.  
Each channel may be associated to a maximum of 5 end points from the 5 devices.

## For Multi-Channel 2 Gang Devices



## Inclusion

To include device into another system press any operation button.

## Exclusion

To exclude device from a system press Exc button twice in 1s.

## Association

To create associations using another controller press normal operation button/rocker of required channel.

## Disassociation

To remove associations using another controller press normal operation button/rocker of required channel.

## SUC/SIS updates

Periodic and routine update will be requested every

- 24 operations on 1 Gang Products
- 36 operations on 2 Gang Products
- To initiate a manual wake-up and update request press Exc/Dis

Note: Only available if SUC/SIS in network.

## Response to indicator request

On receipt of an indicator request command from another Z-Wave® device each channel status indicator will illuminate green for 1s in a continuous sequence for 30s.

## Z-Wave® compatibility

MK Astral™ products are tested and certified as Z-Wave® compliant and are designed to work with other manufacturers Z-wave® compliant and interoperable products. Z-Wave® products of other types and applications can be added to the system and will act as repeaters if they support this functionality. This enables the system to grow and expand to other application areas as your needs develop.

Note: Please refer to www.mkelectric.co.uk for the latest data and information

## LDM31, LDM32, LDM61 300W/600W Dimmers



LDM31U	1 Gang 300W Dimmer, 868.4MHz, UK/UAE
LDM32U	2 Gang 300W Dimmer, 868.4MHz, UK/UAE
LDM61U	1 Gang 600W Dimmer, 868.4MHz, UK/UAE
LDM31S	1 Gang 300W Dimmer, 868.4MHz, Singapore
LDM32S	2 Gang 300W Dimmer, 868.4MHz, Singapore
LDM61S	1 Gang 600W Dimmer, 868.4MHz, Singapore
LDM31M	1 Gang 300W Dimmer, 868.1MHz, Malaysia
LDM32M	2 Gang 300W Dimmer, 868.1MHz, Malaysia
LDM61M	1 Gang 600W Dimmer, 868.1MHz, Malaysia
LDM31H	1 Gang 300W Dimmer, 919.8MHz, Hong Kong
LDM32H	2 Gang 300W Dimmer, 919.8MHz, Hong Kong
LDM61H	1 Gang 600W Dimmer, 919.8MHz, Hong Kong
LDM31I	1 Gang 300W Dimmer, 865.2MHz, India
LDM32I	2 Gang 300W Dimmer, 865.2MHz, India
LDM61I	1 Gang 600W Dimmer, 865.2MHz, India

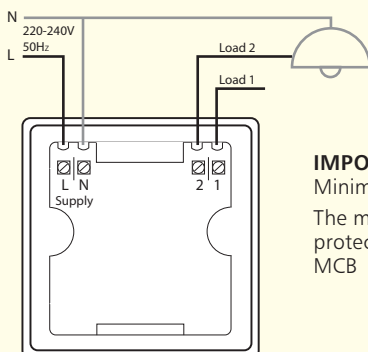
### Compatible with Astral™ dimmer fascias (supplied separately)

	LDF21	1 Gang Metal Dimmer Fascia		LDF11	1 Gang Plastic Dimmer Fascia
	LDF22	2 Gang Metal Dimmer Fascia		LDF12	2 Gang Plastic Dimmer Fascia

### Features and Benefits

- 1 and 2 Gang versions available
- Up to 75m RF range (open field)
- Can control either a group or scene
- Can control up to 5 devices in total
- Maximum of 5 devices per control channel
- Mains-powered
- Astral™ holiday mode occupation simulation
- Use Astral™ dimmer fascias

### Installation



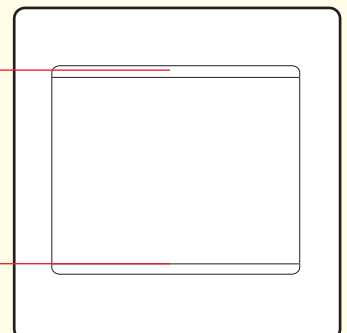
**IMPORTANT**  
 Minimum wall box depth: 35mm  
 The mains supply must be protected by a 10A class B or C MCB

### Operation

#### Normal Operation

Short press ON/SET SCENE  
 Long press DIM UP

Short press OFF  
 Long press DIM DOWN



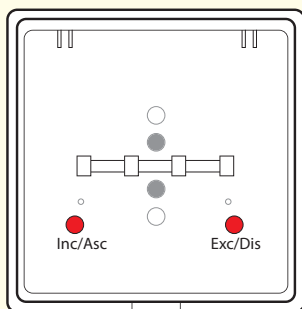
### Command Status Indications

<b>Flash red 1 time</b>	Device not included in the network
<b>Flash green 3 times</b>	Command received by all target switches and dimmers
<b>Flash red 3 times:</b>	At least 1 target device has not confirmed receipt of the command
<b>High level blue</b>	Load ON
<b>Low Blue</b>	Night locator (Visible only in low light level conditions.)
<b>Red flash every 3s</b>	Load switched OFF due to detection of overload or short circuit condition on load side of switch
<b>Alternating High/Low: blue every second</b>	Holiday mode active

### Program Buttons and Functions

#### Program buttons

Located on front of module beneath fascia



#### Program

- Group/Scene control select
- Delete group/scene
- NVM reset
- Update request to SUC/SIS

#### functions

### Power Supply

Power Source	Mains
Rated voltage	220 - 240Vac / 50Hz
Power Consumption	<1W in standby

### Load Specification

Suitable for use with the following load types and maximum load ratings only.

	1G 300W Dimmer	1G 600W Dimmer	2G 300W Dimmer
GLS Tungsten filament Tungsten halogen	25-300W	25-600W	25-300W per channel
12V ELV Tungsten halogen with wirewound or electronic transformers	35-300VA	35-600VA	35-300VA per channel

Not suitable for any other load type.

Do not use different types of lamps on the same circuit.

Remember to allow for the inefficiency and losses in the transformer when calculating dimmer loading, (e.g. a 50VA transformer will look like more than 60VA to the dimmer if it is 80% efficient).

#### Notes on using ELECTRONIC TRANSFORMERS:

To minimise the risk of flicker associated with using electronic transformers at low dimming levels please take note of the following installation points:

- Always follow the loading instructions for the transformer and load the transformer to a minimum of 70% of its rating
- Always use transformers from the same manufacturer and of the same type and size on each load circuit
- Load each transformer equally
- Do not use both electronic and wire-wound transformers on the same load circuit

#### Notes on using MAGNETIC TRANSFORMERS:

- Always use transformers of a similar rating to the load connected to it
- Always follow the loading instructions for the transformer and load the transformer to at least 50% of its rating
- Remember to allow for the losses of the transformer  
(A 100VA transformer will actually load the dimmer with approx 120VA (or more) depending on the transformer.)

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RF Performance	
<b>RF operating frequency</b>	
LDM31U, LDM32U, LDM61U	868.4MHz for use in UK, Ireland, UAE
LDM31S, LDM32S, LDM61S	868.4MHz for use in Singapore
LDM31M, LDM32M, LDM61M	868.1MHz for use in Malaysia
LDM31H, LDM32H, LDM61H	919.8MHz for use in Hong Kong
LDM31I, LDM32I, LDM61I	865.2MHz for use in India
<b>RF Specification</b>	
RF range	Up to 75m (open field)
Modulation	FM
Radiated power	<1mW

Mechanical and Environmental	
<b>Dimensions</b>	
With metal fascia	86(h) x 86(w) x 32(d)mm
With plastic fascia	86(h) x 86(w) x 34.5(d)mm
Wall box depth	35mm (min)
<b>Weights</b>	
1 Gang Switch	100g
2 Gang Switch	103g
Metal Fascia	54g
Plastic Fascia	30g
<b>Temperature and Humidity</b>	
Operating	0°C to +45°C
Storage	-20°C to +60°C
Humidity	95% (non condensing)

Certification and Approvals	
<b>Certification</b>	
CE marked	Yes
EU Directives	LVD, EMC and R&TTE
LVD	(BS) EN 60669-2-1 (MS) IEC 60669-2-1 SS227-2-1
EMC	(BS) EN 61000-6-1 / 3 (MS) IEC 61000-6-1 / 3 ETSI EN 301489-1 / 2
R&TTE	ETSI EN 300220-1 / 2
<b>Local Regional and Other Approvals</b>	
UK, Ireland	None required
UAE	TRA
Singapore	IDA
Malaysia	CMST
Hong Kong	None required
India	None required
Zensys	Z-Wave® compliant and interoperable

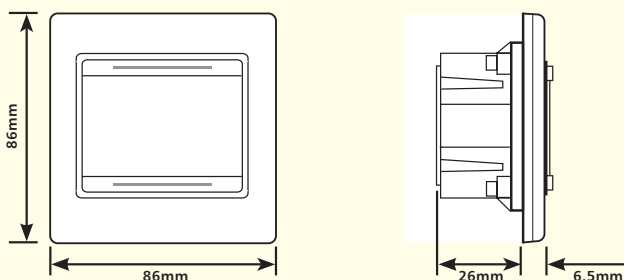
### Zensys

#### Z-Wave® device type

- Basic class: Routing Slave
- Generic class: Multi-Level Switch
- Specific class: Multi-Level Power Switch

#### 2 Gang Products

- Basic class: Routing Slave
- Generic class: End point 1: Multi-Level channel 1  
End point 2: Multi-Level channel 2
- Specific class: End point 1: Multi-Level Power Switch channel 1  
End point 2: Multi-Level Power Switch channel 2



\* Shown with metal Fascia. Plastic Fascia is 7.5 mm thick

### Z-Wave® command classes

- All switch, (S)
- Basic, (S/C)
- Binary switch, (S)
- Indicator, (S)
- Manufacturer specific, (S/C)
- Multi-channel, (S/C)
- Multi-channel association, (S)
- Node Naming & Location, (S)
- Version, (S)

Where: S = Supported, C = controlled

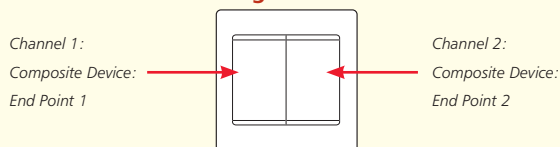
### Associations

Control modes:	Can be configured for group control only
No of groups/scenes:	One per channel
No of Associations:	5

Note: The device can support associations to up to 5 other devices in total.

Each channel may be associated to a maximum of 5 end points from the 5 devices.

### For Multi-Channel 2 Gang Devices



### Inclusion

To include device into another system press any operation button.

### Exclusion

To exclude device from a system press Exc button twice in 1s.

### Association

To create associations using another controller press normal operation button/rocker of required channel.

### Disassociation

To remove associations using another controller press normal operation button/rocker of required channel.

### SUC/SIS updates

Periodic and routine update will be requested every

- 24 operations on 1 Gang Products
- 36 operations on 2 Gang Products
- To initiate a manual wake-up and update request press Exc/Dis

Note: Only available if SUC/SIS in network.

### Response to indicator request

On receipt of an indicator request command from another Z-Wave® device each channel status indicator will illuminate green for 1s in a continuous sequence for 30s.

### Z-Wave® compatibility

MK Astral™ products are tested and certified as Z-Wave® compliant and are designed to work with other manufacturers Z-wave® compliant and interoperable products. Z-Wave® products of other types and applications can be added to the system and will act as repeaters if they support this functionality. This enables the system to grow and expand to other application areas as your needs develop.

Note: Please refer to [www.mkelectric.co.uk](http://www.mkelectric.co.uk) for the latest data and information



## LPIR1 SP103 PIR Detectors

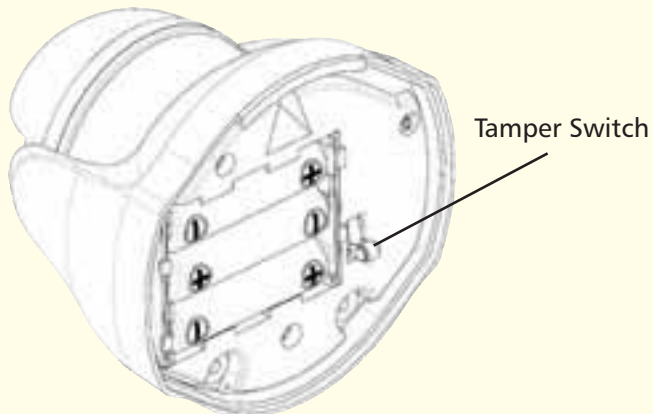


### Features and Benefits

- Up to 50m RF range (open field)
- Can control a group of up to 5 devices
- 12m Range detection with 100° field of view
- Adjustable time on period
- Battery-powered
- Low battery indicator
- Supplied with batteries and wall fixings
- For indoor use only

### Installation

**Slide off battery cover and fit batteries as shown below**  
Do not mix old and new batteries or batteries of different types.  
Not suitable for NiMH or NiCd rechargeable batteries.



LPIR1U	SP103 PIR Detector, 868.4MHz, UK/UAE
LPIR1S	SP103 PIR Detector, 868.4MHz, Singapore
LPIR1M	SP103 PIR Detector, 868.1MHz, Malaysia
LPIR1H	SP103 PIR Detector, 919.8MHz, Hong Kong

Note: other regions not available.

### Operation and Detection

#### Normal Operation

Operation Mode	24 hour
Time-On period	5 seconds - 12 minutes

#### Movement Detection

Range	6 - 12m
Field of View	100°

### Command Status Indications

#### Movement Indicator

will not flash on movement detection unless the battery is low or the battery cover is removed.

Note: During normal operation there is no indication of command success/failure on the product as with other MK astral™ products.

### Program Buttons and Functions

#### Program buttons

Tamper switch lever behind battery cover

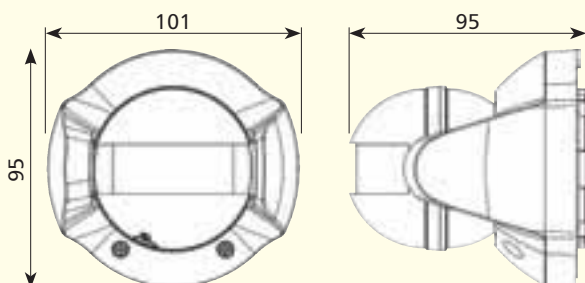
#### Program functions

Not applicable

Power Supply	
Power Source	Battery
Rated voltage	4.5V
Batteries	3 x 1.5V AAA / LR03
Battery Type	Alkaline <i>Note: Not suitable for NiMH or NiCd rechargeable batteries</i>
Battery Capacity	1200mA or greater
Typical battery life	Up to 1 year <i>Note: Based on normal operation of 8 events per day and ambient temperature of 20-25°C. Additional operation and lower temperatures will reduce life</i>
Low battery signal	LED behind the lens flashes after movement is detected

RF Performance	
<b>RF operating frequency</b>	
LPIR1U	868.4MHz for use in UK, Ireland, UAE
LPIR1S	868.4MHz for use in Singapore
LPIR1M	868.1MHz for use in Malaysia
LPIR1H	919.8MHz for use in Hong Kong
<b>RF Specification</b>	
RF range	Up to 50m (open field)
Modulation	FM
Radiated power	<1mW

Mechanical and Environmental	
<b>Dimensions</b>	
95(h) x 95(w) x 101(d)mm	
<b>Weights</b>	
185g (excluding batteries)	
<b>Temperature and Humidity</b>	
Operating	0°C to +45°C
Storage	-20°C to +60°C
Humidity	95% (non condensing)



### Certification and Approvals

Certification	
CE marked	Yes
EU Directives	LVD, EMC and R&TTE
LVD	IEC 60950-1
EMC	ETSI EN 301489-1 / 3
R&TTE	ETSI EN 300220-1 / 2
Local Regional and Other Approvals	
UK, Ireland	None required
UAE	TRA
Singapore	IDA
Malaysia	CMST
Hong Kong	None required
Zensys	Z-Wave® compliant and interoperable

### Zensys

#### Z-Wave® device type

- Basic class: Routing Slave
- Generic class: Binary Sensor
- Specific class: Routing Binary Sensor

#### Z-Wave® command classes

- Association, (S)
- Battery, (S)
- Basic, (C)
- Binary sensor, (S)
- Configuration, (S)
- Manufacturer specific, (S)
- Version, (S)
- Wake Up

Where: S = Supported, C = controlled

### Associations

Control modes:	Can control a group only
No of groups:	One
No of Associations:	5

Note: Associations cannot be made to Channel 2 of MK Astral™ 2 Gang switches and dimmers.

Note: Only one PIR can be used per group.

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### **Inclusion**

To include the device in a system press the TAMPER switch under the back cover.

### **Exclusion**

To exclude the device from a system press the TAMPER switch under the back cover.

### **Association**

To create associations using a controller press the TAMPER switch under the back cover.

### **Disassociation**

To remove associations using a controller press the TAMPER switch under the back cover.

### **SUC/SIS updates**

Periodic and routine update will be requested every 4 hours.

Note: Only available if SUC/SIS in network.

### **Z-Wave® compatibility**

MK Astral™ products are tested and certified as Z-Wave® compliant and are designed to work with other manufacturers Z-wave® compliant and interoperable products. Z-Wave® products of other types and applications can be added to the system and will act as repeaters if they support this functionality. This enables the system to grow and expand to other application areas as your needs develop.

Note: Please refer to [www.mkelectric.co.uk](http://www.mkelectric.co.uk) for the latest data and information

## LDBC1 DBMZ DC Blind Controllers



LDBC1U	DBMZ DC Blind Controller, 868.4MHz, UK/UAE
LDBC1S	DBMZ DC Blind Controller, 868.4MHz, Singapore
LDBC1M	DBMZ DC Blind Controller, 868.1MHz, Malaysia
LDBC1H	DBMZ DC Blind Controller, 919.8MHz, Hong Kong
LDBC1I	DBMZ DC Blind Controller, 865.2MHz, India

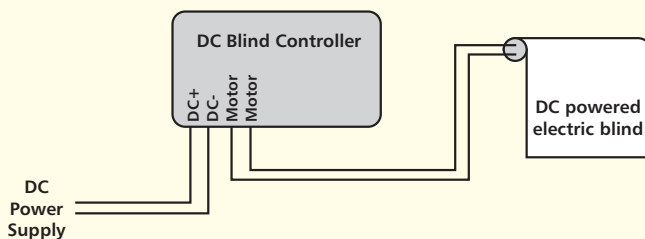
### Features and Benefits

Single channel controller for use with DC powered motorised blinds.

Note: Motor supplied with blind and not supplied by MK.

- Up to 50m RF range (open field)
- On board control of blind
- Self calibrating during use
- DC Powered

### Installation



### Important

Upper and Lower end stops of blind must be set and locked before calibration, (see blind instructions).

### Operation and Detection

#### Using on board buttons

- Press OPEN to raise the blind
- Press CLOSE to lower the blind
- Press either button to stop the blind at its current position

#### From another MK Astral™ Controller

- Press On/Dim-up to raise the blind
- Press Off/Dim-down to lower the blind
- To set the blind to an intermediate position - hold the dim-up/down button down and release to stop when the blind is in position

### Command Status Indications

#### Motor Status LED

- Red: Calibration required
- Green: Calibration activated and in progress

#### Zensys Status LED

- Green flash: Receipt of valid Z-Wave® command
- Red flash: Error

Note: During normal operation there is no indication of command

success/failure on the product as with other MK Astral™ products.

### Program Buttons and Functions

#### Program buttons

LEARN button on side of unit

#### Program functions

Calibration

Reversal of motor direction control

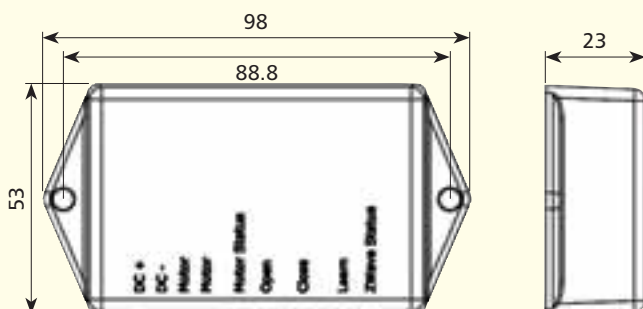
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Power Supply	
Power Source	DC
Rated voltage	8 - 30V
Rated load current:	5A
Power Consumption	<1W in standby

RF Performance	
<b>RF operating frequency</b>	
LDBC1U	868.4MHz for use in UK, Ireland, UAE
LDBC1S	868.4MHz for use in Singapore
LDBC1M	868.1MHz for use in Malaysia
LDBC1H	919.8MHz for use in Hong Kong
LDBC1I	865.2MHz for use in India
<b>RF Specification</b>	
RF range	Up to 50m (open field)
Modulation	FM
Radiated power	<1mW

Mechanical and Environmental	
<b>Dimensions</b>	
53(h) x 98(w) x 23(d)mm	
<b>Weights</b>	
65g	
<b>Temperature and Humidity</b>	
Operating	0°C to +45°C
Storage	-20°C to +60°C
Humidity	95% (non condensing)



### Certification and Approvals

Certification	
CE marked	Yes
EU Directives	LVD, EMC and R&TTE
LVD	EN 60335-1 EN 60335-97
EMC	EN 61326 IEC 61000-6-1 IEC 61000-3-2 IEC 61000-3-3 ETSI EN 300683
R&TTE	ETSI EN 300220
Local Regional and Other Approvals	
UK, Ireland	None required
UAE	TRA
Singapore	IDA
Malaysia	CMST
Hong Kong	None required
India	None required
Zensys	Z-Wave® compliant and interoperable

### Zensys

#### Z-Wave® device type

- Basic class: Routing Slave
- Generic class: Multi-Level Switch
- Specific class: Multi-Position Motor

#### Z-Wave® command classes

- All Switch, (S)
- Basic, (C)
- Configuration, (S)
- Version, (S)
- Multi Level Switch, (S)
- Scene Activation, (S)
- Scene Actuator Configuration, (S)
- Manufacturer specific, (S)

Where: S = Supported, C = controlled

**Inclusion**

To include the device from a system press the LEARN button.

**Exclusion**

To exclude the device from a system press the LEARN button.

**Association**

To create associations using a controller press the LEARN button.

**Disassociation**

To remove associations using a controller press the LEARN button.

**Configuration Command Class****Parameter 1: Device calibration status**

Read:	0	device not calibrated
	1	device calibrated
Write:	0	no action
	1	start calibration process

**Parameter 2: Motor Direction Setting**

Read:	0	normal
	1	reversed
Write:	0	set to normal and start calibration
	1	set to reverse and start calibration

**Z-Wave® compatibility**

MK Astral™ products are tested and certified as Z-Wave® compliant and are designed to work with other manufacturers Z-wave® compliant and interoperable products. Z-Wave® products of other types and applications can be added to the system and will act as repeaters if they support this functionality. This enables the system to grow and expand to other application areas as your needs develop.

Note: Please refer to [www.mkelectric.co.uk](http://www.mkelectric.co.uk) for the latest data and information

## LPTSM1 AN148 Plug-Through Switch



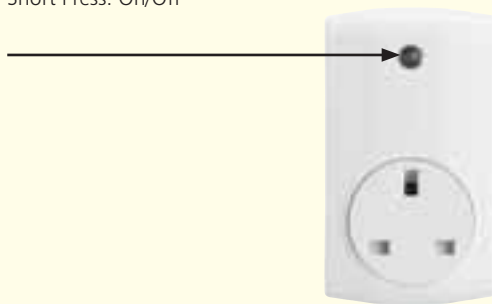
### Features and Benefits

- Allows control of plug in stand and table lamps
- Load status indicator
- Mains powered
- Internal fuse protection against overload or short circuit
- Low standby power consumption
- Up to 30m RF range (open field)
- Responds to system All\_Off commands

Note: This product does not participate in MK Astral™ Holiday mode

### Operation

Short Press: On/Off



### Command Status Indications

- Red** Load ON
- 10 Red flashes** Switch module controlled by LPIR1 SP103 PIR and tamper switch activated.
- Note: Load flashes at same time.

LPTSM1U	AN148 Plug-Through Switch Module, 868.4MHz, UK/UAE
LPTSM1S	AN148 Plug-Through Switch Module, 868.4MHz, Singapore
LPTSM1M	AN148 Plug-Through Switch Module, 868.1MHz, Malaysia
LPTSM1H	AN148 Plug-Through Switch Module, 919.8MHz, Hong Kong

### Program Buttons and Functions

#### Program buttons

Normal operation button on front of module

#### Program functions

Not applicable

### Power Supply

Power Source	Mains
Rated voltage	220 - 240Vac / 50Hz
Power Consumption	<1.2W in standby

### Load Specification:

Suitable for use with the following load types and load ratings.

GLS / Incandescent, Tungsten Filament	25 - 600W
Mains Tungsten Halogen	25 - 600W

### RF Performance

#### RF operating frequency

LPTSM1U	868.4MHz for use in UK, Ireland, UAE
LPTSM1S	868.4MHz for use in Singapore
LPTSM1M	868.1MHz for use in Malaysia
LPTSM1H	919.8MHz for use in Hong Kong

#### RF Specification

RF range	Up to 30m (open field)
Modulation	FM
Radiated power	<1mW

### Mechanical and Environmental

#### Dimensions

104(h) x 60(w) x 47(d)mm (excluding plug pins)

#### Weights

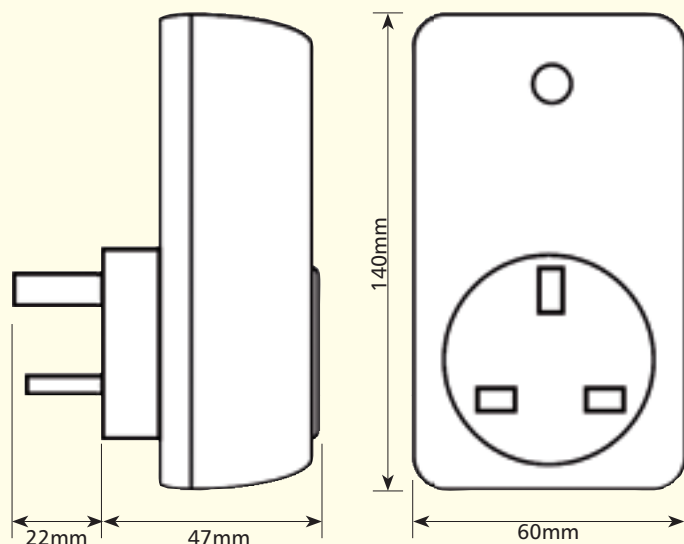
145g

#### Temperature and Humidity

Operating 0°C to +45°C

Storage -20°C to +60°C

Humidity 95% (non condensing)



### Certification and Approvals

#### Certification

CE marked	Yes
EU Directives	LVD, EMC and R&TTE
LVD	IEC 61058-1 BS 1363
EMC	ETSI EN 301489-1 / 3
R&TTE	ETSI EN 300220-1 / 2

#### Local Regional and Other Approvals

UK, Ireland	None required
UAE	TRA
Singapore	IDA
Malaysia	CMST
Hong Kong	None required
Zensys	Z-Wave® compliant and interoperable

### Zensys

#### Z-Wave® device type

- Basic class: Slave
- Generic class: Binary Switch
- Specific class: Binary Power Switch

#### Z-Wave® command classes

- Alarm, (S)
- All Switch, (S)
- Basic, (S)
- Binary switch, (S)
- Manufacturer specific, (S)
- Protection, (S)
- Version, (S)

Where: S = Supported, C = controlled

#### Associations

The product cannot control other Z-Wave® devices.

#### Inclusion

To include the device in a system press the OPERATION BUTTON on the front of the module.

#### Exclusion

To exclude the device from a system press the OPERATION BUTTON on the front of the module.

#### Association

To create associations using a controller press the TAMPER OPERATION BUTTON on the front of the module.

#### Disassociation

To remove associations using a controller press the OPERATION BUTTON on the front of the module.

#### Protection Command Class Parameters

Allows local control of the lamp at the module to be disabled.

Setting	Description
0	Local operation possible
2	Local operation disabled - module can only be controlled remotely

#### Alarm Command Class Parameters

On receipt of an Alarm Report, (Alarm Type 0x01 and Level 0x11), the indicator and load will flash on and off for 10s.

#### SUC/SIS updates

Network updates from SUC/SIS devices are not required or applicable to slave devices.

#### Z-Wave® compatibility

MK Astral™ products are tested and certified as Z-Wave® compliant and are designed to work with other manufacturers Z-wave® compliant and interoperable products. Z-Wave® products of other types and applications can be added to the system and will act as repeaters if they support this functionality. This enables the system to grow and expand to other application areas as your needs develop.

Note: Please refer to www.mkelectric.co.uk for the latest data and information



## LPTDM1 AD131 Plug-Through Dimmer



LPTDM1U	AD131 Plug-Through Dimmer Module, 868.4MHz, UK/UAE
LPTDM1S	AD131 Plug-Through Dimmer Module, 868.4MHz, Singapore
LPTDM1M	AD131 Plug-Through Dimmer Module, 868.1MHz, Malaysia
LPTDM1H	AD131 Plug-Through Dimmer Module, 919.8MHz, Hong Kong

### Features and Benefits

- Allows control of plug in stand and table lamps
- Load status indicator
- Mains powered
- Internal fuse protection against overload or short circuit
- Low standby power consumption
- Up to 30m RF range (open field)
- Responds to system All\_Off commands

Note: This product does not participate in MK Astral™ Holiday mode

### Operation

Short Press: On/Off

Long Press: Dim up/down



### Command Status Indications

**Red** Load ON

**10 Red flashes** Switch module controlled by LPIR1 SP103  
PIR and tamper switch activated.

Note: Load flashes at same time.

### Program Buttons and Functions

#### Program buttons

Normal operation button on front of module

#### Program functions

Not applicable

### Power Supply

Power Source	Mains
Rated voltage	220 - 240Vac / 50Hz
Power Consumption	<1.2W in standby

### Load Specification:

Suitable for use with the following load types and load ratings.

GLS / Incandescent, Tungsten Filament	25 - 400W
Mains Tungsten Halogen	25 - 400W

### RF Performance

#### RF operating frequency

LPTDM1U	868.4MHz for use in UK, Ireland, UAE
LPTDM1S	868.4MHz for use in Singapore
LPTDM1M	868.1MHz for use in Malaysia
LPTDM1H	919.8MHz for use in Hong Kong

#### RF Specification

RF range	Up to 30m (open field)
Modulation	FM
Radiated power	<1mW

### Mechanical and Environmental

#### Dimensions

104(h) x 60(w) x 47(d)mm (excluding plug pins)

#### Weights

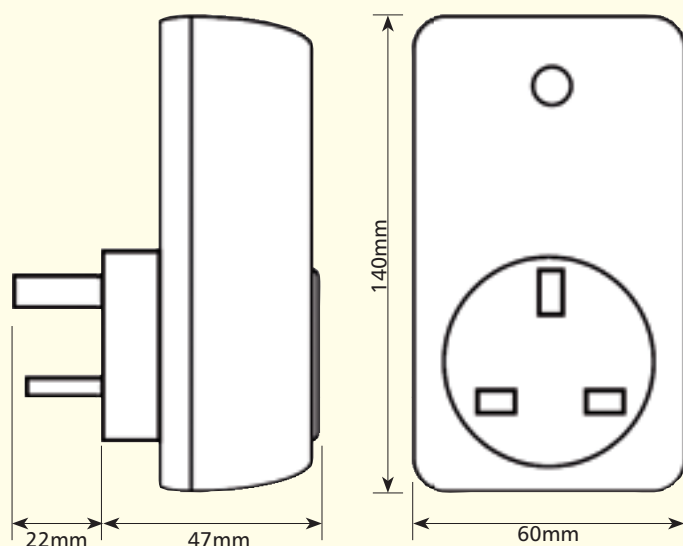
150g

#### Temperature and Humidity

Operating 0°C to +45°C

Storage -20°C to +60°C

Humidity 95% (non condensing)



### Certification and Approvals

#### Certification

CE marked	Yes
EU Directives	LVD, EMC and R&TTE
LVD	IEC 61058-1 BS 1363
EMC	ETSI EN 301489-1 / 3
R&TTE	ETSI EN 300220-1 / 2

#### Local Regional and Other Approvals

UK, Ireland	None required
UAE	TRA
Singapore	IDA
Malaysia	CMST, ST
Hong Kong	None required
Zensys	Z-Wave® compliant and interoperable

### Zensys

#### Z-Wave® device type

- Basic class: Slave
- Generic class: Multilevel Switch
- Specific class: Multilevel Power Switch

#### Z-Wave® command classes

- Alarm, (S)
- All Switch, (S)
- Basic, (S)
- Multilevel switch, (S)
- Manufacturer specific, (S)
- Protection, (S)
- Version, (S)

Where: S = Supported, C = controlled

#### Associations

The product cannot control other Z-Wave® devices.

#### Inclusion

To include the device in a system press the OPERATION BUTTON on the front of the module.

#### Exclusion

To exclude the device from a system press the OPERATION BUTTON on the front of the module.

#### Association

To create associations using a controller press the TAMPER OPERATION BUTTON on the front of the module.

#### Disassociation

To remove associations using a controller press the OPERATION BUTTON on the front of the module.

#### Protection Command Class Parameters

Allows local control of the lamp at the module to be disabled.

Setting	Description
0	Local operation possible
2	Local operation disabled - module can only be controlled remotely

#### Alarm Command Class Parameters

On receipt of an Alarm Report, (Alarm Type 0x01 and Level 0x11), the indicator and load will flash on and off for 10s. SUC/SIS updates

#### SUC/SIS updates

Network updates from SUC/SIS devices are not required or applicable to slave devices.

#### Z-Wave® compatibility

MK Astral™ products are tested and certified as Z-Wave® compliant and are designed to work with other manufacturers Z-wave® compliant and interoperable products. Z-Wave® products of other types and applications can be added to the system and will act as repeaters if they support this functionality. This enables the system to grow and expand to other application areas as your needs develop.

Note: Please refer to [www.mkelectric.co.uk](http://www.mkelectric.co.uk) for the latest data and information

## Transmitters, Receivers and Accessories

### Features

- Wireless and Batteryless – using RF technology with ranges up to 300metres in ideal conditions
- Available in all MK wiring device aesthetics
- Quick and easy to install with no need for cabling from the switch to the lighting circuit
- Robust Metalclad Plus and Masterseal available
- 400w and 10AX receiver/repeaters available to cover most installation needs
- Switch Receivers are capable of switching all lighting types

### Description

Echo™ is an innovative range of entirely wireless, batteryless and self powered switches, only available from MK Electric.

Wireless – allows for instant switch installation and location flexibility, reducing disruption and cost.

Batteryless – low maintenance and low running costs makes echo a very versatile and sustainable option.

Self Powered – using innovative technology to 'harvest' energy.

### Echo™ Installer Guide

#### 1. INTRODUCTION

The MK Echo™ range of products are different from all other products in MK's Wiring Devices portfolio in so far as the "switches" are RF transmitters which communicate with Switch Receivers. It is the Switch Receivers that actually switch the mains power.

Echo™ Transmitters send an RF signal at 868.3 MHz. The unique feature of these products is that the signal transmission is made without the need for mains power, or batteries.

Compared to installing hard-wired systems, wireless systems are much simpler and provide the flexibility to relocate or add to a system.

A symbol is visible on all Switch Receivers to indicate the position of the antenna. Although not always possible, the best reception will always be achieved if the front face of the Transmitter is directly facing the surface of the Switch Receiver on which the antenna symbol is shown.

Based on the physical principle of the propagation of radio waves, certain basic conditions should be observed. The following simple recommendations are provided to ensure successful installation and reliable operation of a robust radio network.

**NOTE: A FIELD STRENGTH TEST MEASUREMENT SHOULD BE CARRIED OUT PRIOR TO EACH INSTALLATION TO ENSURE COMPLETE RELIABILITY.**

#### 2. PRINCIPLES OF RADIO SIGNALS IN BUILDINGS

As stated in the introduction, Echo™ Transmitters send wireless transmissions to the echo™ Switch Receivers. The receiver checks the incoming signal for accuracy and uses the data to control outputs. Radio signals are electromagnetic waves; hence the signal becomes weaker the further it travels.

Please note that RF signals also decrease in strength when they pass through certain materials between the transmitted signal and the receiver.

While radio waves can penetrate a wall, they are dampened more than on a direct line-of-sight path. A few examples of different types of wall and the realistic typical reduction in signal strength that can be seen are:

MATERIAL	ATTENUATION
Wood, plaster, uncoated glass, with no metal content	0 – 10%
Brick, pressed board	5 – 35%
Ferro-concrete	10 – 90%
Metal, aluminium lining	90 – 100%

In practice, this means that the material used in a building must be taken into consideration during any assessment for radio coverage.

Here are some typical guideline figures when using Logic Plus style Transmitters with plastic frontplates:

Line-of-sight connections:	typically 30m range in corridors, or up to 100m in halls
Plasterboard walls / dry wood:	typically 30m range, through 5 walls
Brick walls / aerated concrete:	typically 20m range, through 3 walls
Ferro-concrete walls / ceilings:	typically 10m range, through 1 ceiling

All other Transmitters in the range that have metal frontplates, do of course cause a reduction in the signal strength and therefore the transmission distance. Generally, the line of site distance in a hall is reduced from 100m described above for Logic Plus, down to 30m.

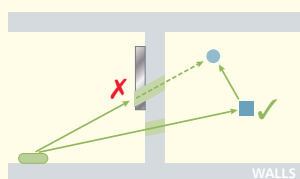
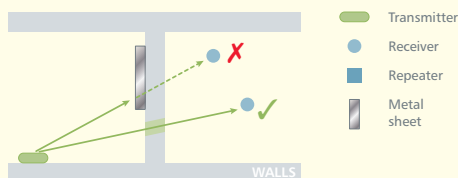
### 3. SCREENING

Objects made of metal, such as wall reinforcements, the metal foil often used in certain forms of insulation, or metallised heat protected glass, reflect electromagnetic waves and thus create what is known as a radio shadow and thereby a reduction in transmission distance.

The main factors decreasing coverage include:

- A Transmitter mounted on metal surfaces (typically 30% loss of range).
- Transmitters with metal frontplates (typically 60% loss of range).
- Hollow lightweight walls filled with insulating wool on metal foil.
- Inserted ceilings with panels made of metal or carbon fibre.
- Lead glass or glass with metallised coating, steel furniture.

Please note: Fire-safety walls, elevator shafts, staircases and supply areas should be considered as screening.



Simple example of a possible screening problem.

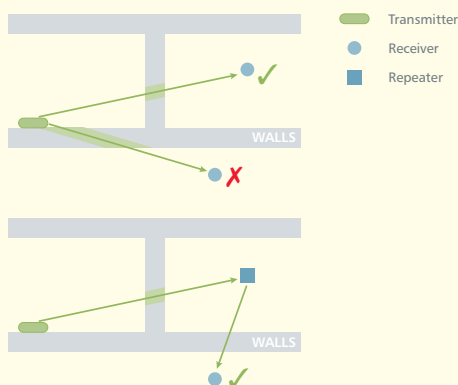
Depending on the material used to build the walls and assuming the distance between the transmitters and receivers are within specification, the illustrations above show a typical screening problem.

For the best range performance a minimum distance of 10mm to 20mm should be allowed from the whole length of the antenna to any conductive objects, which effectively means the area surrounding the Switch Receiver module.

Avoid screening by repositioning the Transmitter and / or Switch Receiver away from the screening objects (radio shadow), or if this is not possible, by using a Repeater.

### 4. PENETRATION ANGLE

The angle at which the transmitted signal hits the wall is very important. The effective wall thickness – and with it the signal attenuation – varies according to this angle. Signals should be transmitted as directly as possible through the wall. Wall niches should be avoided.



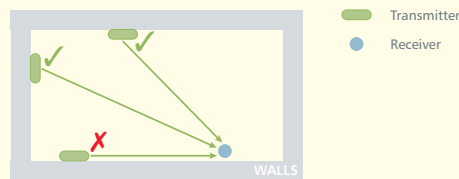
Echo™ is a registered trademark of Novar ED&S Limited

Avoid an unfavourable penetration angle by repositioning the Transmitter and / or Receiver, or by using a Repeater.

Do not position a Switch Receiver behind a Transmitter. In this position the signal strength is greatly reduced, even if there is no wall in-between.

### 5. ANTENNA INSTALLATION

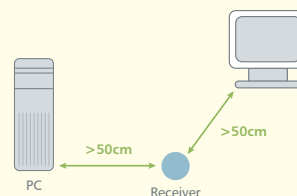
Switch Receivers should not be installed on the same wall as the Transmitter. When positioned near a wall, the radio waves are likely to be subject to interfering dispersions or reflections.



In a similar manner to the comment in the previous section, positioning transmitters and receivers along the same wall will mean the signal strength is greatly reduced.

### 6. DISTANCE BETWEEN SWITCH RECEIVERS AND A SOURCE OF INTERFERENCE

The distance between Switch Receivers and other transmitters (e.g. GSM / DECT / wireless LAN) or high-frequency sources of interference (computers, audio and video equipment) should be at least 500mm. However, Echo Transmitters can be installed next to any other high-frequency transmitter without a problem.



### 7. USE OF REPEATERS

In the case of poor reception, it may be helpful to use a Repeater.

The Echo Repeater (K5414R) does not require any configuration (e.g. programming) and will become operational simply by connecting it to the mains supply. The new 10AX Switch Receiver/Repeater (K5420R) is also a repeater when not programmed with any switches. The various possibilities of use are shown by the illustrations in sections 3. SCREENING and 4. PENETRATION ANGLE.

A Repeater has similar requirements in being positioned as a Switch Receiver, i.e. it too has an antenna and needs to receive the signal from the Transmitter and be within range of the Switch Receiver with which it is intended to communicate.

While planning, it may be worth considering retrofitting the system with a Repeater.

Only one repeater is intended for use in any single installation. Using more than one repeater is counterproductive (higher cost, cross-signal interference, etc).

## 8. FIELD STRENGTH INDICATOR

The K5419R is a mobile Field Strength Indicator enabling the installer to determine the ideal mounting positions for Transmitters and Receivers. Furthermore, faulty connections of devices already installed can be checked. The unit shows the field intensities of radio signals received and any interfering radio signals in the 868MHz range.

Using the Field Strength Indicator allows the installer to review the strength of received signals at the proposed receiver locations – to ensure reliable operation you should aim to have consistent GREEN or AMBER signals on the indicator.

The meaning of the four LEDs at the top section of the Field Strength Indicator, are as follows:

- The right hand AMBER LED is headed “Telegram Valid”. This signifies that an 868MHz signal has been detected.
- The left hand RED LED signifies that the signal strength is insufficient for a good installation. This LED will be illuminated immediately when the Power button is switched on.
- The AMBER “Class A” LED signifies that the installation will be good. The only proviso to this is that the Switch Receiver is not to be recessed in the wall or have any further potential screening situated around it, which could further increase signal attenuation.
- GREEN, the “Class B” LED, ensures an excellent installation, even if there is a little further screening caused, for instance by mounting it below a wall surface, assuming this is not in a metal box.

To get the best results, always hold the Transmitter exactly where it is intended to be installed and place the Field Strength Indicator exactly where the Receiver will be installed.

When the Transmitter is operated and the GREEN LED is illuminated, this signals that the receiving field force possesses sufficient power reserve for a reliable installation. There will be generous provision for subsequently changing conditions of the surroundings (i.e. additional screening caused by lightweight walls, shadowing by people etc.).

If the signal received is AMBER, repeat the test three times. If three AMBERS or a mixture of AMBER and GREEN are received, the installation will be good. The only proviso to this is that the Receiver is not to be recessed in the wall or further screened in any way, which in itself would increase any signal attenuation.

If just the RED LED is illuminated, this indicates that the present intended installation is not acceptable.

If the signal is not good enough in the initial layout, consider rearranging the position of the Switch Receiver to see if the signal strength can be improved.

### How to use the Field Strength Indicator:

Person 1 operates the Transmitter and generates the radio signal by pressing the switch. Person 2 checks the field strength received on the display of the device and thus determines the ideal position.

Alternatively, if conducting the investigation alone, press the “1 min.” button on the Field Strength Indicator, then from the moment of pressing the Transmitter, you have that long to return to the indicator to determine the suitability of the proposed installation.



Field Strength Indicator K5419R

The Field Strength Indicator can be used for on-site determination of the ideal mounting position of the Transmitter and for identification of an interfering radio signal.

Even after careful planning, the Field Strength Indicator should be used to verify proper reception at the Switch Receiver position during installation.

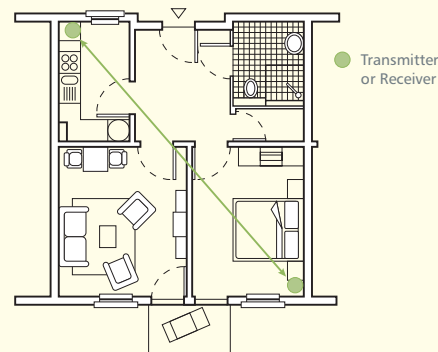
## 9. PLANNING INFORMATION FOR RESIDENTIAL BUILDINGS

For applications restricted to one or two rooms, e.g. when retrofitting a switch, the direct transmission range will normally be adequate. For applications “throughout” a building, the following differentiations must be made:

Flats, terraced houses and single-family houses of up to 400sqm.

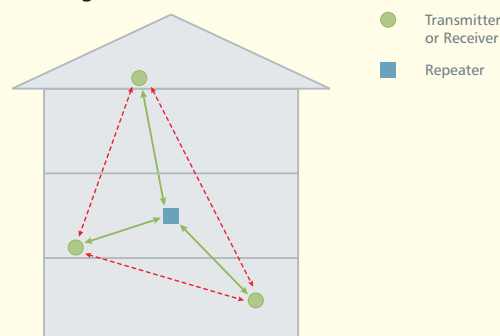
- Larger residential units with 3 rooms or more (living room and bedrooms) should be fitted with a Repeater. The Repeater should be centrally placed (e.g. in the centre of the middle floor).

### Small residential unit (up to 3 walls and 1 ceiling)



Bedsit or up to 2 floors in a townhouse: the direct transmission range is usually adequate.

### Multi-room flat and one-family house (more than 3 walls, more than 1 ceiling)



To ensure radio coverage in a larger residential unit, it is generally advisable to install a central Repeater.

## 10. TROUBLESHOOTING

The foregoing information on selecting the ideal place of installation for Transmitters and Switch Receivers has been provided to ensure a smooth operation of the devices. If, however, you still experience problems, please refer first to the following table for troubleshooting:

FAULT	POSSIBLE CAUSE	CHECKING AND POTENTIAL REMEDY
<b>No transmission received</b>	Transmitter fails to transmit	<b>Close to the Transmitter (distance of around 20-50cm), the Field Strength Indicator does not receive a transmission signal:</b> Activate the Transmitter, the GREEN LED fails to illuminate. Result – The Transmitter appears to be faulty. Replace the Transmitter.
	Transmitter installed outside the receiver range	<b>Near the receiver (distance of around 20 - 50cm), the Field Strength Indicator does not receive a transmission signal:</b> Activate the Transmitter, the GREEN and AMBER LEDs fail to illuminate. Result – Reposition Transmitter or Switch Receiver and follow the information on coverage and installation. Possible need for a Repeater to be added.
	Transmitter was removed (or maybe exchanged)	Always remember to delete the Transmitter from the Switch Receiver's memory before removing it, and/or always add any new transmitter to the Switch Receiver's memory.
	Receiver does not receive	<b>Close to the Switch Receiver the Field Strength Indicator demonstrates good reception of the transmitted signal:</b> Activate the Transmitter; the GREEN or AMBER LED of the Field Strength Indicator is illuminated. Result – Check the receiver is functioning and replace the Switch Receiver if necessary.
	Transmitter not programmed (or wrong Transmitter programmed)	Re-programme the Transmitter into the Switch Receiver.
	Some form of jamming is present	The GREEN Class A or AMBER Class B LEDs of the Field Strength Indicator are illuminated consistently: but the "Telegram Valid" LED is not illuminated. Result – There is some form of "jamming" occurring. Find and remove the source of jamming.
	High-frequency jamming near receiver	Move cause of jamming (telephone, PC etc.) at least 50cm away from the Switch Receiver.
<b>Transmission only intermittently received</b>	Receiver is placed at the limit of the transmitter's range	<b>When placed near the Switch Receiver (at a distance of around 20-50cm) the Field Strength Indicator does not receive a proper transmission signal:</b> When a Transmitter is operated, neither the GREEN nor AMBER classification LEDs of the Field Strength Indicator are illuminated, but the AMBER "Telegram Valid" LED is illuminated. Result – Poor reception, consider repositioning either the Transmitter or Switch Receiver, or alternatively use a Repeater.
	Occasional change in environmental conditions (cupboard, door, plants, people, interferes with transmission signal)	Check the distance from high-frequency sources of interference, should be at least 50cm. Alternatively, the Switch Receiver has been placed at the limit of the Transmitter's range.
	The position of the transmitter changes occasionally (e.g. transmitter fitted to a mobile object)	Ensure any movement does not cause the Transmitter to move outside the reception range.
	Some form of jamming is present	The GREEN or AMBER classification LEDs are illuminated only intermittently, but the AMBER "Telegram Valid" LED remains off (no valid echo™ transmission). Result – remove the cause of the jamming.

## 11. DISCLAIMER

The information provided in this document describes typical features of the Echo™ system and should not be misunderstood as specifying operating characteristics. No liability is assumed for errors and / or omissions. We reserve the right to make changes without prior notice.

To find out more, visit: [www.mkelectric.co.uk](http://www.mkelectric.co.uk)

technical hotline +44 (0)1268 563720

wireless | wiring devices

## Transmitters

### Standards and approvals

BS EN 60669-1, BS EN 60669-2-1,  
ETSI EN301 489-1 & -3, ETSI EN61000-6-2,  
ETSI EN300 220-3

### Technical specification

#### Physical

Operating temperature:  
-5°C to + 40°C

Operating frequency:  
868.3 MHz

IP rating:  
IP2XD

Max. Installation altitude:  
2000 meters



### Dimensions

Transmitters: 86mm x 86mm

Fixing centres: 60.3mm

### Mounting Transmitters

- All Transmitters can be mounted to any 1-gang back box.
- All can be mounted directly to the wall surface – screws supplied.
- All can be mounted to back boxes – screws supplied.
- Logic Plus and Aspect type Transmitters can also be mounted using supplied adhesive pads

## Switch Receivers and Repeater

### Standards and approvals

BS EN 60669-1, BS EN 60669-2-1,  
ETSI EN301 489-1 & -3, ETSI EN61000-6-2,  
ETSI EN300 220-3

### Technical specification

#### ELECTRICAL

##### K5418R

Voltage rating:  
250V a.c. 50Hz

Current ratings:

This is a small load switch receiver that can be used typically for 400W resistive loads and 360W inductive.

Terminals:

Terminal screw size: M2.6

Rated terminal screw torque: 0.4 Nm

Terminal capacity:

Single wire (solid): 1.5 mm<sup>2</sup>

Stranded wire (flex.): 1.0 mm<sup>2</sup>

Stranded wire with ferrules: 0.75 mm<sup>2</sup>

##### K5420R (When used as a receiver)

Voltage rating:  
250V a.c. 50Hz

Current ratings:

10AX – No de-rating when used on standard magnetic ballast fluorescent loads.

Terminals:

Terminal screw size M3

Rated terminal screw torque: 0.5 Nm

Terminal capacity:

4 x 1mm<sup>2</sup>

3 x 1.5mm<sup>2</sup>

2 x 2.5mm<sup>2</sup>

#### PHYSICAL

Operating temperature:  
-5°C to + 40°C

IP rating:

IP2XD

Max. Installation altitude:  
2000 meters



K5418R



K5414R



K5420R

#### K5420R

The 10AX Receiver/Repeater can function both as a 1 level repeater and as a 10AX Switch Receiver.

#### K5414R

The Repeater does not pass current, but all other details are the same as the 10AX Switch Receiver/Repeater K5420R.

### Dimensions

#### 10AX Switch Receiver/Repeater – K5420R

Length: 175.5mm

Width: 50.3mm

Height: 33.25mm

#### 1 Level Repeater - K5414R

Length: 175.5mm

Width: 50.3mm

Height: 33.25mm

#### Small Load Switch Receiver – K5418R

Length: 47.4mm

Width: 34.6mm

Height: 28.8mm

For complete technical information on all Echo™ products, please visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)



## Installation general information

Socket outlets, switches and other MK wiring accessories can be wall or bench mounted. Do not use a trailing lead for sockets and connection units or mount any devices where they may be subject to excessive moisture or dampness.

### Cable management

Socket outlets, switches and other MK wiring accessories can be mounted in a variety of MK trunking systems.

## 13A Switchsocket Outlets

### Standards and approvals

13A socket outlets comply with BS 1363 Part 2: 1995.

Replacement fuses to the 3 gang socket outlets (Logic Plus Only) comply with BS 1362: 1973.



### Technical specification

#### Electrical

Voltage rating:  
250V a.c.

Current rating:  
13A per socket outlet  
(except 3 gang which is 13 amp in total)

Terminal capacity:  
Live, neutral & earth

3 x 2.5mm<sup>2</sup>  
3 x 4mm<sup>2</sup>  
2 x 6mm<sup>2</sup> (standard)

(Dual earth terminals on list Nos. K781, K2657, K2737, K2746, K2757, all standard Edge and Aspect sockets, K733, K2958, K2458, K2947, K2947D6, K850, K2977, K2477, K3045, K3077, K2945, K2945D6 and K5357)

#### Physical

Ambient operating temperature:  
-5°C to +40°C (not to exceed an average of more than 25°C in any 24 hour period)

IP rating:  
IP2XD

Max. installation altitude:  
2000 metres

### Description

A range of socket outlets designed for ease of installation and having all the advantageous design features of the MK range of wiring devices. The 2 gang sockets with outboard rockers (available in Logic Plus and Albany Plus) are of particular value for use by the infirm and partially sighted whilst the same feature in Metalclad Plus is ideal for use with gloved hands.

Non-standard clean earth sockets are for use on installations where restricted access is required and will only accept a 647WHI 13A non-standard plug with T-shaped earth pin. The sockets have two independent earth terminals so that they can also be used for 'clean earth' installations. The K2746CE and K2947CE also have two independent earth terminals for 'clean earth' installations.

A variety of sockets (see Technical Specification) are fitted with two earth terminals on a common busbar to provide a double earth facility for use when installations require a high integrity protective connection as specified within BS 7671: 2008. These should be referred to for guidance.

The products can be quickly installed as replacement for existing 13 amp sockets or in a new installation.

#### Fuse carriers (Logic Plus 3 gang switchsocket only)

The fuse carrier is opened by a fast-acting, screwdriver-operated, worm-drive screw for ease of replacement.



## 13A Switchsocket Outlets

### Features

- Moulded 'on' indicator flash on plastic switches will not rub off – totally safe
- Matching Metal rocker Switches (Edge, Aspect and Alloy only)
- Optional neon indicators in the switch rockers with 175° visibility in the horizontal and vertical planes
- 3 pin operated safety shutter
- Printed terminal markings on grey rear mouldings for clearer identification
- Top access, angled terminals make wiring easier and quicker
- 3mm minimum switch contact gap
- Double pole switching
- Choice of inboard or outboard positioned rockers
- Additional electrical safety from DP Switch, neutral 'make first', 'break last' feature
- Switch contacts with silver contacts on both surfaces for good continuity
- Only one size of screwdriver required for installation
- Selection of products incorporating dual earth terminals for high integrity earthing
- Backed out and captive terminal screws
- 'Clean earth' sockets available
- Non-standard 'clean earth' sockets available

### Installation

#### 1 gang switchsocket – view from rear

Top-facing, angled, backed-out terminals make wiring easier and quicker.



## Sentrysocket

### Compliance with EC Directives, Standards and approvals

All Sentrysockets comply with the following EC Directives and are CE marked:

Low Voltage Directive  
Electromagnetic Compatibility Directive (89/336/EEC)

Sentrysocket RCD Single Sockets comply with the requirements of the following standards:

BS 7288: 1990  
BS EN 50082-1: 1998

Sentrysocket RCD Double Socket also complies with the requirements of BS EN 61543: 1996 and BS EN 55014-1



### Description

Sentrysocket provides a high level of protection against electrocution and gives further protection when used with appliances vulnerable to insulation damage, particularly when they are in damp environments or outdoors. These Sentrysocket units are not suitable for mounting in damp environments or outdoors.

Sentrysocket, incorporating an RCD, is part of a complete range of fixed and portable wiring devices and circuit protection devices suitable for use in domestic, commercial and light industrial applications.

#### Active control circuits

Incorporate a 'Re-set' mechanism and are mains failure sensitive, i.e. they will function under all the normal conditions expected of an RCD, but will also trip in the event of a power cut or a sudden, dramatic reduction in mains voltage. This makes them ideal for use where it would be hazardous for equipment to suddenly energise after return of mains power, such as use with rotating machinery and heat developing apparatus.

#### Passive control circuits

Incorporate a 'Stay-set' mechanism and is mains failure proof, i.e. it will function under all the normal conditions expected of an RCD and will not trip in the event of a power cut. This makes it suitable for use with freezers or in inaccessible or unmanned locations.

### Technical specification

#### Electrical

Rated Voltage:  
240V a.c.

Current rating:  
13A resistive

Rated tripping current  
30mA and 10mA versions

Terminal capacity:  
3 x 4mm<sup>2</sup> for 1 gang  
2 x 4mm<sup>2</sup> for 2 gang

#### Physical

Ambient operating temperature:  
-5°C to +40°C

IP rating:  
IP2XD

Max. installation altitude:  
2000 metres

Sentrysockets are only suitable for use in TN-S system where the Supply Neutral Connection is connected to the Supply Earth.

They are not suitable for connection across two lines of a 127V line to Neutral Voltage System.

### Features

- Suitable for most residential, commercial and light industrial applications
- Active and passive control circuit applications
- Comply fully with current Wiring Regulations
- Double pole switching
- Flexible and versatile in use
- Ideal for use with equipment subject to wet weather or high humidity
- Part of a complete range of MK circuit protection devices
- They are a.c. and pulsating d.c. sensitive for residual current

## Sentrysocket

### Installation

#### Flush mounting steel wall box

It should be noted that some of the conduit entries may be restricted, depending upon their positions and the depth of box used.

### Socket Testing:

#### Single Socket Testing

After installation, turn the mains electricity supply on.

To test that the Sentrysocket is functioning correctly:

1. Ensure that no appliance is connected to the Sentrysocket. **Switch Sentrysocket on:** The switch should remain closed and the red flag will appear in the window. If the switch fails to remain closed, check that the Supply L and N connections are not reversed or the Supply N connection is not open circuit. If the Sentrysocket is correctly connected and still trips after being switched on, the Sentrysocket is faulty and should not be used.
2. If the Sentrysocket stays on, **press the test button:** The switch will open and the white flag will appear in the window. If the Sentrysocket does not trip and there is mains voltage present at the socket outlet, Sentrysocket is faulty and should not be used.
3. **Switch Sentrysocket on:** Connect an RCD tester and ensure that the Sentrysocket trips within the specified time:
  - ≤ 200 ms AT RATED TRIP CURRENT
  - ≤ 40 ms AT 5 x RATED TRIP CURRENT
 If the Sentrysocket does not trip within the specified times then the product is faulty and should not be used (If more than one RCD is in series then there is no guarantee as to which device will trip first).
4. **Reset all tripped RCD's including the Sentrysocket.**
5. **Switch off the mains supply switch disconnecter.** On mains failure, a Sentrysocket with Active Control Circuit will trip, whilst a Sentrysocket with Passive Control Circuit will not trip. If the Active Control device does not trip, it is faulty and should not be used – see note below. If no faults have been found then installation testing has been completed successfully.

**Note:** If a fault is identified at any stage of installation testing procedure do not use Sentrysocket, and contact your local electrician, or your local MK stockist.

#### Double Socket Testing

After installation, turn the mains electricity supply on.

To test that the Sentrysocket is functioning correctly follow the steps 1 to 4 below:

1. Ensure that no appliance is connected to the Sentrysocket.
2. **Reset** – Press the button marked R (for Reset) – the contact status indicator should show red, indicating that the socket outlets are now live (if the switches are in the ON positions).
3. **Test** – Press the TEST button marked T (for Test), the product should trip with the contact status indicator showing black. In this state the socket outlets are disconnected from the supply.
4. **Reset** – Press the button marked R again, the contact status indicator should show red.
5. Connect an RCD Tester to either socket outlet and ensure that the Sentrysocket trips with the specified times below:
  - ≤ 200 ms AT RATED TRIP CURRENT
  - ≤ 40 ms AT 5 x RATED TRIP CURRENT
6. Reset the Sentrysocket as in step 2 above.
7. Switch off the Mains Supply Switch Disconnecter.
8. A Sentrysocket with Active Control Circuit should trip while a Sentrysocket with Passive Control Circuit should not trip.

If all the operations in steps 2 to 8 above give correct results, the Sentrysocket RCD socket outlet is safe to use.

**If the procedures in steps 2 to 8 above are not completed correctly, do not use the Sentrysocket product and seek professional advice or contact the MK Technical Sales and Service department on +44 (0)1268 563720.**

## Filtered Switchsocket Outlets (Logic Plus and Albany Plus)

### Standards and approvals

Filtered socket outlets comply with BS 5733: 2010



### Technical specification

#### Electrical

Current rating:  
13A maximum total for 2 sockets

Voltage rating:  
250V a.c. 50Hz

Earth leakage:  
0.5 mA

Suppression:  
150 kHz – 30 MHz (transients)

Maximum energy absorption:  
140 Joules L – N  
140 Joules L – E

Terminal capacity:  
2 x 6mm<sup>2</sup>  
3 x 4mm<sup>2</sup>  
3 x 2.5mm<sup>2</sup>  
3 x 1.5mm<sup>2</sup>

#### Physical

Operating temperature:  
-5°C to +40°C (not to exceed an average of more than 25°C in any 24 hour period)

Thermal overload:  
The K1826 and K2826 filter socket incorporates a thermal overload device in the RFI filter section. Overload current causes temperature rise, resulting in automatic 'trip out'. The overload device will re-set as the temperature falls.

IP rating:  
IP2XD

Max. installation altitude:  
2000 metres

### Description

A range of sockets in the Logic Plus and Albany Plus styles, designed to combat interference to or data losses on sensitive electrical products and systems due to mains borne voltage spikes and RFI.

Such systems include:

- Computer or microprocessor based equipment
- Telecommunications systems
- Electronic measurement equipment
- Cash registers
- Audio visual and hi-fi equipment

These products can be quickly installed as replacements for existing twin 13 amp sockets or in a new installation.

Fitted with two earth terminals to provide a double earth facility for use when installations require a high integrity protective connection as specified within BS 7671: 2008.

#### Filter cassettes

Filter cassettes are supplied with sockets and have an LED which shows green under normal conditions but will turn red or extinguish when a replacement cassette (K1800WHI) is required. An alarm will also beep at 5 second intervals to indicate replacement necessity. It can be de-activated if required.

### Features

- Moulded 'on' indicator flash on switches will not rub off – totally safe
- 3 pin operated safety shutter
- Printed terminal markings on grey rear mouldings for clearer identification
- Reduces risk of damage to equipment and down time
- Reduces risk of data loss
- 2 way filtering – into appliance and back into mains supply
- Double pole switches
- Dual earth terminals for high integrity earthing
- Clearly visible LED on filter cassette, changes from green to red when replacement required
- Simple replacement of cassettes
- 10 year guarantee (except filter cassette)
- 3mm minimum switch contact gap
- Backed out and captive terminal screws

## Filtered Switchsocket Outlets

### Product features

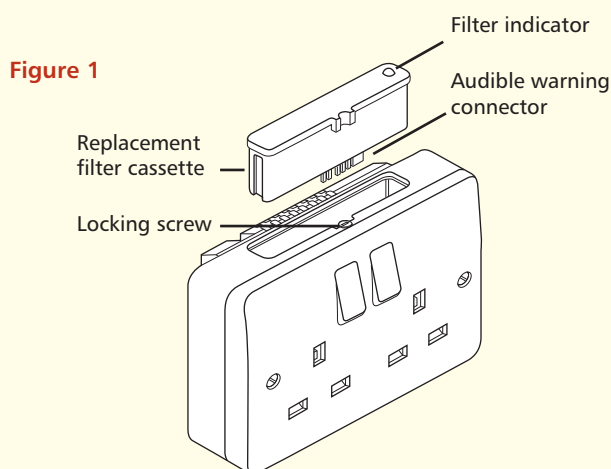
Ensure that the connecting pins protruding from the bottom of the replacement Filter Cassette are not damaged or bent before installation. If in doubt, contact MK Technical Sales Service Department on +44 (0)1268 563720.

1. The MK Filtered Switchsocket, in common with many other filters uses Voltage Dependant Resistors for spike suppression purposes. The performance of these devices will eventually degrade with use to a level where they will no longer provide adequate protection.

When this occurs the spike filter performance of the MK Filtered Switchsocket outlet can be restored by replacing the filter cassette.

When the filter cassette needs replacing, the green indicator on the Replacement Filter Cassette will glow red or go out, an audible beep every five seconds may also be heard.

Note: As with all filters, these Filter Sockets will reduce the magnitude of RFI and spikes and consequently their ability to interfere with connected equipment. They will not completely remove the interference from the supply.



### Installation

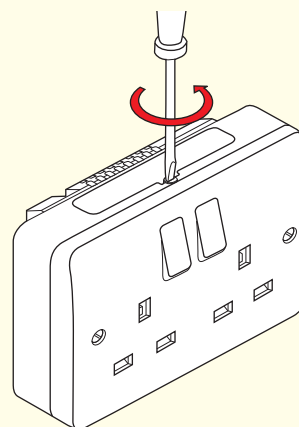
#### Replaceable Spike Filter Cassette

**Note:** To ensure a safe installation;

- this product should be installed by a competent person.
  - it is important that all connections are made as instructed.
1. The filter cassette can be removed and replaced without switching off the mains or removing any plugs from the filter socket.
  2. Remove the filter cassette by turning the jacking screw anti-clockwise to partially eject it (see Figure 2), and then gently pulling the cassette upwards, (see Figure 2a).
  3. **Only fit the MK Replacement Filter Cassette (K1800WHI).**

Unpack the new filter cassette and check that the pins along the bottom edge are not bent or broken. If these pins are damaged, do not fit the replacement cassette. The audible sound indicating that the filter cassette needs replacing, is optional. It may be prevented by removing the small connector on the two end pins, (see Figure 2b), before fitting it into the socket.

Figure 2



4. Fit the new filter cassette by carefully sliding it into the aperture and gently pushing it down while turning the screw clockwise until the filter cassette is flush with the surface. Do not turn the screw any further as this will cause distortion of the plastic mouldings.

Product and packaging can safely be disposed of via standard refuse facilities at the end of its useful life.

Figure 2a

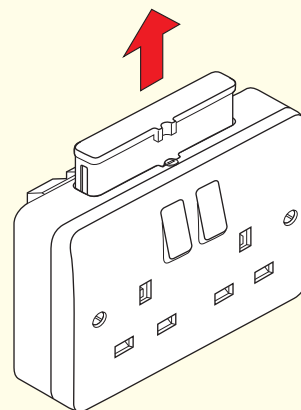
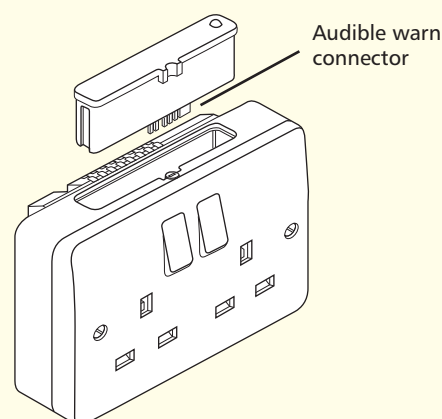


Figure 2b



## Round Pin Socket Outlets

### Standards and approvals

Round pin socket outlets comply with BS 546: 1950.

#### Technical specification

##### Electrical

Voltage rating:  
250V a.c.

Terminal capacities:

2 amp sockets:

7 x 1mm<sup>2</sup>

4 x 1.5mm<sup>2</sup>

2 x 2.5mm<sup>2</sup>

1 x 4mm<sup>2</sup>

5 amp sockets:

3 x 2.5mm<sup>2</sup>

2 x 4mm<sup>2</sup>

2 x 6mm<sup>2</sup> (stranded)

15 amp sockets:

3 x 2.5mm<sup>2</sup>

3 x 4mm<sup>2</sup>

2 x 6mm<sup>2</sup> (stranded)

##### Physical

Ambient operating temperature:

-5°C to +40°C (not to exceed an average of more than 25°C in any 24 hour period)

IP rating:

IP2XD

Max. installation altitude:

2000 metres



### Description

A range of round pin socket outlets designed for ease of installation and having all the advantages and design features of the MK range of wiring devices. These products can be quickly installed as replacements for existing socket outlets or in new installations.

#### Features

- Top access terminals make wiring easier and quicker
- Integral ON indicator on plastic switches will not rub off – totally safe
- Switch contact gap, 3mm minimum
- Double pole switching
- Terminal screws backed out
- Additional electrical safety from neutral “make first”, “break last” feature on switched sockets
- Switch contacts with silver contact points on both surfaces for good continuity
- 5A and 15A sockets contain a 3 pin operated safety shutter
- White terminal markings on grey rear mouldings for clearer identification
- 2A socket (Earth Pin Operated) Shuttered

## Non UK Socket Outlets

### Standards and approvals

15A American sockets comply with SASO 2203: 2003

16A Universal sockets comply with BS 5733: 2010

16A 2P+E German sockets comply with  
IEC 60884-1: 2006

### Technical specification

#### Electrical

##### 15A American

Voltage rating:  
127V a.c.

Current rating:  
15A

Terminal capacity:  
Live, neutral & earth  
3 x 2.5mm<sup>2</sup>  
2 x 4mm<sup>2</sup>  
1 x 6mm<sup>2</sup> (stranded)

Max. installation altitude:  
2000 metres

##### 16A 2P+E German Socket

Voltage rating:  
250V a.c.

Current rating:  
16A

Terminal capacity:  
Live, neutral & earth  
4 x 1.5mm<sup>2</sup>  
2 x 2.5mm<sup>2</sup>  
1 x 4mm<sup>2</sup>

#### Physical

Ambient operating temperature:  
-5°C to +40°C  
(not to exceed an average of more than 25°C in any  
24 hour period)

IP rating:  
IP2XD

Max. installation altitude:  
2000 metres

### 15A AMERICAN (Logic Plus\*)



#### BOX TYPES

Flush	Flush (for extra wiring space)		Surface
1 gang	861ZIC	866ZIC	K2140WHI
2 gang	862ZIC	886ZIC	K2142WHI

### 16A 2P+E GERMAN (Logic Plus\*)



#### BOX TYPES

Flush	Surface	
1 gang	866ZIC	K2031WHI
2 gang	886ZIC	K2172WHI

Note: 16A 2P+E German Outlet: These products are **NOT** suitable for 25mm deep boxes.

\* 15A American Sockets and 16A 2P+E German Sockets are also available in a modular format for MK decorative wiring device ranges.



## Three Pole Fan Isolators

### Standards and approvals

Comply with BS EN 60947: 1992

### Technical specification

#### Electrical

Voltage rating:  
250V a.c. 50Hz

Current rating:  
10 amps

Terminal capacity:  
4 x 1mm<sup>2</sup>  
4 x 1.5mm<sup>2</sup>  
3 x 2.5mm<sup>2</sup>  
2 x 4mm<sup>2</sup>  
1 x 6mm<sup>2</sup>

Contact gap:  
4mm switch contact gap

#### Classifications

Method of operation: Stored energy operation

Suitability for isolation: Suitable for isolation

#### Ratings

Utilisation category: AC23B  
Rated operational voltage (Ue) 250V  
Conventional free air thermal current (Ith) 10A  
Rated frequency 50Hz  
Rated making capacity 100A rms  
Rated breaking capacity 80A rms  
Rated conditional short-circuit current 6000A rms  
(with supply side protective device GEC NIT 16 BS88: part 2: 1988 16A 550VAC utilisation category gG 80KA breaking capacity fuse links.)

#### Physical

Operating temperature:  
-5°C to +40°C

IP rating:  
IP4X

Max. installation altitude:  
2000 metres

### Features

- Switchlock list no. K4858 is available to allow the isolator to be locked in the disconnected position to facilitate fan maintenance



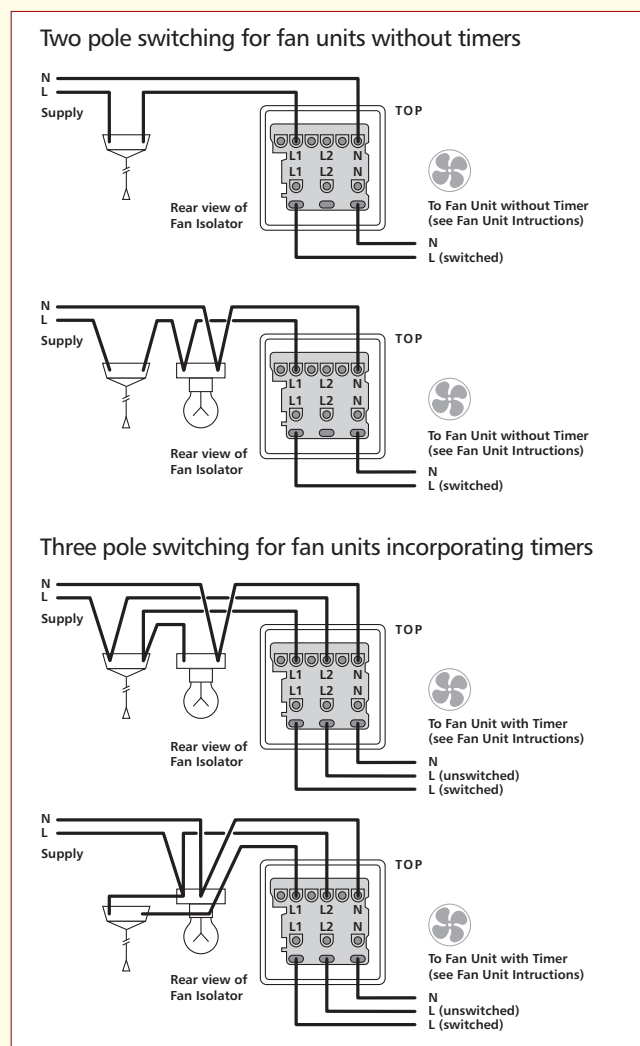
### Description

The MK Three Pole Fan Isolator provides a safe and simple method of isolating mechanical fan units and is particularly useful in bathrooms, toilets, storerooms and basements where there is little or no natural light.

For example, timer controlled fans are often linked into the lighting circuit for energy saving and convenience. In such an installation there is often a need for the lighting circuit to remain live to provide light whilst the fan unit is externally isolated so that routine maintenance and repairs can be carried out in complete safety.

The fan isolator can be used as a double pole or triple pole isolator. In addition it includes a clear on/off indicator and the frontplate features a fan isolator symbol for easy circuit identification.

### Wiring diagrams



## Shaver Socket Outlets (Logic Plus)

### Standards and approvals

Shaver socket outlets comply with BS 4573: 1970 and IEC 884-1: 1994.

Plug pin apertures, and engagement face dimensions comply with BS 4573: 1970.



### Technical specification

#### Electrical

Voltage rating:

200-250V a.c. Input

Maximum load:

200 mA (internal thermister trip current)

Terminal capacities:

Each terminal will accommodate

1 x 4mm<sup>2</sup>, or 2 x 2.5mm<sup>2</sup>, 3 x 1.5 solid conductors

#### Physical

Ambient operating temperature:

-5°C to +40°C

IP rating:

IP2XD

Max. installation altitude:

2000 metres

### Description

Designed for ease of installation and having many of the advantageous features of the Logic Plus range.

The shaver socket outlet accommodates the following plugs:

British 5mm dia pins on 16.6mm pitch (230V socket) to BS 4573: 1970.

European 4mm dia pins on 17 to 19mm pitch (230V socket) to IEC 83: 1975 Standard C5.

Australian 6.5 x 1.6 flat blades each set at 30° to the vertical on a nominal pitch of 13.7mm (230V socket).

AS C112: 1964.

The fuse carrier is captive and opened by a fast acting, screwdriver operated worm drive screw for ease of replacement.

### Features

- Top access terminals make wiring quicker and easier
- Only one size of screwdriver required for installation
- Terminal screws supplied 'backed out' and held captive within the terminal moulding
- White printed terminal markings on grey rear mouldings for clearer identification
- Front plate fixing screws retained on rear case moulding

### Installation

This shaver socket **must not** be used in bathrooms and washrooms. Non-isolated, fused, shaver socket outlets must never be installed in any location subject to splashes, condensation or damp conditions.

For installation in any other room where a wash basin or shower cubicle is installed then refer to the current IEE wiring regulations.

## Shaver/Toothbrush Supply Units

### Standards and approvals

Shaver/Toothbrush supply units comply with BS 61558-2-5: 1998

Accommodates plugs as follows:

- British 5mm dia pins on 16.6mm pitch (230V socket) to BS 4573: 1970.
- European 4mm dia pins on 17 to 19mm pitch (230V socket) to IEC 83: 1975 Standard C5.
- Australian 6.5 x 1.6 flat blades each set at 30° to the vertical on a nominal pitch of 13.7mm (230V socket) AS C112: 1964.
- American 6.6 x 1.6 flat horizontal blades on 12.7mm pitch (115V socket) to ANSI C73.10.



### Features

- Bottom access terminal screws make wiring quicker and easier
- Automatic primary supply switching on insertion of plug
- Choice of 230V or 115V output socket positions
- Safety interlocked shutters to prevent insertion of two plugs simultaneously
- Only one size of screwdriver required for installation
- Terminal screws supplied 'backed out' and held captive within the terminal moulding
- Printed terminal markings on grey rear mouldings for clearer identification
- Front plate fixing screws retained on rear case moulding
- Integral over current device to protect transformer
- Suitable for use with electric toothbrush chargers.

### Installation

Shaver/Toothbrush supply unit should be wall mounted.

### Wiring

An installation instruction leaflet is available. List no. 44994 PL.

### Description

Designed for ease of installation and having many of the advantageous design features of the MK range of wiring devices.

May be used in bathrooms and washrooms – must only be installed in accordance with BS 7671: 2008.

### Technical specification

#### Electrical

Voltage rating:

K701: 230V a.c. Input (will operate at 220-250V a.c.)

K706: 127V a.c. Input (will operate at 110-130V a.c.)

230V or 115V nominal outputs

Current rating:

K701: 200mA max.

(internal thermister trip current)

K706: 400mA max.

(internal thermister trip current)

Maximum load:

20VA

No load voltage < 275V

Terminal capacities:

Each terminal will accommodate 1 x 4mm<sup>2</sup> or 2 x 2.5mm<sup>2</sup> solid conductors\*

#### Physical

Ambient operating temperature:

-5°C to +40°C

IP rating:

IP41 (In Zone 2 if fixed where direct spray from showers is unlikely)

Max. installation altitude:

2000 metres

\*The design of this unit means that on no load the transformer output is allowed to be as high as 275V. This means that rechargeable shavers and toothbrushes intended for use on the continent may be damaged by the inrush current created by this higher voltage. Rechargeable shavers and toothbrushes with a wide range of input voltage should be recharged at 115V. Shavers and toothbrushes manufactured for the UK are designed to be used with a transformer unit. Loads in excess of 20VA may cause the solid state overload to operate before shaving is completed. This is to protect the transformer.

## Connection Units, 20A Switches and Flex Outlets

### Standards and approvals

All Logic Plus Connection Units comply with BS 1363 Part 4: 1995.

The 20A DP switch complies with BS EN 60669-1: 1999

The flex outlet plate complies with BS 5733: 2010.

Fuses are to BS 1362.



### Technical specification

#### Electrical

Voltage rating:  
250V a.c.

Current rating:  
Connection units – 13 amp  
DP switches – 20 amp  
Flex outlets – 20 amp

Terminal capacity:

Supply terminal: 2 x 6mm<sup>2</sup> stranded  
2 x 4mm<sup>2</sup>  
3 x 2.5mm<sup>2</sup>

Load terminals: 2 x 6mm<sup>2</sup> stranded  
2 x 4mm<sup>2</sup>  
3 x 2.5mm<sup>2</sup>

Cord Grip capacity:

Connection units: min: 2 core, 0.5mm  
max: 3 core, 1.5mm

20 amp DP  
switches & flex outlet plate  
min: 3 core, 1.5mm  
max: 3 core, 2.5mm

#### Physical

Ambient operating temperature:  
-5°C to +40°C  
(not to exceed an average of more than 25°C in any 24 hour period)

IP rating:  
With flex outlet: IP2XD  
Without flex outlet: IP4X

Max. installation altitude:  
2000 metres

### Description

A range of 13A fused connection units and 20A DP switches designed for the connection of refrigerators, water heaters, central heating boilers and other fixed appliances.

The ranges are designed for ease of installation and have the advantageous design features of the MK range of wiring devices.

#### Neon indicators

Products are available with Neon indicators included in the rockers of the switched connection units. In the case of unswitched units, they can be located centrally and uppermost on the face plate. Neon indicators are integrally wired into the product and do not require separate connection when installing. The design gives 175° visibility in the horizontal and vertical planes.

#### Fuse carriers

These are captive and are opened by a fast acting, screwdriver operated worm drive for ease of replacement. A tamper-proof version is also available.

Fuse carriers can be locked open using a padlock, List No. K2000.

#### Flex outlets

Bottom outlet types are supplied with blanking plug allowing use where the bottom outlet is not required. Spare blanking plugs are available.

The products are equipped with very strong, push-fit nylon cord grips making installation safe, quick and easy.

#### Flex outlet plate

An unfused flex outlet with cord grip and 3 pairs of terminals.

### Installation

#### Wiring

Products must be installed in accordance with current IEE Regulations.

#### Changing Fuses

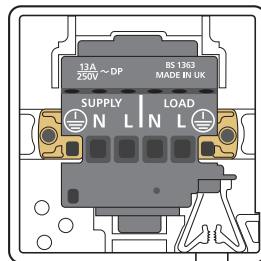
1. Unscrew the fuse carrier screw to partially eject the carrier.
2. Carefully lever the carrier out further to remove the fuse. Note: The carrier does not come fully out.
3. Always replace with a BS 1362 type fuse (as used in 13A plugs) of the correct rating.
4. Consistent fuse blowing could mean a faulty appliance. If in doubt, consult a qualified electrician.
5. Push carrier back until engaging with jacking screw. Screw the carrier down until flush with surface of the plate. Do not over tighten the screw.

## Connection Units, 20A Switches and Flex Outlets

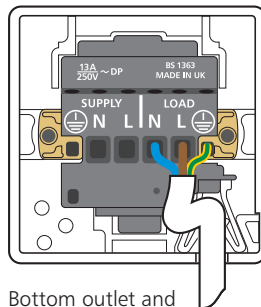
### Features

- Optional indicators in the switch rockers with 175° visibility in the horizontal and vertical planes
- Worm-drive operated fuse carriers for additional security (tamper-proof version available)
- Fuse carrier lockable in open position
- All supply and load cables can be cut and stripped to the same length
- Integrally wired Neon indicators save installation time
- Push-fit cord grips, for safer, quicker installation
- Angled, top mounted terminal screws simplify wiring
- Moulded 'on' indicator flash on switches cannot rub off – totally safe
- Captive fuse carrier
- Additional electrical safety from DP Switch, neutral 'make first', 'break last' feature
- Secure cable and flexible cord connection
- All terminal and fixing screws operated by one-size (4mm) screwdriver
- Backed out and captive terminal screws

**Note:** These switches are not recommended for switching large banks of PCs

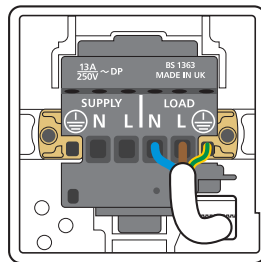
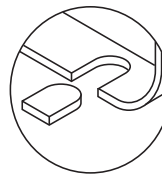


Supply and load cable cords cut and stripped to same length



Bottom outlet and cord grip

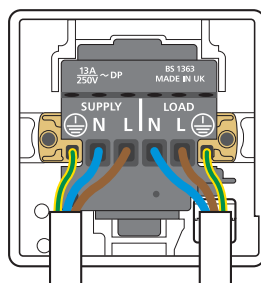
Blanking plug for bottom outlet



Front outlet cord grip



Lockable fuse carrier



Supply Load



K1090WHI

Supply and non flexible load cables

**PLEASE NOTE THAT THE TERMINAL LAYOUT OF THE FLEX OUTLET, K1090, IS DIFFERENT TO THE OTHER SHOWN ABOVE.**

## 20A Lockable Fire Alarm Isolator Switch



### Description

The isolators comply with BS 60669-2-4: 2005

The Isolator is intended for use with building Alarm Systems that are required to comply with BS 5839 Part 1.

BS 5839 Part 1 states;

Clause 25.2c "To facilitate local isolation during maintenance, suitable means should be provided for double pole isolation of the low voltage supply circuit that serves the power supply and control equipment."

Clause 29.2e. "Means should be provided for double pole isolation of the mains supply to all parts of the system; the isolation facilities should be suitably sited, in the vicinity of the equipment served, for use by maintenance technicians without the need for access to remote parts of the building. It should be possible to lock the facilities in both the normal and isolate positions to prevent unauthorized use."

### Features

- The built in lock ensures power cannot be provided without the key being operated, making it safe to carry out maintenance to Fire Alarms
- Printed terminal markings on grey rear of the switch moulding for clearer identification
- Double Pole switching
- Only one size of screwdriver required for installation

### Technical specification

#### Electrical

Voltage rating:

240V a.c.

Current rating:

20 amp

Terminal capacity:

Live, Neutral & Earth 3 x 2.5mm<sup>2</sup>

3 x 4mm<sup>2</sup>

2 x 6mm<sup>2</sup>

#### Physical

Ambient operating temperature:

-5°C to +40°C

(not to exceed an average of more than 25°C in any 24 hour period)

IP rating:

With flex outlet: IP2XD

Without flex outlet: IP4X

Max. installation altitude:

2000 metres

IP rating:

IP2XD

Max. Installation altitude 2000 metres

Note: The lock fitted to these isolators is universal for all MK 20A Isolators in the range.

However, the keys are different to those used on all other MK Key Operated Switched Products, for added security.

## High Current Switches and Cooker Control Units

### Standards and approvals

All DP switches in the range conform to BS EN 60669-1: 1999

All Cooker Control Units in the range conform to BS 4177: 1992.

Cooker Connection Unit conforms to BS 5733: 2010



### Technical specification

#### Electrical

Voltage rating:  
250V a.c.

Current:  
32A Switch  
45A Cooker Control Unit  
45A Cooker Connection Unit  
50A Switch (Resistive Load)

Switch:  
3mm contact gap  
Double pole operation –  
except socket switch on Cooker Control Units

Terminal capacity, 50A Switches, Cooker Control Units, and Cooker Connection Units:

4 x 4mm<sup>2</sup>  
3 x 6mm<sup>2</sup>  
1 x 10mm<sup>2</sup>  
1 x 16mm<sup>2</sup>

Terminal capacity, 32A Switch:

3 x 2.5mm<sup>2</sup>  
2 x 4mm<sup>2</sup>  
1 x 6mm<sup>2</sup>

#### Physical

Ambient operating temperature:  
-5°C to +40°C  
(not to exceed an average of more than 25°C in any 24 hour period)

IP rating:  
IP2XD (K5061, K5060, K5041, K5040, K5001, K5011)  
IP4X (K5105, K5215, K5205, K5215CK, K5215SH, K5230, K5011)

Max. installation altitude:  
2000 metres

### Description

A range of switches and cooker control units suitable for the switching of all domestic, commercial and industrial appliances where higher current ratings are required, i.e. cookers, heaters, units etc. Metal units are particularly suitable for refurbishment projects.

### Features

- Positive switch action
- Positive double pole switching
- Toggle action switches
- Metal front plates available
- Replaceable neon indicators
- Wide product choice

**Note:** These switches are not recommended for switching large banks of PCs

## Plateswitches

### Standards and approvals

All MK plateswitches comply with  
BS EN 60669-1: 1999

### Technical specification

#### Electrical

Voltage rating:  
250V a.c. 50Hz

Current rating:  
10 amps – no derating when used on fluorescent  
or inductive loads

20 amps – no derating when used on fluorescent  
or inductive loads

Terminal capacity:  
All products except K4870/71/72

4 x 1mm<sup>2</sup>  
4 x 1.5mm<sup>2</sup>  
3 x 2.5mm<sup>2</sup>  
2 x 4mm<sup>2</sup>  
1 x 6mm<sup>2</sup>

For products K4870/71/72

4 x 1mm<sup>2</sup>  
4 x 1.5mm<sup>2</sup>  
2 x 2.5mm<sup>2</sup>  
1 x 4mm<sup>2</sup>

Contact gap:  
3mm switch contact gap

#### Physical

Operating temperature:  
-5°C to +40°C

IP rating:  
IP2XD

Max. installation altitude:  
2000 metres

Operational testing (all plateswitches): tested to  
100,000 operations for mechanical life tested to  
40,000 operations at 10 amp rating tested to  
10,000 operations at 20 amp rating



### Description

MK plateswitches are designed to blend in with the decor, whilst complementing a wide range of other MK wiring devices. They are designed for easy installation in plasterdepth boxes and are suitable for controlling lighting circuits in domestic, commercial and industrial applications.

#### Neon locator

A textured, polycarbonate moulding allowing the glow of the neon to be seen at almost any angle. Designed to complement the Logic Plus 1, 2, or 3 gang plateswitches.

It is easy to install in existing locations. For 3 gang applications using a 25mm deep box simplifies wiring.

### Features

- Two way switches can be wired as one or two way
- All products clearly printed with BS Nos., ratings, etc
- Matching Grid switches available in 10 or 20A ratings
- 3mm switch contact gap
- Positive switch action
- Top access, backed out and captive terminal screws (except Logic Plus list numbers K4870, K4871 and K4872)
- Neon locator available making switch easy to find in darkened rooms

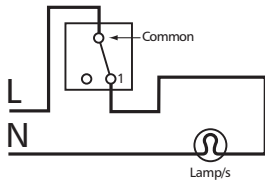




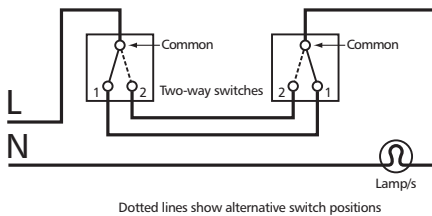
## Plateswitches

### Wiring Diagrams

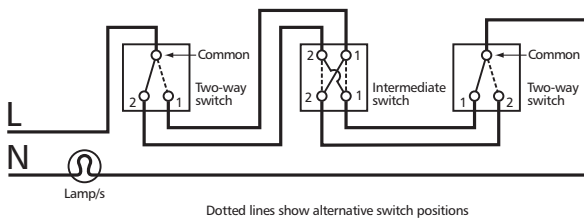
#### One-way switching



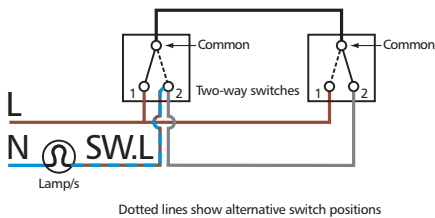
#### Two-way switching – 2 wire control



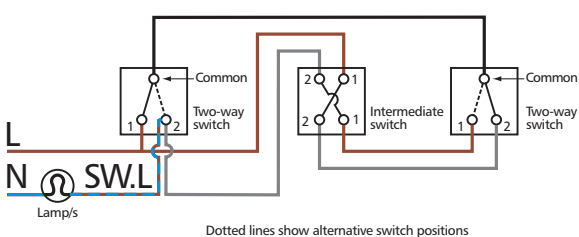
#### Two-way switching plus intermediate switching – 2 wire control



#### Two-way switching – 3 wire control



#### Two-way switching plus intermediate switching – 3 wire control



N.B. Terminal positions may alter. The above diagrams are to show wiring layout.

## Dimmer Switches

### Standards and approvals

All CE marked MK dimmer switches comply with the EC Low Voltage Directive: 73/23/EEC, Electromagnetic Compatibility Directive 89/336/EEC

They also comply with BS EN 60669-2-1 and BS EN 55015

\*Non-UK dimmer switches see note below

### Technical specification

#### Electrical

Mains Supply Voltage:  
230V a.c. (Nominal)  
220V a.c. (Nominal, Non-UK)

Mains Supply Voltage Range:  
216V a.c. to 253V a.c.  
200V a.c. to 250V a.c

Mains Supply Frequency:  
50Hz  $\pm$ 3Hz  
60Hz  $\pm$ 3Hz

Type of Loads:

#### Standard Dimmers:

Fused GLS Tungsten Filament lamps only to BS EN60064: 1996 and BS EN60432-1: 2000, rated at 230/240V

#### Intelligent Dimmers:

Fused GLS Tungsten Filament lamps to BS EN60064: 1996 and BS EN60432-1,2 rated at 230/240V. Dimmable wire wound or electronic Low Voltage Transformers of good quality. Can also be used with good quality mains voltage halogen lamps incorporating GU10 bases. Please check with lamp manufacturer to determine suitability.

Note: Transformer must be suitable for dimming using phase delay (leading edge) and NOT only phase cut (trailing edge) type of dimmers.

**Warning: Standard and Intelligent dimmer switches are not suitable for use with Fluorescent Lamps or Energy Saving Lamps.**

#### CFL lamp dimmers:

Dimmable compact fluorescent lamps rated at 220/240V.

#### Physical

Operating temperature:  
0°C to +40°C

IP rating:  
IP2XD

Max. installation altitude:  
2000 metres



### Description

**MK dimmer switches can fall into one of four categories:**

- 1) Standard Dimmer Switches
- 2) Intelligent Dimmer Switches
- 3) Non-UK Dimmer Switches
- 4) CFL lamp dimmer switches

#### Standard Dimmer Switches

Dimmer Switches belonging to this category employ simpler electronic circuitry and the CE marked products make use of thermal switches to conform to the very stringent requirements of the Standard BS EN 60669-2-1, for overload protection. They are only suitable for use with normal tungsten filament lamps with internal fuses, conforming to BS EN 60064: 1996 and BS EN 60432-1 Standards and do not have any added features, e.g. soft start, ability to control dimmable transformers for low voltage, etc.

**Standard Dimmer Switches are not suitable for use with transformers for Low Voltage Lighting or Fluorescent Loads, including Energy Saving Lamps.**

#### Intelligent Dimmer Switches

Dimmer Switches belonging to this category, employ the latest, state of the art, micro-controller based electronic circuitry and use current sensing to compute the load conditions. These products show progressive reaction to overload conditions, depending on the extent of overload as shown in the table below. List numbers belonging to this category are identified by the suffix letters LV, e.g. K1501 WHI LV. All MK Intelligent Dimmer Switches employ one pole change over switches to facilitate two way switching.

**MK Intelligent Dimmer Switches are not suitable for use with Fluorescent Loads, including Energy Saving Lamps.**

#### \*Non-UK Dimmer Switches

Dimmer switches belonging to this category only conform to the relevant parts of BS EN 60669-2-1, without conforming to BS EN 55015. Loads suitable for use with standard dimmer switches above are also suitable for use with this category of dimmer switch.

#### CFL Lamp dimmer switches

Dimmer switches belonging to this category employ the latest, state of the art, micro-controller based electronic circuitry used in other intelligent dimmer switches. In addition they utilise control software to improve performance and life of dimmable compact fluorescent lamps.

**Only one Dimmer Switch can be used in a two-way switching circuit.**

## Dimmer Switches

### Features

**Intelligent Dimmer Switches** incorporate the following advanced features

- Suitable for dimming Low Voltage Halogen lamps via good quality, fully dimmable electronic or wire-wound transformers
- Can be used with good quality mains voltage halogen lamps incorporating GU10 bases. Please check with lamp manufacturer to determine suitability
- Load current sensing:  
These dimmers continuously monitor the load current to help protect against overheating in wire wound transformers and to prevent overloading of the dimmer for long term reliability.
- Soft Start, which gradually increases the light output from the load over 1 to 3 seconds after switch on. The Soft Start feature is also particularly beneficial when used to dim Mains Voltage Tungsten Halogen lamps which inherently have a very high inrush current at switch on

### Standard Dimmer Switches

- Suitable only for use with fused GLS Tungsten Filament lamps to BS EN 60064 and BS EN 60432-1
- One way dimmer switches incorporate manual soft start
- Incorporate thermal switches for protection against overload

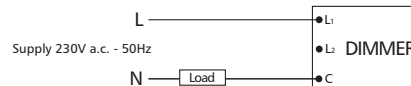
### CFL Lamp dimmer switches

- Suitable only for use with compact fluorescent lamps designed specifically for dimming.
- Load current sensing:  
These dimmers continuously monitor the load current to help prevent overloading of the dimmer for long term reliability.
- Full brightness start to increase lamp life, the dimmer will reduce the light level to the level set within 2 - 3 seconds.
- Total connected load must not be less than the minimum power load rating of 11W.
- A maximum of 4 lamps only must be connected to each dimmer switch.

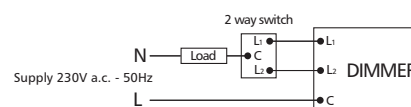
60-500W CIRCUIT	40-300W CIRCUIT	COMMENTS
<b>Overload management:</b> 60-500W nominal 60-625W function without dimming > 625-750W dim to 68V±8V r.m.s. > 750W switch off	<b>Overload management:</b> 40-300W nominal 40-375W function without dimming > 375-500W dim to 68V±8V r.m.s. > 500W switch off	This is the min. controlled voltage

INTELLIGENT DIMMER SWITCHES		
	Rating	Max No. of Transformers (total rating of all transformers must not exceed maximum VA rating of dimmer)
1 gang single dimmer	40-300W (LV and mains voltage halogen rating 40-240W/VA)	4
1 gang double dimmer	2 x 40-300W (LV and mains voltage halogen rating 2 x 40-240W/VA)	4 per dimmer
1 gang single dimmer	60-500W (LV and mains voltage halogen 60-400W/VA)	5

### One-way switching



### Two-way switching (only one dimmer can be used)



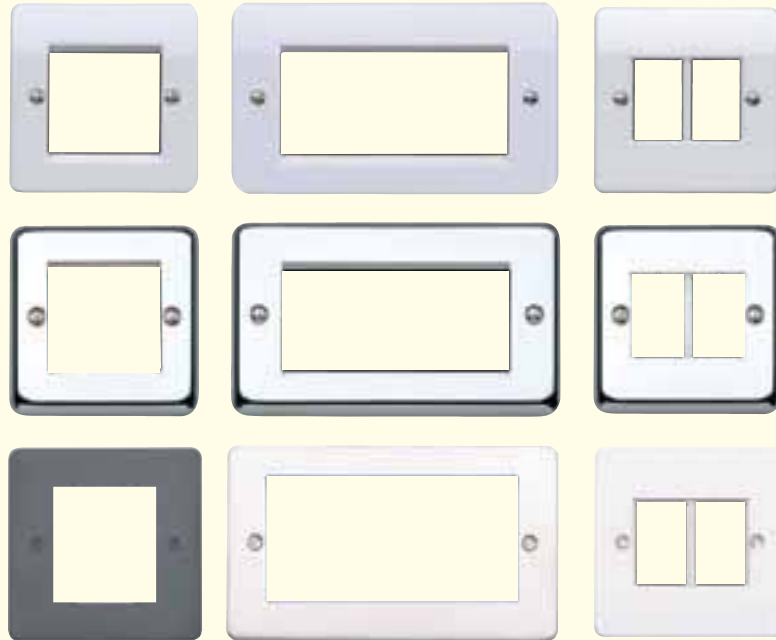
Wires must be connected to the correct dimmer terminals.  
DO NOT connect earth to dimmer.

Please note the dimmer may be substituted for any of the Two-Way switches shown on page 53

## Euro and LJU6C Data Frontplates

### Standards and approvals

BS 5733: 2010



### Description

Frontplates used for mounting snapfit Modules.

#### Features

- 1G, 2G and 3G Euro frontplates (100 x 50mm aperture)
- 1G LJU6C Frontplate
- Accept industry standard (Euro) and LJU6C snapfit modules
- 1G Euro frontplate accepts 2 Euro modules, (50 x 50mm aperture)
- 2G Euro frontplate accepts 4 Euro modules, (100 x 50mm aperture)
- 3G Euro frontplate accepts 6 Euro Modules, (150x50mm aperture)
- 1G LJU6C frontplate accepts two LJU6C modules (27 x 37mm aperture)
- 1/2 module (12.5 x 50mm) blank available for Euro frontplates

## Power Modules

### Standards and approvals

K5830: BS 1363 Part 2: 1995

K5833: BS 546: 1950

K5831: IEC 60884-1: 2006

K5834: French National Standard

K5832: SASO 2203: 2003

NF C 61-314

### Description

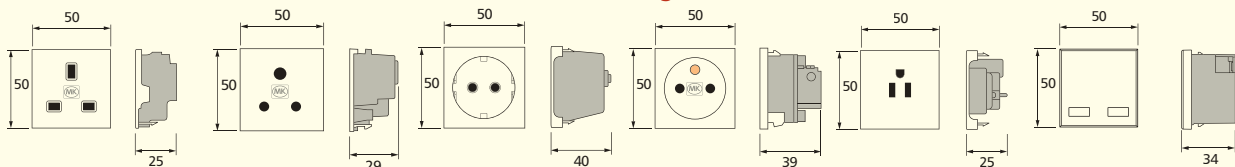
A range of euro modules designed to provide a variety of power options.

### Technical specification

13A UK	5A UK	16A German	16A French/Belgian	15A American	1A USB Charging Module
<b>Electrical</b>	<b>Electrical</b>	<b>Electrical</b>	<b>Electrical</b>	<b>Electrical</b>	<b>Electrical</b>
Voltage rating: 250V a.c.	Voltage rating: 250V a.c.	Voltage rating: 250V a.c.	Voltage rating: 250V a.c.	Voltage rating: 127V a.c.	<b>Input</b> Voltage rating: 220-240V a.c. Frequency : 50Hz Rated Current: 0.6A Terminal Capacity: Live & neutral 1 x 2.5mm <sup>2</sup>
Current rating: 13A	Current rating: 5A	Current rating: 16A	Current rating: 16A	Current rating: 15A	<b>Output</b> Voltage rating: 2 x 5V d.c. Max current: 1A per socket Charging sockets: USB 2.0 type A
Terminal capacity: Live, neutral & earth 3 x 2.5mm <sup>2</sup> 3 x 4mm <sup>2</sup> 2 x 6mm <sup>2</sup> (stranded)	Terminal capacity: Live, neutral & earth 3 x 2.5mm <sup>2</sup> 2 x 4mm <sup>2</sup> 2 x 6mm <sup>2</sup> (stranded)	Terminal capacity: Live, neutral & earth 4 x 1.5mm <sup>2</sup> 2 x 2.5mm <sup>2</sup> 1 x 4mm <sup>2</sup>	Terminal capacity: Live, neutral & earth 3 x 2.5mm <sup>2</sup> 2 x 4mm <sup>2</sup> 1 x 6mm <sup>2</sup>	Terminal capacity: Live, neutral & earth 3 x 2.5mm <sup>2</sup> 2 x 4mm <sup>2</sup> 1 x 6mm <sup>2</sup> (stranded)	
<b>Physical</b>	<b>Physical</b>	<b>Physical</b>	<b>Physical</b>	<b>Physical</b>	<b>Physical</b>
Ambient operating temperature: -5°C to +40°C (not to exceed an average of more than 25°C in any 24 hour period)	Ambient operating temperature: -5°C to +40°C (not to exceed an average of more than 25°C in any 24 hour period)	Ambient operating temperature: -5°C to +40°C (not to exceed an average of more than 25°C in any 24 hour period)	Ambient operating temperature: -5°C to +40°C (not to exceed an average of more than 25°C in any 24 hour period)	Ambient operating temperature: -5°C to +40°C (not to exceed an average of more than 25°C in any 24 hour period)	Ambient operating temperature: 0°C to +40°C
IP rating: IP2XD	IP rating: IP2XD	IP rating: IP2XD	IP rating: IP2XD	IP rating: IP2XD	IP rating: IP2XD
Max. installation altitude: 2000 metres	Max. installation altitude: 2000 metres	Max. installation altitude: 2000 metres	Max. installation altitude: 2000 metres	Max. installation altitude: 2000 metres	Max. installation altitude: 2000 metres

### Dimensions (mm)

#### 13A UK      5A UK      16A German      16A French/Belgian      15A American      1A USB Charging Module



#### K5830

#### K5833

#### K5831

#### K5834

#### K5832

#### K5837

BOX TYPES	BOX TYPES	BOX TYPES	BOX TYPES	BOX TYPES	MK EURO FRONT PLATE THICKNESS	BOX TYPES
<b>Minimum</b>	<b>Minimum</b>	<b>Minimum</b>	<b>Minimum</b>	<b>Minimum</b>		
35mm	35mm	46mm	46mm	35mm	> 7mm	Min 35mm
<b>Extra wiring space</b>	<b>Extra wiring space</b>			<b>Extra wiring space</b>	< 7mm	Min 46mm
46mm	46mm			46mm		

## RJ45 Data Outlets

### Standards and approvals

ISO/IEC 11801  
EN 50173  
TIA 568  
EN 41003



### Description

Suitable for use in all LJU6C, Euro and MK Modular frontplates, available in the Logic Plus range, Cat 5e and Cat 6 modules suitable for use in structured cabling distribution systems.

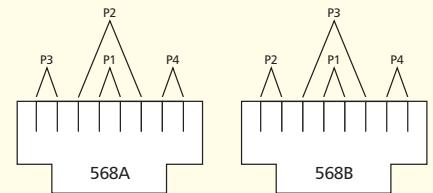
### Installation

- Maximum cable length 90m.
- Cable bend radii, 40mm during installation, 20mm after installation.
- Maximum pull force 8.7kg.
- Do not over tighten cable ties.
- Do not unwind the twists in the wire pairs by more than 13mm max.

### Installation details and wiring diagram illustrations

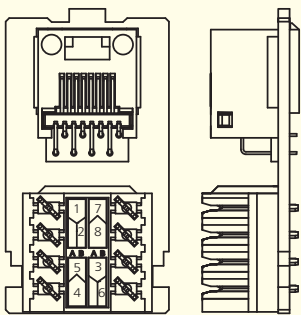
#### TIA WIRING SCHEME COLOUR CODES:

Pin No.	568A	568B
1	WHITE / green	WHITE / orange
2	GREEN / white	ORANGE / white
3	WHITE / orange	WHITE / green
4	BLUE / white	BLUE / white
5	WHITE / blue	WHITE / blue
6	ORANGE / white	GREEN / white
7	WHITE / brown	WHITE / brown
8	BROWN / white	BROWN / white

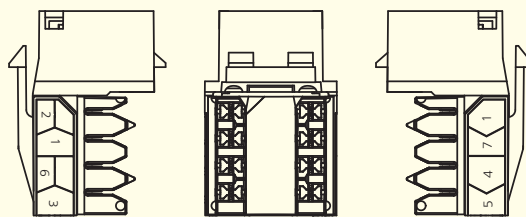


Pair 1 – BLUE/white & WHITE/blue  
Pair 2 – ORANGE/white & WHITE/orange  
Pair 3 – GREEN/white & WHITE/green  
Pair 4 – BROWN/white & WHITE/brown

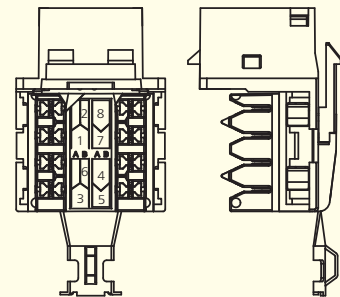
### Euro and LJU6C modules are to be wired as follows



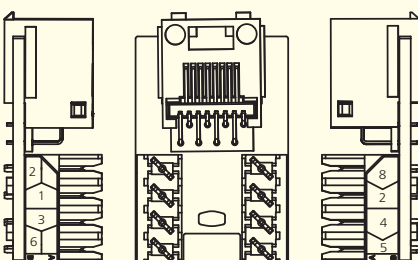
RJ45 Cat.5e Euro K5845



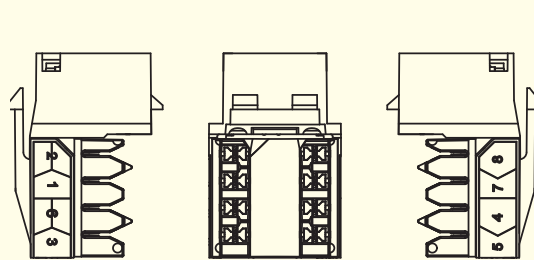
RJ45 Cat.5e Euro - Angled K5844



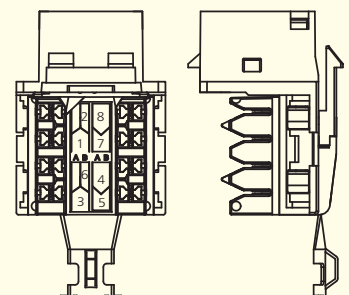
RJ45 Cat.6 Screened  
K5746S - LJU6C, K5846S - Euro



RJ45 Cat.5e LJU6C K5745



RJ45 Cat.6 Euro - Angled K5746 - LJU6C  
K5846 - Euro, K5864 - Euro Angled



RJ45 Cat.5e Screened  
K5845S - Euro

## Telephone, RJ11/12, BNC Data and Blank Modules

### Standards and approvals

Telephone sockets K5820 and K5821 comply with the following:

BS 6312: 2.2

Data sockets K5801, BS 5733: 2010 (where applicable).

K5887 complies with FCC68 and EN 41003.



### Technical specification

#### Electrical

Cable types:

Telephone: CW1311, CW1293, CW1308, CW1316

No. of cables per termination:

Telephone: 2

RJ11/12: 1

BNC

50 Ohms impedance cable – RG58, RG141, URM43

Belden 9907

Frequency range:

BNC connector: 0 to 4GHz

Impedance:

BNC Connector: 50. nominal

Termination type:

Telephone module – IDC

BNC module – Crimped connection

#### Physical

Temperature range:

Ambient air –20°C to +60°C

IP rating:

IP2XD – K5820, K5821, K5801 and K5787.

IP4X – K180, K188, K186 and K170

Max. installation altitude:

2000 metres

### Description

A range of telephone, data and blank modules to fit Euro and U6UC front plates. BNC Euro modules with a 50Ohm crimp connector suitable for use with RG58, URM43, URM76 and Belden 9907 type coaxial cables are also available.

### Installation (Telephone socket modules)

#### Product performance, systems compatibility

Master Sockets: For use as the first socket outlet on a direct exchange. They contain the required surge protector (for line protection against electrical surges) and ringing capacitor.

Secondary Sockets: for use as extension sockets when connected on the same line as a Master Socket.

#### Installation tools required IDC Connectors (telephone & RJ45 outlets)

MK insertion tool List No. 400NAT.

Wire pull-out force: 10.5 Newtons when installed correctly.

#### Wiring regulation restrictions

Domestic Installations: The total REN (Ring Equivalent Number) value of all telephone equipment connected on a line must not exceed 4.

### Features

- Meet all relevant BS, OFTEL and cabling standards
- Interchangeable modules clip into frontplates
- Front fixing facilitates easy exchange of modules
- Part of a complete range of products for telephone and data processing requirements
- Can be specified for all applications

#### Data sockets

- Latest specification for high performance systems
- Made to stringent quality assurance procedures
- Wide range of data connectors available

#### Telephone sockets

- 100% tested before delivery
- Quick, simple and reliable IDC connectors

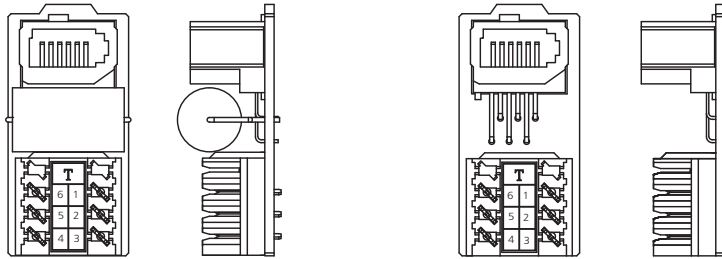
For information on TV Satellite and FM Modules see pages 451-453

## Telephone, RJ11/12, BNC Data and Blank Modules

### Telephone Wiring Scheme

- 1 GREEN / white
- 2 BLUE / white
- 3 ORANGE / white
- 4 WHITE / orange
- 5 WHITE / blue
- 6 WHITE / green

**Note:** Main wire colour is shown in capitals

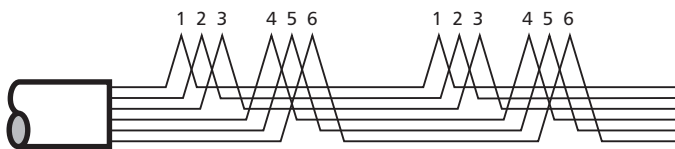


K5820

K5821

First Socket Outlet  
Master

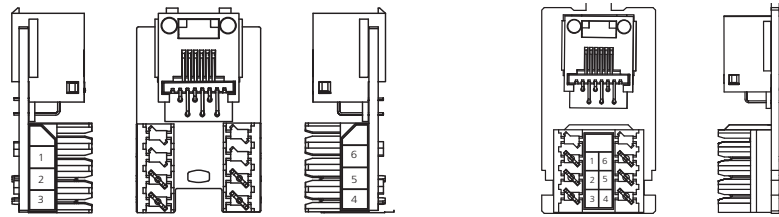
Extension Outlet  
Secondary



### RJ11/12 Wiring Scheme

PIN NO.	STRIPPED COLOUR WIRE	SOLID COLOUR WIRE
1	WHITE / green	WHITE
2	WHITE / orange	BLACK
3	BLUE / white	RED
4	WHITE / blue	GREEN
5	ORANGE / white	YELLOW
6	GREEN / white	BLUE

**Note:** Main wire colour is shown in capitals



K5787

K5887



## MK Modular Datacoms (Logic Plus)

### Standards and approvals

Logic Plus Telephone and Data sockets comply with the following:

Telephone sockets K420 and K421

BS 6312: 2.2, OFTEL Approval NS/G/23/L/100005

Data sockets K190 to K194, K501

BS 5733: 2010 (where applicable)

Data sockets K545

Cat 5e performance to EIA/TIA TSB568, BS EN 50173, IEC11801



### Description

A unique modular system in the distinctive Logic Plus style comprising a range of socket modules for Data and Telephone use, with 4 matching frontplates capable of accepting combinations of interchangeable modules. The 'clip-in' design provides a high degree of versatility, making the system ideal for use in all commercial and industrial applications.

### Technical specification

#### Electrical

Cable types:

Telephone CW1311, CW1293, CW1308, CW1316

RJ45: 20 to 26 AWG, 100 ohm Cat 5e UPT cable

No. of cables per termination (Telephone & RJ45):

Telephone: 2

RJ45: 1

#### Physical

Temperature range:

Ambient air -20°C to +60°C

IP rating:

IP2XD

Max. installation altitude:

2000 metres

### Features

- Meet all relevant BS, OFTEL and cabling standards
- Interchangeable modules clip into frontplates
- Front fixing facilitates easy exchange of modules
- Part of a range of products for telephone and data processing requirements

#### Telephone sockets and frontplates

- Quick, simple and reliable IDC connectors
- Can be specified for all applications
- Fit in plaster depth boxes

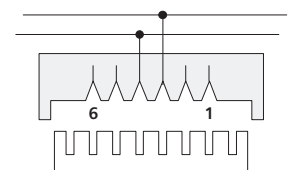
#### Data sockets and frontplates

- Cat 5e specification performance
- Made to stringent quality assurance procedures

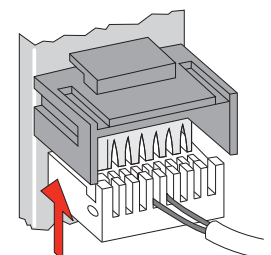
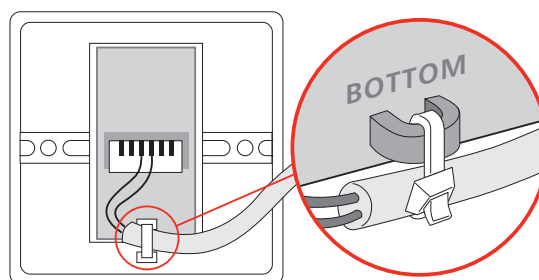
### RJ11 Wiring Scheme

PIN NO.	STRIPPED COLOUR WIRE	SOLID COLOUR WIRE
1	WHITE / green	WHITE
2	WHITE / orange	BLACK
3	BLUE / white	RED
4	WHITE / blue	GREEN
5	ORANGE / white	YELLOW
6	GREEN / white	BLUE

**Note:** Main wire colour is shown in capitals



Rear View of Terminal Connection Block



## MK Modular Datacoms (Logic Plus)

### Installation (Data sockets)

#### RJ45 modules

In order to maintain Category 5e performance, install cabling in accordance EIA/TIA or ISO General Cabling Standards.

### Installation (Telephone socket modules)

#### Product performance, systems compatibility

Master Sockets: For use as the first socket outlet on a direct exchange. They contain the required surge protector (for line protection against electrical surges) and ringing capacitor.

Secondary Sockets: for use as extension sockets when connected on the same line as a Master Socket.

#### Installation tools required IDC Connectors (telephone & RJ45 outlets)

MK insertion tool List No. 400NAT.

Wire pull-out force: 10.5 Newtons when installed correctly.

#### Wiring regulation restrictions

Domestic Installations: The total REN (Ring Equivalent Number) value of all telephone equipment connected on a line must not exceed 4.

Industrial and commercial installations: MK telephone sockets are suitable in all situations after the PBX/PABX has been installed by a recognised installer. For key systems and other 'special' systems, the manufacturer's instructions should be referred to.

#### Safety information

None of the above products should be installed into the same fixing or mounting boxes as mains rated equipment or cable.

### Cable management

Logic Plus Modular Data and Telephone Sockets can be mounted in a variety of MK trunking systems.

## MK Modular Datacoms (Decorative)

### Standards and approvals

MK Telephone and Data sockets comply with the following:

Telephone sockets K452 and K457

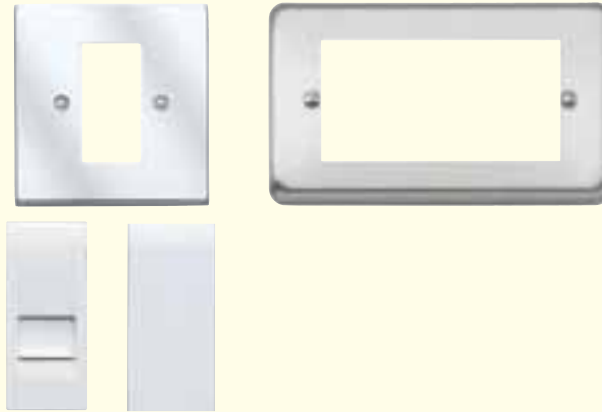
BS 6312: 2.2, OFTEL Approval NS/G/23/L/100005

Data sockets K290 to K452, K458

BS 5733: 2010 (where applicable)

Data sockets K455

Cat 5e performance to EIA/TIA TSB568, BS EN 50173, IEC11801



### Technical specification

#### Electrical

Cable types:

Telephone CW1311, CW1293, CW1308, CW1316

RJ45: 20 to 26 AWG, 100 ohm Cat 5e UPT cable

No. of cables per termination (Telephone & RJ45):

Telephone: 2

RJ45: 1

#### Physical

Temperature range:

Ambient air -20°C to +60°C

IP rating:

IP2XD

Max. installation altitude:

2000 metres

### Description

A unique modular system in the Alloy and Albany Plus styles comprising a range of socket modules for data and telephone use with frontplates capable of accepting combinations of interchangeable modules. Modules clip into mounting frames which, when attached to frontplates, provide a high degree of versatility, making the system ideal for use in all commercial and industrial applications.

#### Features

- Meet all relevant BS, OFTEL and cabling standards
- Part of a range of products for telephone and data processing requirements
- Interchangeable modules clip into grid frame which attaches to frontplate
- Quick, simple and reliable IDC connectors
- Can be specified for all applications

#### Data sockets and frontplates

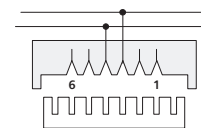
- Cat 5e specification performance
- Made to stringent quality assurance procedures

#### Telephone sockets and frontplates

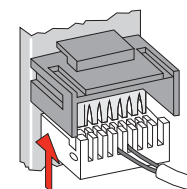
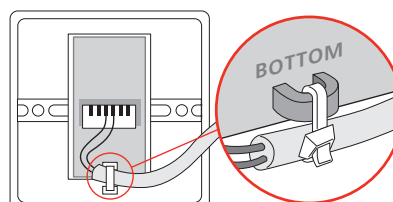
#### RJ11 Wiring Scheme

PIN NO.	STRIPPED COLOUR WIRE	SOLID COLOUR WIRE
1	WHITE / green	WHITE
2	WHITE / orange	BLACK
3	BLUE / white	RED
4	WHITE / blue	GREEN
5	ORANGE / white	YELLOW
6	GREEN / white	BLUE

**Note:** Main wire colour is shown in capitals



Rear View of Terminal Connection Block



## MK Modular Datacoms (Decorative)

### Installation (Data sockets)

#### RJ45 modules

In order to maintain Category 5e performance, install cabling in accordance EIA/TIA or ISO General Cabling Standards.

### Installation (Telephone socket modules)

#### Product performance, systems compatibility

Master Sockets: For use as the first socket outlet on a direct exchange. They contain the required surge protector (for line protection against electrical surges) and ringing capacitor.

Secondary Sockets: for use as extension sockets when connected on the same line as a Master Socket.

#### Installation tools required IDC Connectors (telephone & RJ45 outlets)

MK insertion tool List No. 400NAT.

Wire pull-out force: 10.5 Newtons when installed correctly.

#### Wiring regulation restrictions

Domestic Installations: The total REN (Ring Equivalent Number) value of all telephone equipment connected on a line must not exceed 4.

Industrial and commercial installations: MK telephone sockets are suitable in all situations after the PBX/PABX has been installed by a recognised installer. For key systems and other 'special' systems, the manufacturer's instructions should be referred to.

#### Safety information

None of the above products should be installed into the same fixing or mounting boxes as mains rated equipment or cable.

### Cable management

MK Modular Data and Telephone Sockets can be mounted in a variety of MK trunking systems.

## Telephone, TV/FM and Satellite Socket Outlets

### Standards and approvals

Telephone and TV sockets comply with the following:

#### Telephone sockets K422 and K427

BS 6312: 2.2, BS 5733: 2010 (where applicable) and OFTEL Approval NS/G/23/L/100005.

K4817: BS 5733: 2010 (where applicable) and FCC68.

#### TV sockets

BS 3041 Part 2: 1977 / IEC 169-2: 1977,  
BS 5733: 2010 (where applicable) and IEC65,  
Cls 10.1, 10.3.

#### Satellite TV sockets

BS 5733: 2010 (where applicable).



### Description

A part of the very wide range of products to meet the latest technical requirements and the standards applicable to modern technology in the installation of telephone and television equipment. The master and secondary telephone sockets K422 and K427 comply with relevant OFTEL approvals for direct and indirect connections between a termination point of a public telecommunications system and any piece of approved telecommunications apparatus. For applications requiring twin or dual telephone outlets, refer to the Modular Data section, pages 54-57.

Telephone and TV sockets fit into plaster depth boxes (except for RJ11).

The F-type Satellite Socket may be used for connection of CATV, MATV and satellite TV installations.

### Technical specification

#### Electrical

Telephone sockets, cable specification:  
CW1311, CW1293, CW1308, CW1316  
No. of cables per termination: 2

Re-usability:  
>9 reterminations (should not be reterminated with smaller diameter wire)

TV sockets:  
Cable specification: CT100 or equivalent  
Any standard low-loss TV co-axial cable:  
Outside 4-8mm diameter,  
inner conductor 0.5-2mm diameter

Insertion loss:  
Insertion loss data available on request

'F' Type satellite socket (K3525), cable specification:  
Co-axial cable: inner core diameter – 0.5-1.2mm

RJ11 (K4817), Cable specification:  
Capable of taking 0.08 to 0.65mm<sup>2</sup> solid or stranded cable

#### Physical

Ambient air:  
-20°C to +60°C

IP rating:  
IP2XD

Max. installation altitude:  
2000 metres

#### Features

- Single screw termination on TV outlets
- Protected, fully enclosed PCBs
- Meet all relevant BS requirements
- Quick, simple and reliable terminal connection
- IDC connectors on telephone outlets
- Part of a complete range of products for telephone, television and data processing requirements
- Angled connector on TV outlets
- Sockets fit in plaster depth boxes (except K4817)

## Telephone, TV/FM and Satellite Socket Outlets

### Installation (Telephone sockets)

#### Product performance, systems compatibility

*Master Sockets:* for use as the first socket outlet on a direct exchange or PABX line. They contain surge protector (for line protection against electrical surges) and ringing capacitor.

*Secondary Sockets:* For use as extension sockets when connected on the same line as a Master Socket.

#### Installation tools required

MK IDC insertion tool List No. 400NAT (not supplied with product).

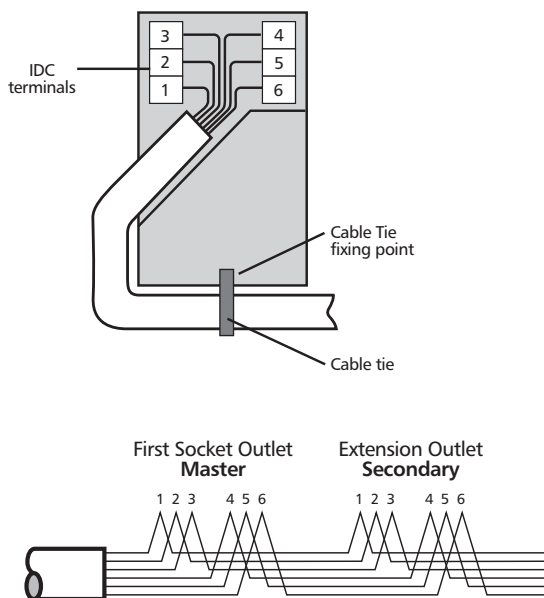
#### Wiring regulation restrictions

Domestic installations: Any number of MK sockets may be installed thereafter, with a total REN (Ring Equivalent Number) value of all telephone equipment connected on a line not exceeding 4.

#### Telephone Wiring Scheme

- 1 GREEN / white
- 2 BLUE / white
- 3 ORANGE / white
- 4 WHITE / orange
- 5 WHITE / blue
- 6 WHITE / green

**Note:** Main wire colour is shown in capitals



## Digital TV and Telephone Outlets (Logic Plus and Modular Datacoms)

### Installation (TV sockets)

#### Product performance, systems compatibility

Isolated Outlets are intended for use where safety isolation (rated at 2000V ac) is required to provide protection against faults occurring within any mains powered product used on different parts of the distribution system. They are not suitable for use in systems where DC signals are passed through the socket, (e.g. where masthead/headend equipment is controlled by receiver/decoder equipment).

Diplexer Outlets are used in distribution systems where both TV and FM band signals are combined on a single aerial download. The filtering in the diplexer separates the appropriate signals and feeds them through to the relevant output connection port.

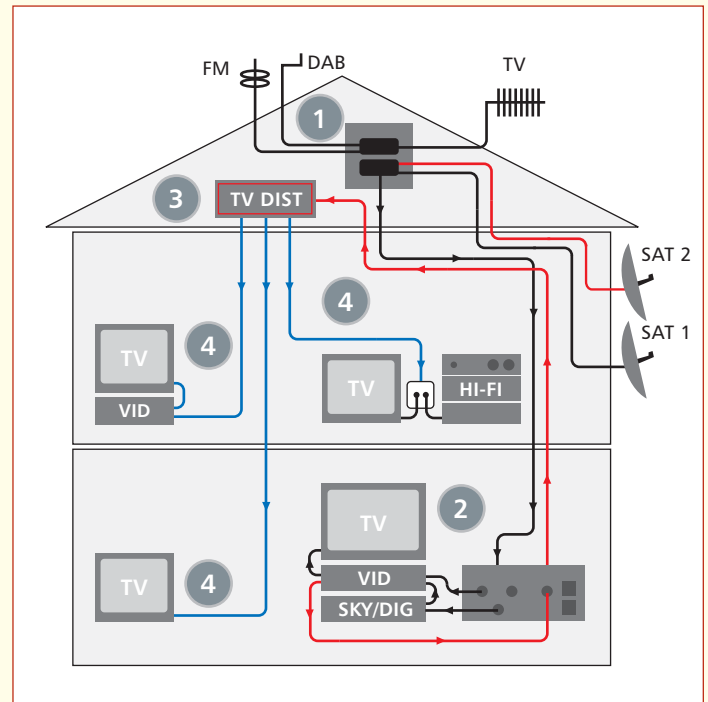
#### Cable Routing and Use of Cable Clamp

Sharp bends in the cable must be avoided during installation. The single TV/FM socket is fitted with a cable clamp that can be fixed on either side of the termination position to facilitate this.

When tightening the screening braid clamps ensure that the cable is firmly gripped and that the inner insulation is not squashed flat beyond a slight oval shape.

#### Safety Information

TV outlets or modules must not be installed in the same enclosure as equipment rated in excess of 50V, (e.g. mains rated 13A sockets or switches).



Method of installation of TV and FM aerial connection by using MK co-axial socket outlet and only one download.

Conventional distribution system for TV and FM signals using a single aerial download.

- 1 The signals from the TV and FM aerials and the satellite dish are combined together using two products. The first combines the TV and FM signals and the second adds the Sky signal to the TV/FM signal and provides a DC control path to power the LNB unit on the satellite dish. (These products are not supplied by MK).

The single aerial down lead feeds into the triplexer (black lines in wiring diagram).

- 2 The separated satellite signal is then fed to the decoder. The decoded satellite signal is then fed into the VCR along with the TV signal from the Triplexer. The output signal from the VCR then feeds into the TV and also back to the single outlet and onto the distribution amplifier (black lines in wiring diagram).

- 3 The single cable back-feed then feeds back to the input of a multi way distribution amplifier, (typically located in the loft or garage) (red lines in wiring diagram).

- 4 Each individual output from the distribution amplifier is then fed to the individual rooms in the house to a standard TV (single or diplexer) outlet to which the TV/VCR and/or Hi-Fi can be connected (blue lines in wiring diagram).

## Digital TV, Radio and Telephone Outlets

### Standards and approvals

All Logic Plus TV Outlets comply with BS 5733 and BS EN 50083 where applicable.

Also IEC 169-2, BS EN 60169-24 and BS 6312 Part 2

Modular products are Euro compatible.

### Technical specification

#### Single Outlets

TV/FM IEC Male or Female DC-950MHz  
SATF-Type DC-1.75GHz

#### Diplexer and Triplexer products

##### TV

Diplexer: 5-65MHz  
470-862MHz  
Triplexer: 5-65MHz  
470-862MHz

##### FM

Diplexer: 87.5-108MHz  
Triplexer: 87.5-108MHz

##### SAT

Diplexer: n/a  
Triplexer: 950-2300MHz

#### TV/FM/DAB/SAT products for digital radio

##### TV

Diplexer: 5-65MHz  
470-862MHz  
Triplexer: 5-65MHz  
470-862MHz

##### FM/DAB

Diplexer: 87.5-230MHz  
Triplexer: 87.5-230MHz

#### SAT or SAT1

Diplexer: n/a  
Triplexer: 950-2300MHz

#### SAT2

Diplexer: n/a  
Triplexer: 5-2300MHz



### Description

There are two ranges of diplexer and triplexer products, an established range suitable for VHF TV, and a range suitable for digital radio (DAB).

Diplexer modules are for connecting to a single co-axial aerial down lead carrying combined TV and FM signals. The filtering in the diplexer splits out the appropriate signal and feeds it to the relevant output connection. A DC control path is provided in the TV signal path through the diplexer.

Triplexer modules are for connecting to a single co-axial aerial down lead carrying combined TV, FM and SAT signals. The filtering in the triplexer splits out the appropriate signal and feeds it to the relevant output connection. A DC control path is provided in the SAT signal path through the triplexer.

The quad outlet contains a triplexer together with a separate satellite output, for use with Sky+, or more complex installations.

Telephone secondary outlets are provided on some products for connection of telephone or for interactive TV applications.

### Features

- Non Isolated
- Fully screened
- Earth terminal provided on TV modules
- Selected products with BT secondary outlets for interactive TV applications
- Selected products with supplementary TV outlet for back-feed for further distribution

### Cable management

Logic Plus TV outlets can be mounted in a variety of MK trunking systems.

### BOX TYPES

	Flush	Flush (for Extra wiring space)	Surface Insulated	Surface Metal
1 gang	861ZIC	866ZIC	K2140WHI	K2211ALM/K2213ALM
2 gang	862ZIC	886ZIC	K2142WHI	K2212ALM/K2214ALM

Minimum recommended box depth 32mm

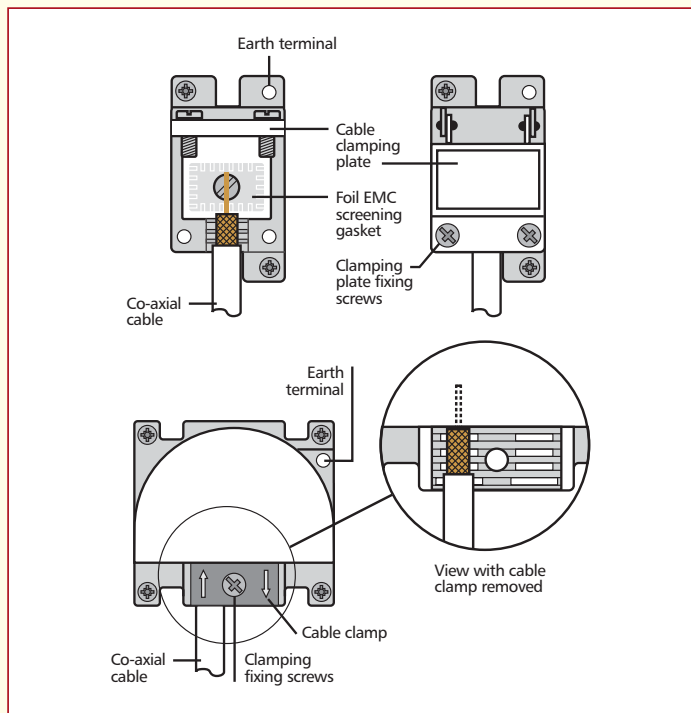
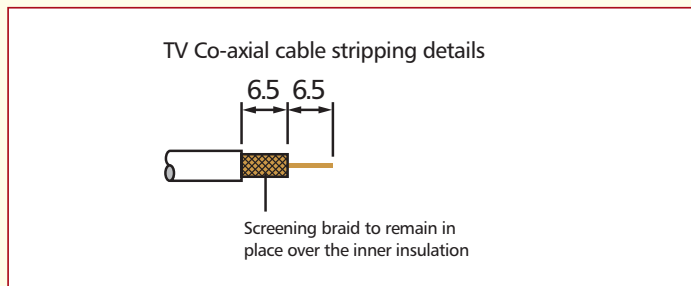
Note: Edge/Insignia mounted modular products require 45mm box



## Digital TV/FM and Telephone Outlets (Logic Plus and Modular Datacoms)

### Installation

- When installing the TV co-axial cable ensure that all cable bends are smooth so that the inner insulation is not crushed or squashed, otherwise the TV signal quality may be affected.
- Not suitable for loop-in loop-out installations.
- Use CT100 cable (or equivalent).



### Telephone Outlet Connection

Carefully strip 50mm of the telephone cable outer sheath to expose the inner insulated conductors. Using the insertion tool supplied, (MK List no. 400NAT) carefully push each lead into the appropriate IDC terminals according to the wiring colour code stated in the telephone Wiring Scheme diagram.

Pins 1 and 6 are frequently unused, 4 wire cable may be used in these installations.

If an existing installation uses a different wiring colour code system, this should be retained on any new or extended installation.

Additional secondary extension outlets should be wired in parallel with the existing installation via the IDC terminals, (i.e. pin 1 to pin1, pin 2 to pin 2, etc).

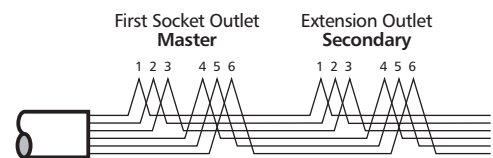
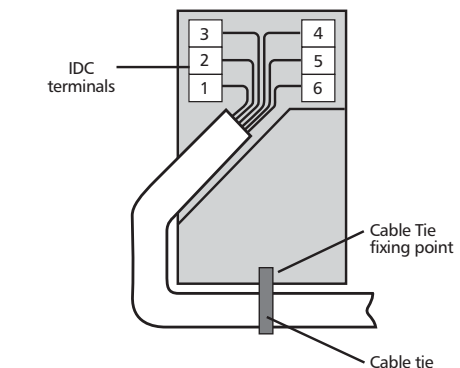
In the event that the earth terminal is required to be used, the installer must ensure that a suitable earth conductor is present to connect to the earth terminal. (In the case of 2G products both TV modules should be earthed).

In the event that the earth terminal is required to be used, the installer must ensure that a suitable earth conductor is present to connect to the earth terminal. (In the case of 2G products both TV modules should be earthed).

### Telephone Wiring Scheme

- 1 GREEN / white
- 2 BLUE / white
- 3 ORANGE / white
- 4 WHITE / orange
- 5 WHITE / blue
- 6 WHITE / green

**Note:** Main wire colour is shown in capitals



## Logic Plus Combination Plates 2/4-gang Stacked Combination Plate

### 4 Gang Plate Description

The 4-gang Stacked Combination Plate carries 2x 2-gang 13A DP switched sockets, plus a Quad TV, FM/DAB, Satellite outlet, single TV (IEC Female) and an additional Telephone socket.

Additionally, there is a 4-module Euro area capable of accommodating any additional telephone or media products from the Euro modular range.



Quad TV, FM/DAB, Satellite outlet & additional TV Socket  
As used on K3566 WHI

BT Telephone Socket  
As used on K3566 WHI

4-module Euro Housing  
This portion of the plate accepts up to 4 x 50mm high by 25mm wide Euro modules. (100mm x 50mm aperture)

#### Technical specification

##### Frontplate

The frontplate complies with the mechanical strength requirements of BS 5733 2010.

##### Switched socket specification

Compliant to BS 1363 Part 2: 1995

##### Electrical

Voltage rating 250V a.c.

Current rating 13 Amp per socket outlet

##### Terminal capacity

Live, Neutral & Earth

3 x 2.5mm<sup>2</sup>

3 x 4mm<sup>2</sup>

2 x 6mm<sup>2</sup> (standard)

##### Physical

Ambient operating temperature:

-5°C to +40°C (not to exceed an average of more than 25°C in any 24 hour period)

IP rating:

IP2XD

Max. installation altitude 2000 metres

#### Note

- Pre-configured back boxes available shall be used with these plates. These are 853ZIC, which is 35mm deep, and for greater wiring space 854ZIC, which is 47mm deep
- These back boxes should always be used to ensure alignment of the fixing screws is correct and proper segmentation between mains and low voltage products is maintained
- Mains operated products and extra low voltage modules must not be installed within the same front plate aperture. Refers to BS 7671 IEE Wiring regulations for detail
- When removing the fixing screws and front plate from an installation to gain access to low voltage modules, please be aware that there will also be access to the mains supply

### 2 Gang Plate Description

The 2-gang Stacked Combination Plate carries a 2-gang 13A DP switched sockets and an additional 4-module Euro area capable of accommodating any additional telephone or media products from the Euro modular range.

#### Technical specification

##### Frontplate

The frontplate complies with the mechanical strength requirements of BS 5733 2010.

##### Switched socket specification

Compliant to BS 1363 Part 2: 1995

##### Electrical

Voltage rating 250V a.c.

Current rating 13 Amp per socket outlet

##### Terminal capacity

Live, Neutral & Earth

3 x 2.5mm<sup>2</sup>

3 x 4mm<sup>2</sup>

2 x 6mm<sup>2</sup> (standard)

##### Physical

Ambient operating temperature:

-5°C to +40°C (not to exceed an average of more than 25°C in any 24 hour period)

IP rating:

IP2XD

Max. installation altitude 2000 metres

#### Note

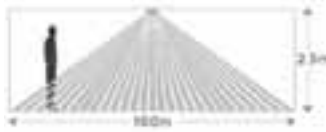
- Pre-configured back boxes available shall be used with these plates. These are 857ZIC, which is 35mm deep, and for greater wiring space 858ZIC, which is 47mm deep
- These back boxes should always be used to ensure alignment of the fixing screws is correct and proper segmentation between mains and low voltage products is maintained
- Mains operated products and extra low voltage modules must not be installed within the same front plate aperture. Refers to BS 7671 IEE Wiring regulations for detail
- When removing the fixing screws and front plate from an installation to gain access to low voltage modules, please be aware that there will also be access to the mains supply

## Simple Fit PIRs

### Technical specification

Maximum recommended mounting height:  
1.8m to 3m

Range:  
Cone-shaped detection pattern,  
5m radius at 2.5m mounting height



Operating voltage:  
AC220~240V/50Hz

Recommended circuit protection:  
16A

Maximum load:  
6A or 1500W fluorescent/incandescent lighting load capacity

Photocell:  
Approx. 30~200 Lux

Off delay:  
5sec - 40min

Colour:  
White

Material:  
Flame retardant PC

IP rating:  
IP20

**K5015**  
Depth required behind ceiling:  
100mm

Weight:  
105g excluding cable

**K5016**  
Weight:  
105g approx



K5015



K5016

### Description

MK Simple Fit Sensors offer cost effective presence detection for lighting control in small to medium areas. This one-box solution is easy to install and commission, and requires no additional parts.

The following versions are available:

- Flush mounted K5015 - Spring Clips enable ease of installation in plasterboard ceilings
- Surface Mounted K5016 - Screw and Plug Fixings can be mounted direct to the ceiling or on to a square pattress box (K2160 WHI)

### Features



Advanced presence detection by passive infrared (PIR) technology



Passive photocell holds lights off when area becomes occupied in bright ambient conditions



Off delay in minutes following the last observed movement after which lights switch off

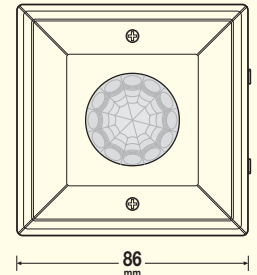
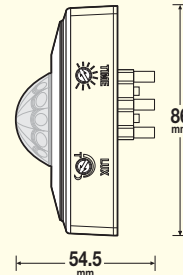
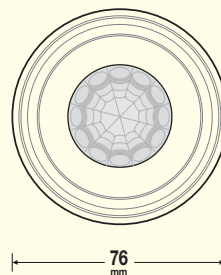
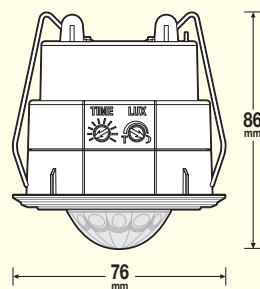


Detection pattern and approx range in metres at floor level for 2.5m mounting height (detection pattern is cone shaped).

### Dimensions

K5015

K5016

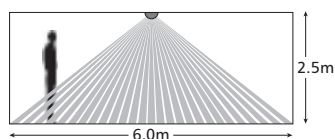


## Standard PIRs

### Technical specification

Maximum recommended mounting height:  
3.0m

Range:  
Cone-shaped detection pattern,  
diameter (at floor level) = 2.4 x mounting height



Operating voltage:  
230V 50Hz

Recommended circuit protection:  
10 Amps

Maximum load:  
6 Amps resistive or fluorescent

Photocell:  
Adjustable 50-5000 lux

Off delay:  
20 minutes (fixed) and a 10 second Walk Test Mode  
(need K4050 or K4053 to put it in a Walk test mode)

Colour:  
White

Material:  
Flame retardant PC/ABS

IP rating:  
K4010: IP4X  
K4011: IP3X

#### K4010

Depth required behind ceiling:  
125mm

Weight:  
Flush – 70g excluding cable

Surface – 200g approx

#### K4011

Weight:  
200g approx



K4010



K4011

### Description

Standard PIRs are part of a comprehensive range of presence detection systems designed to control any type of lighting load, particularly modular luminaires.

They provide simple, cost-effective presence detection for lighting control in small areas.

The following versions are available:

- Slimline flush K4010
- Surface mounted K4011

### Features



Advanced presence detection by passive infrared (PIR) technology



Passive photocell holds lights off when area becomes occupied in bright ambient conditions



Off delay in minutes following the last observed movement after which lights switch off



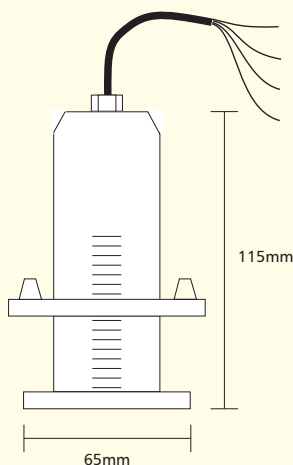
Detection pattern and approx range in metres at floor level for 2.5m mounting height (detection pattern is cone shaped).



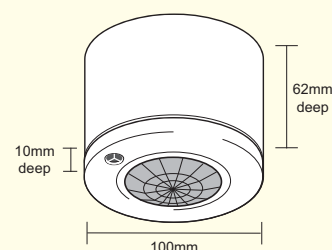
Hand-held Controllers (K4051 and K4052) provide local user override

### Dimensions

#### K4010 – flush detector



#### K4011 – surface detector

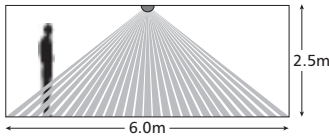


## Superior PIRs

### Technical specification

Maximum recommended mounting height:  
3.0m

Range:  
Cone-shaped detection pattern,  
diameter (at floor level) = 2.4 x mounting height



Off delay:  
1 minute – 96 hours (5-35 mins via K4050) and  
10 second Walk Test Mode. (Off Delay 1 & 2 on K4017  
and K4018 are independently adjustable.)

Photocell:  
Adjustable 50-5000 lux

Operating voltage:  
230V 50Hz

Recommended circuit protection:  
10 Amps

Maximum load:  
6 Amps per output (not exceeding 10A in total) only in  
dual circuit option

Colour:  
White

Material:  
Flame retardant PC/ABS

Weight:  
Flush – 70g excluding cable  
Surface – 200g approx

IP rating:  
K4015: IP4X  
K4016: IP3X

### Description

Superior PIRs are part of a comprehensive range of presence detection systems designed to control modular luminaires with high frequency ballasts, and other lighting loads.

They offer high-performance, programmable presence detection for lighting control in offices and open-plan workstations. Available in flush and surface mount versions with single or dual circuit options.











K4015

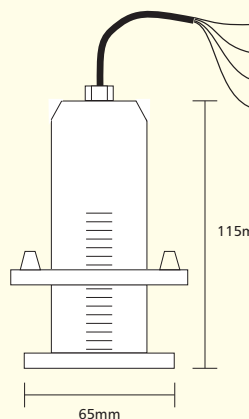


K4016

### Features

-  Presence detection is by passive infrared, effectively enhanced to improve sensitivity to small movements
-  Passive photocell holds lights off in bright ambient conditions. Active photocell has the capability to switch lights off in occupied areas
-  Off delay in minutes following the last observed movement after which the lights switch off (1 minute to 96 hours via K4053)
-  Detection pattern and approx range in metres at floor level for 2.5m mounting height (detection pattern is cone shaped).
-  Dual-circuit option (1 x volt-free, 1 x switched-live output: K4017 & K4018 only). Switched-live influenced by photocell, volt-free output by presence detection only. Independent time delays can be programmed via K4050 or K4053
-  Hand-held Controllers (K4051 and K4052) provide local user override
-  Remote programming via K4050 or K4053 ensures changes can be easily accommodated (Note that not all options are available when using HP10)
-  Washroom mode. If no movement is detected in a 24-hour period, detector can be programmed to switch the load on for the duration of the off delay. With suitable valve unit can be used as urinal control

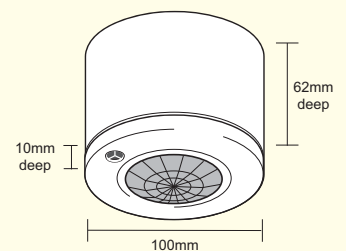
### Dimensions



Brown – Live In  
Black – Live Out  
Blue – Neutral  
Green/Yellow – Earth  
(no internal connection)

Suitable for flush mounting in a suspended ceiling tile, maximum 54mm thick and with a minimum clearance of 125mm between front surface of tile and hard ceiling behind.

Cut a 50mm diameter (K4054 plasterboard fixing kit) circular hole in the ceiling tile, feed the flying lead and detector through and secure into position with the locking ring.



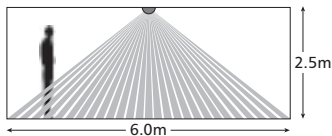
The housing may be secured to a hard surface or a BESA box. The detector fits into the housing with a simple bayonet action.

## Superior PIRs for DSI

### Technical specification

Maximum recommended mounting height:  
3.0m

Range:  
Cone-shaped detection pattern,  
diameter (at floor level) = 2.4 x mounting height



Photocell:  
Regulating

Operating voltage:  
230V 50Hz

Recommended circuit protection:  
10 Amps

Capacity:  
K4019 – 9 ballasts  
K4020 – 25 ballasts

Output:  
Digital DSI

Colour:  
White

Material:  
Flame retardant PC/ABS

Weight:  
Flush – 70g excluding cable  
Surface – 200g approx

IP rating:  
K4019: IP4X  
K4020: IP3X



K4019



K4020

### Features



Presence detection is by passive infrared, effectively enhanced to improve sensitivity to small movements



Regulating photocell ensures a minimum maintained light level, taking account of the contribution from adjacent luminaires and daylight



Incorporates simple scene-setting - up to six scenes can be set via user remote



Off delay in minutes following the last observed movement after which the lights switch off (1 minute to 96 hours via K4053)



Detection pattern and approx range in metres at floor level for 2.5m mounting height (detection pattern is cone shaped)



Hand-held Controllers (K4051 and K4052) provide local user override



Remote programming via K4050 or K4053 ensures changes can be easily accommodated

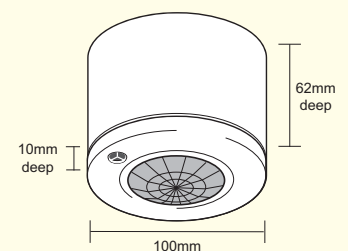
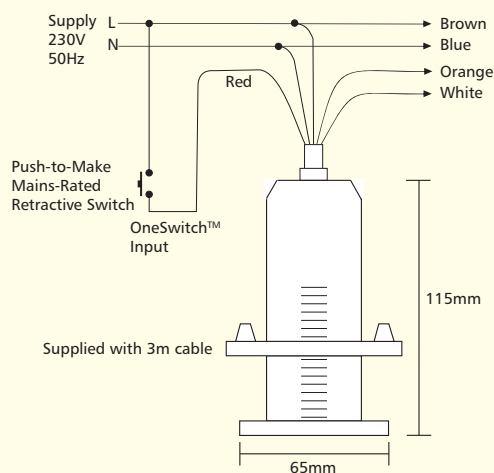


OneSwitch™ Dimming. Manual input to adjust light level or turn luminaires on or off

### Description

Superior Self Regulating PIRs offer high performance, programmable presence detection for lighting control for work stations and offices. It is designed to control groups of luminaires by regulating DSI type ballasts.

### Dimensions

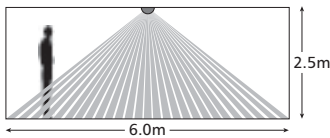


## Battenfit Sensors

### Technical specification

Maximum recommended mounting height:  
5.0m

Range:  
Cone-shaped detection pattern,  
diameter (at floor level) = 2.4 x mounting height



Off delay:  
1 minute – 96 hours (5-35 mins via K4050) and  
10 second Walk Test Mode. (Off Delay 1 & 2 on K4017  
and K4018 are independently adjustable.)

Photocell:  
Adjustable 50-5000 lux

Operating voltage:  
230V 50Hz

Recommended circuit protection:  
10 Amps

Maximum load:  
2A for K4041 and K4042  
25 ballast for K4043 and K4044

Colour:  
White

Material:  
Flame retardant PC/ABS

Weight:  
100g

IP rating:  
4X



### K4041, K4042, K4043, K4044

#### Features



Advanced presence detection by passive infrared (PIR) technology



Off delay in hours following the last observed movement after which lights switch off. Up to 96 hours with K4053. (K4042, K4043 and K4044 only) Fixed 20 minutes off delay with K4051



Passive photocell holds lights off in bright ambient conditions. Active photocell has the capability to switch lights off in occupied areas (K4042 only)



Regulating photocell adjusts luminaire output to maintain constant light levels (K4043 and K4044 only)



Detection pattern and range in meters under normal operating conditions



One Switch Dimming. Manual input to adjust light level or turn luminaires on or off (K4043 and K4044 only)



Hand-held Controllers (K4051 and K4052) provide local user override



Infrared programming enables easy commissioning and re-commissioning



Dual circuit option (switching or digital dimming) available (K4043 and K4044 only)

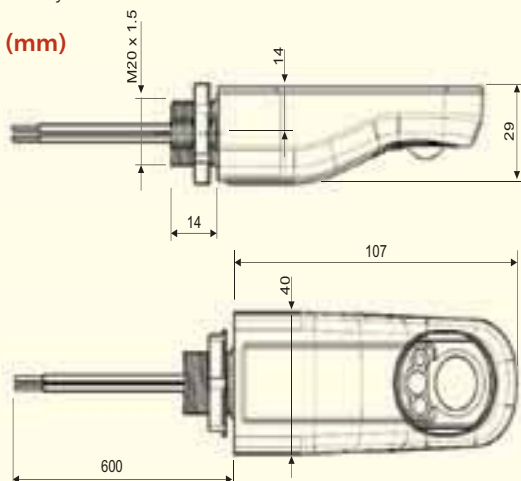


Scene setting – lights switch on to a pre-programmed scene when area becomes occupied (K4043 and K4044 only)

### Description

A range of simple to fit batten-mounted sensors which can deliver energy savings of up to 50%. The BattenFit sensor is a simple-to-fit control solution for batten style luminaires.

### Dimensions (mm)

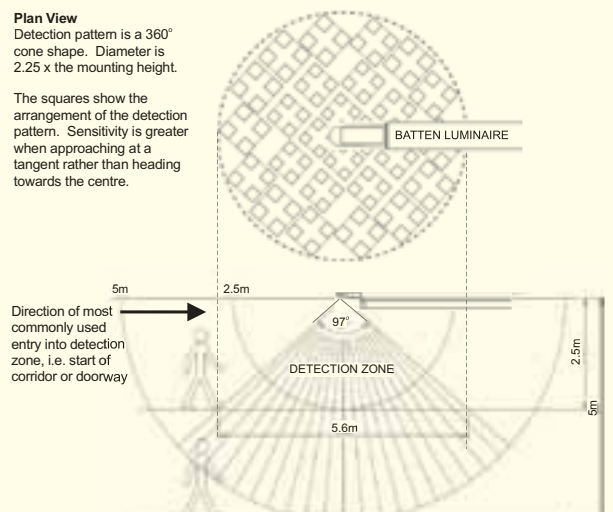


### Detection Profile

#### Plan View

Detection pattern is a 360° cone shape. Diameter is 2.25 x the mounting height.

The squares show the arrangement of the detection pattern. Sensitivity is greater when approaching at a tangent rather than heading towards the centre.

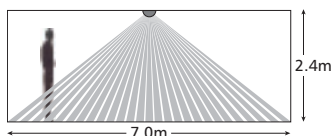


## Digital Sensors – Ceiling Mounted

### Technical specification

Maximum recommended mounting height:  
3.0m

Range:  
Approx 7m dia at 2.4m ceiling height



Off delay:  
5-60 minutes – adjustable

Photocell:  
Adjustable 50-5000 lux

Operating voltage:  
230V 50Hz

Recommended circuit protection:  
10 Amps

Maximum load (VOLT-FREE):  
6 Amps

Maximum load (DSI):  
25 ballasts

Colour:  
White

Material:  
Flame retardant PC/ABS

Weight:  
300g

IP rating:  
IP3X



K4025

### Features



Active presence detection by microwave technology



Regulating photocell actively monitors ambient light levels and adjusts the light output accordingly (dimnable control gear only)



Incorporates simple scene-setting - up to six scenes can be set via user remote



Off delay in minutes following the last observed movement after which the lights switch off (1 minute to 96 hours via K4053)



Detection pattern and range in metres under normal operating conditions



Dual circuit control. Digital output always influenced by photocell, relay output can be influenced by photocell if configured



Hand-held Controllers (K4051 and K4052) provide local user override



Remote programming with the K4053 ensures changes can be easily accommodated



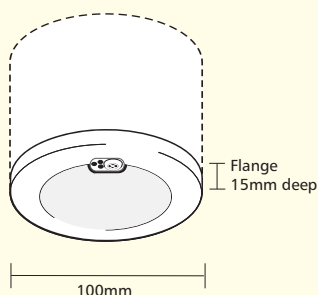
OneSwitch™ Dimming. Manual input to adjust light level or turn luminaires on or off

### Description

Digital sensors are part of a comprehensive range of presence detection systems designed to control modular luminaires with DSI, high frequency ballasts and other lighting loads.

They offer superior-performance programmable presence detection for lighting control in offices and open-plan workstations. They use microwave presence detection technology which enables the range to be adjusted to ensure a tailored detection pattern to suit any application and is available for flush and surface mounting with single or dual-circuit option.

### Dimensions



Digital sensors utilise microwave radar to monitor a space for movement. This involves transmitting a very low power microwave signal and examining the reflected signal for frequency variations called "doppler shifts". The microwave system is extremely sensitive to small body movements and provides effective presence detection in rooms up to 20m x 20m.

Please note that this extreme sensitivity makes it essential that the detector be installed on a rigid surface that will not itself be subject to movement or vibration.

Please note also that microwave technology is not recommended for applications where there are large areas of metal, e.g. metal ceiling or floor tiles, as unpredictable sensitivity may result.



## Digital Sensors – Corner Mounted

### Technical specification

Maximum recommended mounting height:  
3.5m

Range:  
Adjustable up to 20m

Off delay:  
10 seconds to 20 minutes

Photocell:  
Adjustable 50-5000 lux

Operating voltage:  
230V 50Hz

Colour:  
White

Material:  
Flame retardant PC/ABS

Weight:  
250g

IP rating:  
43 when ceiling mounted  
4X when wall mounted



**K4033**



**K4032**

### Features



Active presence detection by microwave technology



Passive photocell holds lights off in bright ambient conditions



Off delay in minutes following the last observed movement after which the lights switch off



Detection pattern and range in metres under normal operating conditions



Hand-held Controller (K4051) provide local user override

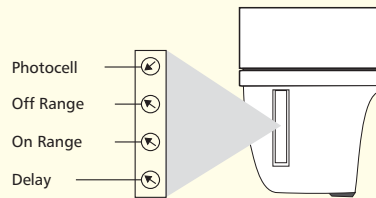
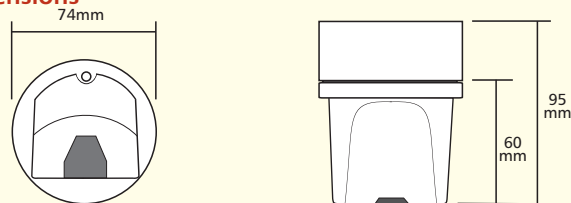
### Description

Digital corner mounted sensors are high performance, directional presence detector with built-in photocell for use in almost any internal space. It was conceived to bridge the gap between the Standard Series LightSpot and the Long Range equipment. It is ideal for larger classrooms, conference rooms, longer storage aisles etc. It is a self-contained unit, making installation very simple and straightforward.

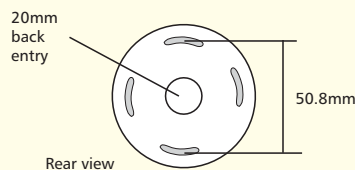
They utilise microwave technology and are capable of effective presence detection in rooms of up to 20m x 20m.

The units are self-contained, featuring a movement detector, photocell and 10 Amp (load switching) element in one, easily deployed housing. The detectors may be surface or semi-flush mounted.

### Dimensions



(Position of controls when commissioning commences)



### K4032 – Surface version

The back-box can be secured directly to a hard surface or to a conduit stop end box.

### K4033 – Semi-flush version

Use a hole saw to drill a 76mm hole into the ceiling tile. The flush ring is designed to clamp the tile between its two halves.

## Ultrasonic Sensors

### Technical specification

Operating voltage:	230V 50Hz
Maximum recommended mounting height:	5 metres
Switch capacity:	10 Amps – Incandescent lamps: 1500W max (230V)
Terminal capacity:	2 x 1.5mm or 1 x 2.5mm
Weight:	148g
Time delay:	5, 10 or 15 mins
Power-up condition:	select ON or OFF
Detector range:	adjustable
On/Off Ranges:	adjustable
Ultrasonic frequency:	40kHz
Photocell:	adjustable 50 to 5000 lux

### Description

Ultrasonic sensors are general purpose, fully automatic, directional presence detectors with photocell. They save energy by switching off lights in unoccupied areas and by holding lights off in occupied areas which have adequate natural light. They use a specially developed ultrasonic radar to monitor the controlled space for movement. This radar is sensitive enough to respond to even very small movements thus ensuring that lights are sustained whenever the controlled space is occupied. If no movement has been detected for a pre-selected period, the sensors switch the lights off until the next visitor is detected.

The sensors control feature a movement detector, photocell and 10 Amp load switching element in one easily deployed housing. The technology has been refined and improved over many years of efficient, reliable service in a wide range of industrial and commercial environments. The latest designs use state-of-the-art miniaturisation to pack the features into a small, attractive yet rugged enclosure which gives full field-of-view adjustment. Detectors are available for surface or semi-flush mounting.



K4030



K4031

### Features



Active presence detection by ultrasonic technology



Passive photocell holds lights off in bright ambient conditions



Off delay in minutes following the last observed movement after which the lights switch off

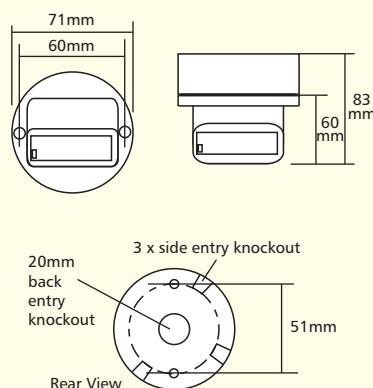


Detection pattern and range in metres under normal operating conditions

### Dimensions

#### K4030 – Surface version

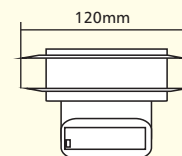
The back-box can be secured directly to a hard surface or to a conduit stop end box.



#### K4030 – Semi Flush version

Use a hole saw to drill a 76mm hole into the ceiling tile. The flush ring is designed to clamp the tile between its two halves.

**Flush Plate & Clamp (K4078)**  
For simple flush mounting of detector to suspended ceilings.  
Max clamping distance – 25mm



A sensor will fit to its own backplate or to a standard 25mm switch sinking box.

Ultrasonic sensors utilise ultrasonic radar to monitor a space for movement. This involves transmitting an ultrasound signal and examining the reflected signal for frequency variations called "doppler shifts". The transmitted signal is more quickly dissipated in open space and squeezed out by constraining walls and ceilings. The range of the detector also depends upon the type of movement being observed: for example, walking activity can be observed at a greater distance than the slight hand or body movement to be expected from a person working at a desk. Note that detectors can see behind themselves slightly so must be inset in a storage aisle or corridor application.

## Long Range Detectors

### Technical specification

#### CONTROL UNITS (K4039/K4040)

Operating voltage:  
230v 50 hz

Switch:  
10 amp x 230v (volt-free)

Incandescent lamps:  
1500w max (at 230v)

Terminals:  
1 x 6mm or 2 x 2.5mm

Weight:  
850g approx

Power supply:  
Transformer isolated 12V

Semi-automatic:  
Using low voltage switch

Segregation:  
None

Time-out:  
0-16 minutes per channel  
K4039 - 1 channel  
K4040 - 2 channels

Power-up condition:  
Select on or off

Photocell:  
Remote operation

Dimensions:  
175 x 125 x 75 mm

#### K4036 – SURFACE DETECTOR

Voltage:  
12V dc

Frequency:  
10.7GHz low power microwave

Weight:  
800g approx

On/Off Range:  
Adjustable

Construction:  
Zinc & polycarbonate

IP rating:  
IP4X

Max mounting height:  
6m

Flush fixing (K4035 only):  
To 2-gang sinking box



**K4036**  
(K4039/K4040 required)



**K4035**  
(K4039/K4040 required)

### Description

Long Range Detectors are high performance presence detection system for use in almost any internal space. It was conceived to bring effective energy-saving control to large areas such as warehouses, sports halls, workshops, hangars, classrooms etc. The system offers many outstanding features and user options, making it the natural choice for large and prestigious situations. Long Range LightSpot is designed to the highest quality standards and performance criteria to ensure efficient and trouble-free operation in the most exacting locations.

Long Range Detectors comprise of 230-volt control units with single or dual volt-free output relays, rated to switch any type of load up to 10 amps.

### Features



Active presence detection by microwave technology



Passive photocell holds lights off in bright ambient conditions (Requires K4106). Active photocell has the capability to switch lights off in occupied areas



Off delay in minutes following the last observed movement after which the lights switch off



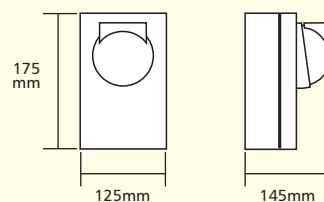
Detection pattern and range in metres under normal operating conditions



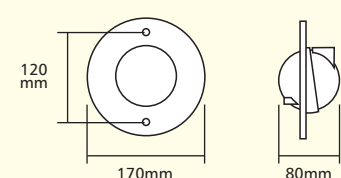
Dual circuit control. Relay 2 (K4040 model only) always influenced by photocell, relay 1 output can be influenced by photocell if configured

### Dimensions

#### K4036 – surface detector



#### K4035 – flush detector



## Universal Photocell

### Technical specification

Operating voltage:  
230V 50Hz

Power consumption:  
< 10W

Volt-free contact:  
6 Amps max. Any type of lighting load

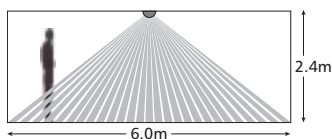
Ambient temperature range:  
0 to +40°C

Ballast control type:  
Single master; no other masters to be connected

Ballast control capacity:  
25 Max (1-10V, DSI, DALI Ballasts – ballast type selected via K4053)

Photocell sensitivity:  
0 to 5000 Lux (with a 20% reflective workplane)

Recommended mounting height:  
2.4m



Maximum mounting height:  
6.0m

Material:  
Flame Retardant PC/ABS

IP rating:  
IP3X

Weight:  
350g

### Description

The K4045 is a high performance regulating and switching photocell for DSI, DALI, Analogue 1-10V and non-regulating ballasts.

It can be used with all common types of control gear in almost any environment where lights would be left on unnecessarily when there is sufficient daylight.

The K4045 observes the controlled space, not just daylight, and takes account of all light contributions.

Photocell operation is extremely user-friendly: lights will not be switched on or off until the Passing Cloud Time delay has elapsed thus removing the possibility of nuisance switching.

The K4045 offers more advanced features and operational parameters than an ordinary, simple photocell. Consequently, it requires careful and considered commissioning and is aimed at higher specification projects.



K4045

### Features



Regulating photocell ensures a minimum maintained light level, taking account of the contribution from adjacent luminaires and daylight



Hand-held Controllers (K4051 and K4052) provide local user override



Remote programming via K4050 or K4053 ensures changes can be easily accommodated

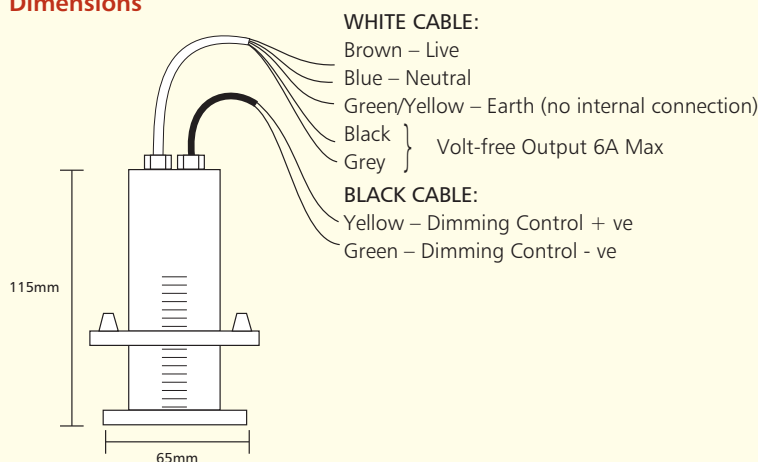


Incorporates simple scene-setting - up to six scenes can be set via user remote



Passing cloud timer – prevents nuisance switching when light levels fluctuate rapidly, can be set from 5-60 minutes

### Dimensions



## Accessories



K4050



K4051



K4052



K4053

### K4050 – Hand-held Programmer

#### Technical specification

Battery type:  
6V dc (2 x CR 2032 cells)

Typical battery life:  
3 years

Dimensions:  
75 x 58 x 18mm (L x W x D)

Weight:  
50g

#### Description

The K4050 is a simple-to-use, low-cost programming tool for use with MK's range of stand-alone lighting control products.

#### Features

Parameters, such as time delay and semi-automatic/fully automatic operation, are chosen via an array of 12 dip switches, the status of which is then programmed into the MK detector.

Most programmable parameters are catered for although not all options are available for programming on some products (see K4053 below).

#### Specification

The K4050 can also be used to set the regulating light level in conjunction with a suitable lux meter on supported products via a simple UP/DOWN/STORE command.

All detectors (except Standard PIRs, Digital Corner Mounted and Long Range) are programmable via the K4050 although not all the programmable parameters are supported by all detectors. Please check individual Technical Data Sheets for details.

### K4051 & K4052 – Hand-held Controllers

#### Technical specification

Battery type:  
3V dc (2 x AAA alkaline cells)

Typical battery life:  
1 year

Dimensions:  
120 x 56 x 22mm (L x W x D)

Weight:  
115g

Operating range:  
2.5m

#### K4051

The K4051 provides the same functions as the K4052 along with the ability to set and recall up to six different lighting 'scenes'. Supplied with wall bracket. See Technical Data Sheets on individual detectors to check compatibility.

#### K4052

This remote control offers the user temporary on/off override and light level adjustment. Supplied with wall bracket. See Technical Data Sheets on individual detectors to check compatibility.

### K4053 – Digital Programmer

#### Technical specification

Battery type:  
4.5V dc (3 x AAA alkaline cells)

Display:  
128 x 64 monochrome dot matrix LCD

Dimensions:  
150 x 85 x 35mm (L x W x D)

Weight:  
228g

#### Description

The K4053 Digital Programmer can be used with all K4050-compatible products; it offers a full range of programmable parameters and also a "Download" facility.

## Room Thermostat

### Standards and approvals

Complies with BS EN 60730-1, BS EN 60730-2-7,  
BS EN 55014-1, BS EN 55014-2  
Conforms to 73/23/EEC, (93/68/EEC) & 89/336/EEC (93/68/EEC & 92/31/EEC).

### Technical specification

Voltage Rating:  
230V AC 50Hz

Switch Rating:  
Terminal 3 – 10A resistive, 3A inductive  
Terminal 4 – 6A resistive, 2A inductive

Switch Type:  
Single pole, double throw (SPDT)

Temperature Setting Range:  
10 to 30°C

Thermal Differential:  
0.5-1-0°C (at a heat ramp of 3°C per hour with heat anticipator connected)



### Description

The KT6360BWHL is a mains voltage room thermostat designed to give automatic temperature control of domestic wet central heating systems. It can be used to directly switch a circulating pump or boiler, or to operate spring return and motor open/motor close zone valves. The KT6360BWHL can switch electrical heating loads up to 10A.

The KT6360BWHL thermostat can also be used for cooling applications.

### Features

- Dual diaphragm temperature sensing element
- Suitable for surface or switch box mounting
- Heat anticipator for close temperature control
- Indicator neon, illuminates on a call for heat
- Change-over contact switching
- Double insulated
- Earth wire parking terminal
- RFI suppression
- Large setting dial

### Installation

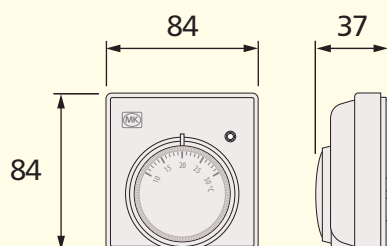
A room thermostat must be located in a position with good air circulation at average ambient temperature, preferably on an inside wall about 1.2 to 1.5m from the floor.

The thermostat must not be positioned in draughts, above a radiator or where it will be subject to localised heat gains from direct sunlight, water pipes or appliances.

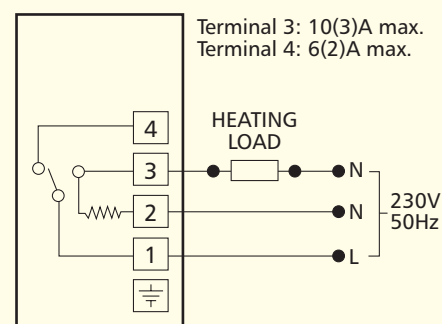
To obtain close temperature control the heat anticipator must be operational. This is achieved by wiring the unit as shown on the wiring diagram.

There are two knockouts on the top of the cover and one knockout on each side for surface wiring. When mini-trunking is used it must be fitted firmly against the thermostat cover so that there is no gap between the cover and trunking.

### Dimensions



### Wiring



N.B.1. Switching contacts are shown in the normally open position – i.e. no heat demand.

2. Typical heating loads: Motorised zone valve, pump, boiler.

## Electronic Timeswitch

### Standards and approvals

Complies with BS EN 60730-1, BS EN 60730-2-7,  
BS EN 55014-1, BS EN 55014-2  
Conforms to 73/23/EEC, (93/68/EEC) & 89/336/EEC (93/68/EEC &  
92/31/EEC).

### Technical specification

Switch Type:  
Single pole, double throw (SPDT)

Switch Rating:  
3(3)A

Timing Accuracy:  
± 1 min/month

Timing Resolution:  
Time of Day 1 minute  
Programme Times 10 minutes

Ambient Operating Temperature:  
0-50°C

Power Reserve:  
Minimum 4 days

Weight:  
330g approx (including wall plate)

Earthing:  
Double Insulated

Battery Back-Up:  
Integral battery with built-in charging circuit



### Description

KST6100CWHI is a 7 day single channel timeswitch that gives great flexibility offering up to three on/off switchings per day, additionally, each day could be programmed differently. Ideal for combi installations when the user has different heating needs from day to day or as a zone control on larger systems.

Transfer of programming information from one day to the next is simplified by the provision of a copy button.

KST6100AWHI is a 24 hour timeswitch with two on/off switching times per day. This unit can be used for combi boilers, added zones or any application where small electrical loads need switching.

A hinged cover conceals the programming buttons when not in use, leaving only the two override buttons exposed. The front cover also carries abbreviated user instructions on the inside for permanent ready reference.

### Features

- Built-in battery back-up
- Built-in start-up programme
- Clear digital display
- Ease of operation
- Temporary or permanent over-ride facilities
- 12-hour time display with am/pm indication
- Simple change to 24 hour clock display
- Programme indicator lights
- Double insulated
- Extra hour facility for one, two or three hour boost or programme extension
- Earth wire parking terminal

### Options

KST6100CWHI 7 Day Single Channel timeswitch with up to three ON/OFF periods a day.

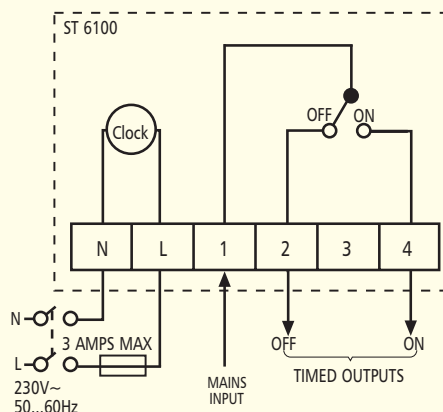
KST6100AWHI 24 Hour Single Channel time-switch with up to two ON/OFF periods a day.

### Installation

KST6100CWHI and KST6100AWHI can be either surface or flush switch box mounted, for both of which fixing screws are supplied. The wiring sub-base has holes to suit single switch boxes and breakouts for surface and channelled wiring and mini-trunking.

When wiring is completed the plug-in module is fitted onto the sub-base and secured by tightening the retaining screws.

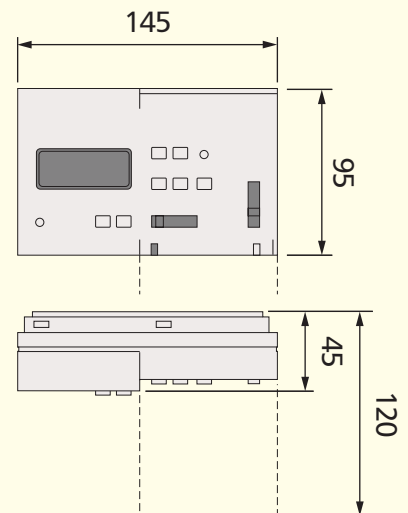
### Wiring



### Notes

1. Suitable for potential free mains voltage switching.
2. If normal mains voltage is required link terminal L and 1.

### Dimensions



### Minimum clearance

Above wall plate	40mm
Below wall plate	100mm
Left/right of wall plate	10mm

## Electronic Programmer

### Standards and approvals

Complies with BS EN 60730-1, BS EN 60730-2-7,  
BS EN 55014-1, BS EN 55014-2  
Conforms to 73/23/EEC, (93/68/EEC) & 89/336/EEC (93/68/EEC &  
92/31/EEC).

### Technical specification

Switch Type:  
Single pole, double throw (SPDT)

Switch Rating:  
3(3)A

Timing Accuracy:  
±1 min/month

Timing Resolution:  
Time of Day 1 minute  
Programme Times 10 minutes

Ambient Operating Temperature:  
0-50°C

Power Reserve:  
Minimum 4 days

Weight:  
330g approx (including wall plate)

Earthing:  
Double Insulated

Battery Back-Up:  
Integral battery with built-in charging circuit



### Description

The KST6400AWHI is a fully featured electronic programmer offering 24 hour programming with up to two ON/OFF periods per day, which can be set independently for heating and hot water.

A hinged cover conceals the programming buttons when not in use, leaving only the four override buttons exposed. The front cover also carries abbreviated user instructions on the inside for permanent ready reference.

### Features

- Independent time control of heating and hot water
- Up to three ON/OFF periods a day
- Built-in start-up programme
- Clear digital display
- Ease of operation
- Temporary or permanent over-ride facilities
- 12 hour time display with am/pm indication
- Simple change to 24 hour clock display
- Programme indicator lights
- Double insulated
- Extra hour facility for one, two or three hour boost or programme extension
- Earth wire parking terminal

### Options

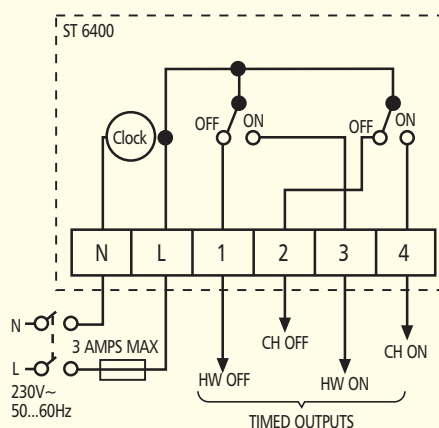
KST6400AWHI 24 hour full programmer with independent time control for heating and hot water.

### Installation

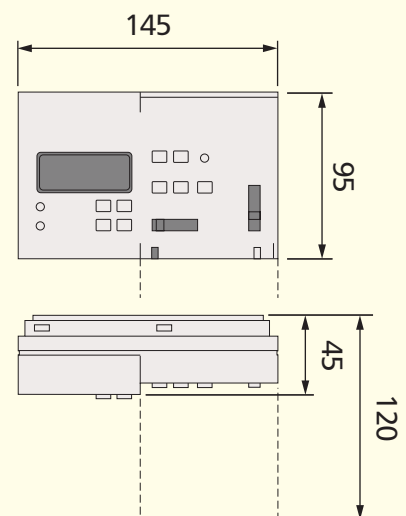
The KST6400AWHI can be either surface or flush switch box mounted, for which fixing screws are supplied. The wiring sub-base has holes to suit single switch boxes and breakouts for surface wiring and mini-trunking.

When wiring is completed the plug-in module is fitted onto the sub-base and secured by tightening the retaining screws.

### Wiring



### Dimensions





## Programmable Thermostat

### Standards and approvals

Complies with BS EN 60730-1, BS EN 60730-2-7,  
BS EN 55014-1, BS EN 55014-2  
Conforms to 73/23/EEC, (93/68/EEC) & 89/336/EEC (93/68/EEC &  
92/31/EEC).

### Technical specification

Switch Type:  
Single Pole, double throw (SPDT)

Electric Rating:  
230V~, 50...60Hz, 0.1A to 5A resistive  
0.1A to 2A inductive (0.6pf)  
24V~, 50...60Hz, 0.5A to 5A resistive  
0.5A to A inductive (0.6pf)



### Description

The KCMR701AWHI thermostat is designed to provide automatic time and temperature control of domestic heating systems.

It can be used as part of a system in conjunction with combi-boilers, oil-burners and gas fired boilers, circulation pumps, thermal actuators, zone valves and electric heat systems (<5A).

The KCMR701AWHI is designed with the installer in mind and includes a moulded back-plate with trunking guides and wiring breakouts to make installation quick and easy.

The unit is ideal for consumers who want reliable precise temperature control from a modern looking, simple to program and easy to use product.

### Features

- Attractive slim, modern styling
- 24 hour heating program
- Up to 4 daily independent time and temperature level changes
- Room Temperature Enquiry
- EEPROM memory holds the user program indefinitely
- OFF mode has an integral frost protection setting at minimum 5°C (installer adjustable) so that pipes in the house will never freeze in winter
- Battery powered by 2 x AA size (LR6) alkaline cells
- Minimum battery life of 2 years with low battery warning indicator
- Surface or wall box mounting options, with trunking guides and wiring breakouts to simplify installation
- No installer links or special installer switches on the back of the unit mean no adjustment is required for combi-boilers and most domestic central heating systems

# Programmable Thermostat

## Installation

### Location

The KCMR701AWHI thermostat is the control element of the heating system and, therefore, MUST be located in a position with good air circulation, at average room temperature and on an inside wall, 1.5 metres above the floor level. Do not position the KCMR701AWHI thermostat near sources of heat (radiators, hot air vents, TV or lights), near doors or windows, or in direct sunlight.

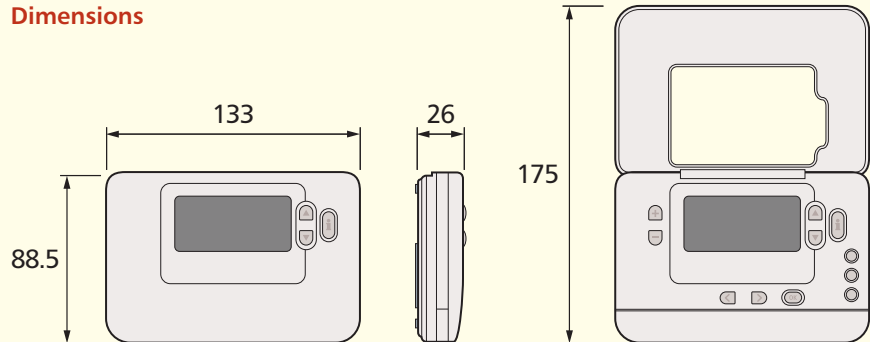
### Mounting

The KCMR701AWHI thermostat can be mounted directly on the wall surface or on to an electrical wall box.

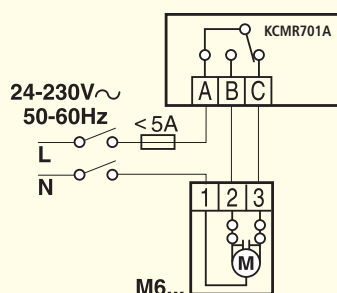
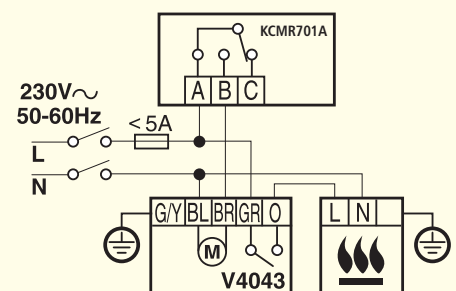
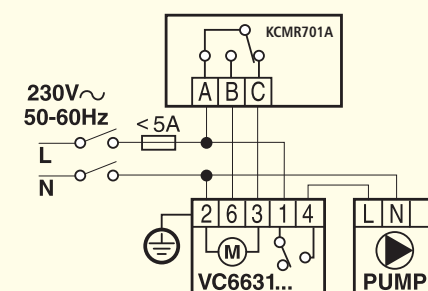
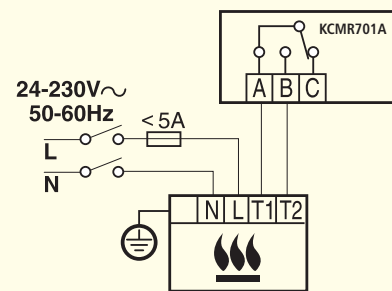
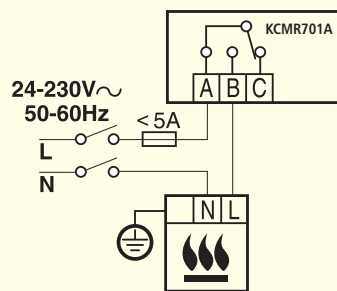
### Wiring

The KCMR701AWHI thermostat is designed for fixed wiring only and must be installed in accordance with the latest I.E.E. regulations. Ensure the wiring connection to the supply is via a fuse rated at no more than 5 amps and a Class "A" switch (having contact separation of at least 3 mm in all poles).

## Dimensions



## Wiring



## Programmable Thermostat

### Standards and approvals

Complies with BS EN 60730-1, BS EN 60730-2-7,  
BS EN 55014-1, BS EN 55014-2  
Conforms to 73/23/EEC, (93/68/EEC) & 89/336/EEC (93/68/EEC &  
92/31/EEC).

### Technical specification

Switch Type:  
Single Pole, double throw (SPDT)

Electric Rating:  
230V~, 50...60Hz, 0.1A to 5A resistive  
0.1A to 2A inductive (0.6pf)  
24V~, 50...60Hz, 0.5A to 5A resistive  
0.5A to A inductive (0.6pf)



### Description

The KCMR707AWHI thermostat is designed to provide automatic time and temperature control of domestic heating systems.

It can be used as part of a system in conjunction with combi-boilers, oil-burners and gas fired boilers, circulation pumps, thermal actuators, zone valves and electric heat systems (<5A).

The KCMR707AWHI is designed with the installer in mind and includes a moulded back-plate with trunking guides and wiring breakouts to make installation quick and easy.

The unit is ideal for consumers who want reliable precise temperature control from a modern looking, simple to program and easy to use product.

### Features

- Attractive slim, modern styling
- 7 day heating program
- Up to 4 daily independent time and temperature level changes
- Room Temperature Enquiry
- EEPROM memory holds the user program indefinitely
- OFF mode has an integral frost protection setting at minimum 5°C (installer adjustable) so that pipes in the house will never freeze in winter
- Battery powered by 2 x AA size (LR6) alkaline cells
- Minimum battery life of 2 years with low battery warning indicator
- Surface or wall box mounting options, with trunking guides and wiring breakouts to simplify installation
- No installer links or special installer switches on the back of the unit mean no adjustment is required for combi-boilers and most domestic central heating systems

# Programmable Thermostat

## Installation

### Location

The KCMR707AWHI thermostat is the control element of the heating system and, therefore, MUST be located in a position with good air circulation, at average room temperature and on an inside wall, 1.5 metres above the floor level. Do not position the KCMR707AWHI thermostat near sources of heat (radiators, hot air vents, TV or lights), near doors or windows, or in direct sunlight.

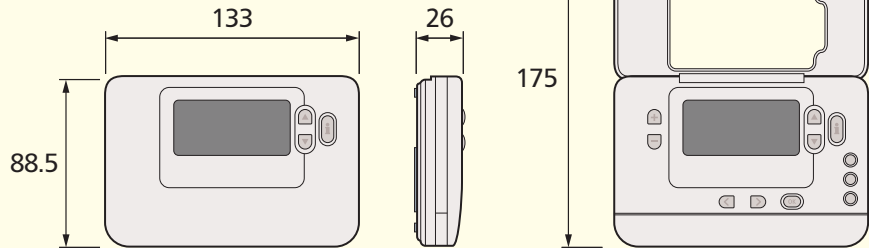
### Mounting

The KCMR707AWHI thermostat can be mounted directly on the wall surface or on to an electrical wall box.

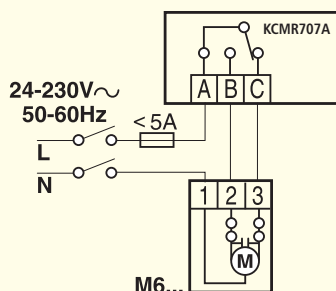
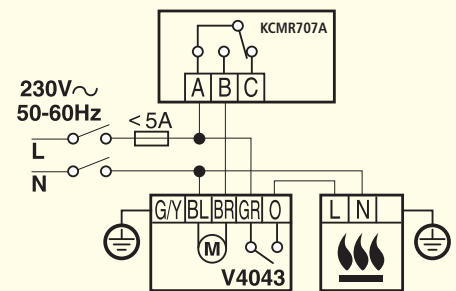
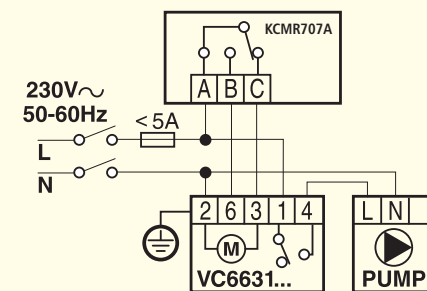
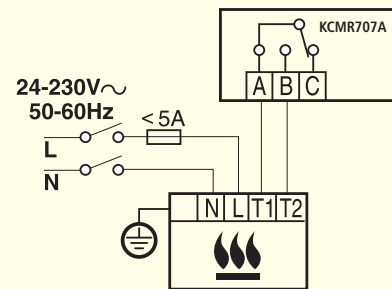
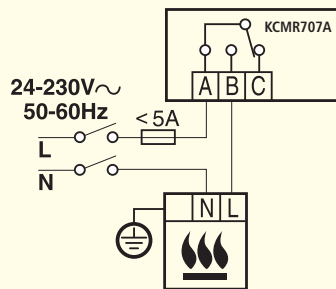
### Wiring

The KCMR707AWHI thermostat is designed for fixed wiring only and must be installed in accordance with the latest I.E.E. regulations. Ensure the wiring connection to the supply is via a fuse rated at no more than 5 amps and a Class "A" switch (having contact separation of at least 3 mm in all poles).

## Dimensions



## Wiring



## Ceiling Switches

### Standards and approvals

3164WHI fully complies with the 16th Edition Wiring Regulations (BS 7671: 2008 with respect to safety isolation for maintenance purpose. Conforms to BS EN 60669-1: 1999

3190WHI, 3191WHI, 3192WHI, 3131WHI, 2051WHI, 2056WHI, conform to BS EN 60669-1: 1999

3151WHI conforms to BS EN 60669-1: 1999

### Technical specification

#### Electrical

Voltage rating:  
250V a.c.

Maximum rating:  
See range details

Note: Switches do not have to be derated when used with resistive or fluorescent loads

Terminal capacity:

3131, 3190, 3191, 3192:

4 x 1.0mm<sup>2</sup>  
3 x 1.5mm<sup>2</sup>

3151,

4 x 2.5mm<sup>2</sup>  
2 x 4.0mm<sup>2</sup>  
1 x 6mm<sup>2</sup>

3164,

4 x 4mm<sup>2</sup>  
3 x 6mm<sup>2</sup>  
1 x 10mm<sup>2</sup>  
1 x 16mm<sup>2</sup>

2051/2056, Earth Terminal

6 x 1mm<sup>2</sup>  
4 x 1.5mm<sup>2</sup>  
2 x 2.5mm<sup>2</sup>  
1 x 4mm<sup>2</sup>  
1 x 6mm<sup>2</sup>

#### Physical

Ambient operating temperature:  
-5°C to +40°C  
(the average value over 24 hrs not exceeding 25°C)

IP rating:  
IP3X

Max. installation altitude:  
2000 metres



### Description

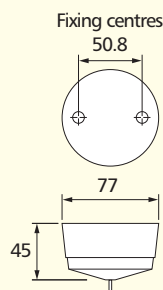
A range of 6 and 16 amp ceiling switch options plus a 50 amp DP flush mounted ceiling switch.

### Features

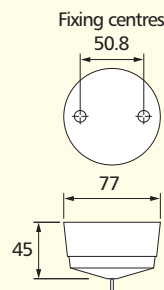
- Mounting blocks have an earth terminal rivetted into their bases
- 3190RCWHI has a retractive (momentary) switch action and can be wired as either pull to make or pull to break
- 3190RCWHI has a red pull cord
- Ceiling switches with standard white cords are 1.5m minimum length, and with standard red cords are 2m minimum length
- Ceiling switches with white cords **and bangles** are 2m minimum length, and with red cords **and bangles** are 3m minimum length
- 3164WHI is fitted with mechanical OFF indicator
- 3164 has a full 3 mm contact gap when off
- 3164 may be surface mounted

### Dimensions (mm)

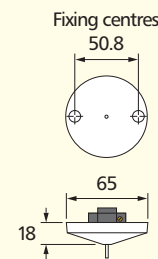
3191WHI/3192WHI



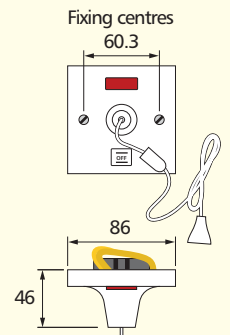
3190RCWHI



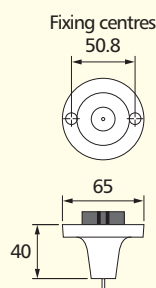
3131WHI



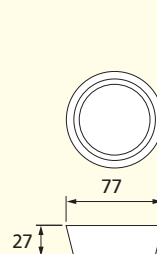
3164WHI



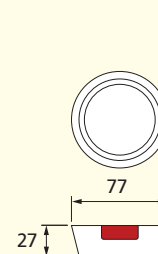
3151WHI



2051WHI



2056WHI



### Installation

MK ceiling accessories are safe for use in all normal lighting applications. Do not mount them where they may be subjected to excessive moisture or dampness.

### Wiring

Products must be installed in accordance with BS 7671: 2008.

For a full range of corresponding products, see pages 67-70 in the product selector.

## Ceiling Roses and Pendants

### Standards and approvals

Heat resistant lampholders comply with BS EN 61184: 1997 T2

All ShockGuard lampholders comply with BS 7895: 1997 and BS EN 61184: 1997 T2

Ceiling roses comply with BS 67: 1987

Pendant sets are supplied with heat resisting PVC insulated and sheathed flexible 0.75 two core circular cable complying with BS 6500: 2000 (Table 29)

### Technical specification

#### Electrical

Lampholders and batten lampholders

Voltage rating:  
250V a.c.

Maximum rating:  
150 watts

Terminal capacity:  
Live, neutral & earth  
3 x 1.0mm<sup>2</sup>  
2 x 1.5mm<sup>2</sup>

Ceiling roses & base of pre-wired batten lampholders

Voltage rating:  
250V a.c.

Maximum rating:  
6 amps

Terminal capacity:  
Live, neutral & earth  
4 x 1.0mm<sup>2</sup>  
3 x 1.5mm<sup>2</sup>  
1 x 2.5mm<sup>2</sup>

#### Physical

Ambient operating temperature:  
-5°C to +40°C

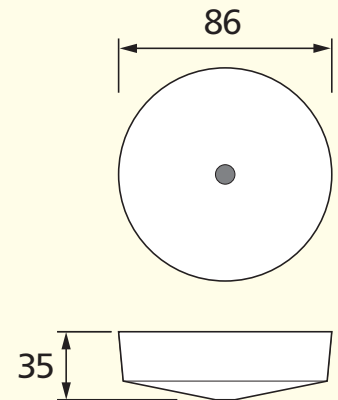
IP rating:  
IP4X

Max. installation altitude:  
2000 metres



Ceiling Rose

### Dimensions (mm)



### Description

The range includes ShockGuard™ SG type lampholders, pendant sets, batten lampholders and ceiling roses.

### Features

#### ShockGuard™

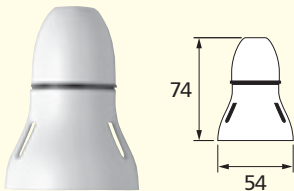
- Automatically shields the contacts as soon as the lamp is removed
- The contacts remain shielded until a new lamp is slotted into place
- While there is no lamp in place there is no danger of electrocution

#### Ceiling roses

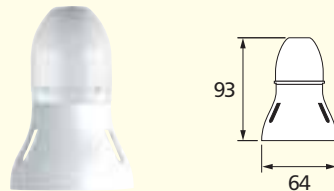
- Clear base and pre-cut aperture for ease of installation
- Clear markings
- Terminal layout allows cables to be cut to even length
- Earth terminal point used for easier cable access
- Halo available to give professional finish on damaged ceilings (for use with ceiling roses and pendant sets only)

## Lampholders and Shockguard type Lampholders

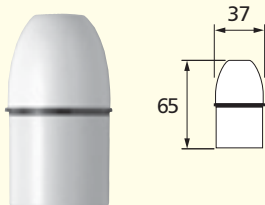
### Dimensions (mm)



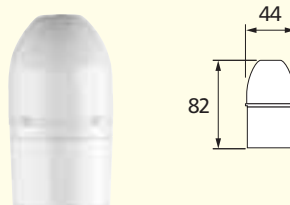
**Standard Lampholder with protective skirt**



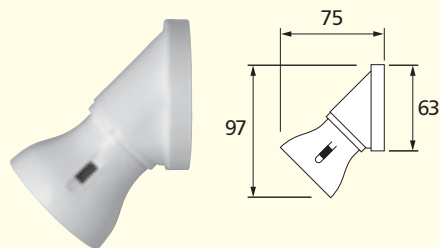
**SG Type Lampholder with protective skirt**



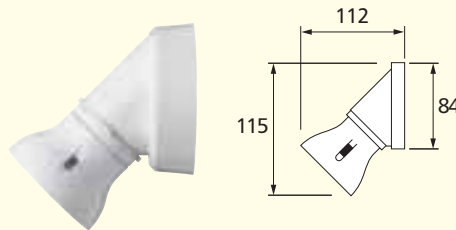
**Standard Lampholder**



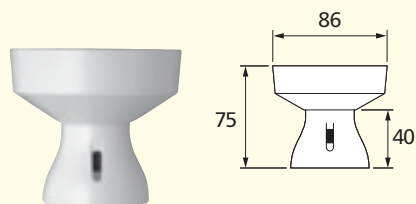
**SG Type Lampholder**



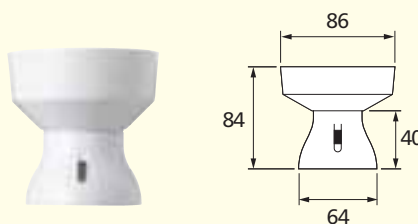
**Standard Angled Batten Lampholder**



**SG Type Angled Batten Lampholder**



**Standard Batten Lampholder**



**SG Type Batten Lampholder**

### Heat Resistance

Two levels of heat resistance are nominated for lampholders but at different maximum working temperatures and the products must be identified by a different marking code.

Heat resistance	Max working temp
T2	Lamp cap temp 210°C marked BS 7895 and BSEN 61184 T2

### Lamp wattage rating

All MK lampholders comply with category T2 BS EN 61184. It is important to ensure that the wattage rating of the lamp used is not higher than that for which the particular shade or luminaire is designed. The maximum rating in watts is marked on all shades and luminaires that comply with the requirements of BS 4533: Part 101.

### Weight of fittings

Ceiling roses and pendant sets are suitable for fittings of up to 3 kg. Heavier fittings must be installed using independent support, e.g. ceiling hook.

### Angled batten lampholders

Can be mounted direct to the wall. The surface mounting patress (1179 WHI) may be used if more wiring space is required.

### Straight batten lampholders

Can be screwed direct to the ceiling but it must be ensured that it is fastened to a wooden joist. Integral Ceiling Rose included.

### Ceiling roses and pendant sets

Flush mounting to circular conduit boxes in accordance with BS 4568: Part 2.

### Installation

MK ceiling accessories are safe for use in all normal lighting applications. Do not mount them where they may be subjected to excessive moisture or dampness.

### Wiring

Products must be installed in accordance with BS 7671: 2008.

## 3 and 4 Pin Accessories/Pre-Wired

### Standards and approvals

BS 6972 & BS 5733

Heat resisting three core circular cable BS 6972 & BS 5733 to BS 6500:2000 (Table 29)

Low smoke zero halogen three core circular cable



### Technical specification

#### Electrical

Voltage rating:  
250V a.c. 50Hz

Current rating:  
6 Amp

#### Terminal Capacity (Accessories)

Phase, neutral, earth & 'loop in' terminals will each accept:

K3230, K4230 – 1 x 0.75 or 1 x 1.00mm conductors

K3220, K3212, K3240, K4220, K4214 and K4240 – 5 x 0.75, 5 x 1.00, 4 x 1.50, 3 x 2.50 or 2 x 4.00mm<sup>2</sup> conductors

#### Physical

Static Suspension load:  
5kg max

Ambient operating temperature:  
-5°C to +40°C  
(not to exceed an average of more than 25°C in any 24 hour period)

IP rating:  
IP2XD

Max. installation altitude:  
2000 metres

### Description

A connection and distribution system that brings convenience and versatility to lighting installations. The range consists of a modular plug and socket interface which provides electrical connection in one easy click-in action. Luminaries can be plugged in without isolating the circuit. All live contacts are inaccessible and the earthing connection is made before any other.

Wired products incorporate either heat resisting (WHR) or low smoke zero halogen (LSF) insulated and sheathed flexible 0.75mm four core circular cable.

### Features

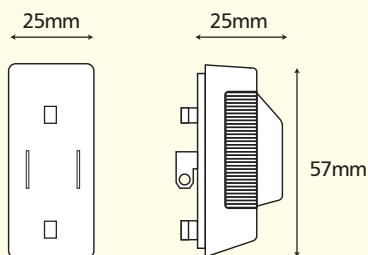
- Live contacts are inaccessible
- Earth Contact – first to make, last to break
- Mechanical and Electrical Connection in one 'click-in' action
- Strong load grips support up to 5kg

For a full range of corresponding products, see pages 72-76 in the product selector.

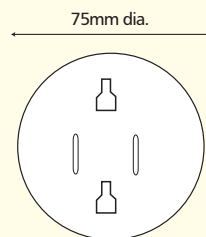
### MOUNTING BOXES

	Surface	Flush (dryline)	Flush (solid)
K3220/K3240	K3220/K4220/K4240WHI	N/A	N/A
K4214	K2160WHI	QFB1WHI	861ZIC

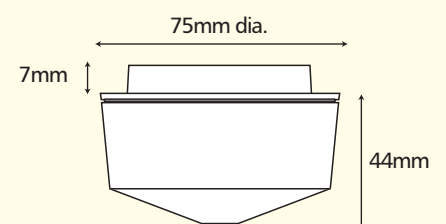
### Dimensions



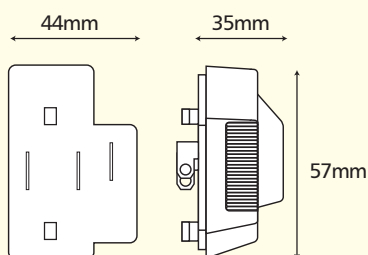
K3230, K3232, K3233



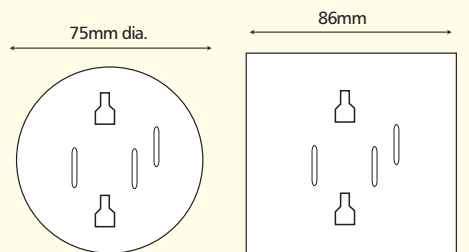
K3220



K3240, K3242, 3243  
K4240, K4242, 3443

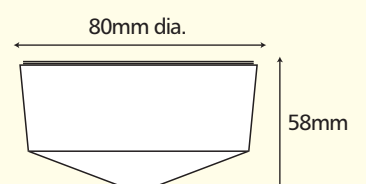


K4230, K4232, K4233



K4220

K4214



K3241



## Distribution Boxes

### Standards and approvals

BS 5733

#### Technical specification

##### Electrical

 Current rating:  
6 amps

 Terminal Capacity:  
3 x 6mm rated at 16 amps

##### Physical

 Conduit entries with snap fit blanks;  
20 and 25mm in top, bottom and back faces.  
Outlets to be wired as 1 or 2 blanks

 Ambient operating temperature:  
-5°C to +40°C  
(not to exceed an average of more than 25°C in any 24  
hour period)

 IP rating:  
IP2XD

 Max. installation altitude:  
2000 metres

**K4210 pictured**

### Description

Distribution boxes consisting of an extruded aluminium body with VO rated plastic terminal housing. Both 3 and 4 pin plugs can be used with the distribution box 4 pin socket outlets.

### Installation

Provision for screw (No. 8) fix to walls or trunking and slots for Caddy Clips\* on top, bottom and back faces. Conduit entries with snap fit blanks; 20 and 25mm in top, bottom and back faces. Outlets can be wired as 1 or 2 banks.

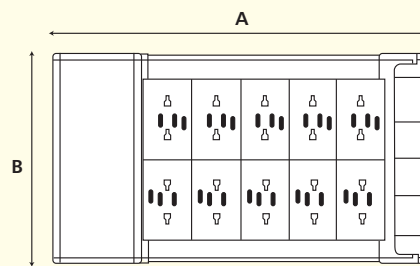
\*Caddy Clip is a registered trade mark of Erico Europa (UK) Ltd. Reading.

For a full range of corresponding products, see pages 72-76 in the product selector.

### Features

- Fixing of distribution box to lighting trunking made easy through choice of cable entry points
- Distribution box can be suspended on drop rods or fitted to the wall or ceiling

### Dimensions (mm)

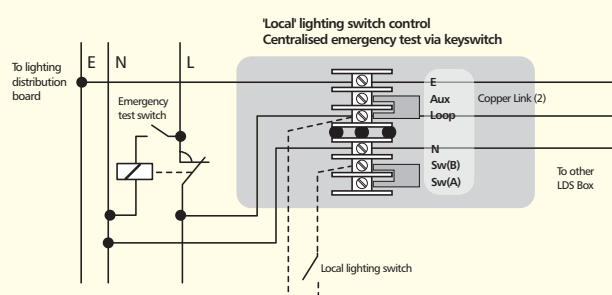
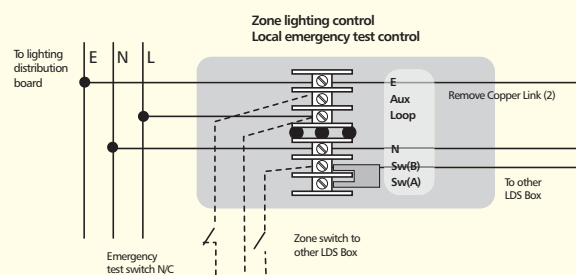
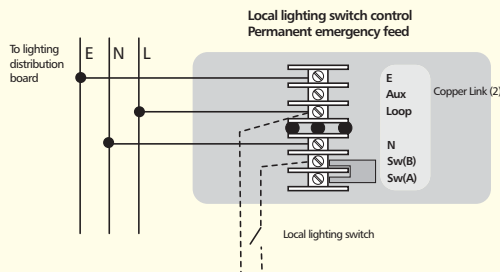


#### DIMENSIONS (MM)

	A	B
K4204	237	222
K4208	400	222
K4210	465	222

**Note:** K4210 pictured

### Wiring Diagrams



## Clearshave

### Standards and approvals

All Clearshave Plus products comply with  
 BS EN 60598-2-1: 1989  
 Clearshave shaver/toothbrush lights comply with  
 BS EN 61558-2-5: 1989



### Technical specification

#### Electrical

Voltage rating:  
240V a.c., 50Hz

Transformer:  
20VA at 230V or 115V

Wattage:  
11W to 60W

IP Rating:  
IP2XD For Luminaire  
IP41 For Shaver/toothbrush Socket Outlet

#### Physical

Ambient operating temperature:  
-5°C to +40°C  
(not to exceed an average of more than 25°C in any 24  
hour period)

Max. installation altitude:  
2000 metres

Luminaire switch rating 1 AMP

### Features

#### General

- Enclosure and diffuser moulded from impact resistant polycarbonate thermoplastic
- Luminaire is pull cord operated
- Luminaire may be wired with 2-way switching
- Clearly marked terminal block. Each terminal has capacity for 1 X 1.5mm<sup>2</sup> rigid conductor
- Normal mounting position is horizontal on a vertical surface
- Provision for surface cable entry using 15mm x 15mm trunking adaptor provided (Except 708WHI)

#### Shaver/Toothbrush Socket Outlet

- Automatic primary supply switching on insertion of plug
- Choice of 230V or 115V output socket positions
- Safety interlocked shutters to prevent insertion of two plugs simultaneously
- Current Rating: 200mA max.
- Maximum load: 20VA

### Installation

The Clearshave range may be mounted horizontally or vertically on a flat, vertical surface. Provision is made in the centre of the backplate for mounting on a round box to BS 4607 or BS 4568, or on a single gang box to BS 4662 of 16mm depth.

### Description

Tungsten and fluorescent lamps make the Clearshave range the obvious choice for bathroom and washroom areas. Units are available with or without a shaver/toothbrush socket and can be vertically or horizontally mounted.

A standard pull cord controls lighting and two way switching allows units to be linked to a lightswitch or another Clearshave.

#### Shaver/toothbrush outlet

The shaver/toothbrush outlet is automatically switched on by insertion of a shaver/toothbrush plug and is protected against overload. In the event of an overload, the unit will reset a few minutes after the shaver/toothbrush is unplugged.

The shaver/toothbrush outlet may be used without the light being switched on.

For a full range of corresponding products, see pages 77-79 in the product selector.

### Thermal Switch

All fluorescent lamps have a thermal switch fitted in series with the ballast, which disconnects the supply to the lamp should a fault occur within the ballast circuit.

#### DIMENSIONS (mm)

List No.	Overall Length (mm)	Overall Height (mm)	Overall Depth from wall (mm)
K708WHI	448	100	82.5
K808WHI	448	100	82.5
K711WHI	605	100	82.5
K712WHI	758	100	82.5
K811WHI	605	100	82.5
K812WHI	758	100	82.5
K818WHI	448	100	82.5

#### Replacement Lamps

##### K708WHI

Tungsten white tube, with double end cap connection, 284mm long, 26mm diameter

##### K808WHI and K818WHI

11W single ended compact fluorescent tube (CFL), single turn, colour warm white, two pin type G23 connection, 225mm long, 10mm diameter

##### K711WHI and K811WHI

15W double ended fluorescent tube, colour warm white, bi-pin connection, 450mm long, 26mm diameter

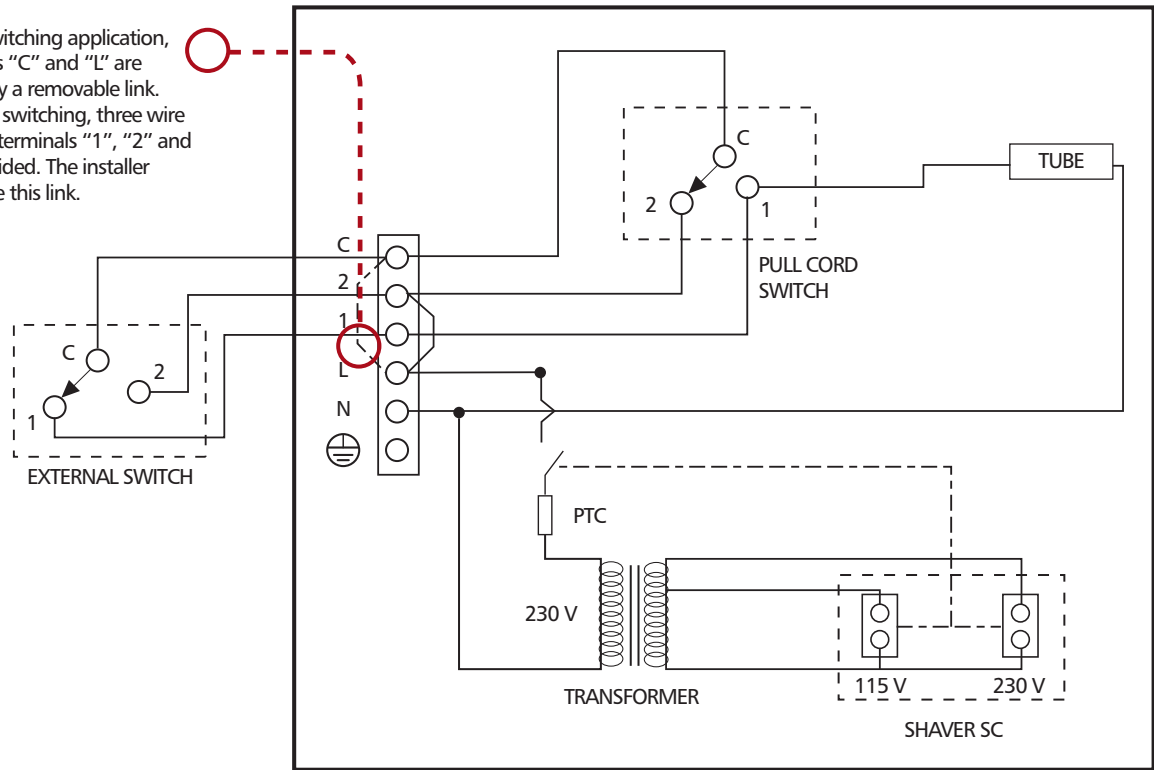
##### K712WHI and K812WHI

18W double ended fluorescent tube, colour warm white, bi-pin connection, 600mm long, 26mm diameter

## Clearshave

### CONNECTION DIAGRAMS

For 1 way switching application, the terminals "C" and "L" are connected by a removable link. For two way switching, three wire connection, terminals "1", "2" and "C" are provided. The installer must remove this link.



### Earthing: All Metal Frontplate Products

To comply with IEE regulations: the metal front plate must be earthed. All earth terminals provided must be connected to the protective earth conductor.

### Telephone Secondary and Data Sockets

To provide customers with a high level of flexibility the voice and data decorative wiring devices are available in modular formats.

For example to produce a Telephone Secondary Socket the following items are required:

Range	Products Required	
<b>Albany Plus</b>	K181	K5821WHI
<b>Aspect</b>	K24181	K5821WHI
<b>Edge</b>	K14181	K5821WHI
<b>Alloy</b>	K181	K5821WHI

Or

Range	Products Required		
<b>Albany Plus</b>	K182	K5821WHI	2 x K186WHI
<b>Aspect</b>	K24182	K5821WHI	2 x K186WHI
<b>Edge</b>	K14182	K5821WHI	2 x K186WHI
<b>Alloy</b>	K182	K5821WHI	2 x K186WHI

## Installation

The MK 'Aspect' range of products consists of the main product complete with its support frame and clipping medium, plus a separate frontplate. The product is mounted to the wall, after wiring, and the frontplate clipped onto the frame.

1. The frontplate is supplied loose to aid installation.
2. Make sure not to crush or deform the spring steel clips situated along one edge of the product support frame.
3. A gasket is also supplied with each product, which may prove useful on uneven walls. See note 5 below.
4. Using the gasket with all switches and the German socket, will ensure full compliance with the appropriate standards.
5. Both standards set out to guarantee full engagement of the frontplate on uneven surfaces, even when there is a mismatch of as much as 1mm between the distance the main body of the product is from the wall and that of the frontplate.
6. Where no gasket is used, if thick wallpapers are cut such that they fit around the support frame and therefore remain under the edge of the frontplate, full plate engagement with the clips may be restricted.

Note when installing Aspect do not over tighten screws, so as to prevent damage or distortion to the product or support frame.

## Frontplate Removal

1. Turn off the power supply.
2. Carefully slide a screwdriver between the ramp on the main body of the product and the notch in the lower right hand edge of the plate.
3. On uneven walls, make sure the screwdriver does not go between the spring steel ramp and the wall, or damage to the wall and/or product could result.
4. Carefully slide the blade upwards and then gently lift the handle away from the wall, which will lever the plate away from the first clip. See Fig.4.
5. With the first clip released, support the plate with one hand and continue to move the blade to the left under.

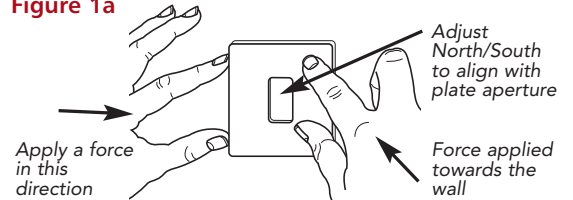
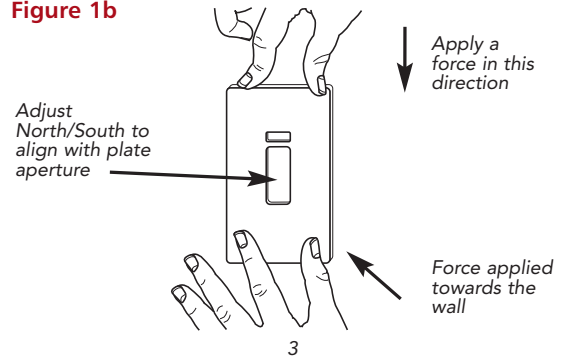
## Data products in euromounting frames

Products operating at extra low voltage levels (<50V) must not be mounted in the same euro enclosures as equipment rated in excess of 50V (e.g. mains socket).

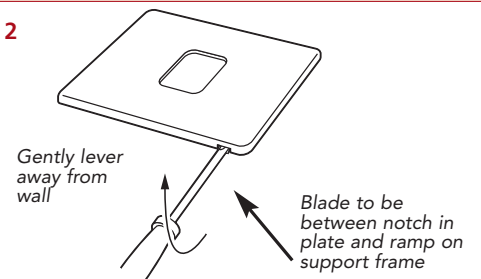
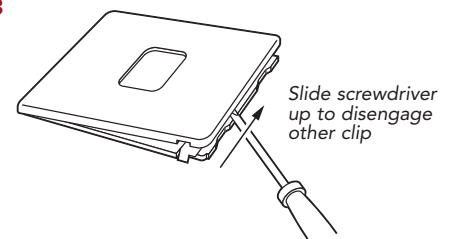
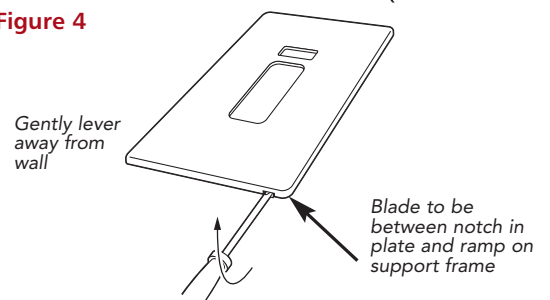
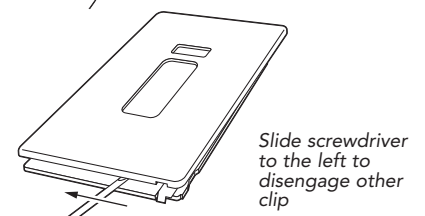
## Cleaning Frontplates

In order to protect the quality surface finish of the front plate, periodic cleaning should only consist of polishing with a dry lint free soft cloth.

## Frontplate Installation

**Figure 1a**

**Figure 1b**


## Frontplate Removal

**Figure 2**

**Figure 3**

**Figure 4**

**Figure 5**


## Edge Technical: General information

### Mounting Boxes

Due to the slimline design MK Edge accessories require deeper back boxes than standard. They are designed to fit into folded metal boxes that comply with BS 4662. To ensure products can be correctly installed, the box must always be installed flush or sub flush to the surface to a maximum depth of 6mm.

The recommended depth of boxes for the different types of wiring accessories are as follows:

MOUNTING BOXES	
Product Depth	Box
Socket Outlets	35mm
Lockable Socket	47mm
Lockable Switch	47mm
German style 2 pole + E Socket Outlet mounted in Euro Frame	47mm
Connection Units	47mm
Plateswitches	35mm
Grid System Switches*	35mm
Dimmer Switches	35mm
Telephone, Television and Data Outlets	35mm
Cooker Control and 50A Switches	47mm
Shaver Supply Units	47mm
32A Triple Pole and Neutral Switch	List no. 5268ALM

**\*Note:** If Grid system accessories are to be fitted and the installation requires the attachment of conduit via nuts inside the mounting box, then it is recommended that a box depth of 47mm is used.

### Fixing Screws

The surface head of Edge fixing screws is treated and compliment the finish of the frontplate. To prevent damage to the fixing screw extreme care is required. It is recommended that a screwdriver with a maximum blade of 3.5mm is used.

## Lockable Switchsocket Outlet

### Standards and approvals

All Edge 13A socket outlets comply with BS 1363: Part 2:1995.

#### Technical specification

##### Electrical

Voltage rating:  
250V a.c.

Current rating:  
13A

Terminal capacity:  
Live, neutral & earth  
3 x 2.5mm<sup>2</sup>  
2 x 4mm<sup>2</sup>  
1 x 6mm<sup>2</sup> (stranded)  
(Dual earth terminals)

##### Physical

Ambient operating temperature:  
-5°C to +40°C  
(not to exceed an average of more than 25°C in any 2 hour period)

IP rating:  
IP2XD

Max. installation altitude:  
2000 metres



### Description

The lockable 13 amp socket is designed for ease of installation and has all the design features of the Edge range. The built-in lock ensures that power cannot be provided without key operation making it ideal for communal areas such as hotel lobbies. The key can be removed from the lock in the on or off position leaving the socket with or without power supply.

The product can be quickly installed as replacement for existing 2 gang 13 amp sockets or in a new installation (assuming suitable 47mm deep mounting box is in position).

**Note:** The lock fitted to each socket is universal.

### Installation

Edge socket outlets can be wall or bench mounted. Do not mount or use as a trailing socket or where they may be subject to excessive moisture or dampness.

### Features

- Built in lock ensures power cannot be provided without key operation
- Printed terminal markings on grey rear mouldings for clearer identification
- Double pole switching
- Only one size of screwdriver required for installation
- Dual earth terminals for high integrity earthing

## Combination Plate

### Standards and approvals

All Edge 13A socket outlets comply with BS 1363: Part 2:1995.

### Technical specification

#### Electrical

Voltage rating:

250V a.c.

Current rating:

13A per socket outlet

Terminal capacity:

Live, neutral & earth

3 x 2.5mm<sup>2</sup>

3 x 4mm<sup>2</sup>

2 x 6mm<sup>2</sup> (stranded)

(Dual earth terminals on all standard sockets)

#### Physical

Ambient operating temperature:

-5°C to +40°C

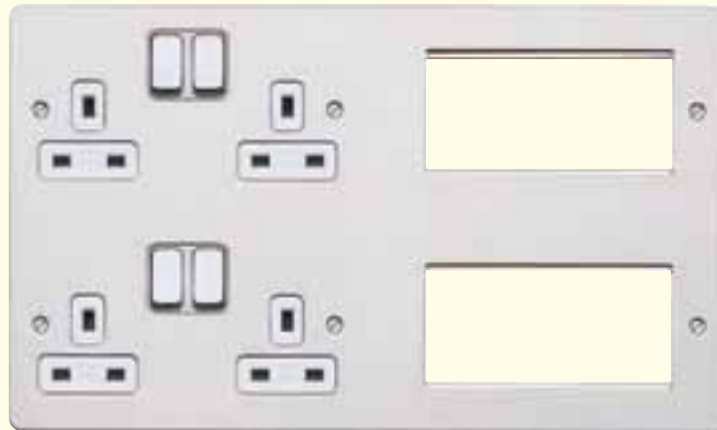
(not to exceed an average of more than 25°C in any 24 hour period)

IP rating:

IP2XD

Max. installation altitude:

2000 metres



### Description

A range of combination plates designed for ease of installation and having all the advantageous design features of the Edge range.

These combination socket outlets provide interior designers and installers with a stylish and practical wiring device solution. The K14100 combination socket outlet allows for the inclusion of up to eight Euro one-gang modules, which could include datacoms, telecoms, plus TV and Satellite modules.

Alternatively, Euro Power Modules i.e. German, French/Belgium and American socket outlets may be used.

#### Note:

- Pre-configured back boxes (K14201, K14101 & K14206 35mm and K14202, K14102 and K14207 47mm) are available for use with the combination plates. These back boxes should always be used to ensure alignment of the fixing screws is correct and proper segregation between mains and extra low voltage products is maintained.
- Mains operated products and extra low voltage modules must not be installed within the same frontplate aperture. Refer to BS 7671: 2008 for details.
- When removing the fixing screws and front plate from an installation to gain access to low voltage modules, please be aware that there will also be access to the mains supply.

All pre-fitted sockets come complete and are fitted with two earth terminals on a common busbar to provide a double earth facility for use when installations require a high integrity protective connection as specified within BS 7671, IEE Wiring Regulations.



Combination plates allow the use of a variety of power and data modules making them ideal for hotels.



## Combination Plate

### Features

- Metal-capped rockers designed to match the chosen front plate finish
- 3 pin operated safety shutter
- Printed terminal markings on grey rear mouldings for clearer identification
- Top access, angled terminals make wiring easier and quicker
- 3mm minimum switch contact gap
- Double pole switching
- Additional electrical safety from neutral 'make first', 'break last' feature
- Switch contacts with silver contacts on both surfaces for good continuity
- Dual earth terminals on pre-fitted sockets are for high integrity earthing.
- Backed out and captive terminal screws on pre-fitted sockets
- Pre-configured backboxes to ensure alignment of the fixing screws is correct and proper segregation between circuits is maintained to comply with BS 7671: 2008 17th Edition wiring regulations



**1 gang switchsocket – view from rear**

Top-facing, angled, backed-out terminals make wiring easier and quicker.

### Installation

Edge socket outlets can be wall or bench mounted. Do not mount or use as a trailing socket or where they may be subject to excessive moisture or dampness.

## Modular Switching System

### Standards and approvals

#### Switch modules

BS EN 60669-1: 1999

#### Indicator units

BS 5733:2010

#### Dimmer switches

Dimmers comply with IEC 669-2-1, BS EN 55015

#### Accessory modules

Single non-isolated, TV/FM socket outlet,  
BS 3041 Part 2: 1977

#### Universal Socket

BS 5733:2010

### Features

- Grid modules clip fit to frame without special tools
- Modules can be removed/replaced when grid frame is fixed in position
- Grid Plus frontplates available to match all MK wiring device ranges
- All products are 100% tested before delivery
- Options of neon/filament indicators label in rocker or printed rockers
- Wide variety of switch modules rated at 10 or 20 amps
- Single or double dimmer modules available
- Vast range of grid plates and modules from one source
- High quality grid frame
- Grid frame earth terminal has 16mm<sup>2</sup> cable capacity
- Backed out and captive terminal screws
- Plated grid frame prevents corrosion
- Up to 12 gang Logic Plus grid frontplates and up to 24 gang in decorative metal finish frontplates
- Top access terminal screws

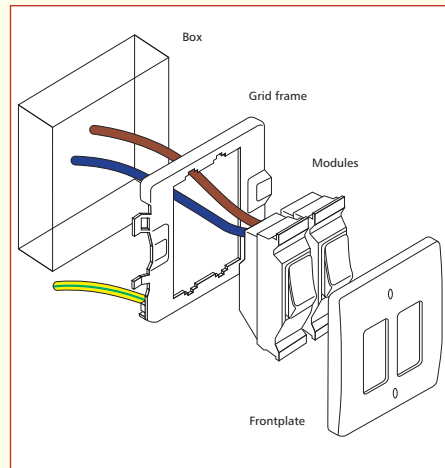


### Description

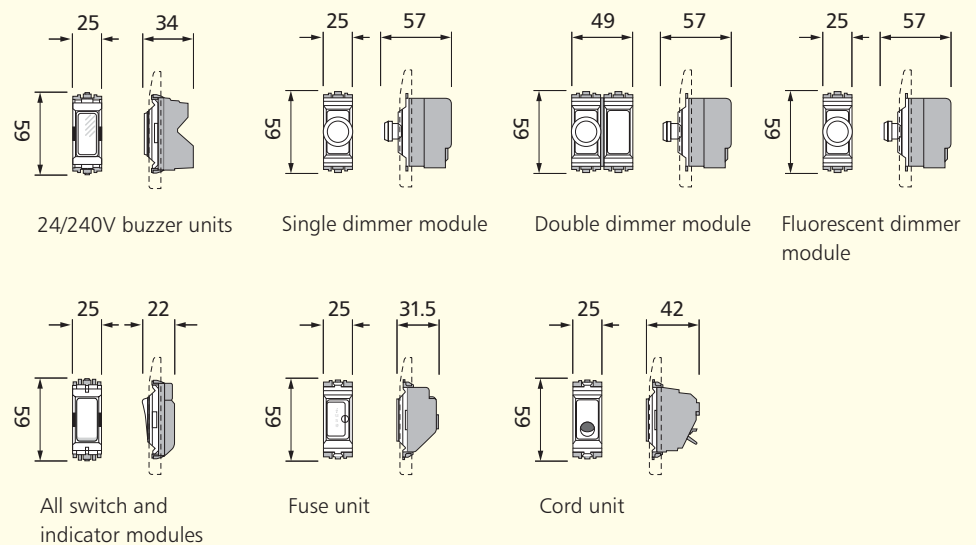
Grid Plus is a comprehensive modular switching and monitoring system ideal for a variety of applications within the commercial, public and domestic sectors.

Grid Plus cover plates have the advantageous design features of the MK wiring device ranges and the interchangeable modules also feature many of the wiring and installation benefits common to the MK wiring device ranges.

The system is extremely easy to assemble (see illustration) and modules can be individually changed without re-wiring of complete assembly by removal of frontplate and simply clipping in or out as required. For further installation details see 'Installation' overleaf.



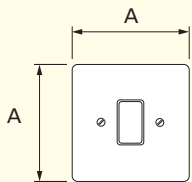
### Module Dimensions (mm)



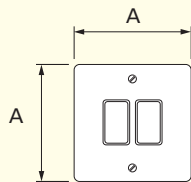
Multiple dimmer installation load ratings When installing more than one dimmer in multi-gang plates, the power rating must be reduced to allow for heat generation.

## Modular Switching System

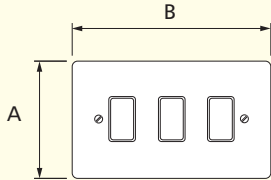
FRONTPLATE DIMENSIONS					
Range	Modules	A	B	C	D
Logic Plus	1,2,3,4,6,8,12	86	146	206	N/A
Aspect	1,2,3,4,6,8	86	146	N/A	N/A
Edge	1,2,3,4,6,8,9,12,18,24	86	146	206	267
Albany Plus	1,2,3,4,6,8,9,12,18,24	86	146	206	267
Metal Clad	1,2,3,4,6,8,9,12,18,24	86	146	206	267



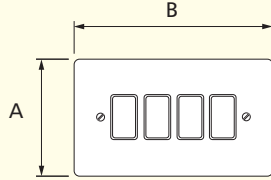
1 module



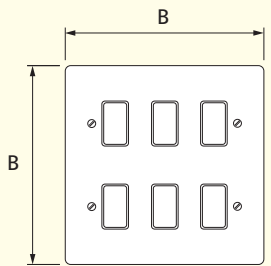
2 module



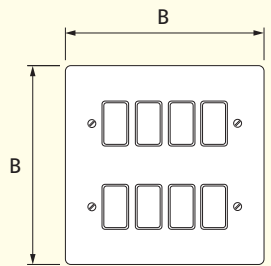
3 module



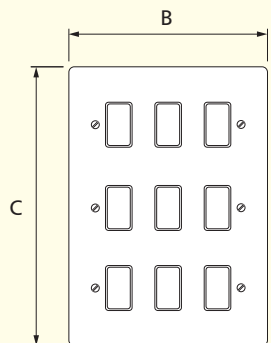
4 module



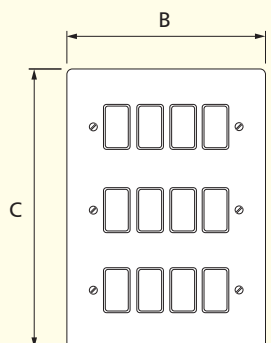
6 module



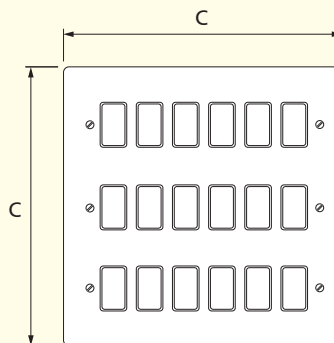
8 module



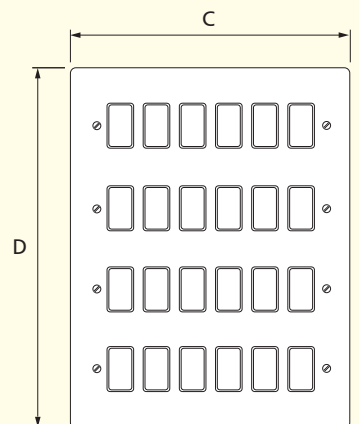
9 module



12 module



18 module



24 module

### Technical specification

#### Electrical

##### Switches

Voltage rating:  
250V a.c., 50 Hz

Current rating:  
10 or 20 amps – no derating when used on fluorescent or inductive loads.

Load type:  
No restriction

Terminal capacity:  
4 x 1mm<sup>2</sup>, 4 x 1.5mm<sup>2</sup>, 4 x 1mm<sup>2</sup>,  
3 x 2.5mm<sup>2</sup>, 2 x 4mm<sup>2</sup>, 1 x 6mm<sup>2</sup>

##### Indicator Units

Voltage rating:  
24V indicators - min. 21V, max. 36V  
240V indicators - min. 200V, max 250V

Terminal capacity:  
as switches

##### Buzzer Unit

Voltage rating:  
240V  
24V

Terminal capacity:  
as switches

##### Fuse Unit

Voltage rating:  
250V

Current rating:  
13 amps

Terminal capacity:  
2 x 4mm<sup>2</sup>

#### Cord Outlet

Voltage rating:  
250V

Current rating:  
16 amps

Terminal capacity  
Supply: 2 x 4mm<sup>2</sup>  
Load: 1 x 1.5mm<sup>2</sup> multi-strand

#### Dimmers

Voltage rating:  
230V a.c., 50Hz

Load rating:  
For single dimmer installations:  
K4500 min. 40W/VA, max. 400W/320 VA  
K4501 min. 40W/VA, max. 220W/180 VA  
For multiple dimmer installation see Load Adjustment table, page 491

Load types:  
K4500, K4501 tungsten filament (GLS) lamps  
Low voltage lighting electronic or wire-wound transformers

Soft start:  
Raises from low to control knob setting in 1-3 secs, (increases lamp life significantly)

Terminal capacity  
1 x 2.5mm<sup>2</sup>, 2 x 1.5mm<sup>2</sup>

#### Universal Socket

Voltage rating  
125/250V

Current rating:  
16 amps

Terminal capacity  
2 x 6mm<sup>2</sup> (stranded)  
3 x 4mm<sup>2</sup> 3 x 2.5mm<sup>2</sup>

## Modular Switching System

### Standards and approvals

#### Switch modules

BS EN 60669-1: 1999

#### Indicator units

BS 5733:2010

#### Dimmer switches

Dimmers comply with BS EN 60669-2-1,  
BS EN 55015

#### Accessory modules

Single non-isolated, TV/FM socket outlet,  
BS 3041 Part 2: 1977

### Technical specification

#### Physical (all products)

Operating temperature:  
-5°C to +40°C

IP rating:  
IP4X

Max. installation altitude:  
2000 metres

### Installation

#### General

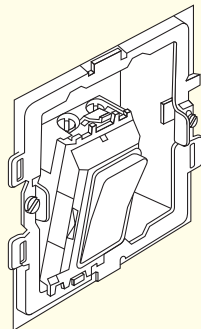
Cut cables to length and make earth connections to grid. Earth: bond Grid Frame to metal mounting box. Grid frames are screwed to back box, modules wired as appropriate and simply clipped into grid frame by hand. No tools are necessary. The front plate is screw fixed to the grid frame to finish the assembly.

To remove or change modules, simply remove front plate. Individual modules fit perfectly into the frontplate in flush fitting installations.

#### Grid mounting

An integral design feature automatically ensures that the modules fit perfectly into the frontplate in flush fitting installations.

Some manual adjustment may be required for surface mounted applications.

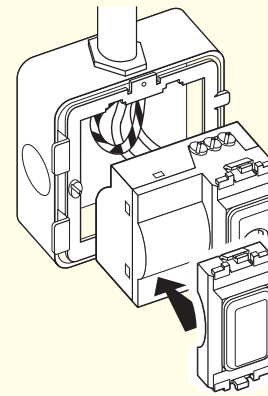


- 1 Locate bottom tab of module in base of grid.
- 2 Module pushes into place at top with a 'click'.
- 3 To remove module, press tab at top and lever forward.

#### Dimmers

The two module size dimmer can be fitted to any grid mounting frame over 1 gang. The supplied blank module can be placed at the required pitch to fill in the second position on the grid.

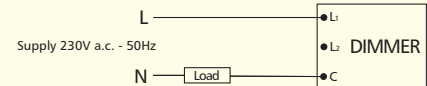
To avoid overheating when using more than one dimmer in the same Grid Plus Enclosure it is recommended that the dimmers are preferentially mounted on the bottom row on 6, 8, 9, 12, 18 and 24 Gang Enclosures, before mounting on any other rows and its load adjusted in accordance with the information provided in the Load Adjustment Table 1 at the bottom of the next page.



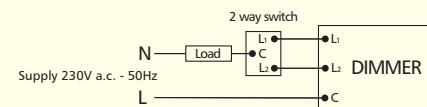
Typical mounting arrangement

### Dimmer wiring diagram

#### One-way switching



#### Two-way switching (only one dimmer can be used)



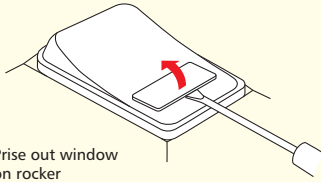
Wires must be connected to the correct Dimmer terminals. Supply Earth must only be connected to the installation metalwork and not to any of the terminals on the dimmer module.

### Rocker window labels

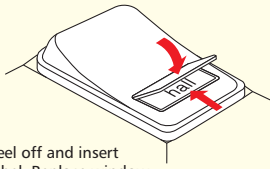
The following labels are available for insertion into window rockers.

air conditioner	water heater	dish washer	store
bedroom	dining area	kitchen	lounge
pool	lights	bar	conference room
office	reception	bell	push
front	middle	bottom	rear
back	top	landing	hall
porch	toilets	ladies	gents
exterior			

The simple installation process is shown below.



Prise out window on rocker



Peel off and insert label. Replace window

Spare labels and windows are available.

### TV/FM socket outlets

The TV outlet must not be mounted in the same enclosure as mains exceeding 50V.

**TABLE 1 – LOAD ADJUSTMENT FOR GRID PLUS DIMMERS**

Frontplate Size, Number of Gangs	2	3	4	6	8	9	12	18	24
Max Power/Load per Row – Tungsten GLS Lamps – W	400	480	480	480	480	480	480	720	720
Max Power/Load per Row – Mains Tungsten Halogen Lamps or Low Voltage Transformers – W or VA	320	380	380	380	380	380	380	580	580
Max Power/Load for Total Plate – Tungsten GLS Lamps – W	400	480	480	740	740	940	940	1440	1440
Max Power/Load for Total Plate – Mains Tungsten Halogen Lamps or Low Voltage Transformers – W or VA	320	380	380	600	600	750	750	1155	1155

### Printed Modules

A wide range of pre-printed switches are also available. See pages 175-193 for details.

## Grid Plus Dimmer Switches

### Standards and approvals

All Grid Plus dimmer switches comply with the EC Low Voltage Directive: 73/23/EEC, Electromagnetic Compatibility Directive 89/336/EEC.

They also comply with BS EN 60669-2-1 and BS EN 55015.

### Technical specification

#### Electrical

Mains Supply Voltage:  
230V a.c. (Nominal)

Mains Supply Voltage Range:  
216V a.c. to 253V a.c.

Mains Supply Frequency:  
50Hz

#### Type of Loads:

Intelligent Dimmers:  
Fused GLS Tungsten Filament lamps to BS EN 60064: 1996 and BS EN 60432-1,2 rated at 230/240V. Dimmable wire wound or electronic Low Voltage Transformers of good quality. Can also be used with good quality mains voltage halogen lamps incorporating GU10 bases. Please check with lamp manufacturer to determine suitability.

Note: Transformer must be suitable for dimming using phase delay (not phase cut) type of dimmers.

Warning: These dimmer switches are not suitable for use with Fluorescent Lamps or Energy Saving Lamps.

#### Physical

Operating temperature:  
0°C to +40°C

IP rating:  
IP4X

Max. installation altitude:  
2000 metres



### Description

#### Intelligent Dimmer Switches

Dimmer Switches belonging to this category employ the latest, state of the art, micro-controller base electronic circuitry and use current sensing to compute the load conditions. These products show progressive reaction to Over-load conditions, depending on the extent of Over-load – see Table 1. List numbers belonging to this category are identified by the suffix letters LV, e.g. K4501 WHI LV. These Dimmer Switches employ one pole change over switches to facilitate two way switching.

MK Grid Plus Dimmer Switches are not suitable for use with Fluorescent Loads, including Energy Saving Lamps.

### Features

#### MK Grid Plus Dimmer Switches incorporate the following advanced features

- Suitable for dimming Low Voltage Halogen lamps via suitable, fully dimmable electronic or wire-wound transformers. See Table 2 for the number of transformers allowed to be used with each dimmer
- Can be used with good quality mains voltage halogen lamps incorporating GU10 bases. Please check with lamp manufacturer to determine suitability
- Unidirectional current sensing. While being used with wire-wound transformers for low voltage lighting, these dimmer switches continuously monitor the drive conditions to the transformers,

which require essentially, bi-directional a.c. supply at their input terminals. If, due to some fault condition, the supply to the wire-wound transformer is detected to be unidirectional, which could result in overheating and/or damaging the transformer, the dimmer switches' circuitry automatically stops supplying the transformer after a few cycles of detected unidirectional supply

- Soft Start, which gradually increases the light output from the load over 1 to 3 seconds after switch on. The Soft Start feature is also particularly beneficial when used to dim Mains Voltage Tungsten Halogen lamps which have inherent very high inrush current at switch on

### Cable Management

Grid Plus dimmer switches can be mounted in a variety of MK trunking systems.

## Grid Plus Dimmer Switches

TABLE 2 – OVERLOAD REACTION		
40-400W CIRCUIT	40-300W CIRCUIT	COMMENTS
<b>Overload management:</b> 40-400W nominal 40-500W function without dimming > 500-700W dim to 68V±8V r.m.s. > 700W switch off	<b>Overload management:</b> 40-220W nominal 40-275W function without dimming > 275-375W dim to 68V±8V r.m.s. > 375W switch off	This is the minimum controlled voltage

### Dimensions

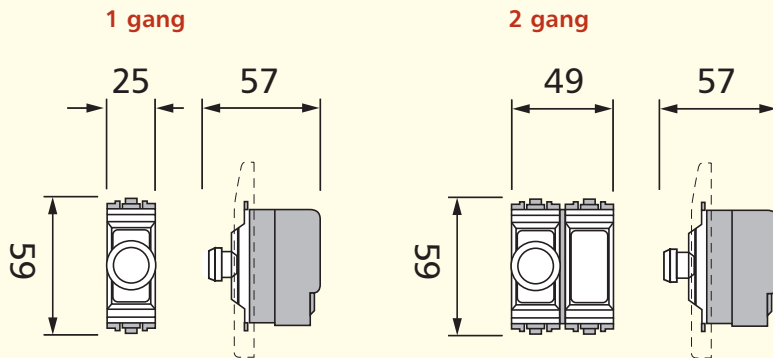


TABLE 2 – GRID PLUS INTELLIGENT DIMMER SWITCHES		
Rating	Max No. of Transformers	
1 module dimmer switch	40-220W (LV rating 40-180VA)	3
2 module dimmer switch	40-400W (LV rating 40-320VA)	5

Do not connect more than the maximum number of transformers stated for each dimmer. Grid Plus dimmer switch ratings are for each dimmer when installed singly.

In multiple installations, each dimmer switch must be de-rated – see Table 1 under 'Modular Switching System' section.

### Fluorescent Dimmer

MK Fluorescent dimmers are low voltage controllers that require only a single two-core wire connection to 1-10V controllable ballast inputs. The dimmer operates by applying a variable resistance to the ballast 1-10V control input.

We recommend using a separate on/off switch to isolate the luminaire(s) in use.

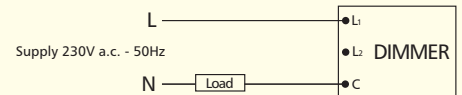
### Features

Preset adjust to set minimum light level. Preset adjust for use with multiple dimmable ballasts.

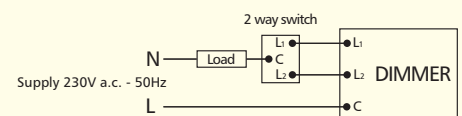
Up to four ballasts can be connected to one dimmer.

### Wiring Diagrams

#### One-way switching

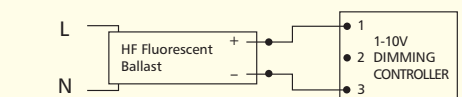


#### Two-way switching (only one dimmer can be used)



Wires must be connected to the correct dimmer terminals. DO NOT connect earth to dimmer.

#### Fluorescent dimmer



Wires must be connected to the correct dimmer terminals. DO NOT connect earth to dimmer.

## Standards and approvals

All High power dimmer modules comply with EN 60669-2-1

### Technical specification

#### Electrical

Mains supply:  
220-240V / 50Hz  
220V / 60 Hz

Type of Loads: Fused GLS Tungsten filament lamps.  
Dimmable wirewound or electronic low voltage transformers of good quality. Inductive loads (i.e. conventional wire-wound transformers, etc.) must not be connected to the trailing edge dimmers.

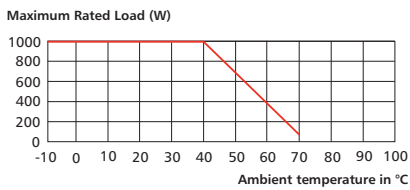
Warning: These dimmer modules are not suitable for use with fluorescent lamps or energy saving lamps.

#### Physical

Operating Temperature: -5 to +40 °C

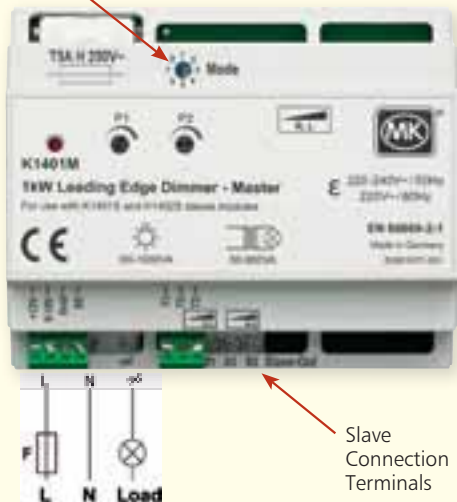
#### Reduction of the dimmer power:

If this product is used in an ambient temperature exceeding 40°C, the maximum allowable load will need to be reduced according to the table below. This will prevent the internal thermal protection in the product from activating and switching the load off.



## Connection Diagram

Operating Mode Selector Switch



Slave Connection Terminals

## Description

These dimmer modules are designed for mounting into distribution and consumer units containing 35mm Din rail according to EN50022. All master and slave dimmers must be connected to the same supply phase. Key points to observe during installation:

- The mains supply to the dimmer(s) must be protected by a suitable fuse or MCB rated no greater than 16A
- Do not exceed maximum control line length of 100m and do not run slave control lines parallel to mains and network cables.
- Always observe the transformers recommended loading guidelines.
- Load transformers at or close to their full rated capacity. Do not connect a small load to a larger transformers, (e.g. a 35W lamp on a 600VA transformer)
- Ensure that slaves are wired to the correct control terminals and that the polarity is observed

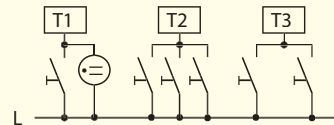
Note: The outputs of the K1402M and K1402S trailing edge dimmers may be connected in parallel to drive a single load greater than 1kW/900VA.

### Control Wiring for operating Modes 1-6 (K1400) and Modes 1-7 (K1401/K1402)

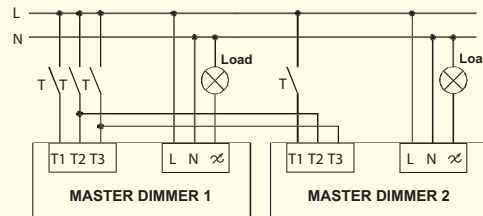
Control switches T1-3 should be push-to-make momentary contact switches.

Up to 10 operating switches may be wired in parallel with Neon indicators being allowed on control line T1 only.

Example 1: Multiple control buttons:



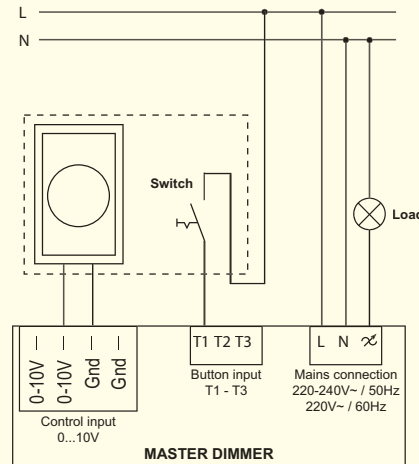
Example 2: Wiring for Multiple Master Dimmers with common Central-ON and Central-OFF



- T1 = Separate Dimming control for each master
- T2 = Central-ON for both master dimmers
- T3 = Central-OFF for both master dimmers

### Control Wiring for operating Mode 7 (K1400) and Mode 8 (K1401/K1402)

Control switches T1 should be a standard single pole light switch with dimming via the rotary 0/1-10V potentiometer connected between 0-10V and Gnd on the Master dimmer.

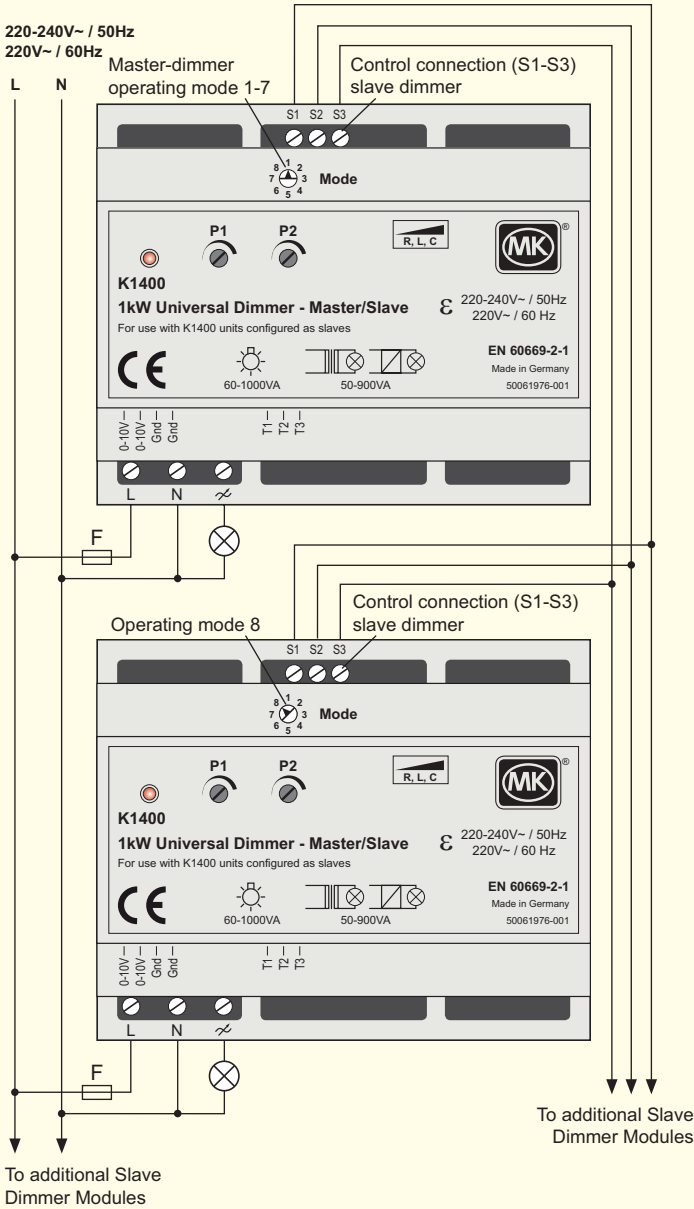




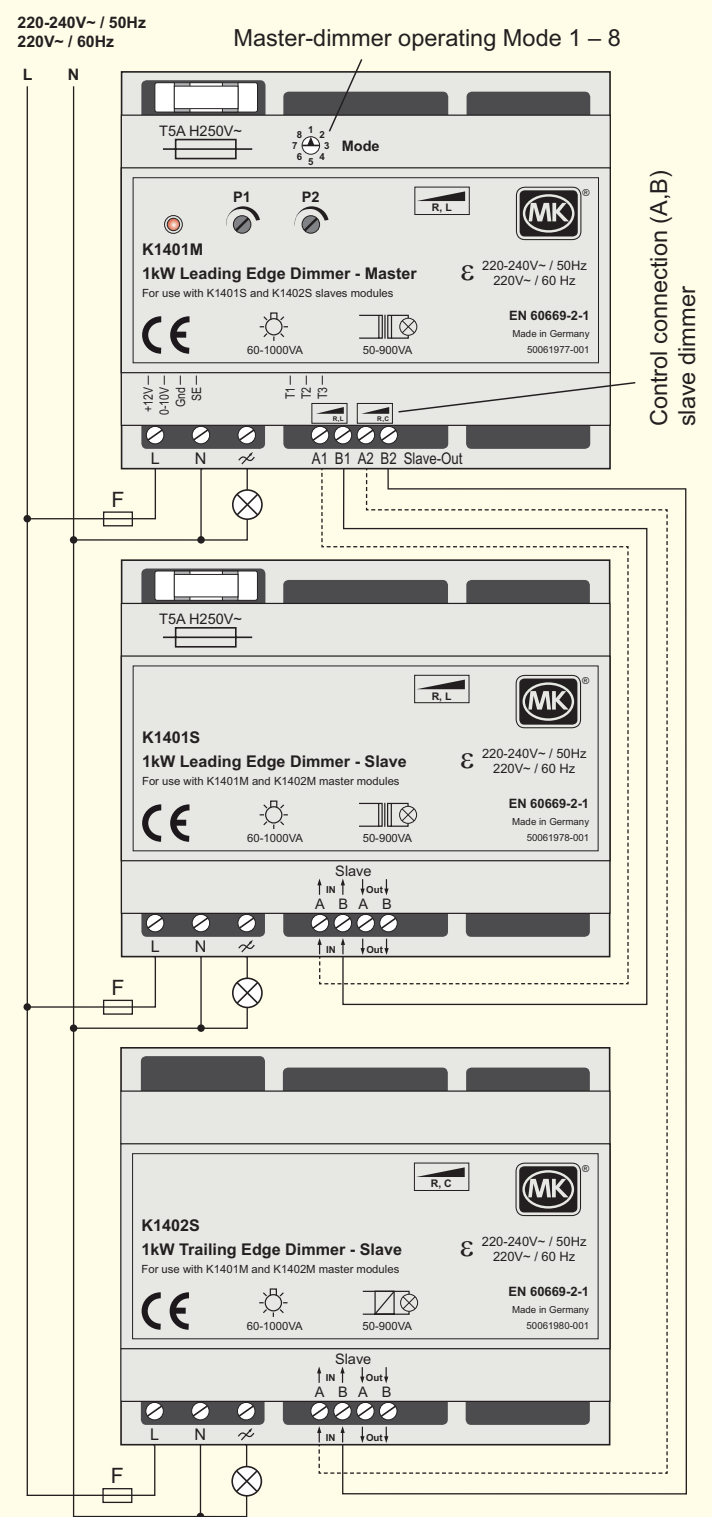
technical hotline +44 (0)1268 563720

lighting controls | wiring devices

## K1400M



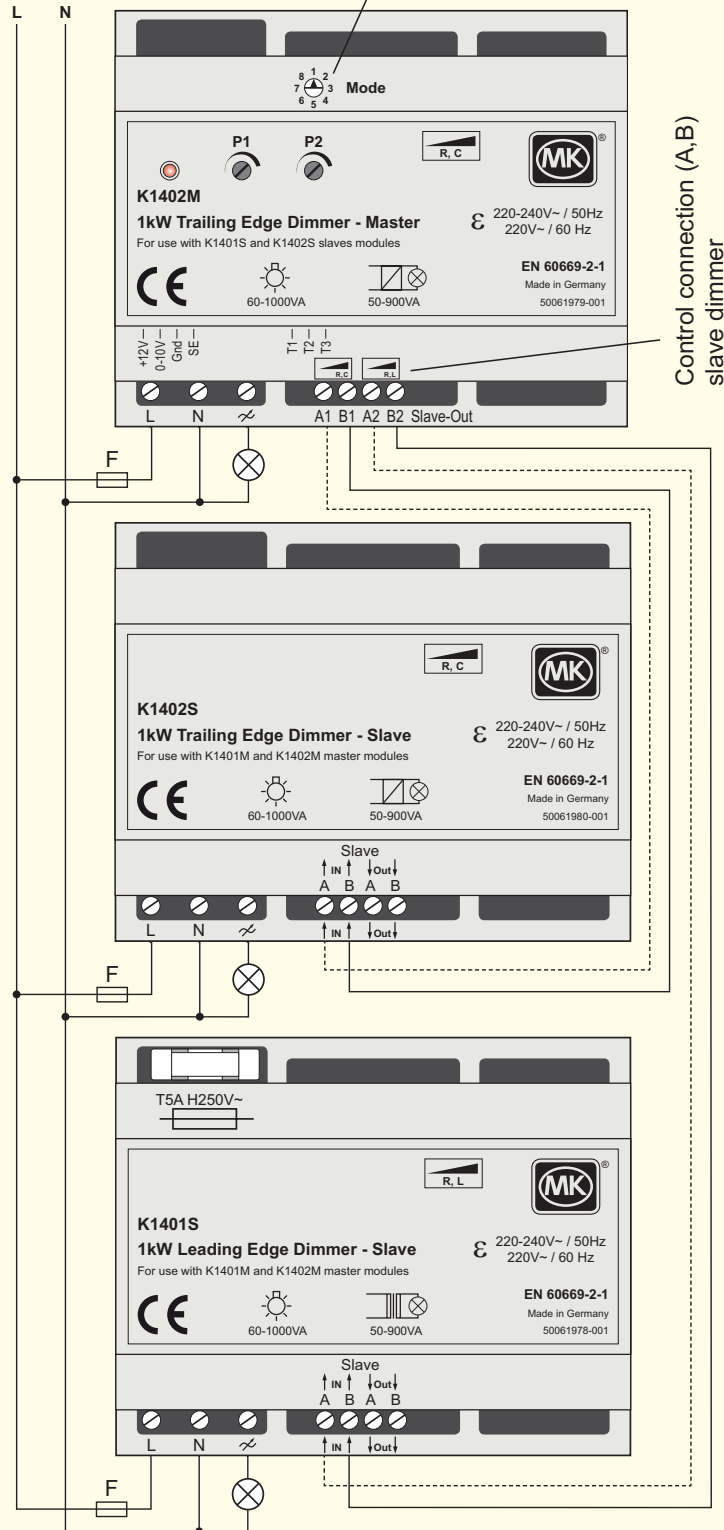
## K1401M



## K1402M

220-240V~ / 50Hz  
220V~ / 60Hz

Master-dimmer operating Mode 1 – 8



technical hotline +44 (0)1268 563720



Edge single dimmer in gold plated bespoke finish

Available on a worldwide basis, the MK Design Service is supported by a dedicated team to ensure the seamless delivery of your chosen products. To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)

## Plugs and Adaptors

### Standards and approvals

All 13 amp Duraplug rubber plugs conform to BS 1363/A Part 1: 1995. The plugs are third party approved and licensed by ASTA.

Round pin plugs comply with BS546: 1950.

### Technical specification

#### Terminal/cable size

List No.	Maximum cable size	
	Outer diameter of cable (mm)	Conductor C.S.A. (mm <sup>2</sup> )
PF133	11.0	1.5
P53	9.4	0.75
P153	11.0	1.5



### Description

#### 13 amp plugs

All Duraplug 13 amp plugs can be used on ring and radial circuits and are available with 13 amp fuses.

Duraplug standard 13 amp plugs are supplied with 13 amp fuses; however, alternative fuse ratings are available to special order.

#### Round pin plugs

Available unfused at 5 and 15 amp.

## Lead Connectors, Extension Leads, Portable Sockets and Cable Couplers

### Standards and approvals

2 pin Duraplug lead connectors comply with BS 5733: 2010.

3 pin Duraplug lead connectors comply with BS 5733: 2010.

All 13A Duraplug trailing socket outlets comply with BS 1363/A Part 2: 1995.

15A Round pin Duraplug trailing socket outlets comply with BS 5733: 2010 and BS 546 for plug pin aperture and engagement face dimensions.

All 13A Duraplug portable socket outlets comply with BS 1363/A Part 2: 1995.

Cable Couplers comply with BS 5733:2010. (BS 1363 pin centres for 13A, BS 546 pin centres for 5A and 15A).

Replacement fuses where fitted are to BS 1362.

Cables to BS 6500: 2000 (Table 27).



### Technical specification

#### Electrical

Voltage rating:  
250V a.c.

Current rating:  
As 'Product range' table

Terminal capacities:  
Lead connector – 1.0mm<sup>2</sup> conductor  
Trailing/Portable socket – 1.5mm<sup>2</sup> conductor

Max. cable capacity:  
Lead connector – LCP102: 2-core insulated cable with 1.0mm<sup>2</sup> conductors, LCP103: 3-core insulated cable with 1.0mm<sup>2</sup> conductors, 11mm overall diameter  
Trailing/Portable sockets – 3-core insulated cable with 1.5mm<sup>2</sup> conductors, 11mm overall diameter

#### Physical

Ambient operating temperature:  
–5°C to +40°C

Max. installation altitude:  
2000 metres

### Description

A range of tough, rewirable lead connectors for use with extension leads for domestic, garden and light workshop applications. Two pin lead connectors are only for use with double insulated class 2 appliances. Three pin lead connectors must be used with earthed appliances.

### Filtered socket only

Protects electronic equipment by filtering mains borne interference such as Voltage spikes. This product complies with the LV (72/23/EEC) directive.

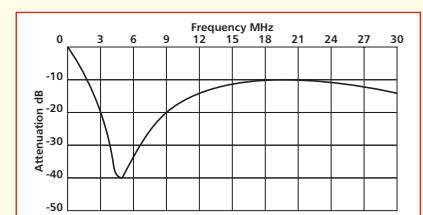
### Filtered Response Characteristics

Mains filter rated at 250v RMS and 0.15µF

Varistor (Transient Voltage Suppressor) has a more constant voltage 275v ac

Clamping voltage @ 40A: 665v

Milliwatt constant: 800



### Installation

Duraplug products should not be allowed to lie in excessively damp areas, e.g. wet grass, puddles etc.

Care must be taken to avoid contact with petroleum spirits.

For added safety trailing sockets should be used in conjunction with a residual current device (RCD).

### Features

#### Lead connectors

- Manufactured with a thermoplastic elastomer cover and polypropylene inserts
- Integral cable grips
- Retaining lugs to prevent accidental disconnection

#### Trailing sockets

- Manufactured from tough ABS/Polycarbonate with rubber cover. FC153 is all-rubber construction
- All internal component parts are retained in the base for ease of wiring
- Visible red nylon shutters

#### Portable sockets

- Manufactured from high impact resistant ABS/Polycarbonate
- Equal length wire stripping for ease of wiring
- Visible red nylon shutters
- Optional wall mounting holes

## Extension Leads

TECHNICAL DATA GUIDE					
Product Code	Socket Outlets	Cable Length Cable	Cable Specification	Plug Type	Plug Fuse Rating
EXL135WHI	13A 4-gang socket with fuse and neon, manufactured from high impact resistant ABS/Polycarbonate thermoplastic. BS1363A: Part 2: 1995. Colour white.	2	1.25mm <sup>2</sup> <HAR> 3-core PVC insulated cable to BS 6500: 2000: Table 27/IEC227-5. Colour white.	Duraplug Rubber cover type PF133. Colour white.	13
EXL135BLK	13A 4-gang socket with fuse and neon, manufactured from high impact resistant ABS/Polycarbonate thermoplastic. BS1363A: Part 2: 1995. Colour black.	2	1.25mm <sup>2</sup> <HAR> 3-core PVC insulated cable to BS 6500: 2000: Table 27/IEC227-5. Colour black.	Duraplug Rubber cover type PF133. Colour black.	13
EXL136WHI	13A 4-gang socket with switch and neon, manufactured from high impact resistant ABS/Polycarbonate thermoplastic. BS1363A: Part 2: 1995. Colour white.	2	1.25mm <sup>2</sup> <HAR> 3-core PVC insulated cable to BS 6500: 2000: Table 27/IEC227-5. Colour white.	Duraplug Rubber cover type PF133. Colour white.	13
EXL136BLK	13A 4-gang socket with switch and neon, manufactured from high impact resistant ABS/Polycarbonate thermoplastic. BS1363A: Part 2: 1995. Colour black.	2	1.25mm <sup>2</sup> <HAR> 3-core PVC insulated cable to BS 6500: 2000: Table 27/IEC227-5. Colour black.	Duraplug Rubber cover type PF133. Colour black.	13
EXL137WHI	13A 4-gang socket with fuse, switch and neon, manufactured from high impact resistant ABS/Polycarbonate thermoplastic. BS1363A: Part 2: 1995. Colour white.	2	1.25mm <sup>2</sup> <HAR> 3-core PVC insulated cable to BS 6500: 2000: Table 27/IEC227-5. Colour white.	Duraplug Rubber cover type PF133. Colour white.	13
EXL137BLK	13A 4-gang socket with fuse, switch and neon, manufactured from high impact resistant ABS/Polycarbonate thermoplastic. BS1363A: Part 2: 1995. Colour black.	2	1.25mm <sup>2</sup> <HAR> 3-core PVC insulated cable to BS 6500: 2000: Table 27/IEC227-5. Colour black.	Duraplug Rubber cover type PF133. Colour black.	13

## Plugs and Adaptors

### Standards and approvals

All 13 amp standard Safetyplugs conform to BS 1363 Part 1: 1995. All 13 amp Toughplugs conform to BS 1363/A Part 1: 1995. All the above plugs are third party approved and licensed by ASTA.

Round pin plugs comply with BS 546.

Non-standard Safetyplugs comply with BS 1363 Part 1: 1995 where applicable.



### Technical specification

#### Terminal/cable size

List No.	Maximum cable size	
	Outer diameter of cable (mm)	Conductor C.S.A. (mm <sup>2</sup> )
646	11.0	1.5
647	11.0	1.5
655	11.0	1.5
502	8.7	0.5
505	9.4	0.75
515	11.0	1.5
639	8.7	0.5
641	9.4	0.75
643	11.0	1.5

### Description

#### 13 amp plugs

All MK standard 13 amp plugs can be used on ring and radial circuits and are available with 13 amp fuses or 3 amp fuses.

#### Round pin plugs

Available unfused at 2, 5 and 15 amp. They can also be supplied fused, the 15 amp fitted with a 5 amp fuse. The British Standard does not allow the 15 amp plug to be fused higher than 5 amp. The 15 amp plug is normally used on a radial system which is protected by a 20 amp protective device.

#### Non standard safetyplug

Not third party approved as the earth pin is 'T' shaped, although the pin configuration conforms to BS 1363 pin centres. This plug is designed specifically for use with MK Non Standard Sockets, e.g. K1257WHI – Logic Plus 1 gang 13 amp Switched, Non Standard Socket outlet.

#### Adaptors

Both the 13 amp two way adaptor and the shaver adaptor are designed to BS 1363: Part 3: 1995. The two way adaptor is unfused and has two shuttered 13 amp socket outlets. The unique feature of the shaver adaptor is the raised wall on the socket face which restricts the size of plug which can be inserted to the typical shaver plug.



## Polycarbonate Chemical Resistance Table

### Key:

- ▲ Resistant
- Limited resistance
- Not resistant

REAGENT	CONCENTRATION	RESISTANCE
Acetic Acid, aqueous	40	■
Acetic acid, aqueous	5	▲
Acetone		■
Ammonia, aqueous	10	■
Benzene		■
Beverages, alcoholic		▲
Bitumen		Not tested
Bleaching lye, aqueous		■
Boric Acid	10	▲
Butanol		■
Butter		●
Butyric acid		■
Calcium chloride, aqueous	10	▲
Carbon tetrachloride		■
Chlorine gas		●
Chlorine, aqueous solution		■
Chloroform		■
Citric acid, aqueous	10	▲
Coconut oil		▲
Diesel fuel		●
Edible fats		▲
Edible oils		▲
Ethanol	96	▲
Ethylene acetate		■
Ethylene ether		■
Formaldehyde, aqueous	30	▲
Formic acid, aqueous	40	●
Freon, liquid		▲
Frigen, liquid		▲
Fruit juices		▲
Fuel oil (heating)		●
Gas liquor		Not tested
Glycerine		▲
Glycol		▲
Glycantine, aqueous	40	Not tested
Hexane		▲
Hydrochloric acid, aqueous	2	■
Hydrofluoric acid, aqueous	40	▲
Hydrogen peroxide, aqueous	10	▲
Ink		▲
Iodine tincture, alcoholic		■

REAGENT	CONCENTRATION	RESISTANCE
Kerosene		■
Lactic acid, aqueous	10	▲
Lavender oil		Not tested
Linseed oil		Not tested
Machine oils		▲
Mercury		▲
Methanol		■
Methylene chloride		■
Milk		▲
Mineral oils		▲
Nitric acid, aqueous	2	▲
Oleic acid		▲
Ozone		▲
Paraffin oil		▲
Peppermint oil		Not tested
Perfumes		■
Petrol (gasoline)		●
Phenol, aqueous		■
Phosphoric acid, aqueous	10	■
Potassium hydroxide solution, aqueous	5	■
Potassium hydroxide solution, aqueous	50	■
Rose oil		●
Salt solution, household, aqueous	10	▲
Silicon oils		▲
Soap solution, aqueous		▲
Soda solution, aqueous	10	▲
Sodium hydroxide solution, aqueous	10	■
Sodium, aqueous	10	Not tested
Sulphur		▲
Sulphuric acid, aqueous	10	▲
Tallow		▲
Tar		▲
Tetrachloroethene		■
Toluene		■
Trichlorethane		■
Vaseline		▲
Water		▲
Water, hot (80°C)		●
Wax, melted		Not tested
Xylene		■



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## 13 Amp Socket Outlets

### Standards and approvals

Socket outlets comply with BS 1363 Part 2: 1995.

All products allow compliance with BS 7671: 2008 when correctly installed.

### Technical specification

#### Electrical

Voltage rating:  
250V a.c.

Current rating:  
13A per socket outlet

Terminal capacity:  
Live, neutral & earth  
3 x 2.5mm<sup>2</sup>  
3 x 4mm<sup>2</sup>  
2 x 6mm<sup>2</sup> (standard)

#### Physical

Ambient operating temperature:  
0°C to +40°C

IP rating:  
IP66

Max. installation altitude:  
2000 metres



### Description

A range of socket outlets specifically designed for use outdoors or in areas heavily exposed to dust and/or splashing water. Constructed from extremely robust polycarbonate, the range is sealed to IP66 against dust, water and is impact resistant and will completely protect virtually any 13 amp plug\* including moulded plugs, allowing safe connection to any appliance.

\*When in doubt, please use an MK 13A plug or Duraplug.

### Boxes

Rear entry back boxes are supplied for surface mounted situations or flush mounting when used with Flush Mounting Bezels (K56502, 1 gang / K56503, 2 gang). These boxes must also be used

if cable or conduit enters the enclosure from the rear.

### IP66 Protection

Each digit in the IP (Ingress Protection) rating denotes resistance to dust and water. The Masterseal Plus IP66 rating breakdown is as follows:

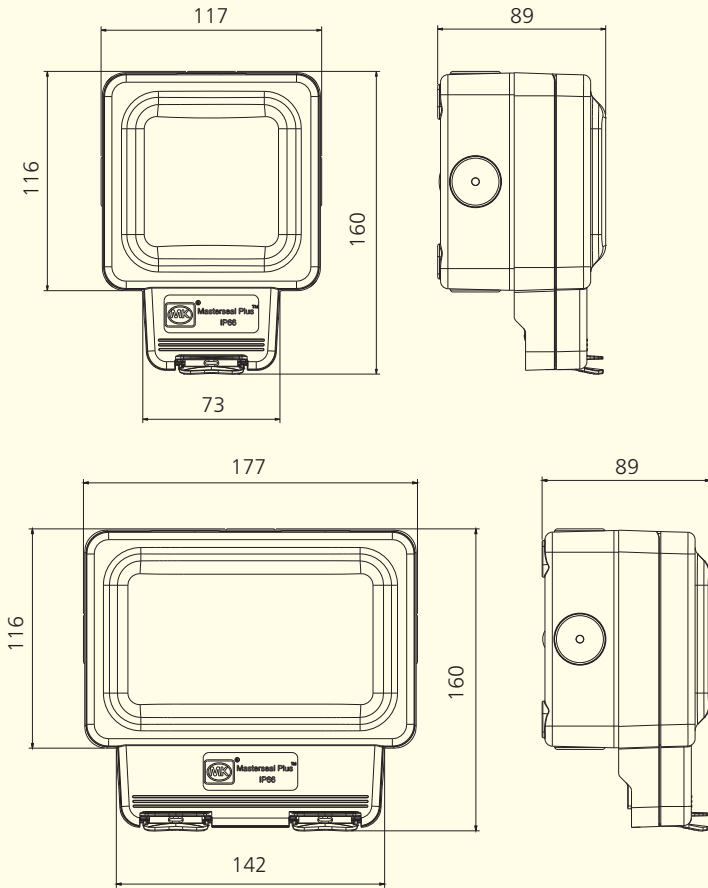
IP66		
Ingress protection	Solid protection: Dust tight No ingress of dust, complete protection against contact	Liquid Protection: Powerful jets of water against the enclosure from any direction shall have no harmful effects

### Features

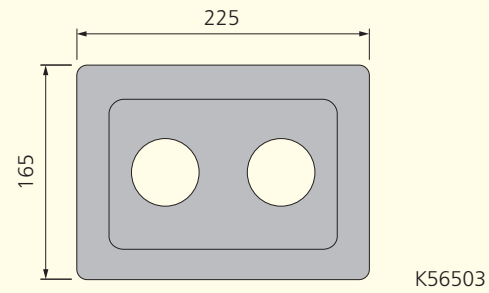
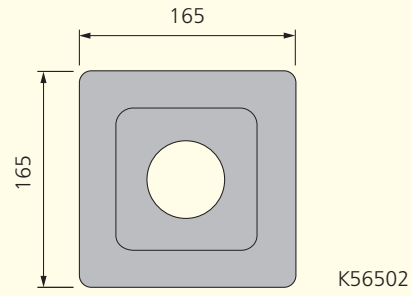
- IP66 protected to BS EN60529: 1992
- Ideal for gardens, workshops, industry, commercial, public areas, farm buildings, ponds, pools etc
- Easy to install: fixed gasket, captive backed out terminal screws, clearly marked top access angled terminals, push fit knockouts and conduit entries, rear drill holes
- Patented gel seal provides durable water and dust tight seal for improved protection
- Sealed when in use with virtually any standard 13 AMP plug, including those with moulded plug tops
- Improved catch eases opening and closing during use
- Manufactured from recycled polycarbonate for impact protection and environmental protection
- 3 pin operated safety shutter on socket outlets
- 3mm minimum switch contact gap
- Additional electrical safety from neutral 'make first, break last' feature
- Moulded 'on' indicator flash on switches will not rub off
- Printed terminal markings on grey rear mouldings for clearer identification
- Double pole switching
- Switch contacts with silver contacts on both surface for good continuity
- Products are available in grey, black and white

### Dimensions (mm)

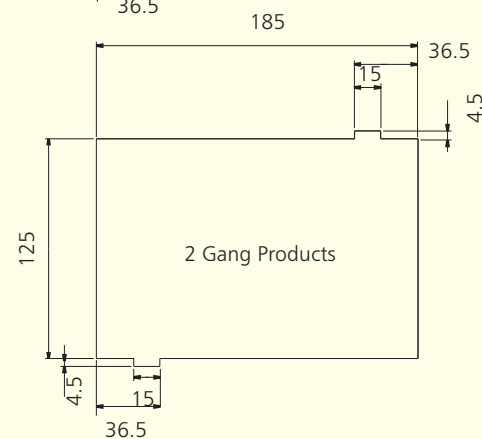
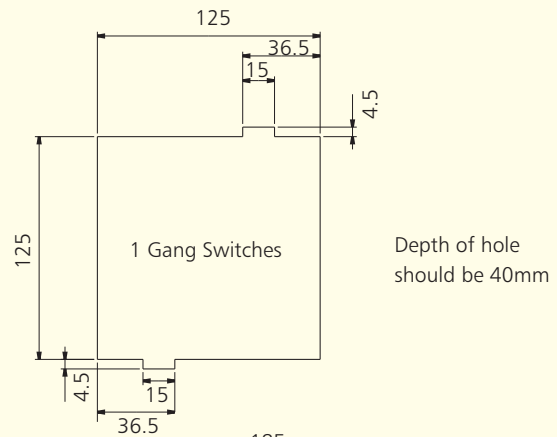
#### 1 gang / 2 gang with fixing dimensions



### Flush Mounting Bezels



### Flush Mounting Bezel Cut-outs



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## Timer Socket Outlet

### Standards and approvals

Socket outlet complies with BS 1363 Part 2: 1995.

Enclosure conforms to BS EN 60529 IP66

Timer module complies with IEC 60730-1  
IEC 60730-2-7, EN 55014 -1: 2000, EN 55022,  
EN 61000-3-2, EN 61000-4-2, EN 61000-4-4,  
EN 61000-4-5, EN 61000-4-6, EN 61000-4-11



### Technical specification

#### Electrical

Supply Voltage 230V a.c.  
Supply frequency 50Hz  
Current rating for socket outlet (RESISTIVE) 13A

#### Terminal capacity

Supply Line, Neutral and Earth 3 x 2.5mm<sup>2</sup>  
3 x 4 mm<sup>2</sup>  
2 x 6 mm<sup>2</sup>

#### Physical

Ambient operating temperature range: 0°C to +40°C  
IP rating: IP66  
Max. installation altitude: 2000 metres

### Features

- Single 13A rated socket outlet switched via the Single Pole timer module
- Weekly Electronic Timer
- 24 hour clock
- Multi-function Liquid Crystal Display (LCD)
- 6 ON/OFF programmes per day
- Individual day selection as well as 4 block day selections
- Supplied with a LOOP terminal in the back box, which has 5 entries for cables
- Override button to switch the load ON/OFF directly, bypassing the timer
- Patented gel seal provides durable water and dust tight seal for improved protection
- Sealed when in use with virtually any standard 13 AMP plug, including those with moulded plug tops
- Improved catch eases opening and closing during use
- Manufactured from recycled polycarbonate for impact protection and environmental protection
- 3 pin operated safety shutter on socket outlets
- Products are available in grey, black and white

### Description

This socket outlet, switched by a single pole timer module is specifically designed for use outdoors or in areas heavily exposed to dust and/or splashing water. Constructed from extremely robust polycarbonate, the product is sealed to IP66 against dust and water, and is impact resistant. The product ensures a very high degree of protection for virtually any 13A plug\* to BS 1363, allowing safe connection to electrical appliances, which can be switched on and off at pre-determined times.

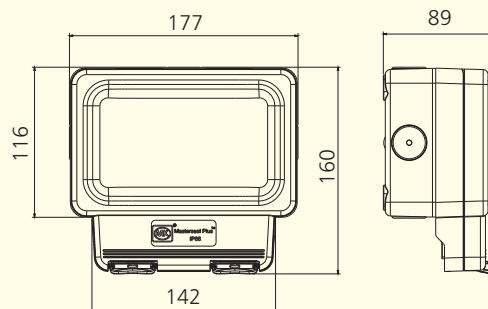
### Timer module

The product employs an electronic timer module, which switches the Supply Line to the socket outlet, via a single pole relay. 6 ON/OFF cycles per day can be programmed via the buttons on the face of the timer module. Days in the week can be set individually or set to repeat in 4 separate blocks as follows:

1. Monday to Friday
2. Saturday and Sunday
3. Monday to Saturday
4. Monday to Sunday

An Override button is available to switch the load ON/OFF directly, bypassing the timer.

### Dimensions (mm)



### Boxes

Rear entry back box is supplied for surface mounted situations or flush mounting when used with Flush Mounting Bezel (K56503). These boxes must also be used if cable or conduit enters the enclosure from the rear.

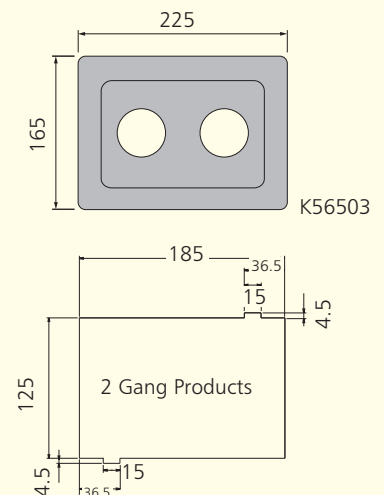
### IP66 Protection

Each digit in the IP (Ingress Protection) rating denotes resistance to dust and water. The Masterseal Plus IP66 rating breakdown is as follows:

\* When in doubt, please use an MK 13A plug

IP66		
Ingress protection	Solid protection: Dust tight No ingress of dust, complete protection against contact	Liquid Protection: Powerful jets of water against the enclosure from any direction shall have no harmful effects

### Flush Mounting Bezel



## Sentrysocket

### Compliance with EC Directives, Standards and approvals

All Sentrysockets comply with the following EC Directives and are CE marked:

Low Voltage Directive Electromagnetic Compatibility Directive (89/336/EEC)

Sentrysocket RCD Single Sockets also comply with the requirements of the following standards:

BS 7288: 1990

BS EN 50082-1: 1992

Sentrysocket RCD Double Sockets also comply with the requirements of the following standards:

BS 7288: 1990

BS EN 61543: 1996



### Technical specification

#### Electrical

Rated Voltage:  
240V a.c.

Current rating:  
13A resistive

Rated tripping current:  
30mA

Terminal capacity:  
3 x 4mm<sup>2</sup>

#### Physical

Ambient operating temperature:  
0°C to +40°C

IP rating:  
IP66

Max. installation altitude:  
2000 metres

### Features

- Suitable for most residential, commercial and light industrial applications
- Active and passive control circuit applications
- Comply fully with current Wiring Regulations if installed correctly
- Double pole switching
- Flexible and versatile in use
- Ideal for use with equipment subject to wet weather or high humidity
- They are a.c. and pulsating d.c. fault current sensitive

### Description

Sentrysocket provides a high level of protection for portable equipment when used in damp environments or outdoors.

#### Active control circuits

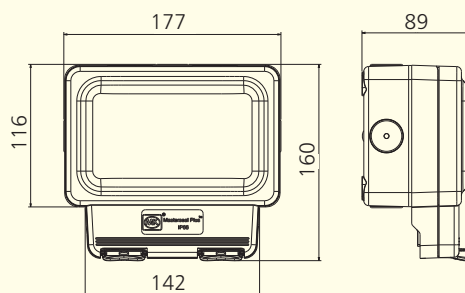
Incorporate a 'Re-set' mechanism and are mains failure sensitive, ie they will function under all the normal conditions expected of an RCD, but will also trip in the event of a power cut or a sudden, dramatic reduction in mains voltage. This makes them ideal for use where it would be hazardous for equipment to suddenly energise after return of mains power, such as use with rotating machinery and heat developing apparatus.

#### Passive control circuit

Incorporates a 'Stay-set' mechanism and is mains failure proof, ie it will function under all the normal conditions expected of an RCD and will not trip in the event of a power cut. This makes it suitable for use with freezers or in inaccessible or unmanned locations.

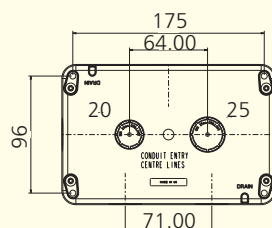
### Dimensions (mm)

Single and double Sentrysockets are identical in size and shape. The following dimensions apply



Masterseal Plus Sentrysocket is suitable for surface mounting only.

### Fixing Dimensions



## 16A 2P+E Socket Outlet (Non UK)

### Standards and approvals

Complies with IEC 60884-1: 2006

#### Technical specification

##### Electrical

Voltage rating:  
250V a.c.

Current rating:  
16A

Terminal capacity:  
Live, neutral & earth  
4 x 1.5mm<sup>2</sup>  
2 x 2.5mm<sup>2</sup>  
1 x 4mm<sup>2</sup>

##### Physical

Ambient operating temperature:  
0°C to +40°C  
(not to exceed an average of more than 25°C in any  
24 hour period)

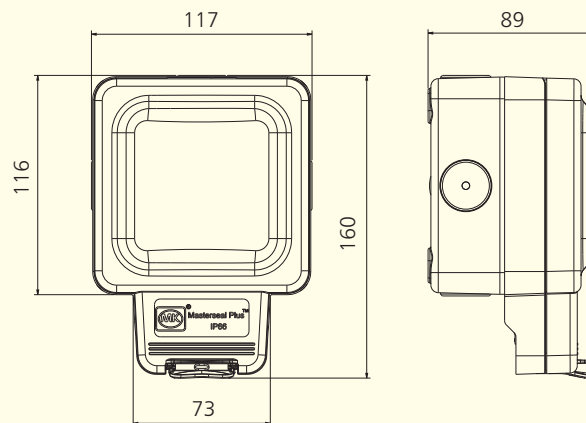
IP rating:  
IP66

Max. installation altitude:  
2000 metres



Masterseal 16A 2P + E German socket outlet is suitable for surface mounting only.

### Dimensions (mm)

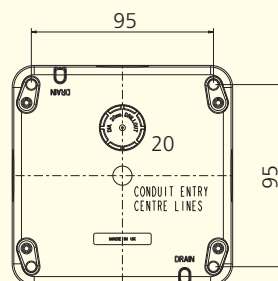


IP66		
Ingress protection	Solid protection: Dust tight No ingress of dust, complete protection against contact	Liquid Protection: Powerful jets of water against the enclosure from any direction shall have no harmful effects

### Features

- IP66 protected to BS EN60529: 1992
- Patented gel seal provides durable water and dust tight seal for improved protection
- Sealed when in use with virtually any plug with a right-angled cable exit, including those with moulded plug tops
- Improved catch eases opening and closing during use
- Manufactured from recycled polycarbonate for impact protection and environmental protection
- Products are available in grey, black and white

### Fixing dimensions



## Connection Units

### Standards and approvals

All Masterseal Plus Connection Units comply with BS 1363 Part 4: 1995. All units are fitted with a 13A fuse link to BS 1362.

#### Technical specification

##### Electrical

Voltage rating:  
250V a.c.

Current rating:  
Connection units – 13 amp

Terminal capacity:

Supply terminal: 2 x 6mm<sup>2</sup> stranded  
3 x 4mm<sup>2</sup>  
3 x 2.5mm<sup>2</sup>  
3 x 1.5mm<sup>2</sup>

Load terminals: 1 x 1.5mm<sup>2</sup>

##### Physical

Ambient operating temperature:  
–5°C to +40°C (not to exceed an average of more than 25°C in any 24 hour period)

IP rating:  
IP66

Max. installation altitude:  
2000 metres

### Features

- IP66 protected to BS EN60529: 1992
- Ideal for gardens, workshops, industry, commercial, public areas, farm buildings, ponds, pools etc
- Easy to install: fixed gasket, captive backed out terminal screws, clearly marked top access angled terminals, push fit knockouts and conduit entries, rear drill holes
- Patented gel seal provides durable water and dust tight seal for improved protection
- Improved catch eases opening and closing during use
- Manufactured from recycled polycarbonate for impact protection and environmental protection
- Screw fitted fuse carrier
- Fuse carrier lockable in open position
- Captive fuse carrier
- 3mm minimum switch contact gap
- Double pole switching
- Moulded 'on' indicator flash on switches will not rub off



### Description

Masterseal Plus connection units are specifically designed for use outdoors or in areas heavily exposed to dust and/or splashing water. Constructed from extremely robust polycarbonate, the range is sealed to IP66 against dust, water and is impact resistant and will completely protect and provide a safe connection to any appliance.

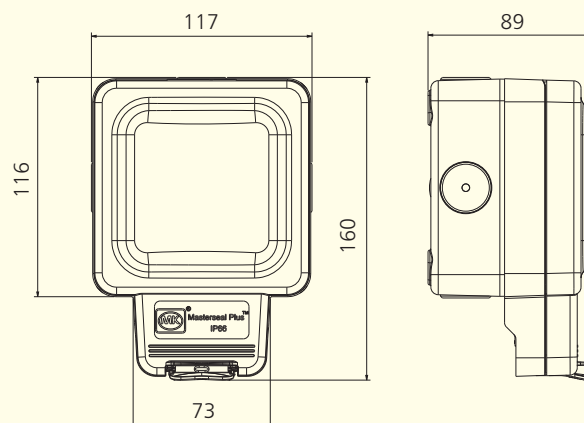
### IP66 Protection

Each digit in the IP (Ingress Protection code) rating denotes resistance to dust and water. The Masterseal IP66 rating breakdown as is follows:

### Impact Resistance

IP66		
Ingress protection	Solid protection: Dust tight No ingress of dust, complete protection against contact	Liquid Protection: Powerful jets of water against the enclosure from any direction shall have no harmful effects

### Dimensions (mm)



### Installation

Masterseal Plus connection units can be wall or bench mounted. Do not use on a trailing lead.

## Switches

### Standards and approvals

Switches and enclosures comply with BS EN 60669-1: 1999 and are IP66 for BS EN 60529: 1992.

20A Switch modules comply with BS EN 60669-1: 1999.

10A Switch modules comply with BS EN 60669-1: 1999.

All products comply with or allow compliance with BS 7671: 2008.

### Technical specification

#### Electrical

Voltage rating:  
250V a.c., 50 Hz

Current rating:  
10 or 20 amps – no derating when used on fluorescent or inductive loads.

Load type:  
No restriction

#### Physical

Ambient operating temperature:  
0°C to +40°C

IP rating:  
IP66  
(Grid Plus enclosures are IP56)

Max. installation altitude:  
2000 metres

### Features

- IP66 protected to BS EN60529: 1992
- Ideal for gardens, workshops, industry, commercial, public areas, farm buildings, ponds, pools etc
- Easy to install: fixed gasket, captive backed out terminal screws, clearly marked top access angled terminals, push fit knockouts and conduit entries, rear drill holes
- Improved catch eases opening and closing during use
- Manufactured from recycled polycarbonate for impact protection and environmental protection
- Large, easy to use rocker switches
- Wide range of switch modules and accessories make Masterseal versatile
- Switch modules snap into position



### Description

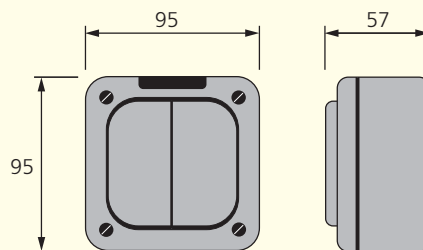
A range of switches and enclosures specifically designed for use outdoors or in areas heavily exposed to dust and/or splashing water. Constructed from extremely robust polycarbonate, the range is sealed to IP66 against dust, water and is impact resistant. Masterseal is easy to install and the large rocker switches and clip in modules make it easy to use, even when wearing heavy gloves.

### IP66 Protection\*

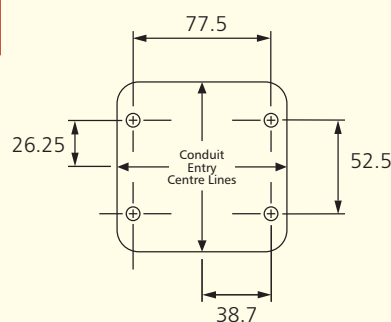
Each digit in the IP (Ingress Protection) rating denotes resistance to dust and water. The Masterseal IP66 rating breakdown is as follows:

IP66		
Ingress protection	Solid protection: Dust tight No ingress of dust, complete protection against contact	Liquid Protection: Powerful jets of water against the enclosure from any direction shall have no harmful effects

### Dimensions (mm)



### Fixing dimensions

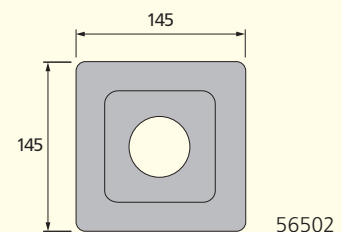


### Boxes

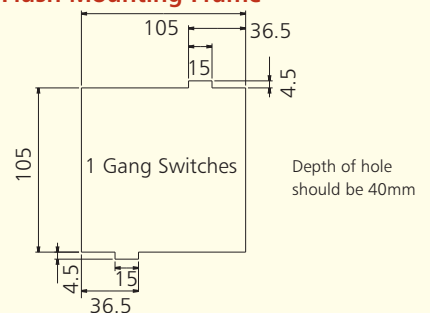
Rear entry back boxes are supplied for surface mounted situations or flush mounting when used with Flush Mounting Bezels (56502). These boxes must also be used if cable or conduit enters the enclosure from the rear.

\* Grid Plus enclosures are IP56

### Flush Mounting Bezel



### Flush Mounting Frame



## Grid Plus Enclosures

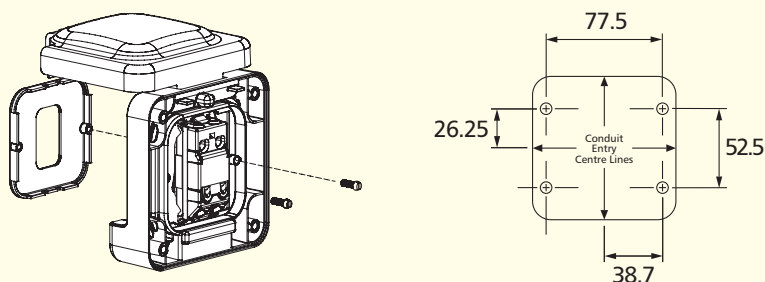


### Customer Configurable Grid – K56414

- 1 Up to two wiring device modules may be selected from the MK Grid Plus modular range and fitted to the configurable grid enclosure.
- 2 If a TV outlet is to be fitted in combination with a mains voltage device, then it is essential that the cabling and modules are isolated from each other.
- 3 Grid modules are assembled into the front face of the front plate and clip firmly into position.
- 4 Two bezel mouldings are supplied. Select the appropriate bezel depending on whether one or two modules are fitted, locate in position and secure with the two screws provided as shown in Figure 1.

Figure 1

### Fixing dimensions





## Euro Enclosure and Telephone and Data Modules

### Standards and approvals

Telephone sockets K5820 and K5821 comply with the following:  
BS 6312: 2.2, OFTEL Approval NS/G/23/L/100005.

K5844/K5845/K5845s comply with:  
ISO/IEC 11801, EN 50173, TIA 568, and EN 41003.

K5887 complies with FCC68 and EN 41003.



### Technical specification

#### Installation tools required IDC Connectors (telephone & RJ45 outlets)

#### Electrical

Cable types:  
Telephone: CW1311, CW1293, CW1308, CW1316

No. of cables per termination:  
Telephone: 2  
RJ11/12: 1  
RJ45: 1

Termination type: IDC

#### Physical

Temperature range:  
Ambient air 0°C to +40°C

IP rating: IP66 (enclosure)

Max. installation altitude: 2000 metres

### Description

A range of Euro telephone, data and blank modules and weatherproof enclosure. Enclosure accommodates 2 modules providing care is used to ensure that the cables are correctly routed through the outlet.

### Features

- IP66 data and telecoms protection
- Meet all relevant BS, OFTEL and cabling standards
- Interchangeable modules clip into enclosure
- Can be specified for all applications

### Installation (Telephone socket modules)

#### Product performance, systems compatibility

Master Sockets: For use as the first socket outlet on a direct exchange. They contain the required surge protector (for line protection against electrical surges) and ringing capacitor.

Secondary Sockets: for use as extension sockets when connected on the same line as a Master Socket.

### MODULE DIMENSIONS (mm)

25 x 50

#### Installation tools required IDC Connectors (telephone & RJ45 outlets)

MK insertion tool List No. 400NAT.  
Wire pull-out force: 10.5 Newtons when installed correctly.

#### Wiring regulation restrictions

Domestic Installations: The total REN (Ring Equivalent Number) value of all telephone equipment connected on a line must not exceed 4.

**FOR EURO MODULE WIRING DIAGRAMS, PLEASE REFER TO WIRING DEVICES TECHNICAL SECTION, Pages 444-446**

IP66		
Ingress protection	Solid protection: Dust tight No ingress of dust, complete protection against contact	Liquid Protection: Powerful jets of water against the enclosure from any direction shall have no harmful effects

## Installation

### Notes:

1. The enclosure is made from polycarbonate which is a highly durable material, and ideal for most environments. However, if installing in areas where creosote, some chemicals, synthetic oils and harsh cleaners are used, seek advice from MK Technical Sales Service Department.

2. The enclosure must be mounted on a flat, vertical surface that is free from grease, dirt and loose material.

3. If the conduit cable entry is from the top or sides the lower drain hole in the mounting box must be drilled out using a 5mm diameter drill bit. This will allow any condensation formed in the conduit system to drain out of the unit.

Note: opening the drain hole will reduce the IP rating; therefore ensure that jetted water is not directed at the unit.

4. The drain hole should not be drilled out if the enclosure is to be installed in an excessively dusty environment. If the drain hole is not drilled out, only the bottom cable entry must be used.


5. If conduit is used for bottom cable entry, a 5 mm diameter drain hole needs to be drilled in the lowest point of the conduit run.

6. If wiring directly to the enclosure without conduit and the installation is outdoors, ensure that a cable specified for outside use is used.

7. Please note; the colour codes used for rigid cabling in the UK since April 2004 and in all other areas of the EU, are as follows;

BROWN = terminals marked 'L'


BLUE = terminals marked 'N'

GREEN / YELLOW = terminals marked .

The colour codes used prior to April 2004 were;

RED = terminals marked 'L'

BLACK = terminals marked 'N'

GREEN / YELLOW = terminals marked .

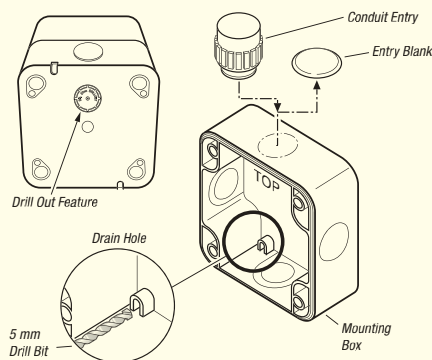
8. PVC Cable Entry (see Service Items) must only be used at the bottom cable entry of the enclosure.

### Instructions:

#### CAUTION

**Do not allow paint or wood preservative to come into contact with the product. The product can be safely mounted on painted surfaces or surfaces treated with wood preservative when the paint or wood preservative is completely dry.**

1. Read the safety instructions.
2. Mark the position of the fixing holes for the mounting box.
3. Drill holes and fit wall plugs suitable for a No. 8 wood screw.
4. Prior to fitting the mounting box to the wall, drill out the drain hole if required (see Installation Note 3). File out the complete drain hole profile. Take care not to damage the small internal wall.
5. Carefully remove the cable entry blanks, or drill out the rear cable entry, as required and fit conduit entry (see Service Items).
6. Secure the mounting box to wall with four No. 8 wood screws. Position drain hole at bottom left hand corner.
7. Align and install conduit or cable entry as required.
8. Seal the conduit and conduit entry with a non setting conduit sealant such as Egaweld™ Plus. Refer to Figure 4.



9. For instructions on how to wire the front plate of telephone and data products see the instruction leaflets supplied with the appropriate module.

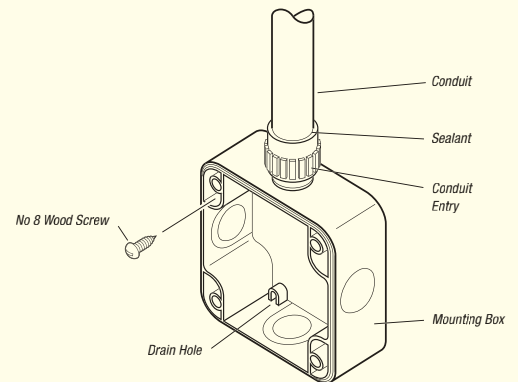


Figure 4

10. Before wiring and fitting the front plate, position the seal on the front plate. Ensure the holes are aligned and seal is aligned with the ribs on the mounting box and the cables are threaded through the seal and screws are fully tightened.

11. Wire and fit the front plate. Ensure the seal is correctly located and the cables are not trapped or pinched.

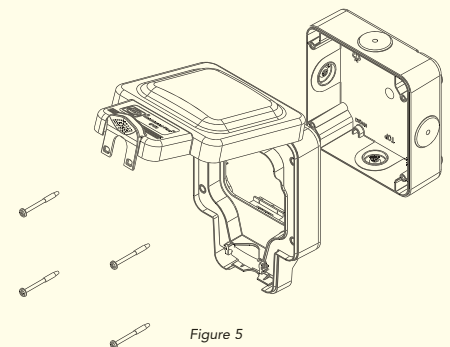


Figure 5

## WHEN INSTALLING CONNECTION UNITS USING THE FRONT FLEXIBLE

### CABLE CLAMP

1. Strip back the outer sheath on the appliance flexible LOAD cable and trim wires to 55mm in length. Do not trim the insulation on the three individual cables for the moment.
  2. When using cables of 10mm or more in diameter, it is necessary to prestress the cable clamp before attempting to load the cable.
  3. To pre-stress the clamp insert a flat bladed screwdriver into the cord grip as shown in fig. 6a and flex the clamping jaw open until it touches the grey base moulding fig. 6b. Then remove the screwdriver.
- IMPORTANT: The clamp must not be re-used for cables below 6mm diameter after pre-stressing.
4. Cables below 10mm diameter do not need the cable clamp pre-stressed and the installation from this point is the same for all products.
  5. To assist pushing the load cable through the front of the product, ease the clamping jaw pressure by holding the product securely in one hand and pushing the tab firmly with your thumb in the direction shown in fig. 7a.
  6. Continue pushing the cable through the clamp until the outer sheath reaches the cable stops. See fig. 7b. The jaws must clamp on the outer sheath.
  7. Carefully strip back the insulation on all three cables to expose 10mm of the conductor.
  8. Ensure all conductors are connected to the appropriate terminals.

Terminal screws must be securely tightened. Pull on each cable to ensure that the terminal screw has securely fixed the conductor.

Notes:

### Testing:

Test the completed installation in accordance with the latest edition of the IEE wiring regulations (BS 7671).

### Service and Maintenance:

#### CLEANING

1. The exterior of the product must only be cleaned with a solution of mild detergent (e.g. washing up liquid) and warm water.

#### CABLE SEAL CAPSULE REPLACEMENT

1. Note the orientation of the cable seal capsules in the lid and front plate.
2. Carefully remove the two cable seal capsules with a flat bladed screwdriver and discard. Refer to Figure 8.
3. Install the new cable seal capsules orientated as noted on removal.

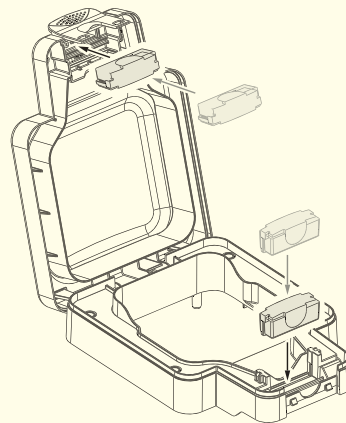


Figure 8

### Pre-stressing the front cable clamp for cables greater than 10mm in diameter

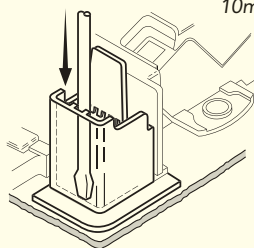


Figure 6a

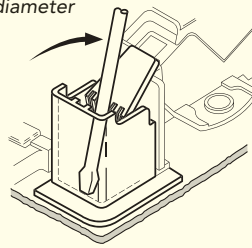


Figure 6b

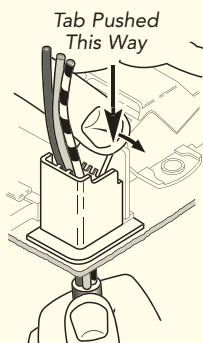


Figure 7a

### Installation of flexible load cables

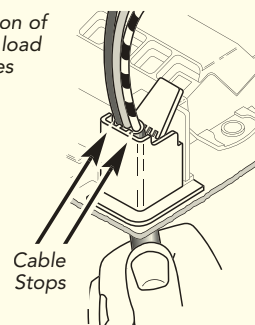
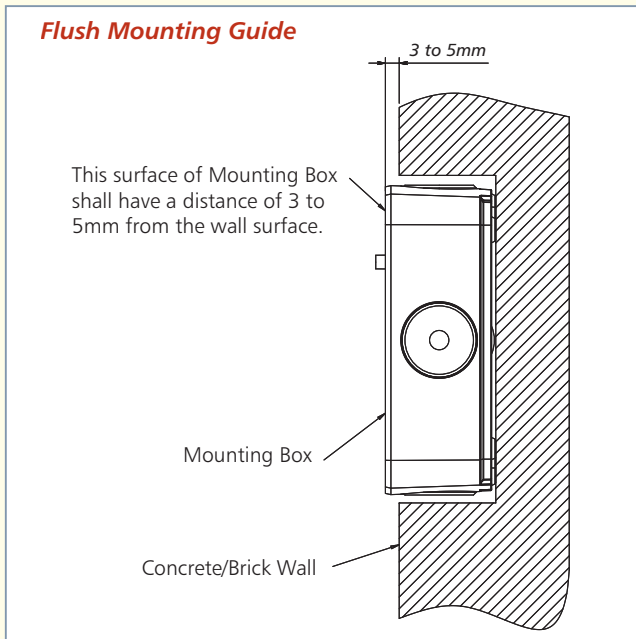


Figure 7b

### Features

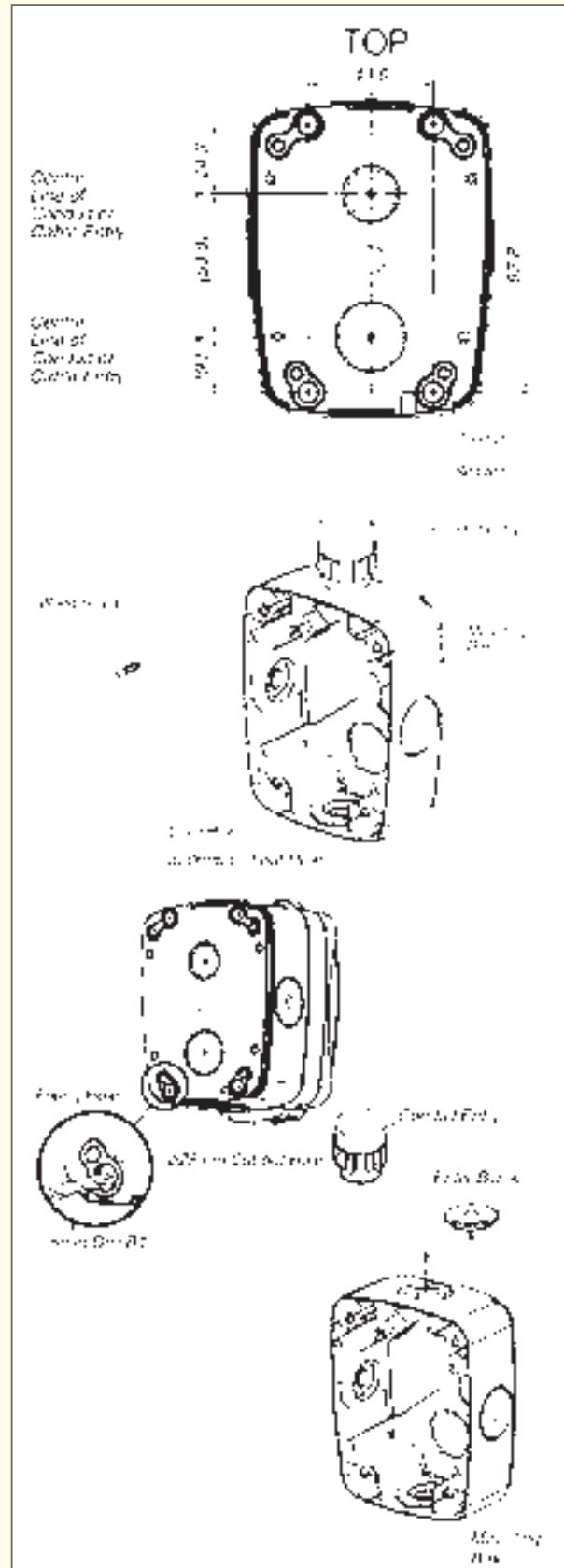
- Surface mounted and flush mounted products and associated service items are available.
- If flush mounting is intended, the conduit cable entry shall be installed from the rear of the mounting box.

#### Flush Mounting Guide



- Suitable for indoor and outdoor use wherever dirt and moisture protection is required. All products accept MK push in conduit and cable entries.
- The use of Polycarbonate for the housing of the products created a robust range of switches and socket outlets.
- Provided all enclosure lids are closed and the products are correctly installed, the MK Shield™ range offers an international protection code of IP56 when the products are in or out of use.
- Only plugs that have cable entry from a side edge will allow the lid to close correctly.
- All products conform to their relevant National standard as well as the standard for enclosures BSEN/IEC60529. 13AMP Sockets conform to BS1363 : Part 2, connection units to BS1363:Part 4 and switches to IEC60669-1.

### Installation Guide



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### Service Items

List No.	Description	D x H mm
56460	Entry Blank	26.9 dia x 5.25
56461	PVC Cable Entry	26.9 dia x 10.15
56462	20mm Plain Conduit Entry	26.9 dia x 28
56463	20mm Threaded Conduit Entry	26.9 dia x 28
56464	Box Coupler	26.9 dia x 16.5
9933	M20 Earth Lead Adaptor	

### Safety Instructions

Switch off and isolate the mains supply before carrying out installation of the MK Shield™ product.

1. This product should be installed by a competent person (eg. a qualified electrician).
2. It is essential that all connections are made as instructed, such that cables are not stressed and terminals are fully tightened.
3. Do not operate with damp hands or whilst it is raining.
4. For the enclosure of a socket-outlet, ensure the cable to the appliance is positioned so as to pass through the gel seal before closing the lid, thereby preventing accidental damage to the cable. The gel seal may stain the cable sleeve, this does not cause harm to the cable.

The box seal is attached on the front plate. Ensure the holes are aligned and the slot in the seal is aligned with the ribs on the mounting box.

Wire and fit the front plate. Ensure the seal is correctly located and no cables are trapped.

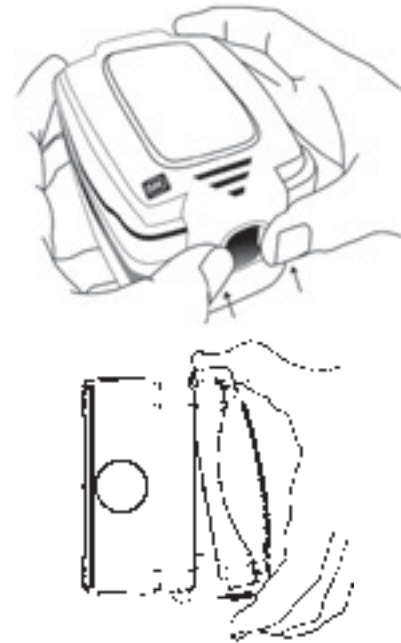
### Specification

This product complies with the following standard.

General	BS 5733
13A Socket-outlet	BS 1363-2
Connection Unit	BS 1363-4
Switch	IEC 60669-1
Environmental Protection	BSEN/IEC60529
Operating Temperature	0°C to +40°C
Material	Polycarbonate UV stabilised

### User Guide

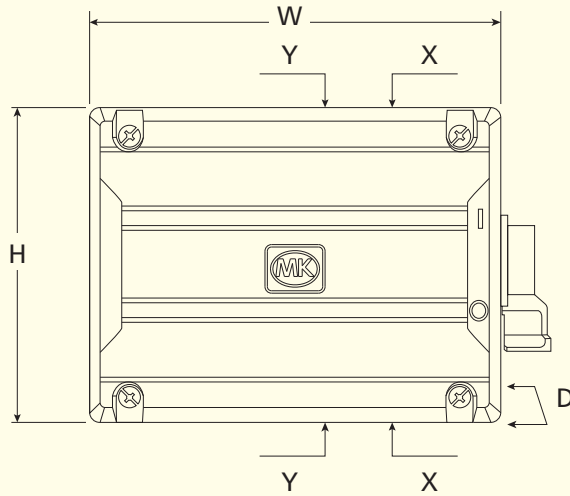
#### Method to release Lid Latch



The full IP56 rating is only achieved when the lid is clipped in the closed position.

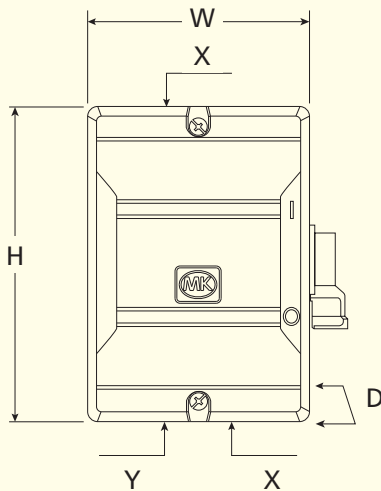
IP	5	6
Ingress protection	Dustproof to sawdust, dust and other small particles	Waterproof to strong jets of water, from any direction

## K6725



List Number	Ithe (A)	Ie (AC23A)	Rated Operational Power (KW)	Terminal Capacity (mm <sup>2</sup> )	No of Poles	Max. number of additional auxiliary contacts	Additional Auxillary Contact (NO) List Number (Not Supplied)	Additional Auxillary Contact (NC) List Number (Not Supplied)	Degree of Ingress Protection	Enclosure Size (mm)			Cable Entry		Fixing Dimensions (mm)		
										W	H	D	X	Y	A	B	G
K6725	25	20	11	1.5-4	6 (2xL1, 2xL2 & 2xL3)	2	6818	6819	IP65	190	130	65	2 x Ø25	1 x Ø16	124	90	5
K6725YEL	25	20	11	1.5-4	7 (2xL1, 2xL2, 2xL3 & AUX)	2	6818	6819	IP65	190	130	65	2 x Ø25	1 x Ø16	124	90	5

## K6816

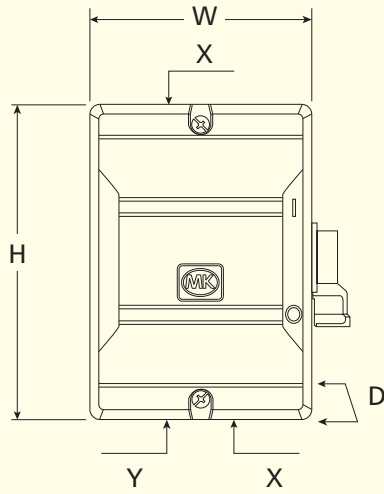


List Number	Ithe (A)	Ie (AC23A)	Rated Operational Power (KW)	Terminal Capacity (mm <sup>2</sup> )	No of Poles	Max. number of additional auxiliary contacts	Additional Auxillary Contact (NO) List Number (Not Supplied)	Additional Auxillary Contact (NC) List Number (Not Supplied)	Degree of Ingress Protection	Enclosure Size (mm)			Cable Entry		Fixing Dimensions (mm)		
										W	H	D	X	Y	A	B	G
K6816	16	10	7.5	1.5-4	3 (L1, L2, & L3)	1	6818	6819	IP65	111	130	60	2xM25	-	64	90	5
K6816YEL	16	10	7.5	1.5-4	3 (L1, L2, L3 & AUX)	1	6818	6819	IP65	111	130	60	2xM25	-	64	90	5

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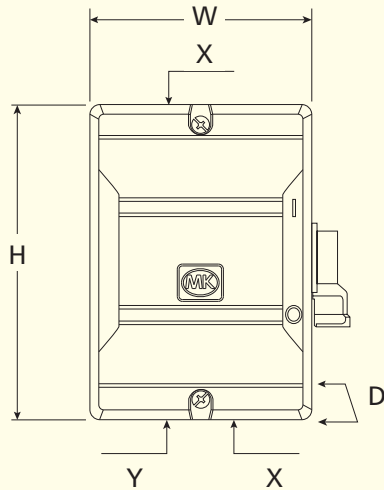
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## K6825



List Number	Ithe (A)	Ie (AC23A)	Rated Operational Power (KW)	Terminal Capacity (mm <sup>2</sup> )	No of Poles	Max. number of additional auxiliary contacts	Additional Auxillary Contact (NO) List Number (Not Supplied)	Additional Auxillary Contact (NC) List Number (Not Supplied)	Degree of Ingress Protection	Enclosure Size (mm)			Cable Entry		Fixing Dimensions (mm)		
										W	H	D	X	Y	A	B	G
K6825	25	20	11	1.5-4	3 (L1, L2, & L3)	1	6818	6819	IP65	111	130	60	2xM25	-	64	90	5
K6825YEL	25	20	11	1.5-4	3 (L1, L2, L3 & AUX)	1	6818	6819	IP65	111	130	60	2xM25	-	64	90	5

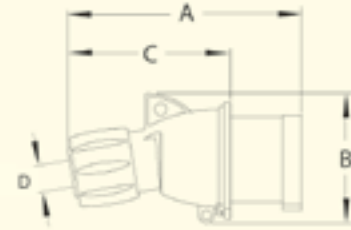
## K6840



List Number	Ithe (A)	Ie (AC23A)	Rated Operational Power (KW)	Terminal Capacity (mm <sup>2</sup> )	No of Poles	Max. number of additional auxiliary contacts	Additional Auxillary Contact (NO) List Number (Not Supplied)	Additional Auxillary Contact (NC) List Number (Not Supplied)	Degree of Ingress Protection	Enclosure Size (mm)			Cable Entry		Fixing Dimensions (mm)		
										W	H	D	X	Y	A	B	G
K6840	40	25	11	1.5-10	3 (L1, L2, & L3)	1	6818	6819	IP65	138	165	68	2xM32	2xM16	90	127	5
K6840YEL	40	25	11	1.5-10	3 (L1, L2, L3 & AUX)	1	6818	6819	IP65	138	168	68	2xM32	2xM16	90	127	5


## Plugs 16 and 32 Amp

## IP44 SPLASHPROOF



Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	440-460V 50-60Hz List No	480-500V 50-60Hz List No	Cable Diameter D mm		Terminal Capacity* mm²	Dimensions in mm		
							min	max		A	B	C
1	2P+E	K9000YEL 4	K9001BLU 6	K9002RED 9			8.2	13	1 - 2.5	115	63	78
16	3P+E	K9005YEL 4	K9006BLU 9	K9007RED 6	K9008RED 11	K9009BLK 7	8.9	17	1 - 2.5	140	72	103
16	3P+N+E	K9013YEL 4	K9014BLU 9	K9015RED 6	K9016RED 11		10.1	17	1 - 2.5	140	76	103
32	2P+E	K9032YEL 4	K9033BLU 6				11.7	21.5	2.5 - 6	156	83	110
32	3P+E		K9036BLU 9	K9037RED 6	K9038RED 11	K9039BLK 7	11.7	21.5	2.5 - 6	156	83	110
32	3P+N+E	K9043YEL 4	K9044BLU 9	K9045RED 6	K9046RED 11		14.2	21.5	2.5 - 6	156	88	110

Amps	Pin. Configuration	>50V 100-300Hz List No	>50V 300-500Hz List No	IS TRAN 50-60Hz List No	>50-250V d.c. List No	Cable Diameter D mm		Terminal Capacity* mm²	Dimensions in mm		
						min	max		A	B	C
16	2P+E			K9004GRY 12	K9003GRY 3	8.2	13	1 - 2.5	115	63	78
16	3P+E	K9010GRN 10	K9011GRN 2			8.9	17	1 - 2.5	140	72	103
16	3P+N+E		K9017GRN 2			10.1	17	1 - 2.5	140	76	103
32	3P+N+E		K9047GRN 2			14.2	21.5	2.5 - 6	156	88	110

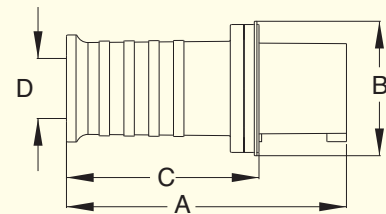
 Earth Hour Position

\*Flexible conductors


## Plugs 63 Amp

FITTED WITH CABLE ENTRY GLAND THREAD SIZE M48

## IP44 SPLASHPROOF



Amps	Pin. Configuration	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Cable Diameter D mm		Terminal Capacity* mm²	Dimensions in mm		
				min	max		A	B	C
63	2P+E	K9063 BLU 6		16.5	35	4 - 16	215	103	148
63	3P+E	K9065 BLU 9	K9066 RED 6	16.5	35	4 - 16	215	103	148
63	3P+N+E		K9071 RED 6	16.5	35	4 - 16	215	103	148

 Earth Hour Position


\*flexible conductors

## Plugs ELV

## IP44 SPLASHPROOF



Amps	Pin. Configuration	25V 50-60Hz List No	50V 50-60Hz List No	25 & 50V 50-60Hz List No	Cable Diameter mm		Terminal Capacity* mm²	Dimensions in mm			
					min	max		A	B	C	D
16	2P	K9018VLT	K9020WHI 12	K9022WHI 10	7	24	4 - 10 and 2 x 6mm²	55	42	145	62
16	3P	K9019VLT	K9021WHI 12		7	24	4 - 10 and 2 x 6mm²	55	42	145	62

 Minor Key Hour Position

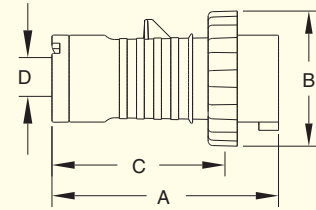
\*flexible conductors



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## Plugs 16 and 32 Amp

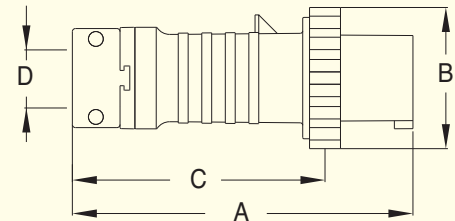
**IP67 WATERTIGHT**


Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Cable Dia. D mm		Terminal Capacity* mm <sup>2</sup>	Terminal Dimensions in mm		
					min	max		A	B	C
16	2P+E	K9023YEL 4	K9024BLU 6		8.2	13	1 - 2.5	128	71	94
16	3P+E			K9025RED 6	8.9	17	1 - 2.5	144	79	111
16	3P+N+E			K9026RED 6	10.1	17	1 - 2.5	146	87	112
32	2P+E	K9053YEL 4	K9054BLU 6		11.7	21.5	2.5 - 6	147	94	105
32	3P+E			K9055RED 6	11.7	21.5	2.5 - 6	147	94	105
32	3P+N+E			K9056RED 6	14.2	21.5	2.5 - 6	161	101	119

Earth Hour Position

\*flexible conductors

## Plugs 63 and 125 Amp

**IP67 WATERTIGHT**


Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	440-460V 50-60Hz List No	480-500V 50-60Hz List No	Cable Dia. D mm		Terminal Capacity* mm <sup>2</sup>	Dimensions in mm		
							min	max		A	B	C
63	2P+E	K9294YEL 4	K9298BLU 6				14	41	4 - 16	275	114	213
63	3P+E			K9282RED 6	K9283RED 11	K9284BLK 7	16.5	41	4 - 16	275	114	213
63	3P+N+E			K9292RED 6	K9293RED 11		16.5	41	4 - 16	275	114	213
125	2P+E		K9099BLU 6				24	48	16 - 50	313	130	242
125	3P+E			K9092RED 6	K9093RED 11		24	48	16 - 50	313	130	242
125	3P+N+E			K9097RED 6			24	48	16 - 50	313	130	242

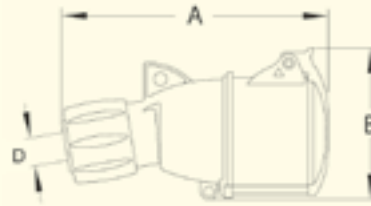
Earth Hour Position

\*flexible conductors

 For a full range of corresponding products,  
see pages 244-259 in the product selector.

## Connectors 16 and 32 Amp

## IP44 SPLASHPROOF



Amps	Pin. Configuration	100-130V	200-250V	380-415V	440-460V	480-500V	Cable Dia. D mm		Terminal Capacity* mm <sup>2</sup>	Dimensions in mm	
		50-60Hz List No	50-60Hz List No	50-60Hz List No	50-60Hz List No	50-60Hz List No	min	max		A	B
16	2P+E	K9100YEL 4	K9101BLU 6	K9102RED 9			8.2	13	1 - 2.5	124	75
16	3P+E	K9105YEL 4	K9106BLU 9	K9107RED 6	K9108RED 11	K9109BLK 7	8.9	17	1 - 2.5	150	85
16	3P+N+E	K9113YEL 4	K9114BLU 9	K9115RED 6	K9116RED 11		10.1	17	1 - 2.5	152	89
32	2P+E	K9132YEL 4	K9133BLU 6				11.7	21.5	2.5 - 6	171	93
32	3P+E	K9135YEL 4	K9136BLU 9	K9137RED 6		K9139BLK 7	11.7	21.5	2.5 - 6	171	93
32	3P+N+E	K9142YEL 4	K9143BLU 9	K9144RED 6	K9145RED 11		14.2	21.5	2.5 - 6	171	99

Amps	Pin. Configuration	>50V	>50V	IS TRAN	>50-250V	Cable Dia. D mm		Terminal Capacity* mm <sup>2</sup>	Dimensions in mm	
		100-300Hz List No	300-500Hz List No	50-60Hz List No	d.c. List No	min	max		A	B
16	2P+E			K9104GRY 12	K9103GRY 3	8.2	13	1 - 2.5	124	75
16	3P+E	K9110GRN 10	K9111GRN 2			8.9	17	1 - 2.5	150	85
16	3P+N+E		K9117GRN 2			10.1	17	1 - 2.5	152	89
32	3P+N+E		K9146GRN 2			14.2	21.5	2.5 - 6	171	99

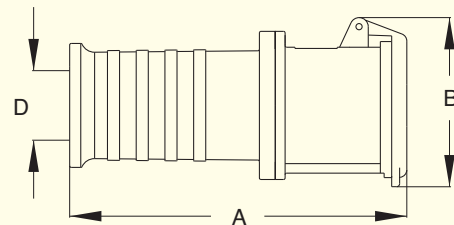
 Earth Hour Position

\*flexible conductors

## Connectors 63 Amp

FITTED WITH CABLE ENTRY GLAND THREAD SIZE M48

## IP44 SPLASHPROOF



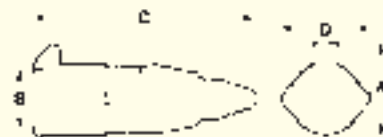
Amps	Pin. Configuration	200-250V	380-415V	Cable Dia. D mm		Terminal Capacity* mm <sup>2</sup>	Dimensions in mm	
		50-60Hz List No	50-60Hz List No	min	max		A	B
63	2P+E	K9172BLU 6		16.5	35	4 - 16	224	112
63	3P+E	K9164BLU 9	K9165RED 6	16.5	35	4 - 16	224	112
63	3P+N+E		K9170RED 6	16.5	35	4 - 16	224	112

 Earth Hour Position


\*flexible conductors

## Connectors ELV

## IP44 SPLASHPROOF



Amps	Pin. Configuration	25V	50V	25 & 50V	Cable Diameter mm		Terminal Capacity* mm <sup>2</sup>	Dimensions in mm			
		50-60Hz List No	50-60Hz List No	50-60Hz List No	min	max		A	B	C	D
16	2P	K9118VLT	K9120WHI 12	K9122WHI 10	7	24	4 - 10 and 2 x 6mm <sup>2</sup>	67	43	158	62
16	3P	K9119VLT	K9121WHI 12		7	24	4 - 10 and 2 x 6mm <sup>2</sup>	67	43	158	62

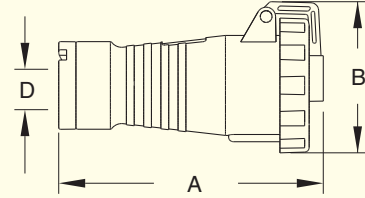
 Minor Key Hour Position

\*flexible conductors


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## Connectors 16 and 32 Amp

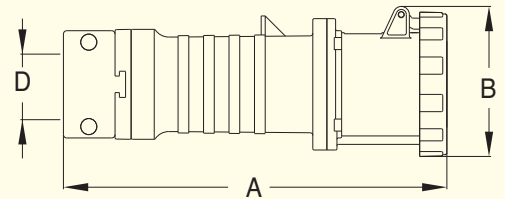
**IP67 WATERTIGHT**


Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Cable Dia. D mm		Terminal Capacity* mm <sup>2</sup>	Dimensions in mm	
					min	max		A	B
16	2P+E	K9123YEL 4	K9124BLU 6		8.2	13	1 - 2.5	151	80
16	3P+E			K9125RED 6	8.9	17	1 - 2.5	168	88
16	3P+N+E			K9126RED 6	10.1	21.5	1 - 2.5	170	97
32	2P+E	K9155YEL 4	K9156BLU 6		11.7	21.5	2.5 - 6	177	102
32	3P+E			K9157RED 6	11.7	21.5	2.5 - 6	177	102
32	3P+N+E			K9158RED 6	14.2	21.5	2.5 - 6	182	109


 Earth Hour Position

\*flexible conductors

## Connectors 63 and 125 Amp

**IP67 WATERTIGHT**


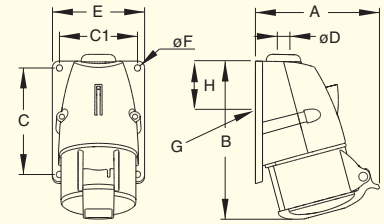
Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	440-460V 50-60Hz List No	480-500V 50-60Hz List No	Cable Dia. D mm		Terminal Capacity* mm <sup>2</sup>	Dimensions in mm	
							min	max		A	B
63	2P+E	K9855YEL 4	K9856BLU 6				14	41	4 - 16	286	111
63	3P+E			K9842RED 6		K9844BLK 7	16.5	41	4 - 16	286	111
63	3P+N+E			K9852RED 6	K9853RED 11		16.5	41	4 - 16	286	111
125	2P+E		K9189BLU 6				24	48	16 - 50	325	122
125	3P+E			K9182RED 6	K9183RED 11		24	48	16 - 50	325	122
125	3P+N+E			K9187RED 6			24	48	16 - 50	325	122

 Earth Hour Position

\*flexible conductors

## Socket Outlets Angled Surface Mounting 16 and 32 Amp

TOP CONDUIT OR REAR CABLE ENTRY, COMPLETE WITH BLANKING PLUG

**IP44 SPLASHPROOF**

Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	440-460V 50-60Hz List No	480-500V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm							Top Conduit Entry D	Rear Entry G
								A	B	C	C1	E	F	H		
16	2P+E	K9200YEL 4	K9201BLU 6	K9202RED 9			1.5 - 4	91	117	75	54	66	5.5	30	M 20	Ø23
16	3P+E	K9205YEL 4	K9206BLU 9	K9207RED 6	K9208RED 11	K9209BLK 7	1.5 - 4	100	132	91	67	79	5.5	30	M 20	Ø23
16	3P+N+E	K9213YEL 4	K9214BLU 9	K9215RED 6	K9216RED 11		1.5 - 4	104	134	91	67	79	5.5	30	M 20	Ø23
32	2P+E	K9232YEL 4	K9233BLU 6				2.5 - 10	118	163	111	72	85	5.5	33	M 25	Ø29
32	3P+E	K9235YEL 4	K9236BLU 9	K9237RED 6		K9238BLK 7	2.5 - 10	116	163	111	72	85	5.5	33	M 25	Ø29
32	3P+N+E	K9239YEL 4	K9240BLU 9	K9241RED 6	K9242RED 11		2.5 - 10	121	164	111	72	85	5.5	33	M 25	Ø29

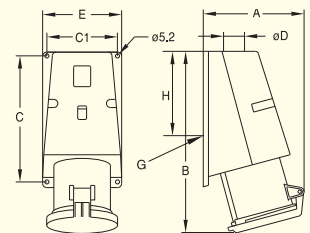
Amps	Pin. Configuration	>50V 100-300Hz List No	>50V 300-500Hz List No	IS TRAN 50-60Hz List No	>50-250V d.c. List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm							Top Conduit Entry D	Rear Entry G
							A	B	C	C1	E	F	H		
16	2P+E			K9204GRY 12	K9203GRY 3	1.5 - 4	91	117	75	54	66	5.5	30	M 20	Ø23
16	3P+E	K9210GRN 10	K9211GRN 2			1.5 - 4	100	132	91	67	79	5.5	30	M 20	Ø23
16	3P+N+E		K9252GRN 2			1.5 - 4	104	134	91	67	79	5.5	30	M 20	Ø23
32	3P+N+E		K9258GRN 2			2.5 - 10	121	164	111	72	85	5.5	33	M 25	Ø29

 Earth Hour Position

\*Solid or Stranded conductors

## Socket Outlets Angled Surface Mounting 63 Amp

TOP CONDUIT OR REAR CABLE ENTRY, COMPLETE WITH BLANKING PLUG

**IP44 SPLASHPROOF**

Amps	Pin. Configuration	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm							Conduit Entry D	Rear Entry G
					A	B	C	C1	E	H			
63	2P+E	K9274BLU 6		4 - 16	136	254	170	95	107	67	M32	Ø35	
63	3P+E	K9264BLU 9	K9265RED 6	4 - 16	136	254	170	95	107	67	M32	Ø35	
63	3P+N+E		K9269RED 6	4 - 16	136	254	170	95	107	67	M32	Ø35	


 Earth Hour Position

\*Solid or Stranded conductors

## Socket Outlets Angled Surface Mounting Elv

**IP44 SPLASHPROOF**

Amps	Pin. Configuration	25V 50-60Hz List No	50V 50-60Hz List No	25 & 50V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm					Conduit Entry
						A	B	C	D	F	
16	2P	K9253VLT	K9255WHI 12	K9257WHI 10	4 - 10 and 2 x 6mm <sup>2</sup>	81	113	80	70	55	M25
16	3P	K9254VLT	K9256WHI 12		4 - 10 and 2 x 6mm <sup>2</sup>	81	113	80	70	55	M25

 Minor Key Hour Position

\*Solid or Stranded conductors

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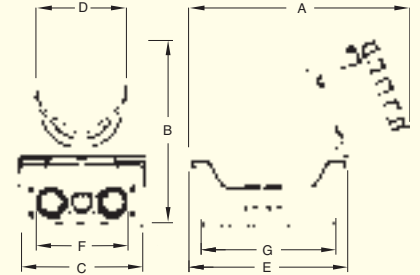
## Socket Outlets Angled Surface Mounting 63 Amp

### IP67 WATERTIGHT

Amps	Pin. Configuration	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm				Fixing Centres	
					A	B	C	E	F	G
63	2P+E	<b>K9857BLU 6</b>		6 - 25	255	185	150	158	129	124
63	3P+E		<b>K9858RED 6</b>	6 - 25	255	185	150	158	129	124
63	3P+N+E		<b>K9859RED 6</b>	6 - 25	255	185	150	158	129	124

Earth Hour Position

\*Solid or Stranded conductors



## Socket Outlets Straight Panel Mounting 16 and 32 Amp

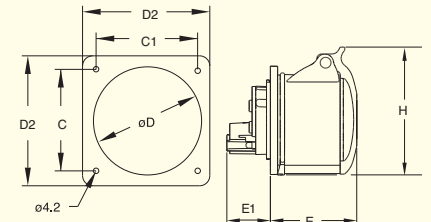
ALL FLANGES HAVE THE SAME FIXING CENTRES AND OUTSIDE DIMENSIONS TO ASSIST PANEL BUILDING. SEE BELOW FOR MINIMISED FLANGE OPTION.

### IP44 SPLASHPROOF

Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	440-460V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm						
							C	C1	D	D2	E	E1	H
16	2P+E	<b>K9400YEL 4</b>	<b>K9401BLU 6</b>			1.5 - 4	60-61	60-61	49	75	56	29	79
16	3P+E	<b>K9405YEL 4</b>	<b>K9406BLU 9</b>	<b>K9407RED 6</b>		1.5 - 4	60-61	60-61	59	75	58	30	87
16	3P+N+E	<b>K9413YEL 4</b>	<b>K9414BLU 9</b>	<b>K9415RED 6</b>	<b>K9416RED 11</b>	1.5 - 4	60-61	60-61	59	75	60	31	89
32	2P+E	<b>K9432YEL 4</b>	<b>K9433BLU 6</b>			2.5 - 10	60-61	60-61	66	75	70	34	93
32	3P+E			<b>K9437RED 6</b>		2.5 - 10	60-61	60-61	66	75	70	34	93
32	3P+N+E		<b>K9444BLU 9</b>	<b>K9445RED 6</b>	<b>K9446RED 11</b>	2.5 - 10	60-61	60-61	66	75	70	34	93

Earth Hour Position

\*Solid or Stranded conductors

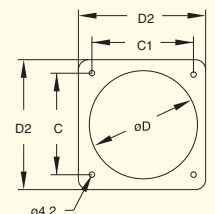


## Minimised Flange For Straight Panel Mounting 16 Amp Outlets

NOTE: FIXING CENTRES COMPATIBLE WITH NON K SERIES PRODUCT

### IP44 SPLASHPROOF

Amps	Pin. Configuration	List No	Dimensions in mm			
			C	C1	D	D2
16	2P+E	<b>K9996</b>	44-47	44-47	49	56




Minimised flange can be used to replace flange supplied with straight panel mounted outlets. To be ordered as additional part.

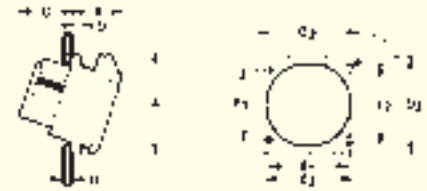
## Socket Outlets Angled Panel Mounting ELV

### IP44 SPLASHPROOF

Amps	Pin. Configuration	25V 50-60Hz List No	50V 50-60Hz List No	25 & 50V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm										
						A	B	C	D	E1	E2	F1	F2	G max	D2	D3
16	2P	K9518VLT	K9520WHI 12	K9522WHI 10	4 - 10 and 2 x 6mm <sup>2</sup>	68	34	36	6	47	52	53	50	7	62	68
16	3P	K9519VLT	K9521WHI 12		4 - 10 and 2 x 6mm <sup>2</sup>	68	34	36	6	47	52	53	50	7	62	68

 Minor Key Hour Position


\*Solid or Stranded conductors



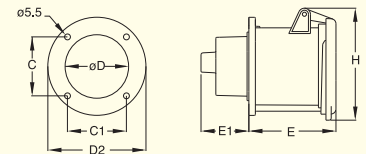
## Socket Outlets Straight Panel Mounting 63 Amp

### IP44 SPLASHPROOF

Amps	Pin. Configuration	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm						
					C	C1	D	D2	E	E1	H
63	2P+E	K9472BLU 6		4 - 16	61	61	70	98	89	48	112
63	3P+E		K9465RED 6	4 - 16	61	61	70	98	89	48	112
63	3P+N+E		K9470RED 6	4 - 16	61	61	70	98	89	48	112

 Earth Hour Position

\*Solid or Stranded conductors



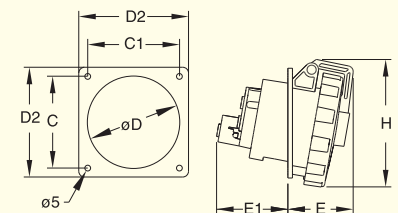
## Socket Outlets Angled Panel Mounting 16 and 32 Amp

### IP67 WATERTIGHT

Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm						
						C	C1	D	D2	E	E1	H
16	2P+E	K9802YEL 4	K9803BLU 6		1 - 2.5	79.5	79.5	83	95	45	57	95
16	3P+E			K9807RED 6	1 - 2.5	79.5	79.5	83	95	45	57	95
16	3P+N+E			K9815RED 6	1 - 2.5	79.5	79.5	83	95	47	57	99
32	2P+E	K9865YEL 4	K9866BLU 6		2.5 - 6	79.5	79.5	83	95	56	61	104
32	3P+E			K9870RED 6	2.5 - 6	79.5	79.5	83	95	56	61	104
32	3P+N+E			K9873RED 6	2.5 - 6	79.5	79.5	83	95	56	62	111

 Earth Hour Position

\*Solid or Stranded conductors



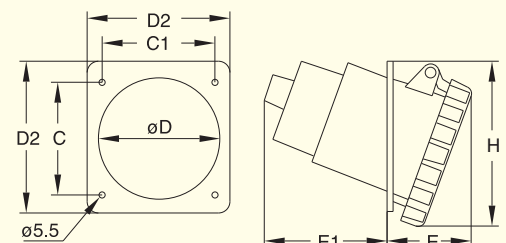
## Socket Outlets Angled Panel Mounting 63 Amp

### IP67 WATERTIGHT

Amps	Pin. Configuration	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm						
					C	C1	D	D2	E	E1	H
63	2P+E	K9825BLU 6		6 - 25	84	80	78	104	61	86	115
63	3P+E		K9582RED 6	6 - 25	84	80	78	104	61	86	115
63	3P+N+E		K9592RED 6	6 - 25	84	80	78	104	61	86	115

 Earth Hour Position

\*Solid or Stranded conductors



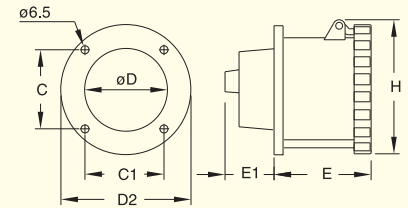
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## Socket Outlets Straight Panel Mounting 63 and 125 Amp

### IP67 WATERTIGHT

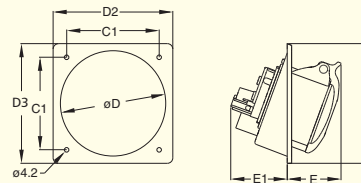
Amps	Pin. Configuration	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm						
					C	C1	D	D2	E	E1	H
63	2P+E	K9828BLU 6		6 - 25	61	61	70	98	89	48	111
63	3P+E		K9812RED 6	6 - 25	61	61	70	98	89	48	111
63	3P+N+E		K9822RED 6	6 - 25	61	61	70	98	89	48	111
125	2P+E	K9483BLU 6		25 - 70	71	71	88	115	100	58	122
125	3P+E		K9481RED 6	25 - 70	71	71	88	115	100	58	122
125	3P+N+E		K9482RED 6	25 - 70	71	71	88	115	100	58	122



Earth Hour Position

\*Solid or Stranded conductors

## Socket Outlets Angled Panel Mounting 16 and 32 Amp (NEW RANGE)

 IP44 Outlet Angled Panel  
Mounted can only be installed  
recessed  
Note: Fixing centres differ from  
old range


### IP44 SPLASHPROOF

Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	440-460V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm							
							C	C1	D	D2	D3	E	E1	H
16	2P+E	K9767YEL 4	K9771BLU 6	K9777RED 9		1.5 - 4	55	55	63	70	78	53	42	76
16	3P+E		K9772BLU 9	K9778RED 6		1.5 - 4	66	66	78	83	89	53	46	85
16	3P+N+E		K9773BLU 9	K9779RED 6	K9754RED 11	1.5 - 4	66	66	78	83	89	55	48	89
32	2P+E	K9769YEL 4	K9774BLU 6			2.5 - 10	75	75	87	93	99	61	52	98
32	3P+E			K9751RED 6	K9755RED 11	2.5 - 10	75	75	87	93	99	61	52	98
32	3P+N+E		K9776BLU 9	K9752RED 6		2.5 - 10	75	75	87	93	99	64	52	101

Amps	Pin. Configuration	>50V 100-300Hz List No	>50V 300-500Hz List No	IS TRAN 50-60Hz List No	>50-250V d.c. List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm							
							C	C1	D	D2	D3	E	E1	H
16	2P+E			K9756GRY 12		1.5 - 4	55	55	63	70	78	53	42	76
16	3P+E					1.5 - 4	66	66	78	83	89	53	46	85

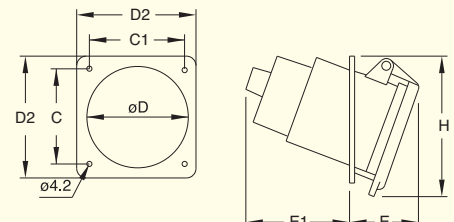
Earth Hour Position

\*Solid or Stranded conductors

## Socket Outlets Angled Panel Mounting 63 Amp

### IP44 SPLASHPROOF

Amps	Pin. Configuration	220-250V 50-60Hz List No	380-415V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm						
					C	C1	D	D2	E	E1	H
63	2P+E	K9544BLU 6		6 - 25	84	80	92	104	62	95	111
63	3P+E		K9565RED 6	6 - 25	84	80	92	104	62	95	111
63	3P+N+E		K9570RED 6	6 - 25	84	80	92	104	62	95	111



Earth Hour Position

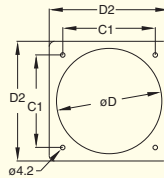
\*Solid or Stranded conductors

## Alternate Flange for Socket Outlets Angled Panel Mounting 16 and 32 Amp

Note: Fixing centres not compatible with new product range

### IP44 SPLASHPROOF

Amps	Pin. Configuration	List No	Dimensions in mm			
			C	C1	D	D2
16	2P+E	K9981	85	85	46	110
16	3P+E, 3P+N+E	K9982	85	85	59	110
32	2P+E, 3P+E, 3P+N+E	K9983	85	85	64	110




## Switchsocket Outlets Interlocked Angled Surface Mounting 16, 32 and 63 Amp Aluminium Alloy

SWITCH CAN BE LOCKED IN OPEN OR CLOSED POSITION

### IP44 SPLASHPROOF

Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	440-460V 50-60Hz List No	480-500V 50-60Hz List No	>50V >300-500Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm			Fixing Centres
									A	B	C	
16	3P+E	K9600YEL 4	K9601BLU 9	K9602RED 6	K9603RED 11		K9605GRN 2	1.5 - 10	125	198	135	91.5 x 165
16	3P+N+E	K9606YEL 4	K9607BLU 9	K9608RED 6				1.5 - 10	125	198	135	91.5 x 165
32	3P+E	K9632YEL 4	K9633BLU 9	K9634RED 6	K9635RED 11	K9636BLK 7		1.5 - 10	135	198	135	91.5 x 165
32	3P+N+E	K9638YEL 4	K9639BLU 9	K9640RED 6	K9641RED 11			1.5 - 10	135	198	135	91.5 x 165
63	3P+E		K9664BLU 9	K9665RED 6				6 - 25	183	228	165	91.5 x 201
63	3P+N+E			K9670RED 6				6 - 25	183	228	165	91.5 x 201

 Earth Hour Position

\*Solid or Stranded conductors

ALUMINIUM ALLOY ENCLOSURE.

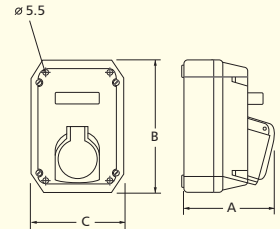
#### 16 amp and 32 amp

Will accept auxiliary contact eg. 6813 and 6814  
M32/M25 conduit entry, with mounting for FL9 flange plate

#### 63 amp

M40 conduit entry with mounting for FL 13 flange plate

Switch Utilisation Category AC 22A



## Switchsocket Outlets Interlocked Angled Conduit Entry Surface Mounting 16, 32 and 63 Amp

### IP44 SPLASHPROOF

Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm			Fixing Centres	Conduit Entry
						A	B	C		
16	2P+E	K9609YEL 4	K9610BLU 6		1.5 - 10	116	129	168	125 x 91	M25
16	3P+E			K9611RED 6	1.5 - 10	116	129	168	125 x 91	M25
16	3P+N+E			K9612RED 6	1.5 - 10	116	129	168	125 x 91	M25
32	2P+E	K9642YEL 4	K9643BLU 6		1.5 - 10	126	129	168	125 x 91	M25
32	3P+E			K9644RED 6	1.5 - 10	126	129	168	125 x 91	M25
32	3P+N+E			K9645RED 6	1.5 - 10	126	129	168	125 x 91	M25
63	2P+E		K9306BLU 6		6 - 25	168	168	206	152 x 132	2 x 32mm
63	3P+E		K9311BLU 9	K9312RED 6	6 - 25	168	168	206	152 x 132	2 x 32mm
63	3P+N +E			K9322RED 6	6 - 25	168	168	206	152 x 132	2 x 32mm

 Earth Hour Position

\*Solid or Stranded conductors

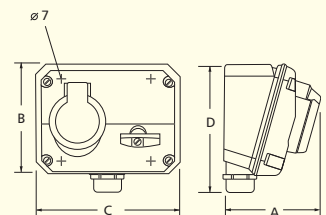
#### 16 amp and 32 amp

With 29mm knockout at top. Will accept FL13 flange. Bottom entry M25.

#### 63 amp

FL13 flange entry at top. Supplied with cover plate and gland plate.

Switch Utilisation Category AC 22A





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## Switchsocket Outlets Interlocked Angled Surface Mounting 16, 32 and 63 Amp

**IP67 WATERTIGHT**

### 16 amp and 32 amp

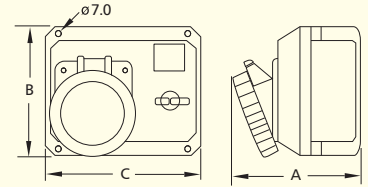
 With 25mm dia. knockout at top. Will accept FL13 flange.  
Bottom entry M25.

### 63 amp

 With 32mm knockouts top and bottom. Will accept FL13 flange  
top and bottom.

Switch can be locked in open position or closed position.

Switch Utilisation Category AC 22A



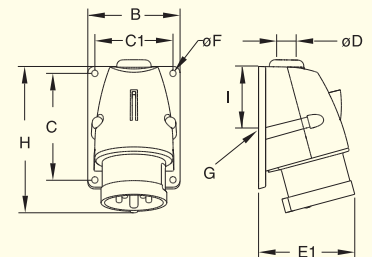
Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	440-460V 50-60Hz List No	480-500V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm			Fixing Centres	Conduit Entry
								A	B	C		
16	2P+E		K9324BLU 6				1.5 - 10	126	129	168	125 x 91	M25
16	3P+E			K9327RED 6			1.5 - 10	126	129	168	125 x 91	M25
16	3P+N+E			K9330RED 6			1.5 - 10	126	129	168	125 x 91	M25
32	2P+E		K9369BLU 6				1.5 - 10	136	129	168	125 x 91	M25
32	3P+E			K9359RED 6			1.5 - 10	136	129	168	125 x 91	M25
32	3P+N+E			K9362RED 6			1.5 - 10	136	129	168	125 x 91	M25
63	2P+E	K9356YEL 4	K9355BLU 6				6 - 25	182	168	206	152 x 132	2 x 32mm
63	3P+E			K9342RED 6	K9343RED 11	K9344BLK 6	6 - 25	182	168	206	152 x 132	2 x 32mm
63	3P+N+E			K9352RED 6	K9353RED 11		6 - 25	182	168	206	152 x 132	2 x 32mm

Earth Hour Position

\*Solid or Stranded conductors

## Splashproof Appliance Inlets Angled Surface Mounting 16 and 32 Amp

TOP CONDUIT OR REAR CABLE ENTRY, COMPLETE WITH BLANKING PLUG

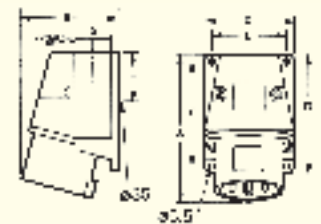
**IP44 SPLASHPROOF**


Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	480-500V 50-60Hz List No	Cable Diameter		Terminal Capacity* mm <sup>2</sup>	Dimensions in mm							Top Conduit Entry D	Rear Entry G
						min	max		B	C	C1	E1	F	H	I		
16	2P+E	K9700YEL 4	K9701BLU 6			8.2	14	1.5 - 10	66	75	54	72	5.5	110	30	M20	Ø23
16	3P+E			K9706RED 6		8.9	16.5	1.5 - 10	79	91	67	78	5.5	124	30	M20	Ø23
16	3P+N+E		K9710BLU 9	K9711RED 6		10.1	16.5	1.5 - 10	79	91	67	81	5.5	125	30	M20	Ø23
32	2P+E	K9732YEL 4	K9733BLU 6			11.7	19.5	1.5 - 10	85	111	72	94	5.5	153	33	M25	Ø29
32	3P+E			K9736RED 6	K9737BLK 7	11.7	19.5	1.5 - 10	85	111	72	94	5.5	153	33	M25	Ø29
32	3P+N+E		K9740BLU 9	K9741RED 6		11.7	19.5	1.5 - 10	85	111	72	96	5.5	154	33	M25	Ø29

Earth Hour Position

\*Solid or Stranded conductors

## Appliance Inlets Angled Surface Mounting 63Amp

**IP44 SPLASHPROOF**


Amps	Pin. Configuration	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Cable Diameter		Terminal Capacity* mm <sup>2</sup>	Dimensions in mm								Conduit Entry	Rear Entry
				min	max		A	B	C	D	E	F	G	H		
63	2P+E	K9775BLU 6		14	30	6 - 25	225	117	106	M32	95	170	182	67	M32	Ø35
63	3P+N+E		K9768RED 6	16.5	30	6 - 25	225	117	106	M32	95	170	182	67	M32	Ø35


Earth Hour Position

\*Solid or Stranded conductors

## Appliance Inlets Angled Surface Mounting 63 Amp

### IP67 WATERTIGHT

Amps	Pin Configuration	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm						Conduit Entry
					B	C	C1	E1	H	H1	
63	2P+E	K9826BLU 6		6 - 25	150	124	129	205	250	186	1 x M40/M32 and 2 x M20 top 2 x M40/M32 and 1 x M20 bottom Will accept FL13 Flange top and bottom
63	3P+E		K9829RED 6	6 - 25	150	124	129	205	250	186	
63	3P+N+E		K9827RED 6	6 - 25	150	124	129	205	250	186	

 Earth Hour Position

\*Solid or Stranded conductors



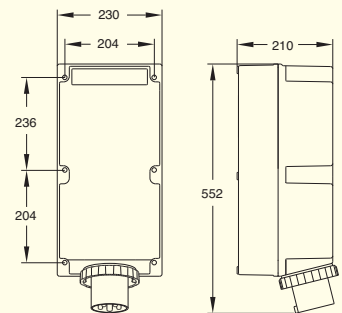
## Appliance Inlets Surface Mounting 125 Amp

### IP67 WATERTIGHT

Amps	Pin Configuration	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Conduit Entry
125	3P+N+E		K9884RED 6	16 - 70	2 x 23/47mm top and bottom

 Earth Hour Position

\*Solid or Stranded conductors



## Appliance Inlets Panel Mounting 16, 32, 63 and 125 Amp

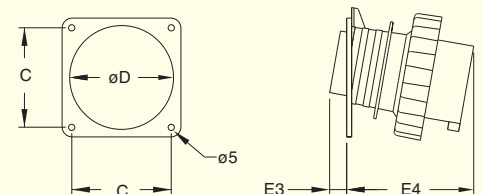
### IP67 WATERTIGHT

Amps	Pin Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Dimensions in mm			
						C	D	E3	E4
16	2P+E	K9780YEL 4	K9781BLU 6		1.5 - 4	79.5	83	10	47
16	3P+E			K9782RED 6	1.5 - 4	79.5	83	10	53
16	3P+N+E			K9783RED 6	1.5 - 4	79.5	83	10	59
32	2P+E	K9784YEL 4	K9785BLU 6		2.5 - 10	79.5	83	12	60
32	3P+E			K9786RED 6	2.5 - 10	79.5	83	12	60
32	3P+N+E			K9787RED 6	2.5 - 10	79.5	83	12	67
63	2P+E	K9788YEL 4	K9789BLU 6		6 - 25	61	70	50	80
63	3P+E			K9790RED 6	6 - 25	61	70	50	80
63	3P+N+E			K9791RED 6	6 - 25	61	70	50	80
125	2P+E		K9792BLU 6		16 - 70	71	81	56	89
125	3P+N+E			K9793RED 6	16 - 70	71	81	56	89

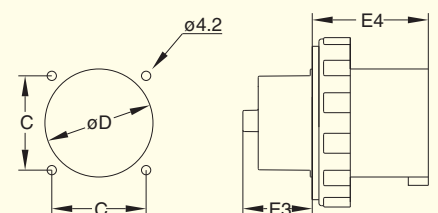
 Earth Hour Position

\*Solid or Stranded conductors

#### 16 AND 32 AMP



#### 63 AND 125 AMP



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## Appliance Inlets Surface Mounting ELV

### IP44 SPLASHPROOF

Amps	Pin. Configuration	25V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup> (flexible conductors)	Dimensions in mm						Conduit Entry
				A	B	C	D	E	F	
16	2P	K9725VLT	4 - 10 and 2 x 6mm <sup>2</sup>	100	66	70	20	55	80	M25
16	3P	K9726VLT	4 - 10 and 2 x 6mm <sup>2</sup>	100	66	70	20	55	80	M25

\*Solid or Stranded conductors

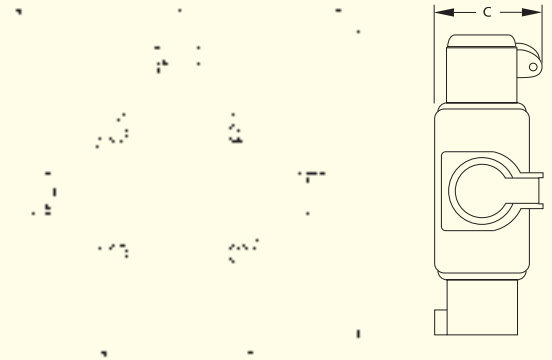


## Three Way Adaptor 16 Amp

### IP44 SPLASHPROOF

Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Dimensions in mm			
					A	B	C	D
16	2P+E	K9907YEL 4	K9908BLU 6		198	189	74	99
16	3P+E			K9910RED 6	202	190	81	99
16	3P+N+E			K9911RED 6	205	192	85	99

Earth Hour Position



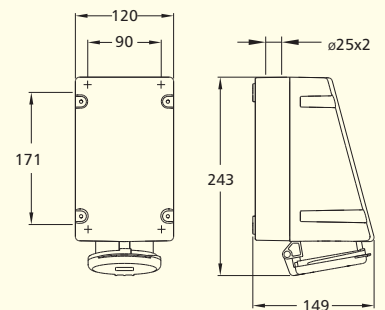
## Socket Outlets Loop in Surface Mounting 16 and 32 Amp

### IP44 SPLASHPROOF

Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Cable Entry Knockouts	Terminal Capacity* mm <sup>2</sup>	Fixing Centres mm
16	2P+E	K13200YEL 4	K13201BLU 6		2 x Ø25 top	2 x (1.5-10)	90 x 170
16	3P+E			K13207RED 6	2 x Ø25 top	2 x (1.5-10)	90 x 170
16	3P+N+E			K13215RED 6	2 x Ø25 top	2 x (1.5-10)	90 x 170
32	2P+E	K13232YEL 4	K13233BLU 6		2 x Ø25 top	2 x (2.5-10)	90 x 170
32	3P+E			K13237RED 6	2 x Ø25 top	2 x (2.5-10)	90 x 170
32	3P+N+E			K13241RED 6	2 x Ø25 top	2 x (2.5-10)	90 x 170

Earth Hour Position

\*Solid or Stranded conductors



## Switchsocket Outlets Interlocked Surface Mounting 16 and 32 Amp

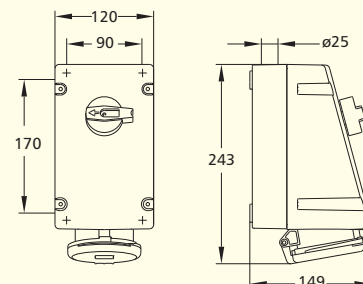
(SUITABLE FOR TOP ENTRY)

**IP44 SPLASHPROOF**

Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Cable Entry Knockouts	Terminal Capacity* mm <sup>2</sup>	Fixing Centres mm
16	2P+E	K13600YEL 4	K13601BLU 6		2 x Ø25 top	1.5 - 4	90 x 170
16	3P+E			K13607RED 6	2 x Ø25 top	1.5 - 4	90 x 170
16	3P+N+E			K13615RED 6	2 x Ø25 top	1.5 - 4	90 x 170
32	2P+E	K13632YEL 4	K13633BLU 6		2 x Ø25 top	2.5 - 10	90 x 170
32	3P+E			K13637RED 6	2 x Ø25 top	2.5 - 10	90 x 170
32	3P+N+E			K13641RED 6	2 x Ø25 top	2.5 - 10	90 x 170

 Earth Hour Position


\*Solid or Stranded conductors



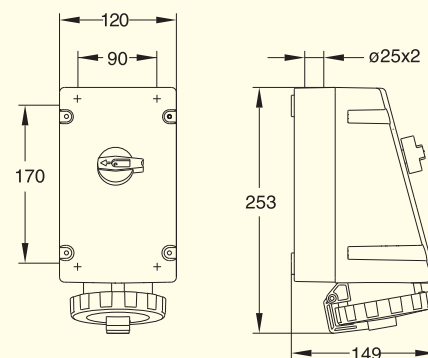
## Switchsocket Outlets Interlocked Surface Mounting 16 and 32 Amp

**IP67 WATERTIGHT**

Amps	Pin. Configuration	100-130V 50-60Hz List No	200-250V 50-60Hz List No	380-415V 50-60Hz List No	Cable Entry Knockouts	Terminal Capacity* mm <sup>2</sup>	Fixing Centres mm
16	2P+E	K13623YEL 4	K13624BLU 6		2 x Ø25 top	1.5 - 4	90 x 170
16	3P+E			K13625RED 6	2 x Ø25 top	1.5 - 4	90 x 170
16	3P+N+E			K13626RED 6	2 x Ø25 top	1.5 - 4	90 x 170
32	2P+E	K13653YEL 4	K13654BLU 6		2 x Ø25 top	2.5 - 10	90 x 170
32	3P+E			K13655RED 6	2 x Ø25 top	2.5 - 10	90 x 170
32	3P+N+E			K13656RED 6	2 x Ø25 top	2.5 - 10	90 x 170

 Earth Hour Position

\*Solid or Stranded conductors



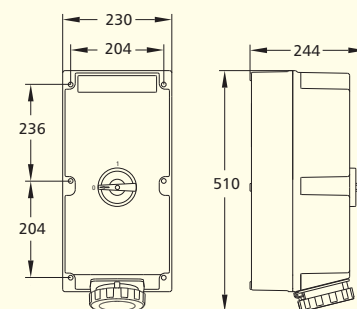
## Switchsocket Outlets Interlocked Surface Mounting 125 Amp

**IP67 WATERTIGHT**

Amps	Pin. Configuration	200-250V 50-60Hz List No	380-415V 50-60Hz List No	440-460V 60Hz List No	Cable Entry Knockouts	Terminal Capacity* mm <sup>2</sup>
125	2P+E	K9688BLU 6			2 x 23/47mm top and bottom	16 - 70
125	3P+E		K9691RED 6	K9692RED 11	2 x 23/47mm top and bottom	16 - 70
125	3P+N+E		K9694RED 6		2 x 23/47mm top and bottom	16 - 70

 Earth Hour Position

\*Solid or Stranded Conductors



Switch Utilisation Category AC 22A

Will accept auxiliary contacts **6813** and **6814**

Switch can be locked in open or closed position.

Switch Utilisation Category AC 22A

Will accept auxiliary contacts **6813** and **6814**

Switch can be locked in open or closed position.

Switch Utilisation Category AC 22A

Will accept auxiliary contacts **6813** and **6814**

Switch can be locked in open or closed position.

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## Socket Outlets Surface Mounting 16 and 32 Amp

SUITABLE FOR TOP ENTRY

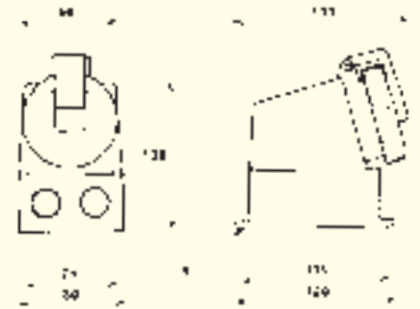
**IP67 WATERTIGHT**

### STANDARD VERSION (see Dimensions A)

Amps	Pin. Configuration	100-130V 50-60Hz List No	220-250V 50-60Hz List No	380-415V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Cable Entry Knockouts		Fixing Centres mm
						top	bottom	
16	2P+E	K9193YEL 4	K9194BLU 6		1 - 2.5	2 x Ø25	2 x Ø20	71 x 111
16	3P+E			K9763RED 6	1 - 2.5	2 x Ø25	2 x Ø20	71 x 111
16	3P+N+E			K9764RED 6	1 - 2.5	2 x Ø25	2 x Ø20	71 x 111
32	2P+E	K9761YEL 4	K9762BLU 6		2.5 - 6	2 x Ø25	2 x Ø20	71 x 111
32	3P+E			K9765RED 6	2.5 - 6	2 x Ø25	2 x Ø20	71 x 111
32	3P+N+E			K9766RED 6	2.5 - 6	2 x Ø25	2 x Ø20	71 x 111

Earth Hour Position

\*Solid or Stranded conductors



Dimensions A

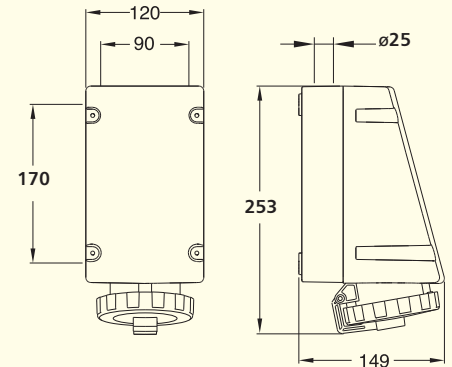
### LOOP IN VERSIONS (see Dimensions B)

Fitted with terminals for Loop In

Amps	Pin. Configuration	100-130V 50-60Hz List No	220-250V 50-60Hz List No	380-415V 50-60Hz List No	Terminal Capacity* mm <sup>2</sup>	Cable Entry Knockouts		Fixing Centres mm
						top	bottom	
16	2P+E	K13023YEL 4	K13024BLU 6		2 x (1.5-10)	2 x Ø25 top		90 x 170
16	3P+E			K13025RED 6	2 x (1.5-10)	2 x Ø25 top		90 x 170
16	3P+N+E			K13026RED 6	2 x (1.5-10)	2 x Ø25 top		90 x 170
32	2P+E	K13053YEL 4	K13054BLU 6		2 x (2.5-10)	2 x Ø25 top		90 x 170
32	3P+E			K13055RED 6	2 x (2.5-10)	2 x Ø25 top		90 x 170
32	3P+N+E			K13056RED 6	2 x (2.5-10)	2 x Ø25 top		90 x 170

Earth Hour Position

\*Solid or Stranded conductors



Dimensions B

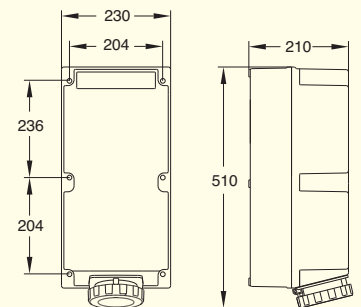
## Socket Outlets Loop in Surface Mounting 125 Amp

**IP67 WATERTIGHT**

Amps	Pin. Configuration	200-250V 50-60Hz List No	380-415V 50-60Hz List No	440-460V 60Hz List No	Cable Entry Knockouts	Terminal Capacity* mm <sup>2</sup>
125	3P+E		K9191RED 6	K9195RED 11	2 x 23/47mm top & bottom	2 x (16 - 70)
125	3P+N+E		K9192RED 6		2 x 23/47mm top & bottom	2 x (16 - 70)

Earth Hour Position

\*Solid or Solid Stranded conductors



## Combi Blocks Three Way 16 Amp

### IP44 SPLASHPROOF

Amps	Pin. Configuration	100-130V 50-60Hz		200-250V 50-60Hz		Terminal Capacity* mm <sup>2</sup>	Cable Diameter		Dimensions in mm							
		List No	⌚	List No	⌚		min	max	A	B	C	D	E	F	H	
16	2P+E	13503	4	13504	6	1 - 2.5	7	24	360	49	115	30	55	407	172	

⌚ Earth Hour Position

\*Solid or Stranded conductors

## Combi Blocks Two Way 16 Amp

### IP57 WATERTIGHT

Amps	Pin. Configuration	100-130V 50-60Hz		200-250V 50-60Hz		Terminal Capacity* mm <sup>2</sup>	Cable Diameter		Dimensions in mm							
		List No	⌚	List No	⌚		min	max	A	B	C	D	E	F	H	
16	2P+E	13507	4	13508	6	1 - 2.5	7	24	360	49	115	30	55	407	158	

⌚ Earth Hour Position

\*Solid or Stranded conductors

## Combi Blocks Two Way 30mA RCD Protected 16 Amp

### IP44 SPLASHPROOF

Amps	Pin. Configuration	100-130V 50-60Hz		200-250V 50-60Hz		Terminal Capacity* mm <sup>2</sup>	Cable Diameter		Dimensions in mm							
		List No	⌚	List No	⌚		min	max	A	B	C	D	E	F	H	
16	2P+E	13505	4	13506	6	1 - 2.5	7	24	360	49	115	30	55	407	158	

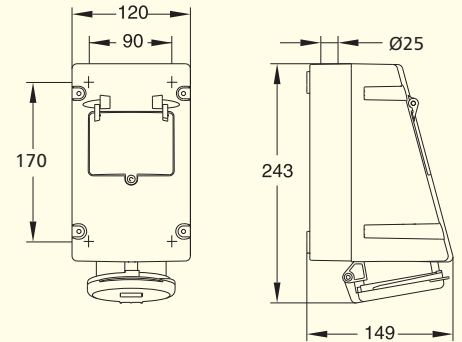
⌚ Earth Hour Position

\*Solid or Stranded conductors

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## Socket Outlets Single Pre-wired with 30mA RCD 16 and 32 Amp

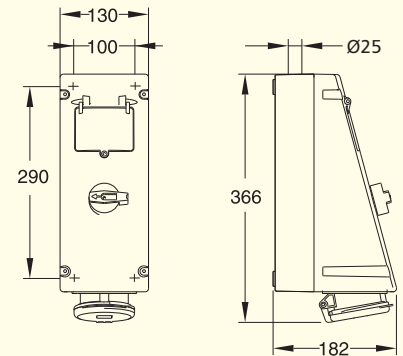
**IP44 SPLASHPROOF**


Amps	Pin. Configuration	100-130V 50-60Hz List No	Earth Hour Position	200-250V 50-60Hz List No	Earth Hour Position	380-415V 50-60Hz List No	Earth Hour Position	RCD Terminal Capacity*		Earth Terminal Capacity*		Cable Entry Knockouts
								min	max	min	max	
16	2P+E	K13413YEL	4	K13414BLU	6			1.5	35	2.5	25	2 x Ø25 top
16	3P+E					K13415RED	6	1.5	35	2.5	25	2 x Ø25 top
16	3P+N+E					K13416RED	6	1.5	35	2.5	25	2 x Ø25 top
32	2P+E			K13433BLU	6			2.5	35	2.5	25	2 x Ø25 top
32	3P+E					K13434RED	6	2.5	35	2.5	25	2 x Ø25 top
32	3P+N+E					K13435RED	6	2.5	35	2.5	25	2 x Ø25 top

Earth Hour Position

\*Solid or Stranded conductors

## Switchsocket Outlets Interlocked Pre-wired with 30mA RCD 16 and 32 Amp

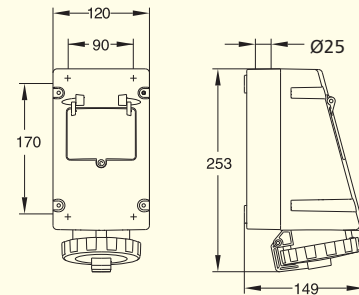
**IP44 SPLASHPROOF**


Amps	Pin. Configuration	100-130V 50-60Hz List No	Earth Hour Position	200-250V 50-60Hz List No	Earth Hour Position	380-415V 50-60Hz List No	Earth Hour Position	RCD Terminal Capacity*		Earth Terminal Capacity*		Cable Entry Knockouts
								min	max	min	max	
16	2P+E	K13309YEL	4	K13310BLU	6			1.5	35	2.5	25	2 x Ø25 top
16	3P+E					K13311RED	6	1.5	35	2.5	25	2 x Ø25 top
16	3P+N+E					K13312RED	6	1.5	35	2.5	25	2 x Ø25 top
32	2P+E	K13342YEL	4	K13343BLU	6			2.5	35	2.5	25	2 x Ø25 top
32	3P+E					K13344RED	6	2.5	35	2.5	25	2 x Ø25 top
32	3P+N+E					K13345RED	6	2.5	35	2.5	25	2 x Ø25 top


Earth Hour Position

\*Solid or Stranded conductors

## Socket Outlets Single Pre-wired with 30mA RCD 16 and 32 Amp

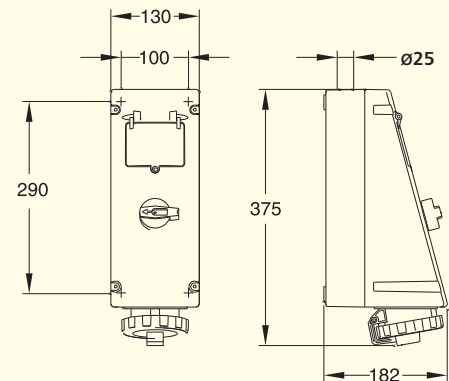
**IP67 WATERTIGHT**


Amps	Pin. Configuration	100-130V 50-60Hz List No	Earth Hour Position	200-250V 50-60Hz List No	Earth Hour Position	380-415V 50-60Hz List No	Earth Hour Position	RCD Terminal Capacity*		Earth Terminal Capacity		Cable Entry Knockouts
								min	max	min	max	
16	2P+E	K13713YEL 4	Ⓛ	K13714BLU 6	Ⓛ			1.5	35	2.5	25	2 x Ø25 top
16	3P+E					K13715RED 6		1.5	35	2.5	25	2 x Ø25 top
16	3P+N+E					K13716RED 6		1.5	35	2.5	25	2 x Ø25 top
32	2P+E			K13733BLU 6	Ⓛ			2.5	35	2.5	25	2 x Ø25 top
32	3P+E					K13734RED 6		2.5	35	2.5	25	2 x Ø25 top
32	3P+N+E					K13735RED 6		2.5	35	2.5	25	2 x Ø25 top

 Earth Hour Position

\*Solid or Stranded conductors

## Switchsocket Outlets Interlocked Pre-wired with 30mA RCD 16 and 32 Amp

**IP67 WATERTIGHT**


Amps	Pin. Configuration	100-130V 50-60Hz List No	Earth Hour Position	200-250V 50-60Hz List No	Earth Hour Position	380-415V 50-60Hz List No	Earth Hour Position	RCD Terminal Capacity*		Earth Terminal Capacity		Cable Entry Knockouts	Fixing Centres
								min	max	min	max		
16	2P+E	K13346YEL 6	Ⓛ	K13348BLU 6	Ⓛ			1.5	35	2.5	25	2 x Ø25 top	100 x 290
16	3P+E					K13350RED 6		1.5	35	2.5	25	2 x Ø25 top	100 x 290
16	3P+N+E					K13351RED 6		1.5	35	2.5	25	2 x Ø25 top	100 x 290
32	2P+E	K13347YEL 6	Ⓛ	K13349BLU 6	Ⓛ			2.5	35	2.5	25	2 x Ø25 top	100 x 290
32	3P+E					K13352RED 6		2.5	35	2.5	25	2 x Ø25 top	100 x 290
32	3P+N+E					K13353RED 6		2.5	35	2.5	25	2 x Ø25 top	100 x 290

 Earth Hour Position

\*Solid or Stranded conductors

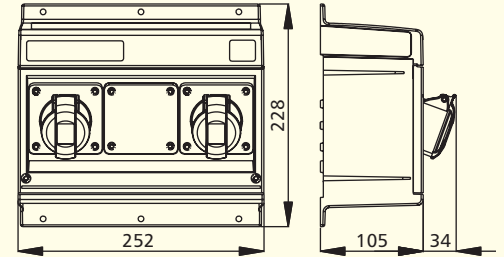


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## Modular Combi Units Twin Surface Socket Outlet 16 and 32 Amp

**IP44 SPLASHPROOF**



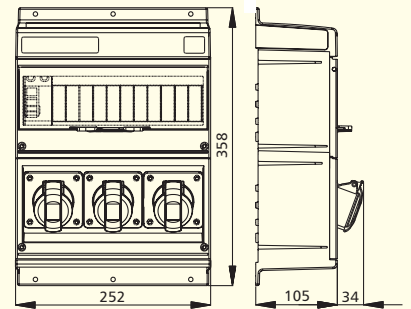
Amps	Pin. Configuration	100-130V 50-60Hz List No	Earth Hour Position	200-250V 50-60Hz List No	Earth Hour Position	PREWIRED	Terminal Capacity* mm <sup>2</sup>		Cable Entry Knockouts	
							min	max	Top	Bottom
16	2P+E	K13143YEL	4	K13144BLU	6	PREWIRED	1.5	6	2 x Ø25 + 2 x Ø38	3 x Ø47.5
16	2P+E	K13043YEL	4	K13044BLU	6	UNWIRED	1.5	6	2 x Ø25 + 2 x Ø38	3 x Ø47.5

Earth Hour Position

\*Solid or Stranded conductors

## Modular Combi Units Triple Surface Socket Outlet with Single 30mA RCD Protection 16 Amp

**IP44 SPLASHPROOF**



Amps	Pin. Configuration	100-130V 50-60Hz List No	Earth Hour Position	200-250V 50-60Hz List No	Earth Hour Position	RCD Terminal Capacity* mm <sup>2</sup>		Earth Terminal Capacity* mm <sup>2</sup>		Cable Entry Knockouts	
						min	max	min	max	Top	Bottom
16	2P+E	K13193YEL	4	K13194BLU	6	1.5	35	2.5	25	2 x Ø25 + 2 x Ø38	3 x Ø47.5

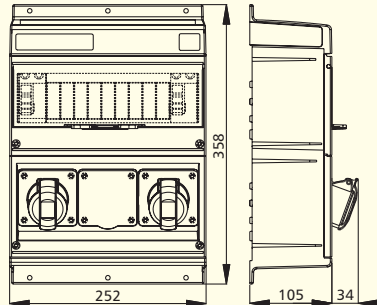
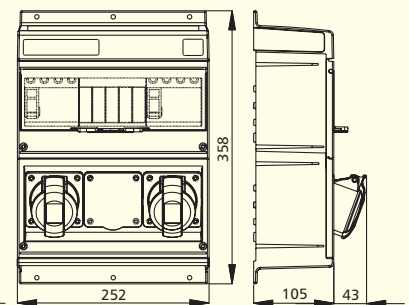
Earth Hour Position

\*Solid or Stranded conductors


## Modular Combi Units Twin Surface Socket Outlet with Individual 30mA RCD Protection 16 and 32 Amp

**IP44 SPLASHPROOF**

with 16A outlets (2P+E)

with 16A (3P+E, 3P+N+E) and  
32A outlets (2P+E, 3P+E, 3P+N+E)

Amps	Pin. Configuration	100-130V 50-60Hz List No	Ⓛ	200-250V 50-60Hz List No	Ⓛ	380-415V 50-60Hz List No	Ⓛ	RCD Terminal Capacity*		Earth Terminal Capacity*		Cable Entry Knockouts	
								min	max	min	max	Top	Bottom
16	2P+E	K13173YEL	4	K13174BLU	6			1.5	35	2.5	25	2 x Ø25 + 2 x Ø38	3 x Ø47.5
16	3P+E					K13175RED	6	1.5	35	2.5	25	2 x Ø25 + 2 x Ø38	3 x Ø47.5
16	3P+N+E					K13176RED	6	1.5	35	2.5	25	2 x Ø25 + 2 x Ø38	3 x Ø47.5
32	2P+E			K13184BLU	6			2.5	35	2.5	25	2 x Ø25 + 2 x Ø38	3 x Ø47.5
32	3P+E					K13185RED	6	2.5	35	2.5	25	2 x Ø25 + 2 x Ø38	3 x Ø47.5
32	3P+N+E					K13186RED	6	2.5	35	2.5	25	2 x Ø25 + 2 x Ø38	3 x Ø47.5

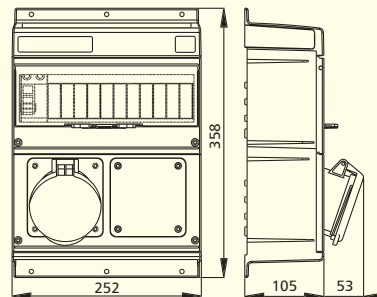
 Earth Hour Position

\*Solid or Stranded conductors

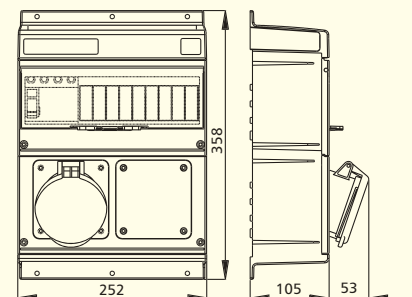
## Socket Outlets Single Pre-wired with 30mA RCD 63 Amp

**IP44 SPLASHPROOF**

with 2P+E outlets



with 3P+E and 3P+N+E outlets



Amps	Pin. Configuration	200-250V 50-60Hz List No	Ⓛ	380-415V 50-60Hz List No	Ⓛ	RCD Terminal Capacity*		Earth Terminal Capacity*		Cable Entry Knockouts	
						min	max	min	max	Top	Bottom
63	2P+E	K13463BLU	6			6	35	2.5	25	2 x Ø25 + 2 x Ø38	3 x Ø47.5
63	3P+E			K13464RED	6	6	35	2.5	25	2 x Ø25 + 2 x Ø38	3 x Ø47.5
63	3P+N+E			K13465RED	6	6	35	2.5	25	2 x Ø25 + 2 x Ø38	3 x Ø47.5

 Earth Hour Position

\*Solid or Stranded conductors

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circuit protection

Range

Technical Data

## Circuit Protection

### Sentry

Consumer units and a wide variety of modular protection and control products

538-566

### Sentrysocket

RCD protected switchsockets with active and passive control circuits

568-569

## Consumer Units and Enclosures

### Standards and approvals

All Sentry consumer units are designed to fully comply with the requirements of BS EN 60439-3.

Weatherproof enclosures are designed to fully comply with the 17th Edition IEE Wiring Regulations (537.2.2.1 and 537.3.2.2).

### Technical specification

#### Electrical

Maximum current rating:

All Sentry consumer units have a maximum rating of 100A except K5504s, K5604s, which are rated at 63A

Terminal capacity: 16mm<sup>2</sup> earth and neutral

Rated frequency: 50Hz

Rated operational voltage:

Consumer unit: 220-250V

2 module enclosure: 220-250V

4 module enclosure: 220-415V

Rated insulation voltage:

Consumer unit: 300V

2 module enclosure: 300V

4 module enclosure: 660V

Short circuit withstand:

16kA rms (based on the use of a BS 1361 Type 2 fuse of rating not exceeding 100A)

Earthing system:

Suitable for use with TN-S, TN-C-S and TT systems

#### Split load

Split load units are supplied with a pre-fitted switch, RCD and suitable cables.

The following versions are offered:

	Main Incomer	RCD
K5682s	100A Switch	63A
K5662s	100A Switch	80A
K5666s	100A Switch	63A
K5686s	100A Switch	80A
K5681s	100A Switch	80A
K5582s	100A Switch	63A
K5566s	100A Switch	63A
K5586s	100A Switch	80A
K5581s	100A Switch	80A



### Description

Specific consumer unit configurations have been designed to provide flexible solutions in meeting the requirements of the 17th Edition with regards to RCD protection for circuits, cables and socket outlets. MK Sentry Consumer Units, available in insulated and metal versions, allow for protected and unprotected ways with the circuits being split across up to 3 RCDs, whilst the labelling sheet allows for full identification of all circuits.

Sentry consumer units and enclosures are available in various surface metal, surface insulated and flush metal types, designed on a modular basis, with 2 to 21 module enclosures in the range, to accommodate a wide variety of MK modular protection and control products. In addition 24, 32, 42 module surface metal and insulated dual rail consumer units can be assembled using a suitable stacking kit.

Surface insulated units provide an all insulated housing. Metal units provide a housing with facility for earthing the metal box.

The enclosures are provided with ample wiring space and cable entry points. The lids can be locked with a barrel lock & key (accessory K5593s).

### Colours / finishes

All insulated and metal consumer units have a textured magnolia cover and lid. The surface metal consumer unit bases are in magnolia (powder coated paint). The flush bases are of galvanized steel. All 2 and 4 module and weatherproof enclosures are available in light grey.

Certain models are provided with a pre-assembled split load arrangement with switch and up to 3 RCDs. The range is complemented by a versatile selection of small, two and four module enclosures suitable for housing RCDs or other combinations of Sentry products. A 2 module enclosure K5592s is suitable for housing the one module RCBO.

All Sentry Consumer Units have neutral and earth terminal bars with 16mm<sup>2</sup> capacity for solid stranded copper cables.

For enquiries where large number of similarly designed consumer units i.e. specified. MK can provide complete pre-assembled factory built units, subject to certain conditions. For further information please contact the MK Electric Technical Services Department (01268 563274).

### Features

- Attractive styling
- Modular design
- Suitable for most residential, commercial and light industrial applications
- Single, dual and triple RCD consumer units available for 17th Edition compliance
- Fully comply with British and European Harmonised Standards
- Available as an empty enclosure or pre-fitted with switch disconnecter and up to 3 RCDs
- Factory built options available



For a full range of corresponding products, see pages 271-291 in the product selector.

### Technical specification

#### Electrical (weatherproof enclosures only)

Maximum current rating:

5702s	2 pole devices	up to 100A
5704s	4 pole devices	up to 63A

Note:

5702s – Can accept up to 4 module ways with removal of moulded blanks.

5704s – Can accept up to 8 module ways with removal of moulded blanks.

Terminal capacity:

5702s:	4 x 6mm <sup>2</sup> earth and neutral
5704s:	2 x 6mm <sup>2</sup> and 6 x 4mm <sup>2</sup> earth and neutral.

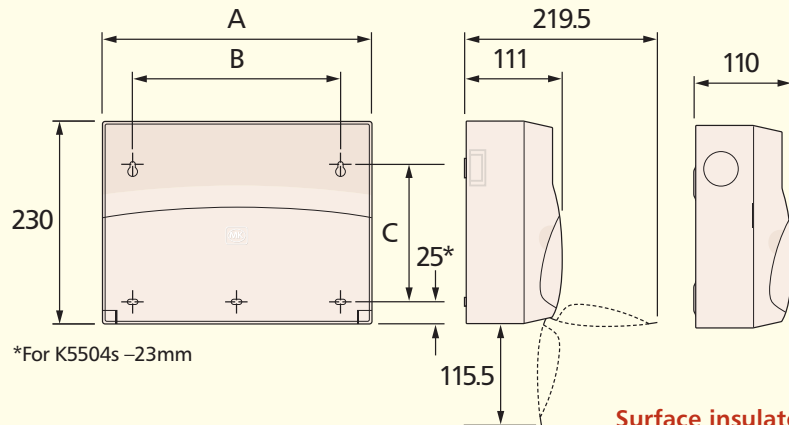
Rated operational voltage: 220-415V

Rated insulation voltage: 660V

### Dimensions (mm)

Note: Knockout details on following page

#### Consumer unit



Surface insulated  
K5604s to K5686s

### Technical specification

#### Physical

Ambient operating temperature:

-5°C to +40°C (not to exceed an average of more than +35°C in any 24 hour period)

IP ratings: (see also 'Service Conditions', below)

Consumer unit IP2XC

2 module enclosure 5502s: IP3X

2 module enclosure 5702s: IP65

2 module enclosure K5592s: IP30

4 module enclosure 5504s: IP3X

4 module enclosure 5604s: IP3X

4 module enclosure 5704s: IP65

Max. installation altitude: 2000m

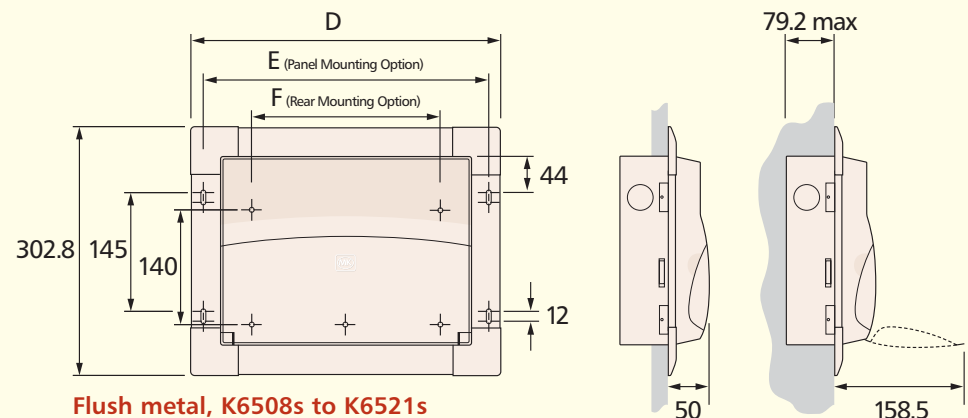
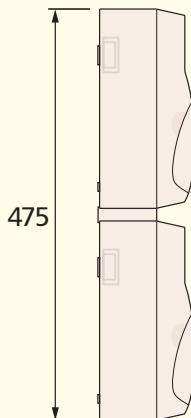
Unit	Modules	Dimensions		
		A	B	C
Surface Insulated	4	140	70	156
	8	234	164	156
	12	306	236	156
	16	378	308	156
Surface Metal	4	140	75	151
	8	234	168	147
	12	306	240	147
	16	378	308	147
	21	468	400	147

Unit	Modules	Dimensions		
		E	F	D
Flush Metal	8	307	276	160
	12	379	348	230
	16	451	420	300
	21	541	510	390

### Stacked assemblies K5504s to K5586s

Dual Rail (Insulated or Metal) using stacking kits K6061s, K6062s and K6063s.

See page 280 for details.



Flush metal, K6508s to K6521s

Flush-mount cavity dimensions, K6508s to K6521s			
	Height	Width	Depth*
8 module	236-246	242-252	69-79
12 module	236-246	314-324	69-79
16 module	236-246	386-396	69-79
21 module	236-246	476-486	69-79

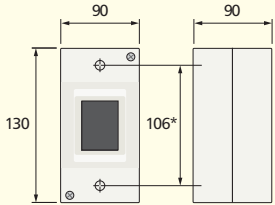
\*Depth does not apply if panel-mounted

Flush metal K6508s to K6521s  
Panel mounted

Flush metal K6508s to K6521s  
Rear mounted

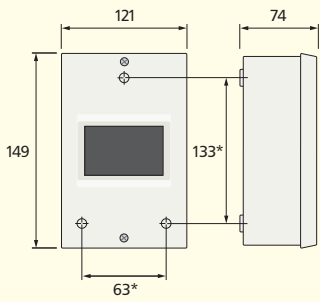
### Dimensions (mm)

#### Two module enclosures



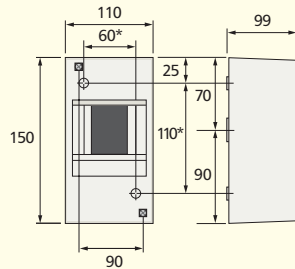
**5502s**

#### Four module enclosures



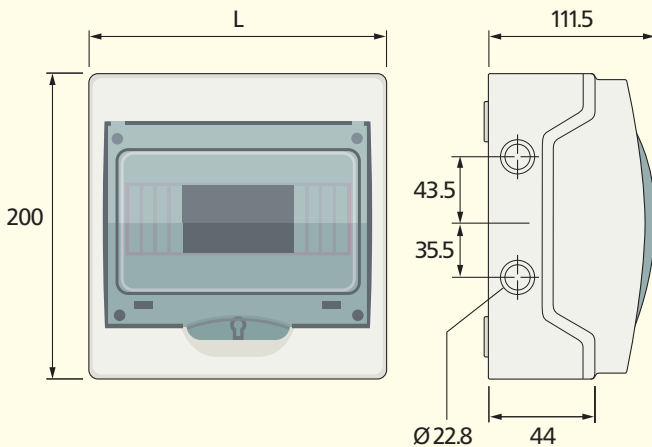
**5504s**

\*Fixing centre for mounting



**5604s**

#### IP65 enclosures

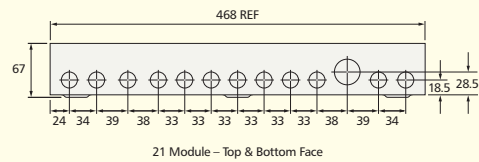
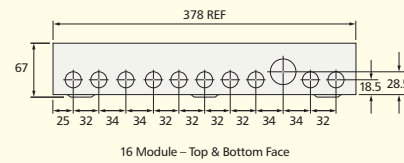
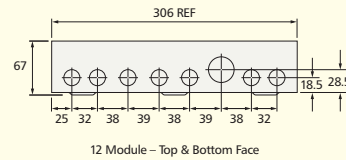
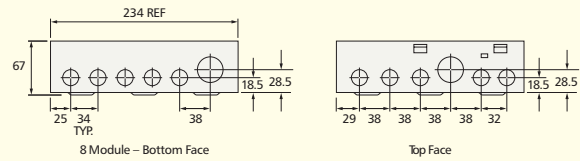
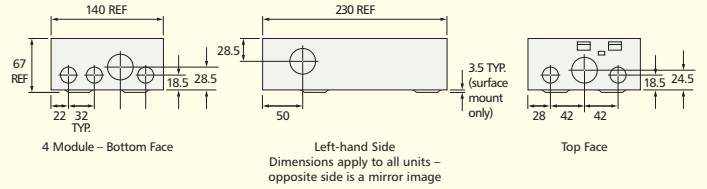


**5702s L = 123**

**5704s L = 195**

### Dimensions (mm)

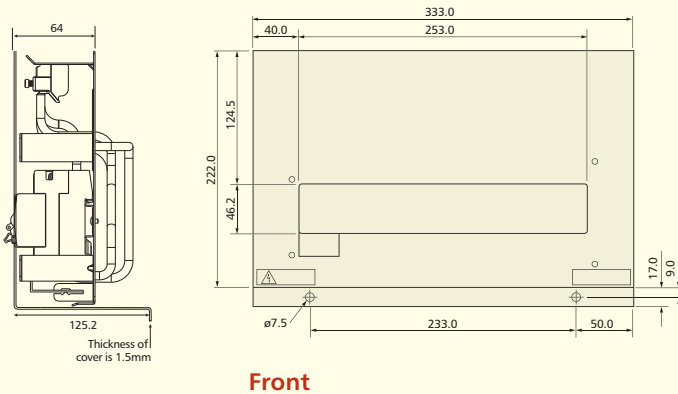
#### Knockout details for Surface and Flush-Mount Sentry Ranges



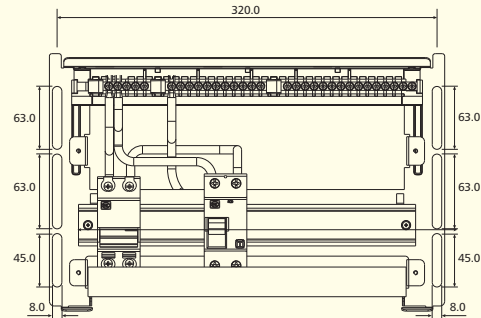
Unit	Top Face	Bottom Face	Sides
4 module	2 x 20mm 1 x 32mm	3 x 20mm 1 x 32mm	1 x 32mm per side
8 module	5 x 20mm 1 x 32mm	5 x 20mm 1 x 32mm	1 x 32mm per side
12 module	7 x 20mm 1 x 32mm	7 x 20mm 1 x 32mm	1 x 32mm per side
16 module	10 x 20mm 1 x 32mm	10 x 20mm 1 x 32mm	1 x 32mm per side
21 module	12 x 20mm 1 x 32mm	12 x 20mm 1 x 32mm	1 x 32mm per side

## Dimensions (mm)

### Skeleton units



Front



Front with plate removed

## Installation

### Consumer units

The Consumer units are provided with internal busbar shields or covers.

Front covers have lockable lid (using barrel lock & key accessory K5593s), which masks the front cover retaining screw. Removal of the front cover for internal access requires the use of tools.

Cover mounted blanks are provided with each Sentry Consumer unit to fill unused ways.

4,8 and 12 module – 1 off x 2

16 and 21 module – 2 off x 2

If additional unused ways are required, the DIN rail mounted blank 5544s or cover mounted blank K5544s must be used to complete the installation.

### Skeleton Units

The Skeleton unit is a spine backplate assembly designed to fit the majority of Mantel / Clifton enclosures, as used in Local Authority housing.

The Skeleton unit is provided with an internal busbar shield.

Removal of the front cover for internal access requires the use of tools.

If any unused ways are required the DIN rail mounted blank 5544s must be used to complete the installation.

### Two / four module enclosures

Front covers require tools to enable removal and gain internal access.

5604s has provision for tamper-proofing.

If there are any unused ways required the DIN rail mounted blank 5544s must be used to complete the installation. 5604s, 5702s, 5704s are provided with moulded blanks.

### Service conditions

Wiring of these products must comply with current IEE regulations.

Consumer units and two and four module enclosures are intended for indoor use in dry conditions and are not suitable for locations where high humidity and/or high temperatures may be experienced.

It is important that during installation of any Sentry enclosure, steps are taken to ensure that the IP rating is maintained, e.g. correct use of cable glands and knockouts / cutouts.

### Testing

Site assembled consumer units using MK components comply fully with BS EN 60439-3 so do not require further site testing other than normal routine installation tests.

### Split load and multi-incomer arrangements

Such assemblies must utilise the relevant Sentry kit in order to comply with BS EN 60439-3 and to avoid the need for additional testing.

### Stacking kits

Accessory kits (stacking frame, fittings and earth cable) can be used to produce stacked dual rail units in the insulated and surface metal ranges for the 12, 16 and 21 module units.

K6061s – for 12 module units to create 24 module dual rail consumer unit.

K6062s – for 16 module units to create 32 module dual rail consumer unit.

K6063s – for 21 module units to create 42 module dual rail consumer unit.

### Weatherproof enclosures

The weatherproof enclosures may be used for outdoor applications up to the level of the IP65 rating.

The cable entry position on the top and bottom of the enclosure is at the discretion of the installer and can be achieved with suitable tools. Knockouts/cutouts are provided for side entry.

Precautions must be taken to maintain the IP rating, e.g. correct use of cable glands and knockouts. The caps provided must be used to cover the mounting screws.

Note: IP65 rating only achieved with lid in the closed position. These enclosures will not accept the one module RCBOs.

## Switch Disconnectors

### Standards and approvals

Sentry switch disconnectors are designed to fully comply with the requirements of BS EN 60947-3.

They all feature positive contact status indication in accordance with the 17th Edition IEE Wiring Regulations (537.2.2.1 and 537.3.2.2).

### Technical specification

#### Electrical

Category of duty:	AC22A
Load type capability:	Both resistive and inductive
Operating voltage:	240V a.c.
Operating frequency:	50Hz

	5560s	5500s
Rated operational current $I_e$	63A	100A
Rated duty	Uninterrupted	Uninterrupted
Rated making capacity $I$	189A rms	300 rms
Rated breaking capacity $I_c$	189A rms	300 rms
Rated short time withstand current $I_{cw}$	2kA rms for 1 sec	2kA rms for 1 sec
Rated short circuit making capacity $I_{cm}$	3kA peak	3kA peak
Rated conditional short circuit current	6kA rms prospective	6kA rms prospective

#### Physical

Ambient operating temperature:  
-5°C to +40°C

IP rating:  
Front face IP3X, screw IP2X

Max installation altitude:  
2000 metres

### Rating specification

Switch disconnector	Rating
5500s	100A
5560s	63A



### Description

The Sentry range offers a choice of switch disconnector rated at either 100A or 63A.

The operating dolly is capable of being locked in either the ON or OFF position. When locked in the ON position it will no longer operate as an isolator. Positive indication of the opening of the contacts is only given when the green stripe can be seen on the dolly.

The terminals are of a tunnel design and offer a generous cable capacity of 50mm<sup>2</sup> for solid stranded conductors and 35mm<sup>2</sup> for flexible conductors, on both current ratings.

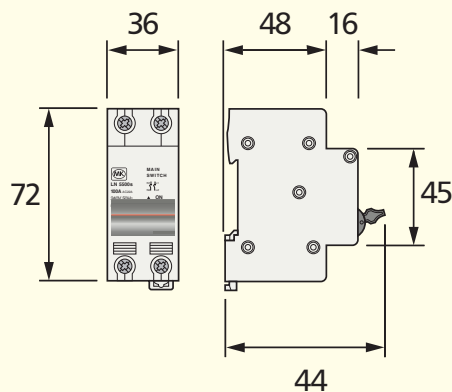
### Category of duty

The Sentry switch disconnector is capable of switching both resistive and inductive loads and has a category of duty of AC22A.

### Features

- Meet BS EN and IEE Wiring Regulation requirements
- Choice of current ratings
- Tunnel design terminals for ease of wiring
- Generous cable capacity
- Lockable operating dolly
- Make first, break last on neutral

### Dimensions (mm)



### Installation

The Sentry switch disconnector is designed to accept both cable-in/cable-out and direct-to-busbar connections.

The terminal screws are touch-proof to IP2X, captive and feature combination heads.



## Miniature Circuit Breakers (MCBs)

### Standards and approvals

Sentry MCBs are designed to fully comply with the relevant requirements of BS EN 60898: 2003.

They all feature positive contact status indication in accordance with the 17th Edition IEE Wiring Regulations (537.2.2.1 and 537.3.2.2).

### Technical specification

#### Electrical

Voltage rating:  
230V/400V a.c.

Operating frequency:  
50Hz

Rated short circuit capacity  $I_{cn}$ :  
6000A

Service short circuit capacity  $I_{cs}$ :  
6000A

When backed up by a BS 1361, 100A fuse, then the breaking capacity of the MCB is increased to 16,000A.

Energy limiting class: **3**

#### Physical

Ambient operating temperature:  
-5°C to +40°C

Calibration temperature:  
+30°C

IP rating:  
Front face IP4X, screw IP2X

Terminal capacity:  
35mm<sup>2</sup>

Tightening torque:  
3Nm Max.

Max. installation altitude:  
2000 metres



### Description

Sentry MCBs are of the thermo-magnetic, current limiting type and are available with either Type B or Type C operating characteristics.

The operating dolly may be locked in either the ON or OFF position without affecting the ability of the trip mechanism to operate. The contacts themselves are manufactured from carefully chosen materials, selected specifically for their low electrical resistance and low propensity to weld under fault conditions.

### Positive contact status indication

When the green indicator is visible, then a contact gap of 4mm has been achieved. Sentry MCBs may therefore be used as single pole isolating switches where appropriate.

### Terminals

The Sentry MCB features tunnel terminals of 35mm<sup>2</sup> capacity on all ratings. Each terminal has a protective shutter to prevent cable being installed incorrectly. The terminal screws are touch proof to IP2X, captive and feature combination heads.

### Modes of operation

The mechanism of the Sentry MCB has been carefully designed and engineered using thermal and magnetic elements to detect overcurrents due to both overload and fault currents. The MCB will operate and interrupt the supply to prevent damage to the installation.

The thermal component is a carefully calibrated, thermally operated bi-metal element.

Larger overloads and fault current situations are dealt with using the magnetic tripping mode of the MCB. This acts very quickly, overriding the thermal operation.

BS EN 60898 requires the tripping to occur within 100 milliseconds and the design of the Sentry MCB allows fault currents of up to 6000A (M6) to be safely interrupted well within this time scale.

## Miniature Circuit Breakers (MCBs)

### Description (continued)

#### Operating characteristics

##### TYPE B

The magnetic operating limits are between 3 and 5 times the current rating of the MCB. Under these conditions the mechanism of a 10A MCB will operate between 30A and 50A in an overcurrent situation.

##### TYPE C

In the case of Type C MCBs, the magnetic operating limits are between 5 and 10 times the current rating of the MCB. Under these conditions the mechanism of a 10A MCB will operate between 50A and 100A in an overcurrent situation.

Type C devices are capable of supplying the majority of inductive and capacitive loads such as motors, transformers and tungsten or fluorescent lighting.

Time/Current and Energy let through characteristics of Sentry MCBs are shown graphically on the Time current characteristics chart (See separate document).

##### TYPE D

The Type D MCB is suitable for applications involving equipment generating very high inrush currents, e.g. x-ray equipment, transmitters and computer power supplies. The magnetic operating limits are between 10 and 50 times the current rating of the MCB. **(For Modular Combi use only)**

#### Rating specification

Type B Single pole	Rating
5903s	3A
5906s	6A
5910s	10A
5916s	16A
5920s	20A
5925s	25A
5932s	32A
5940s	40A
5945s	45A
5950s	50A
Type C Single pole	Rating
8703s	3A
8706s	6A
8710s	10A
8716s	16A
8720s	20A
8725s	25A
8732s	32A
8740s	40A
8750s	50A

#### Features

- Meet BS EN and IEE Wiring Regulation requirements
- 'Trip-free' mechanism
- Positive contact status indicator
- Tunnel type, touch-proof, captive terminals
- Generous terminal capacity
- Can be used as single pole isolating switch
- Protective shutter

#### Installation

Selection of the most suitable MCB should take into account the following considerations:

##### 1. Operating voltage and frequencies

It is possible to use the Sentry MCB on other voltages than 230/400V a.c. 50Hz, but it should be noted that this takes the MCB outside the scope of BS EN 60898.

##### 2. Type of load

##### RESISTIVE

No derating is required in the case of resistive loads.

##### INDUCTIVE

In the case of inductive loads from direct-on-line motors, the surge on energisation can produce up to 5 times full load current, which may be present for several seconds. It is therefore recommended that Type C MCBs are used for such circuits.

When using assisted start motors, the usually quoted figures are 2.5 times the full load current, for periods generally longer than those for direct-on-line starters. It is thus important to establish the degree of inrush current in order to select a suitable MCB. In all instances, reference should be made to both the motor manufacturer's curves and MK's circuit breaker curves in order to select the compatible miniature circuit breaker.

##### CAPACITIVE

Surges on energisation, for example with discharge lighting, may well reach 25 times the rated current of the device, but only for very short duration. Type B devices will often be adequate, but for more specialised circuits, a Type C may be required. The lighting fitting manufacturer's recommendations should be observed.

## Miniature Circuit Breakers (MCBs)

### 3. Fault breaking capacity

All Sentry MCBs have a short circuit breaking capacity of 6,000A (M6).

For applications where the prospective fault current is in excess of this, a BS 1361, 100A (maximum) fuse should be used upstream of the MCB to provide a system breaking capacity of 16,000A (in accordance with BS EN 60439-3).

### 4. Discrimination

A Sentry MCB consumer unit will normally be supplied via an HRC fuse. The HRC in such instances will be the major device and remain unaffected by any fault current which causes the MCB to operate.

The level of fault current up to which this can be assured is determined by comparing the  $I^2t$  characteristics of the two devices. Discrimination will theoretically occur up to the level at which the value of the total operating  $I^2t$  of the MCB is below the minimum pre-arcing  $I^2t$  of the fuse, although in practice, discrimination will be achieved at higher levels than this.

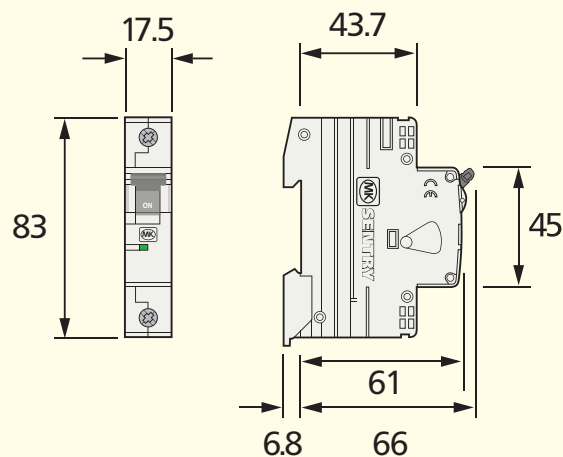
### 5. Cable protection

The current carrying capacity of the cable should always exceed the current rating of the MCB to prevent damage.

However, should this not be the case, a further calculation may show that the MCB can still interrupt the current in a sufficiently short time to prevent overheating of the cable insulation. Although this will prevent mechanical damage to the cables, further overload protection should be provided by a separate device, e.g. a motor overload relay.

In case of doubt please contact the MK Technical Sales and Service Department.

### Dimensions (mm)



## Tripping Characteristics Curve



Limit specified in BS EN 60898 1: 2003

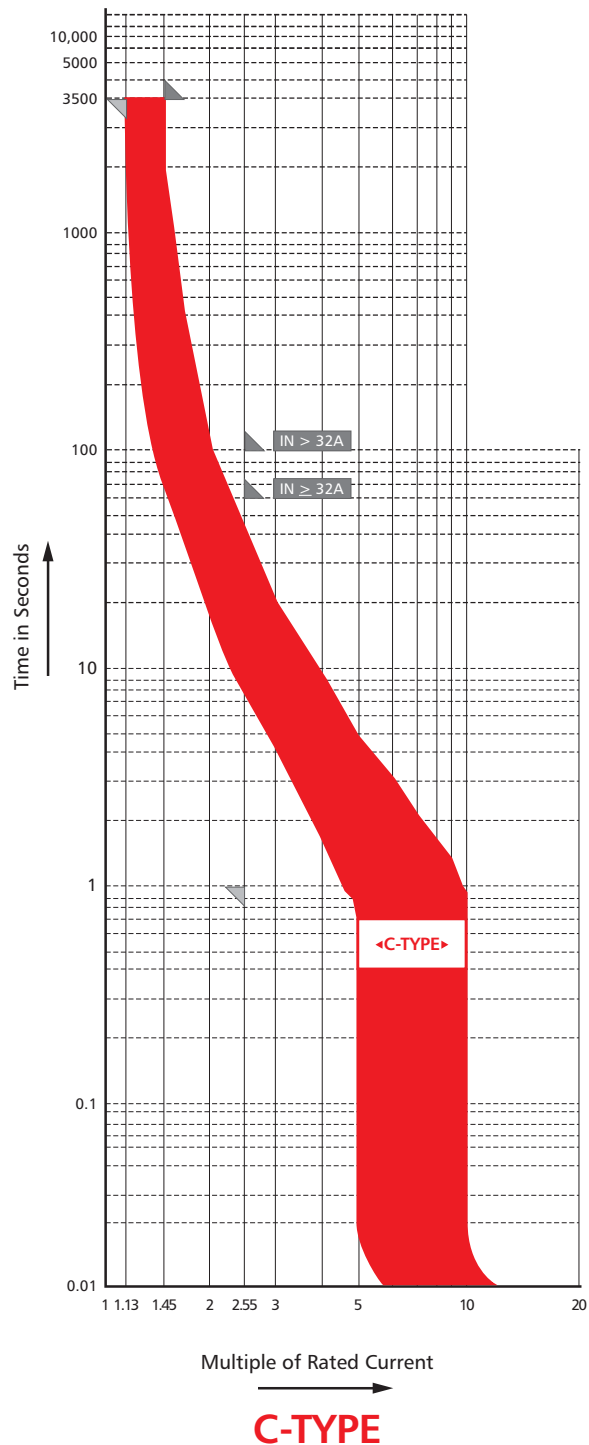
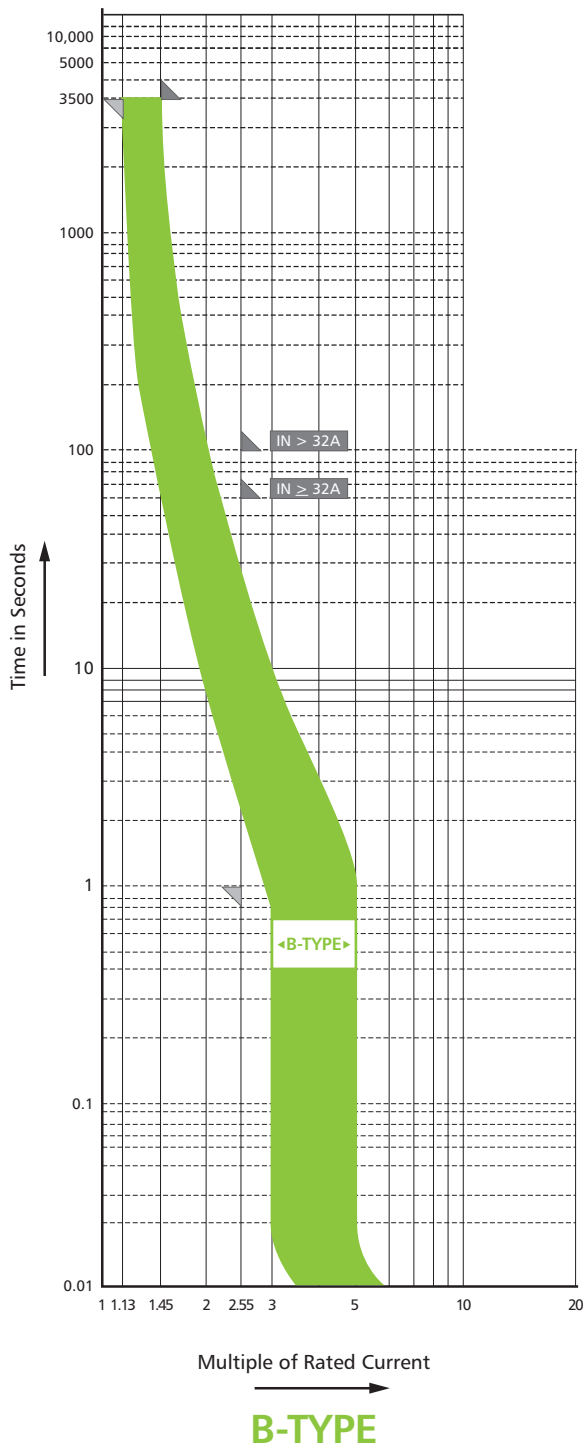
In: Rated Current

B TYPE: 3A to 50A

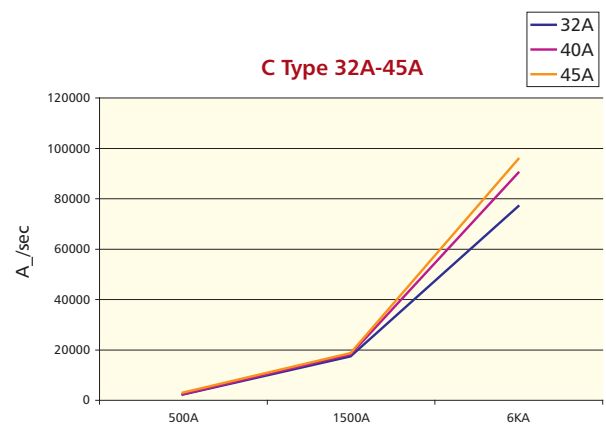
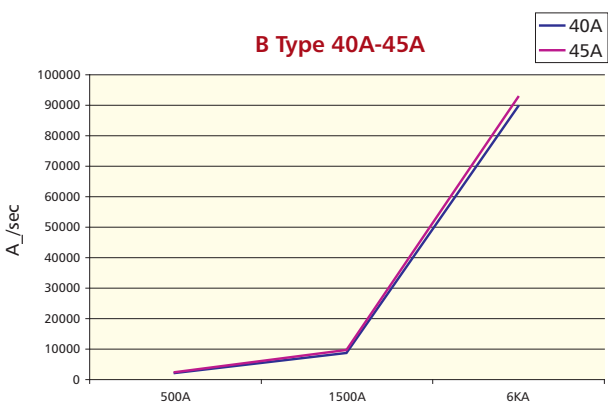
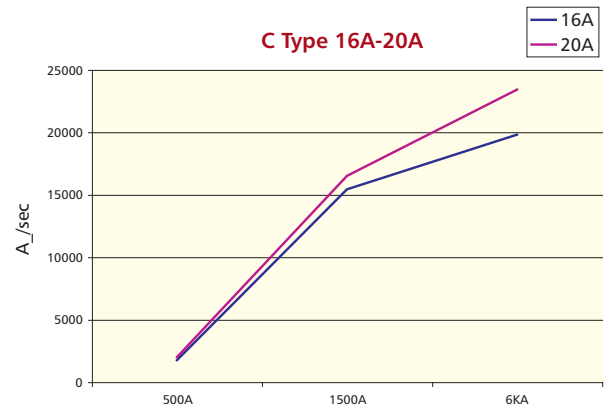
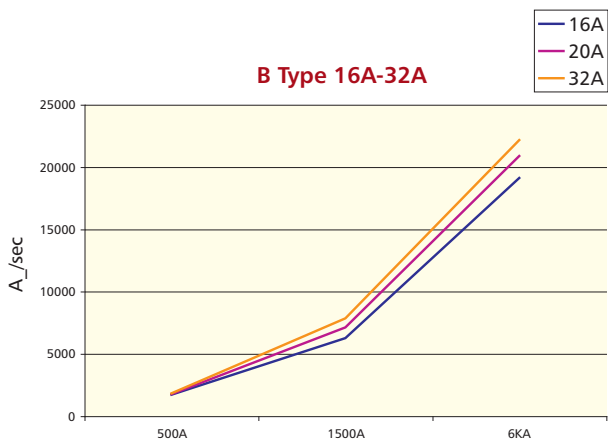
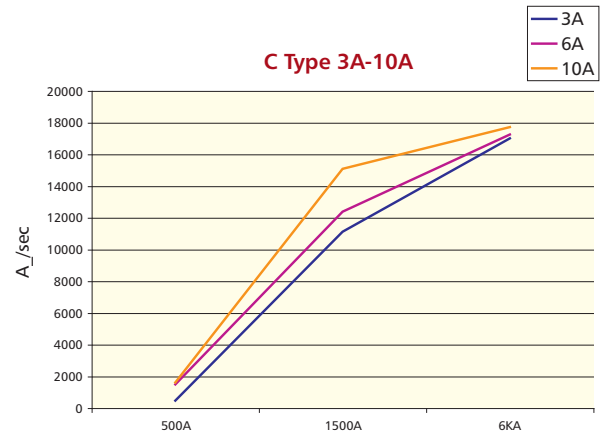
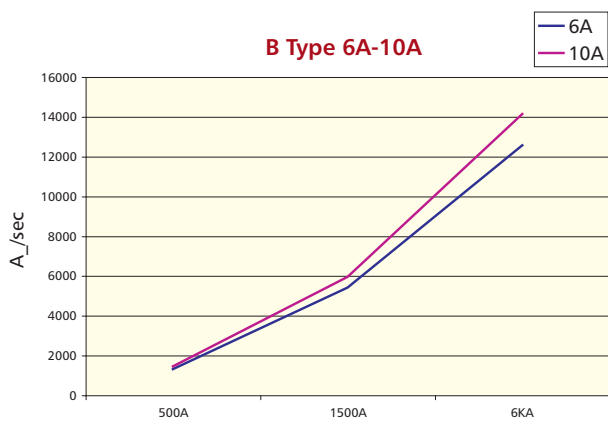
C TYPE: 3A to 50A

Reference calbi. temp. 30°C

 Lower Limit as per Standard  
 Upper Limit as per Standard



## I<sup>2</sup>t curves



## Residual Current Breakers with Overcurrent Protection (RCBOs)

### Standards and approvals

All Sentry RCBOs are designed to fully comply with the relevant requirements of BS EN 61009-1, BS IEC 61 009-2-2, BS 61543 for EMC.

The RCBOs feature positive contact status indication in accordance with 17th edition IEE Wiring Regulations (537.2.2.2 and 537.3.2.2).



### Technical specification

#### Electrical

Operating voltage: 230V a.c.

Operating frequency: 50Hz

Rated Short circuit capacity  $I_{cn}$ : 6,000A

Service short circuit capacity  $I_{cs}$ : 6,000A

When backed up by a BS 1361, 100A fuse, then the breaking capacity of the RCBO is increased to 16,000A.

Type AC

#### Physical

Ambient operating temperature:  $-25^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$

IP rating:

Front face IP4X, screw IP2X

Terminal capacity:

Line in  $25\text{mm}^2$

Line and neutral out  $25\text{mm}^2$

Tightening torque:

2.5Nm

Max. installation altitude: 2000 metres

### Description

The Sentry range features solid neutral type single pole RCBOs in one module format.

The one module Sentry RCBOs are a combination of a Type B MCB and a Residual Current Device. This enables both overcurrent protection and earth fault current protection to be provided by a single unit.

This combination allows earth fault protection to be restricted to a single circuit, thus ensuring that only the circuit with the fault is interrupted. (When groups of circuits are protected by an RCD, all circuits would be interrupted under fault conditions, which may cause unnecessary inconvenience).

The operating switch on all Sentry RCBOs may be locked in either the ON or OFF position without affecting the ability of the trip mechanism to operate.

Sentry RCBOs feature tunnel terminals of generous capacity, with  $25\text{mm}^2$  for live supply for live and neutral load terminals. The neutral supply (blue) and earth supply (white/cream) are provided via flying leads.

### Mode of operation

As the RCBO is a combination of an MCB and RCD, reference should be made to the relevant technical information regarding these devices.

### Features

- Single module
- Meet BS EN and IEE Wiring Regulation requirements
- Allows both overcurrent and earth fault protection and detection
- Available in a range of current ratings
- Tunnel type terminals
- Generous terminal capacity
- Positive contact status indication

## Residual Current Breakers with Overcurrent Protection (RCBOs)

### Rating specification

Rating RCBO	Tripping Current	List No.
6A, 230V	30mA	7932s
10A, 230V	30mA	7933s
16A, 230V	30mA	7934s
20A, 230V	30mA	7935s
32A, 230V	30mA	7936s
40A, 230V	30mA	7937s
45A, 230V	30mA	7938s
50A, 230V	30mA	7939s

### Installation

Sentry RCBOs may be installed anywhere along the length of the busbar and will occupy one outgoing way.

Selection of the most suitable RCBO should take into account the following considerations:

#### 1. Operating voltage and frequencies

#### 2. Fault breaking capacity

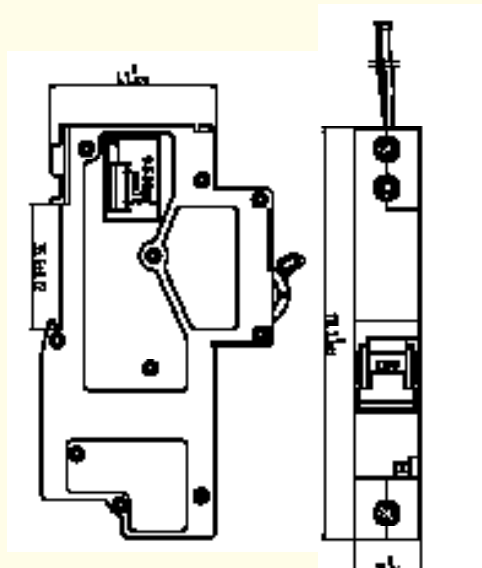
For applications where the prospective fault current is in excess of this, a BS 1361, 100A (maximum) fuse should be used upstream of the RCBO to provide a system breaking capacity of 16,000A.

#### 3. Cable protection

The current carrying capacity of the cable should always exceed the current rating of the RCBO, to prevent damage. However, should this not be the case, a further calculation may show that the RCBO can still interrupt the current in a sufficiently short time to prevent overheating of the cable insulation. Although this will prevent mechanical damage to the cables, further overload protection should be provided by a separate device, e.g. a motor overload relay.

In case of doubt please contact the Technical Sales and Service Department.

### Dimensions (mm)



## Residential 6kA Residual Current Devices (RCDs)

### Standards and approvals

All Sentry RCDs are designed to fully comply with the requirements of BS EN 61 008:1995. IEC 1008:1990

They all feature positive contact status indication in accordance with 17th edition IEE Wiring Regulations (537.2.2.2 and 537 .3 .2 .2).

### Technical specification

#### Electrical

Rated making and breaking capacity /m:

16 - 40A = 500A 63 - 80A = 800A

Type AC

Rated short-circuit current / inc:

16A - 40A = 6,000A (100A Fuse)

Rated residual short-circuit current /IAM: 16 - 100A = 6,000A

Rated voltages:

2 pole devices, 230V

Operating voltages:

2 pole devices, 230V - 100V to 250V

Tripping Time:

1 x IAn ~300ms

5 x IAn ~40ms

#### Physical

Ambient operating temperature: -25°C to + 40°C

IP rating:

Front face after installation of enclosure IP40

Terminal capacity:

Solid standard - 1 x 1.5 - 35mm<sup>2</sup> Flexible with female - 1 x 1 .5 - 35mm<sup>2</sup>

Tightening torque: 3Nm

Max. installation altitude: 2000 metres



### Description

The Sentry range of RCDs offer a comprehensive selection of devices designed to meet most residential, commercial and light industrial requirements.

The range is two pole, a.c. fault current sensitive with a selection of current ratings from 16 to 80A and is available in a variety of tripping sensitivities.

When in the OFF position a contact gap of 4mm is present, enabling Sentry RCDs to be used as isolating switches where appropriate.

The operating dolly may be locked in either the ON or OFF position without affecting the ability of the trip mechanism to operate, i.e. the RCD is 'trip-free'. It is not possible to hold the contacts closed when a fault condition exists.

All Sentry RCDs incorporate a filtering device to provide protection against transient surges in the supply to the unit, thus reducing the occurrence of unwanted tripping.

### Features

- Meet BS EN and IEE Wiring Regulation requirements
- Extensive range to suit all specifications
- Protect against unwanted tripping
- Positive contact status indication
- Suitable for most residential, commercial and light industrial applications
- Offer a high degree of protection against electrocution in accidental shock hazard situations
- Two module, double pole units available up to 80A



## Residential 6kA Residual Current Devices (RCDs)

### Rating specification

Double pole, 2 module

Rating	Tripping current	List No.
16A	30mA	7816s
32A	30mA	7832s
40A	30mA	7840s
63A	30mA	7860s
80A	30mA	7880s
63A	100mA	7560s
80A	100mA	7580s
63A	300mA	7660s
80A	300mA	7680s

### Operation

The RCD provides an indication of an earth fault and contact status as detailed below.

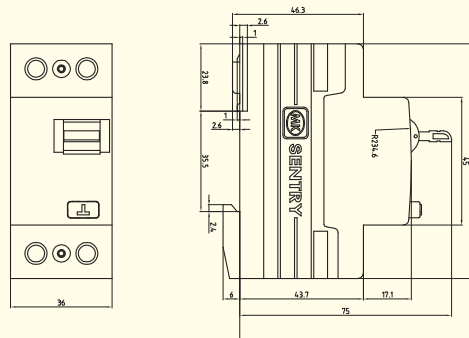
The operating dolly provides the following indication:

**I** = Switched ON

**O** = Switched OFF

The contact status is shown via dolly markings.

In the event of an Earth Fault in the installation or the operation of the test button, the dolly will move to the OFF position. To re-connect the supply the dolly must be reset by moving it to the ON position.



### Testing

If an RCD is installed as additional protection for basic protection, it is a requirement of the IEE Regulations that the effectiveness of the RCD be verified. This must be achieved by a test simulating an appropriate fault condition and be independent of any test facility incorporated in the RCD. The test currents to be applied are as follows:

Test current	Condition
0.5 x I $\Delta$ n	RCD must not trip
1.0 x I $\Delta$ n	RCD must trip within 300mS
5.0 x I $\Delta$ n	RCD must trip within 40mS

Where I $\Delta$  n is the RCD's rated tripping current in accordance with wiring regulations and product standard BS EN 61008.

## Industrial 10kA Residual Current Devices (RCDs)

### Standards and approvals

All Sentry RCDs are designed to fully comply with the requirements of BS EN 61008: 1995, IEC 1008:1990

They all feature positive contact status indication in accordance with the 17th Edition IEE Wiring Regulations (537.2.2.1 and 537.3.2.2).

### Technical specification

#### Electrical

Rated making and breaking capacity / m:

16 - 40A = 500A

63 - 80A = 800A

100A = 1000A

Type AC

Rated short-circuit current / inc:

16A - 40A = 10,000A (63A Fuse)

63A - 80A = 10,000A (100A Fuse)

100A = 10,000A (125A Fuse)

Rated residual short-circuit current /I $\Delta$ m:

16 - 100A = 10,000A

Rated voltages:

2 pole devices, 110V and 230V

4 pole devices, 230V to 440V

Operating voltages:

2 pole devices, 110V - 100V to 250V

230V - 100V to 250V

4 pole devices, 185V - 440V

Tripping Time:

1 x I $\Delta$ n  $\leq$  300ms

5 x I $\Delta$ n  $\leq$  40ms

Time delay version

1 x I $\Delta$ n - 150 - 500ms

5 x I $\Delta$ n - 50 - 150ms

#### Physical

Ambient operating temperature:

-25°C to +40°C

IP rating:

Front face after installation of enclosure IP40

Terminal capacity:

Solid standard - 1 x 1.5 - 50mm<sup>2</sup>

Flexible with female - 1 x 1.5 - 35mm<sup>2</sup>

Tightening torque:

3Nm

Max. installation altitude:

2000 metres



### Description

The Sentry range of RCDs offers a comprehensive selection of devices designed to meet most residential, commercial and light industrial requirements.

The range includes two and four pole, a.c., d.c. fault current sensitive and time delayed models and a selection of current ratings from 16 to 100A is available in a variety of tripping sensitivities.

When in the OFF position a contact gap of 4mm is present, enabling Sentry RCDs to be used as isolating switches where appropriate.

Positive indication of the opening of the contacts is only given when contact status indicator shows green.

The operating dolly may be locked in either the ON or OFF position without affecting the ability of the trip mechanism to operate, i.e. the RCD is 'trip-free'. It is not possible to hold the contacts closed when a fault condition exists.

All Sentry RCDs incorporate a filtering device to provide protection against transient surges in the supply to the unit, thus reducing the occurrence of unwanted tripping.

### Features

- Meet BS EN and IEE Wiring Regulation requirements
- Extensive range to suit all specifications
- Protect against unwanted tripping
- Positive contact status indication
- Suitable for most residential, commercial and light industrial applications
- Offer a high degree of protection against electrocution in accidental shock hazard situations
- Two module, double pole units available up to 100A
- Indication of earth fault, via central dolly position

## Industrial 10kA Residual Current Devices (RCDs)

### Rating specification

#### Double pole, 2 module

Rating	Tripping current	List No.
16A, 110V	10mA	6016s
16A, 110V	30mA	6416s
16A, 230V	10mA	6316s
16A, 230V	30mA	5716s
32A, 110V	30mA	6032s
32A, 230V	30mA	6730s
40A, 230V	30mA	5740s
63A, 230V	30mA	5760s
63A, 230V	100mA	6160s
63A, 230V	300mA	5860s
80A, 230V	30mA	5780s
80A, 110V	30mA	6080s
80A, 230V	300mA	5880s
80A, 230V	100mA	6180s
100A, 230V	30mA	7700s
100A, 230V	100mA	6600s
100A, 230V	300mA	7800s

#### Double pole, pulsating d.c., fault current sensitive, 2 module

16A, 230V	10mA	6216s
16A, 230V	30mA	6716s
32A, 230V	30mA	6630s
40A, 230V	30mA	5640s
63A, 230V	30mA	5660s

#### Time delayed, 2 module

80A, 230V	100mA	6980s
100A, 230V	100mA	6400s

#### Four pole, 4 module

25A, 230/400V	30mA	6425s
40A, 230/400V	30mA	6440s
40A, 230/400V	100mA	6240s
63A, 230/400V	30mA	6463s
63A, 230/400V	100mA	6363s
63A, 230/400V	300mA	6263s

#### Four pole, pulsating d.c., fault current sensitive, 4 module

40A, 230/400V	30mA	6640s
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### Installation

Sentry RCDs must never be used as the sole method of basic protection, but are invaluable in providing supplementary protection in high risk environments where damage may occur.

### Application

The choice of the most suitable RCD for a particular application should take into account the following considerations:

#### 1. Sensitivity

10mA RCDs offer a high degree of protection against electrocution in an accidental shock hazard situation. They are of particular value in a high risk area where resistances external to the body are likely to restrict the earth fault current flowing through the body to less than 30mA and where 110V supply is being used.

30mA RCDs offer a high degree of protection in an accidental shock hazard situation and are by far the most popular sensitivity used in the United Kingdom. In a shock situation, the current flowing through the human body at 240V 50Hz could be between 80 and 240mA, depending on the resistance of the body in question. To ensure that there are no harmful physiological effects in such a situation, it is necessary for the RCD to operate within 300mS at 30mA and 40mS at 150mA. As the Sentry RCD typically operates well below these times, it clearly more than satisfies this requirement.

100mA RCDs may, in some circumstances, provide protection against electrocution in an accidental shock hazard situation. However, it is important to note that there is a likelihood that the earth fault current may be below the sensitivity of the RCD. This becomes increasingly likely if additional resistances to that of the human body are in the current path.

300mA RCDs provide protection against the risk of fire only. They do not provide protection against electrocution in an accidental shock hazard situation. A typical application would be lighting circuits where it is deemed that the risk of electric shock is small.

It is important to note that a current of less than 500mA flowing in a high resistance path is sufficient to bring metallic parts to incandescence and, potentially, initiate a fire.

#### 2. Requirements of the IEE Wiring Regulations BS 7671

RCDs may be used to provide additional protection against both fault protection and basic protection.

#### Fault Protection

Defined as protection against electric shock under single fault conditions.

Effective earthing in conjunction with automatic disconnection should always be employed to protect against the effects of fault protection. The provision of a low resistance path back to the supply from the fault should ensure that the overcurrent device operates before damage occurs. This is the earth fault loop impedance.

In circumstances where the earth fault loop impedance in the circuit is too high to ensure operation of the overcurrent device, then the IEE Wiring Regulations allow the installation of an RCD. To comply with the Regulations, the earth loop impedance of the circuit (in ohms), multiplied by the rated tripping current of the RCD (in amperes) must not produce a value greater than 50. With this in mind, the maximum values of earth loop impedance permissible when installing an MK Sentry RCD are as follows:

$$Z_s (\text{max}) = \frac{50}{I_{\Delta n}} = \frac{50}{0.03} = 1666 \text{ ohms}$$

Rated Tripping Current of RCD	Maximum Permissible Earth Fault Loop Impedance
10mA	5000 ohms
30mA	1666 ohms
100mA	500 ohms
300mA	166 ohms

RCD's are further specified for fault protection on TT systems (Regulation 411.5.2, 411.5.3 apply)

## Industrial 10kA Residual Current Devices (RCDs)

### Application (continued)

#### Direct Contact

Defined as "contact of persons or livestock with live parts".

The Regulations recognise four main means of providing protection against direct contact which include enclosures and the use of extra low voltage systems.

However, the use of RCDs is specified by the Regulations in the following instances:

- A socket outlet rated at 32A or less which may reasonably be expected to supply portable equipment for use outdoors shall be protected by an RCD having the characteristics specified in Regulation 412-06-02. (Regulation 471-16-01 applies.)
- Where socket outlets are used to supply caravans on caravan sites, then they must be protected by an RCD having the characteristics specified in Regulation 412-06-02.

Regulation 412-06-02 stipulates among other things that where supplementary protection is provided by residual current devices, their rated residual operating current must not exceed 30mA and that they must trip within 40ms at 5 times rated operating current.

Although RCDs must never be used as the sole method of direct contact protection, they are invaluable in providing supplementary protection in high risk environments where damage may occur. Typical applications include situations where equipment may be used outside or fed by trailing sockets, equipment accessible to children or equipment used in wet areas. For these reasons RCDs are commonly found in schools, hospitals and residential installations.

### 3. Types of fault current

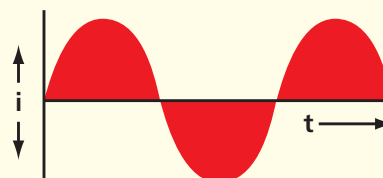
In an installation different types of fault current can occur. MK offer RCDs to suit these conditions.

Sentry Type AC RCDs are suitable for situations where there are residual sinusoidal alternating currents, whether applied suddenly or rising slowly. This is the most commonly used type of RCD in the UK.

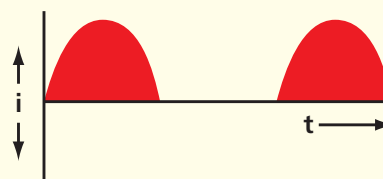
Sentry Type A RCDs (i.e. pulsating d.c. fault current sensitive) are suitable for situations where there are residual sinusoidal alternating currents, whether suddenly applied or slowly rising. These situations can occur with the use of semiconductor devices in modern electrical and electronic equipment, such as computers, printers, plotters, televisions, video cassette recorders and hi-fi equipment, is growing.

Such devices may result in the normal sinusoidal a.c. waveform generated by the mains electrical supply being 'modified'. For example, the waveform may be rectified or, as in asymmetric phase control devices, the waveform may be chopped. The resulting waveforms are said to contain a pulsating d.c. component as illustrated below.

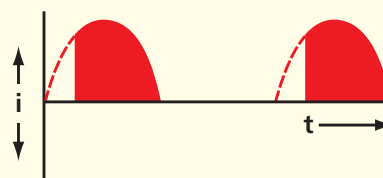
Normal a.c. waveform



Pulsating d.c. waveform  
Half wave rectified



Pulsating d.c. waveform  
Typical asymmetrical  
phase control



## Industrial 10kA Residual Current Devices (RCDs)

### Application (continued)

Pulsating d.c. fault current sensitive RCDs


Should a waveform containing a pulsating d.c. component develop an earth fault, then it is possible that it may not be detected by an "a.c. only" sensitive RCD. For this reason, the Sentry range contains RCDs designed to be sensitive to pulsating d.c. fault currents thus maintaining the intended degree of protection.


Type B RCDs are suitable for situations where there are residual sinusoidal alternating currents, residual pulsating direct currents and smooth d.c. and a.c. residual current of various frequencies, which would not trip Type AC or A RCDs.

These situations can occur in 50Hz a.c. installations with electronic equipment, e.g. frequency converters, UPS installations, power supply unit or high-frequency power converters.


The following symbols are used on the front plate of the device to indicate the type of RCD.

 – type AC RCD.

 – type A RCD.

 – type B RCD.

### 4. Temperature

All Sentry RCDs are suitable for use in the temperature range  $-25^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$ . This is indicated on the RCD by the symbol .

### 5. Time Delayed RCDs Type S (or selective)

When two or more Sentry RCDs are installed in series with one another, measures must be taken to ensure that they discriminate properly. In event of an earth fault, only the RCD immediately upstream from the fault should operate.

RCDs do not discriminate on rated tripping current alone, i.e. a 100mA rated RCD situated upstream from a 30mA rated RCD, will not offer inherent discrimination.

In order to ensure that discrimination is achieved, a Sentry Time Delayed RCD should be used. The in-built time delay period ensures that the downstream RCD opens the circuit before the upstream RCD starts to operate.

The maximum tripping time of a Sentry Time Delayed RCD is 500ms.

Please refer to the current edition of the Wiring Regulations BS 7671 for guidance on the use of these products.

### 6. 3 phase, 3 wire systems

Sentry 4 pole RCDs may be used to provide earth fault protection on 3 phase, 3 wire systems, as the current balance mechanism does not require a neutral to be connected in order to operate effectively.

## Industrial 10kA Residual Current Devices (RCDs)

### Operation

The RCD provides an indication of an earth fault and contact status as detailed below.

The operating dolly provides the following indication:

**I** = Switched ON

**+** = Switched OFF due to Earth Fault or test button operation

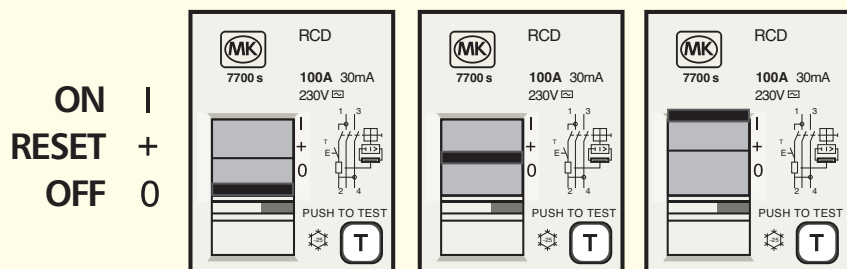
**0** = Switched OFF

The contact status is shown through the window.

Red = contact closed

Green = contact open (RCD is switched off)

In the event of an Earth Fault in the installation or the operation of the test button, the dolly will move to the central position (+) and the contact status indicator shows green. To re-connect the supply the dolly must be reset by moving to the off position before switching on.



### Testing

If an RCD is installed for additional protection against indirect contact, it is a requirement of the IEE Regulations that the effectiveness of the RCD be verified. This must be achieved by a test simulating an appropriate fault condition and be independent of any test facility incorporated in the RCD. The test currents to be applied are as follows:

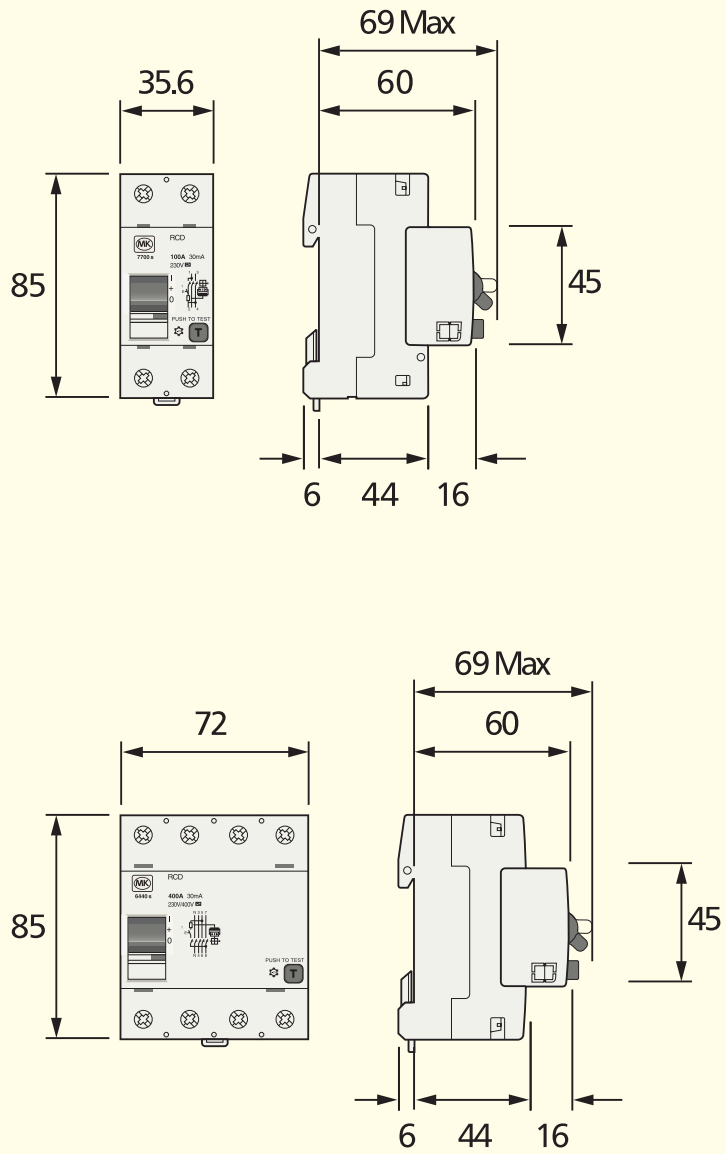
Test current	Condition
$0.5 \times I \Delta n$	RCD must not trip
$1.0 \times I \Delta n$	RCD must trip within 300mS
$5.0 \times I \Delta n$	RCD must trip within 40mS

Where  $I \Delta n$  is the RCD's rated tripping current in accordance with wiring regulations and product standard BS EN 61008.

For time delay RCD  $1.0 \times I \Delta n$  RCD must trip between 130-500mS.

## Industrial 10kA Residual Current Devices (RCDs)

### Dimensions (mm)



## Contactors

### Standards and approvals

All Sentry contactors in the range are designed to fully comply with BS EN 61095

#### Rating specification

Type	Width	List No.
20A, double pole	1 module	6220s
20A, double pole, with manual override	1 module	6720s
20A, four pole	2 module	6420s
40A, double pole	2 module	7240s
63A, double pole	2 module	7263s
40A, four pole	3 module	7440s
63A, four pole	3 module	7463s



### Description

Sentry contactors provide a method of remotely switching single and three phase loads. In this regard, they are particularly useful for switching heating, lighting and ventilation circuits, in particular when used in conjunction with REC supply off-peak tariffs.

The Auxiliary Contact is suitable for fitting to all Sentry Contactors and allows remote indication of contactor status, one normally open and one normally closed contact is provided. The Auxiliary Contact is a half module width, a half module blank is supplied to complete installation.

The suppression block is suitable where contractor controls are not bounce free and connects across the coil terminals. It can be used in conjunction with one or two contactors.

They are suitable for mounting on a standard DIN rail and are therefore fully compatible with all Sentry Consumer Units and small enclosures. (5504s, 5604s, 5704s, 5702s.)

### Functions

#### CONTROL

Achieved by energising and de-energising the contactor coil, via an MK Time Switch or REC meter during 'off peak' hours as set by supply authorities. A coil status indicator is visible through the small window on the front of the contactor.

#### MANUAL OVERRIDE (6720s only)

An extra function is offered by the Sentry Contactor with manual override. This performs in the same way, but has a switch on the front face to give the following extra facilities:

##### 1. AUTO START MODE

This gives the same performance as above.

##### 2. 'STOP' (0)

In this position the user is able to switch the load off when required, eg during periods of absence. The load remains off until manually reset.

##### 3. MANUAL START MODE (1)

A manual override which allows the load to be energised outside the normal timed period when required. When the contactor is used via an MK Time Switch or by an REC supply meter, the override switch can either be reset manually or allowed to return to the 'auto' position at the commencement of the next timed period. During the 'manual' period, electricity will be used at the standard rate.

##### 4. 'PERMANENTLY 'ON' MODE

The manual override switch features a locking mechanism which allows the contactor to be fixed in a 'permanently on' state. Note: this will not now reset at the commencement of the next timed period.



## Contactors

### Features

- Compatible with all Sentry Consumer Units (single phase only) (excludes 5502s) and the following Sentry enclosures: 5504s, 5604s, 5704s, 5702s (for single and three phase) .
- Suitable for heating, lighting and ventilation circuits
- Choice of functions
- Ideal for use with REC supply off-peak tariffs

### Installation

a) When a contactor is mounted alongside an MCB of greater than 10 amp current rating, or two contactors are mounted alongside an MCB of any current rating, it is advisable to insert a module blank between them. (List No. 5544s.)

b) When mounting more than two contactors side by side, it is necessary to insert a module blank between every two contactors, to give ventilation.

c) When using dual rail consumer units, it is advisable to mount electronic products on the lower rail and contactors on the upper rail. If mounting in a single rail consumer unit, it is advisable to mount electronic products as far away as possible from contactors. As a minimum they should be spaced by a single module width blank.

d) Ensure the load to be controlled is protected against short circuit and overload conditions by a suitable rated Sentry MCB.

e) Contactors and Suppression Module are mounted into Sentry Consumer Units and enclosures, by clipping onto the DIN rail mounted in the base by means of the spring clip. If the contactor is required to be removed for any reason, unclip the contactor from the DIN rail by means of the spring clip on the contactor.

f) The suppression module can be used in conjunction with one or two contactors and should be fitted, in parallel with the contactor controls, when they are not bounce free. The module is suitable for 220/240A operation.

### Technical specification

All Contactor List Nos. are designed to operate at either 20, 40 or 63 amps continuous current (AC1-AC7b) 50Hz and have a mechanical life of 1,000,000 operations. The coil voltages are 220/240V 50Hz.

List No.	6220s	6420s	6720s	7240s	7263s	7440s	7463s
Description	Contactor			Contactor			
Contact rating (lth)	20A	20A	20A	40A	63A	40A	63A
Includes manual override?	No	No	Yes	No	No	No	No
No. of poles (normally open only)	2	4	2	2	2	4	4
Width in 18mm modules	1	2	1	2	2	3	3
Rated Voltage (V)							
(i) Insulation (Ui)	500	500	500	500	500	500	500
(ii) Max. operating (Ue)	250	415	250	250	250	415	415
Average consumption of control circuit coil (VA)							
– inrush	15	34	15	53	53	53	53
– closed	3.8	4.6	3.8	6.5	6.5	6.5	6.5
Terminal cable capacity (max.)	2 x 2.5mm <sup>2</sup> flexible						
Controls	2 x 1.5mm <sup>2</sup> rigid						
Power	2 x 2.5mm <sup>2</sup> flexible 2 x 6mm <sup>2</sup> rigid		2 x 4mm <sup>2</sup> flexible 2 x 25mm <sup>2</sup> rigid				
Torque for terminals	1.4Nm			3.5Nm			

## Contactors

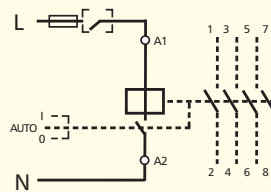
### Terminal Layout

#### i) Contactor

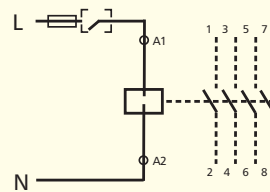
- The coil connections to control energisation should be made between terminals A1 and A2.
- One normally open main contact is between terminals 1 and 2.
- A second normally open main contact is between terminals 3 and 4.
- In the case of four pole contactors, the other main contacts are between terminals 5 and 6, and 7 and 8 respectively.

#### Typical schematic layouts of modular contactors.

With Manual Override



Without Manual Override



## Contactors

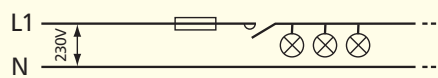
### Applications and Maximum Ratings

#### LIGHTING – Maximum number of lamps

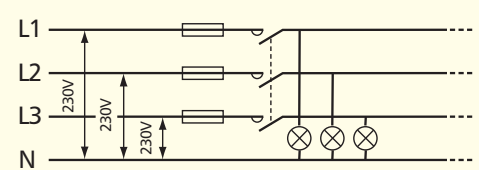
Presentation of installations according to type of supply.

The maximum number of lamps which can be operated per phase is equal to the total number of lamps in the "Single-Phase 230V" table.

Single-phase circuit, 230V



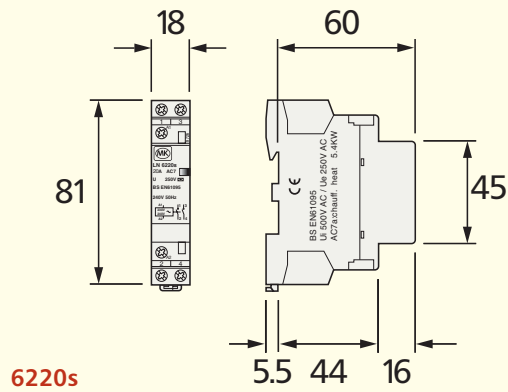
3-phase circuit, 400V (with neutral)



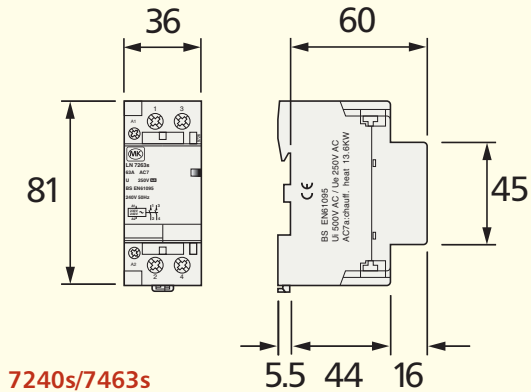
SINGLE-PHASE 230V TABLE			
Type of lighting application (AC5a and AC5b categories)	6220s/6420s/6720s Maximum No. of lamps	7240s/7440s Maximum No. of lamps	7263s/7463s Maximum No. of lamps
<b>Incandescent and halogen lamps</b>			
40 W	57	115	172
60 W	45	85	125
100W	28	70	100
<b>Halogen lamps used with transformer</b>			
60 W	14	27	40
80 W	12	23	35
<b>Fluorescent lamp with starter (single fitting with parallel correction)</b>			
15 W	20	40	60
20 W	20	40	60
40 W	20	40	60
<b>Fluorescent lamp with starter (single fitting non-corrected)</b>			
15 W	30	70	100
20 W	30	70	100
40 W	28	70	100
<b>Electronic ballast (fluorescent lamp single setting)</b>			
18 W	111	222	333
36 W	58	117	176
<b>Electronic compact lamp (low consumption)</b>			
7 W	200	400	600
11 W	120	240	360
15 W	88	176	264
20 W	66	132	200
<b>MOTORS – Maximum Power</b>			
<b>Type of small motor application (AC1 – AC7a categories)</b>			
220/240V single phase with capacitor	1.1kW	2.2kW	4kW
400V three phase motor	4kW	7.5kW	11kW
<b>HEATING – Maximum Power</b>			
<b>Type of small heating application (AC7b category)</b>			
Number of operating cycles	<b>230V</b>	<b>400V</b>	<b>230V</b>
	<b>Single Ph</b>	<b>3 Ph</b>	<b>Single Ph</b>
100,000	5.4kW	16kW	13.6kW
150,000	4.6kW	14kW	11.6kW
200,000	3.5kW	10kW	8.8kW
500,000	1.6kW	5kW	4kW
1,000,000	1.2kW	3.5kW	3kW
<b>ELECTRICAL ENDURANCE</b>			
AC1 and AC7a categories	250,000 operations		

## Contactors

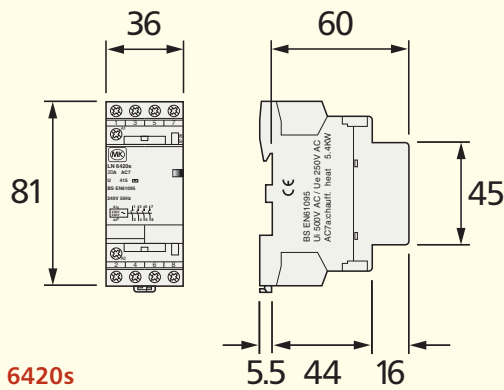
### Dimensions (mm)



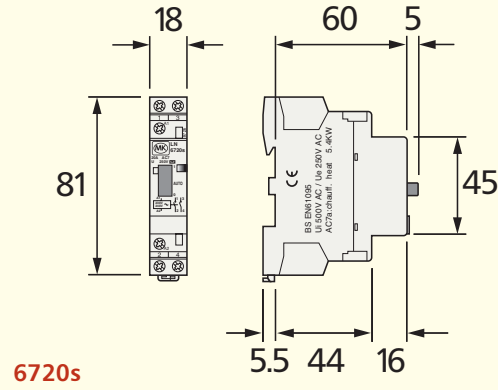
6220s



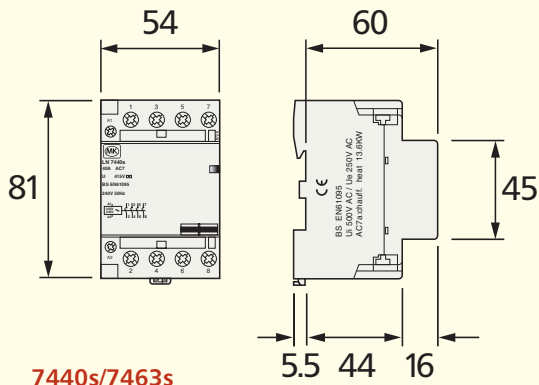
7240s/7463s



6420s



6720s



7440s/7463s

## Bell Transformer

### Standards and approvals

The Sentry Bell Transformer is designed to comply fully with the requirements of EN 60558-2-8.

### Technical specification

#### Electrical

Primary voltage:	220V/240V a.c. 50Hz
Secondary voltage:	8V a.c.
Rated output current:	1A

#### Physical

Width:	2 modules (36mm)
Terminal capacity:	1 x 2.5mm <sup>2</sup>
Ambient operating temp:	-5°C to +40°C
IP rating:	Front face IP4X
Max installation altitude:	2000 metres



### Description

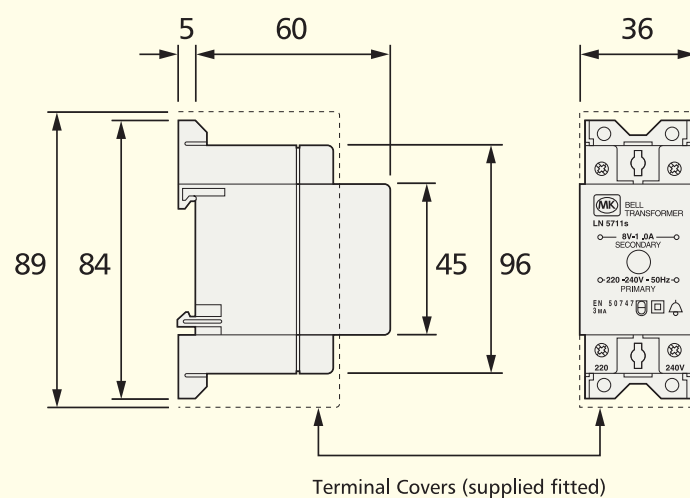
The Bell Transformer is of the safety isolating, fail safe type. The construction is all insulated, Class II. It may be mounted within a Sentry Consumer Unit within 2 or 4 module enclosures alongside MCBs, RCDs and RCBOs or surface mounted.

### Installation

The Sentry Bell Transformer should always be connected in series with an MCB or other type of protective device of rating not exceeding 6A.

When installed in a 230V environment, i.e. inside a consumer unit, the cables used to connect the bell or chime to the transformer must have a 230V rated voltage. If bell wire is used, suitable sleeving must be provided to increase its insulation rating to 230V.

### Dimensions (mm)



## Electromechanical & Digital Timeswitches

### Standards and approvals

EN 60730-1, EN 60730-2-7

#### Features

- Ideal for independent programmable control of lighting, heating and other functions
- Can be mounted in Sentry Consumer Units and appropriate Sentry enclosures, or surface mounted
- Integral resistance to normal electrical interference
- Manual override of programmed commands
- Display indication of switch position for each Channel, i.e. ON or OFF (Digital only)
- Simple summer time to winter time (and vice versa) adjustment facility (Digital only)
- Random and holiday setting programme (5733s only)



#### Description

Sentry electromechanical and digital timeswitches enable pre-programmed commands to be executed on a given circuit. The Sentry time delay switches can be installed on circuits to energise suitable equipment for between 1 to 7 minutes.

**Note:** Inductive loads, particularly fluorescent lamps or energy saving lamps, place a heavy stress on the switching contacts. If in doubt about the ability of the timeswitches to directly switch a particular load it is advisable to install the timeswitch in conjunction with a suitable relay or contactor. If in doubt please consult the Technical Sales and Service Department for assistance.

#### Electromechanical

All Sentry electromechanical timeswitches are suitable for DIN rail mounting in Sentry Consumer Units and appropriate Sentry enclosures.

Quartz controlled units (5807s, 5824s) contain a power reserve of 150 hrs for accurate time keeping in the event of a mains failure.

3 module timeswitches have an additional insulated 'parking' terminal for earth or other connections.

24 hr units have a minimum switching time of 30 mins and 7 day units 3 hrs.

#### Digital

All Sentry digital timeswitches are suitable for DIN rail mounting in Sentry Consumer Units and 2 and 4 module Sentry enclosures.

Sentry digital timeswitches are available in both 1 and 2 module widths.

The 1 channel 1 module digital timeswitch (5733s) provides 50 programming selections, with random and holiday options. A simple summer to winter time (and vice versa) adjustment facility is provided. The timeswitch contains a power reserve of 150 hrs for accurate time keeping in the event of mains failure.

The two module digital timeswitches are available in both one channel (5731s) and 2 channel (5732s) versions. The units are supplied pre-programmed to UK time, and will automatically change from winter to summer time. The integral battery (with a 3 year power reserve) maintains the settings until the mains supply is connected. This feature will allow programming of switching commands prior to installation, if required.

The 1 channel 2 module digital timeswitch (5731s) provides for 50 programming selections.

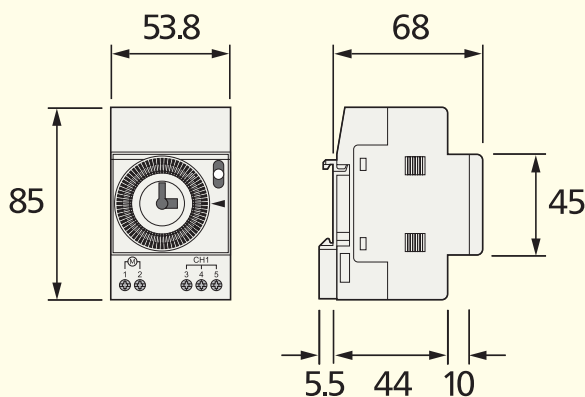
The 2 channel 2 module digital timeswitch (5732s) provides a facility for independent control of two circuits. A maximum of 50 switching commands can be programmed for each channel.

All digital timeswitches have a minimum programming time of 1 minute and a manual override. Commands can be programmed for individual days or for groups of days.

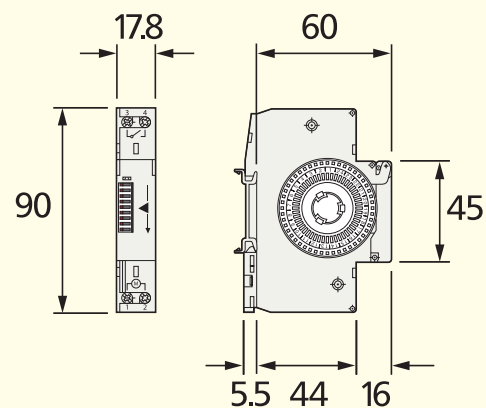
Technical specification					
Electromechanical	5707s	5724s	5833s	5807s	5824s
Supply voltage	220-240V a.c. 50Hz	220-240V a.c. 50Hz	220-240V a.c. 50Hz	220-240V a.c. 50-60Hz	220-240V a.c. 50-60Hz
Maximum power consumption	1VA	1VA	1VA	1VA	1VA
Switching capacity per channel					
– Resistive	16A	16A	16A	16A	16A
– Inductive	4A (Cos.Ø 0.6)	4A (Cos.Ø 0.6)	4A (Cos.Ø 0.6)	4A (Cos.Ø 0.6)	4A (Cos.Ø 0.6)
– Fluorescent	1350W	1350W	1350W	1350W	1350W
Switching arrangement	1 x c/o	1 x c/o	1 x n/o	1 x c/o	1 x c/o
No. of switching commands	56	48	48	56	48
Minimum programme time	3hrs	30mins	30mins	3hrs	30mins
Operating temperature range	-25°C to +55°C	-25°C to +55°C	-25°C to +55°C	-20°C to +55°C	-20°C to +55°C
Running reserve	–	–	–	*150hrs	*150hrs
Width of unit	54mm (3 mods)	54mm (3 mods)	18mm (1 mod)	54mm (3 mods)	54mm (3 mods)
Terminal capacity	2 x 2.5mm <sup>2</sup>	2 x 2.5mm <sup>2</sup>	2 x 4mm <sup>2</sup>	2 x 2.5mm <sup>2</sup>	2 x 2.5mm <sup>2</sup>
Digital and Time delay	5731s	5732s	5733s		
Supply voltage	220-240V a.c. 50-60Hz	220-240V a.c. 50-60Hz	220-240V a.c. 50-60Hz		
Maximum power consumption	5VA	5VA	5VA		
Switching capacity per channel					
– Resistive	16A	16A	16A		
– Inductive	8A (Cos.Ø 0.6)	8A (Cos.Ø 0.6)	8A (Cos.Ø 0.6)		
– Fluorescent	1000W	1000W	1000W		
Switching arrangement	1 x c/o	2 x c/o	1 x c/o		
No. of switching commands	50	50	50		
Programme options	–	–	R/H		
Minimum programme time	1min	1min	1min		
Operating temperature range	-25°C to +55°C	-25°C to +55°C	-25°C to +55°C		
Operating accuracy @ 20°C	2.5sec/day	2.5sec/day	2.5sec/day		
Running reserve	3 years from factory	3 years from factory	3 years from factory		
Width of unit	36mm (2 mods)	36mm (2 mods)	18mm (1 mod)		
Terminal capacity	2 x 2.5mm <sup>2</sup>	2 x 2.5mm <sup>2</sup>	2 x 4mm <sup>2</sup>		
Summer/winter changeover	Yes	Yes	Yes		
Neon indicator lamp load	–	–	–		
R/H = Random/holiday C/O = Changeover switch N/O = Normally open contact * = after 140hr charging time					

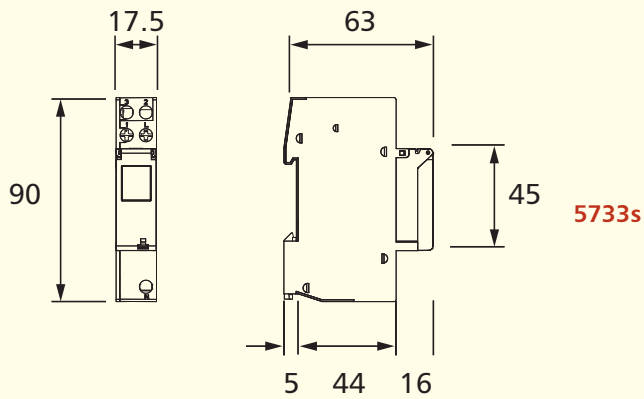
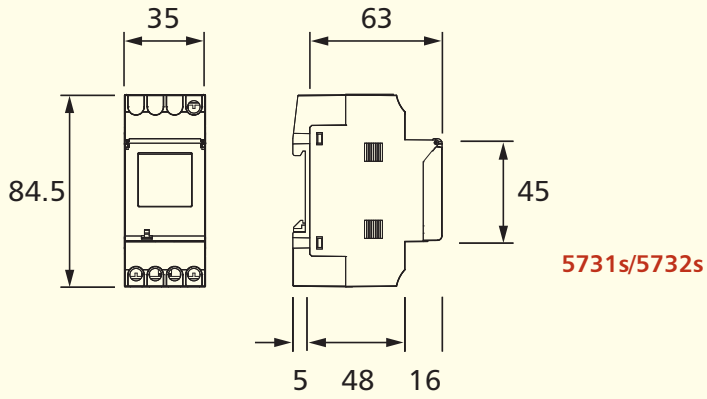
## Dimensions (mm)

### 5707s/5724s/5807s/5824s



### 5833s







technical hotline +44 (0)1268 563720



## the york building, london

London's West End is renowned architecturally, for its style and sophistication and the York Building is no different.

The development, which occupies an island site close to Marble Arch, is a mix of commercial, retail and residential use. The 22 high quality residential apartments feature the latest and best in hi-tech services and MK was asked to design bespoke combination plates to provide a neat outlet for power and data applications.

The Design team came up with specially-designed in-line combination plates that met both the aesthetic and service requirements for these state of the art living spaces.

Available on a worldwide basis, the MK Design Service is supported by a dedicated team to ensure the seamless delivery of your chosen products. To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)



## Sentrysocket

### Compliance with EC Directives, Standards and approvals

All Sentrysockets comply with the following EC Directives and are CE marked:

Low Voltage Directive  
Electromagnetic Compatibility Directive (89/336/EEC)

Sentrysocket RCD Single Sockets comply with the requirements of the following standards:

BS 7288:1990  
BS EN 50082-1: 1998

Sentrysocket RCD Double Socket also complies with the requirements of BS EN 61543:1996

### Technical specification

#### Electrical

Rated Voltage:  
240V a.c.

Current rating:  
13A resistive

Rated tripping current  
30mA and 10mA versions

Terminal capacity:  
3 x 4mm<sup>2</sup> for 1 gang  
2 x 4mm<sup>2</sup> for 2 gang

#### Physical

Ambient operating temperature:  
-5°C to +40°C

IP rating:  
IP4X

Max. installation altitude:  
2000 metres

Sentrysockets are only suitable for use in TN-S system where the Supply Neutral Connection is connected to the Supply Earth.

They are not suitable for connection across two lines of a 127V line to Neutral Voltage System.



### Description

Sentrysocket provides a high level of protection against electrocution and gives further protection when used with appliances vulnerable to insulation damage, particularly when they are in damp environments or outdoors. The Sentrysocket units are not suitable for mounting in damp environments or outdoors.

Sentrysocket, incorporating an RCD, is part of a complete range of fixed and portable wiring devices and circuit protection devices suitable for use in domestic, commercial and light industrial applications.

#### Active control circuits

Incorporate a 'Re-set' mechanism and are mains failure sensitive, i.e. they will function under all the normal conditions expected of an RCD, but will also trip in the event of a power cut or a sudden, dramatic reduction in mains voltage. This makes them ideal for use where it would be hazardous for equipment to suddenly energise after return of mains power, such as use with rotating machinery and heat developing apparatus.

#### Passive control circuits

Incorporate a 'Stay-set' mechanism and is mains failure proof, i.e. it will function under all the normal conditions expected of an RCD and will not trip in the event of a power cut. This makes it suitable for use with freezers or in inaccessible or unmanned locations.

### Features

- Suitable for most residential, commercial and light industrial applications
- Active and passive control circuit applications
- Comply fully with current Wiring Regulations
- Double pole switching
- Flexible and versatile in use
- Ideal for use with equipment subject to wet weather or high humidity
- Part of a complete range of MK circuit protection devices
- They are a.c. and pulsating d.c. sensitive for residual current

Sentrysockets products can be wall or bench mounted. Do not mount or use as a trailing socket or where they may be subject to excessive moisture or dampness.

### Cable management

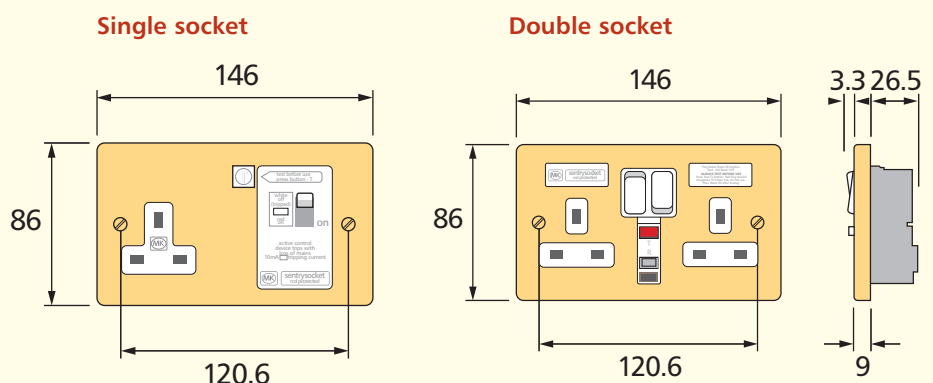
Decorative finish Sentrysockets can be mounted in a variety of MK trunking systems.

### Installation

#### Flush mounting steel wall box

It should be noted that some of the conduit entries may be restricted, depending upon their positions and the depth of box used.

### Dimensions (mm)



For a full range of corresponding products, see pages 292-293 in the product selector.

## Sentrysocket

### Installation

#### Flush mounting steel wall box

It should be noted that some of the conduit entries may be restricted, depending upon their positions and the depth of box used.

### Socket Testing:

#### Single Socket Testing

After installation, turn the mains electricity supply on.

To test that the Sentrysocket is functioning correctly:

1. Ensure that no appliance is connected to the Sentrysocket. **Switch Sentrysocket on:** The switch should remain closed and the red flag will appear in the window. If the switch fails to remain closed, check that the Supply L and N connections are not reversed or the Supply N connection is not open circuit. If the Sentrysocket is correctly connected and still trips after being switched on, the Sentrysocket is faulty and should not be used
2. If the Sentrysocket stays on, **press the test button:** The switch will open and the white flag will appear in the window. If the Sentrysocket does not trip and there is mains voltage present at the socket outlet, Sentrysocket is faulty and should not be used.
3. **Switch Sentrysocket on:** Connect an RCD tester and ensure that the Sentrysocket trips within the specified time:  
**≤ 200 ms AT RATED TRIP CURRENT**  
**≤ 40 ms AT 5 x RATED TRIP CURRENT**  
If the Sentrysocket does not trip within the specified times then the product is faulty and should not be used (If more than one RCD is in series then there is no guarantee as to which device will trip first).
4. **Reset all tripped RCD's including the Sentrysocket.**
5. **Switch off the mains supply switch disconnecter.** On mains failure, a Sentrysocket with Active Control Circuit will trip, whilst a Sentrysocket with Passive Control Circuit will not trip. If the Active Control device does not trip, it is faulty and should not be used – see note below. If no faults have been found then installation testing has been completed successfully.

**Note:** If a fault is identified at any stage of installation testing procedure do not use Sentrysocket, and contact your local electrician, or your local MK stockist.

#### Double Socket Testing

After installation, turn the mains electricity supply on.

To test that the Sentrysocket is functioning correctly follow the steps 1 to 4 below:

1. Ensure that no appliance is connected to the Sentrysocket.
2. **Reset** – Press the button marked R (for Reset) – the contact status indicator should show red, indicating that the socket outlets are now live (if the switches are in the ON positions).
3. **Test** – Press the TEST button marked T (for Test), the product should trip with the contact status indicator showing black. In this state the socket outlets are disconnected from the supply.
4. **Reset** – Press the button marked R again, the contact status indicator should show red.
5. Connect an RCD Tester to either socket outlet and ensure that the Sentrysocket trips with the specified times below:  
**≤ 200 ms AT RATED TRIP CURRENT**  
**≤ 40 ms AT 5 x RATED TRIP CURRENT**
6. Reset the Sentrysocket as in step 2 above.
7. Switch off the Mains Supply Switch Disconnecter.
8. A Sentrysocket with Active Control Circuit should trip while a Sentrysocket with Passive Control Circuit should not trip.

If all the operations in steps 2 to 8 above give correct results, the Sentrysocket RCD socket outlet is safe to use.

**If the procedures in steps 2 to 8 above are not completed correctly, do not use the Sentrysocket product and seek professional advice or contact the MK Technical Sales and Service department on +44 (0)1268 563720.**

Range

Technical Data

## Cable Management

### Perimeter and Distribution

<b>Cable Management Overview</b> An introduction and technical overview to MK cable management	572-573
<b>Prestige 3D Dado and Skirting</b> The new three compartment dado trunking system for compliance with Cat 6 structured cabling	574-583
<b>Prestige 3D Antibac Blue</b> Antibacterial solution for power and data distribution in environments where hygiene is priority.	574-583
<b>Prestige 3D Compact</b> 3 compartment trunking with a smaller footprint for more confined installations	574-583
<b>Prestige 3D Aluminium</b> Unbeatable strength with gently curved aesthetics	574-583
<b>Prestige 2com</b> Two compartments provide maximum data capacity around radiused bends	585-591
<b>Prestige Poles and Posts</b> Poles and Posts for supplying multi-services to work stations	592-593
<b>Powerlink Plus</b> Busbar trunking system with flush fitting accessories	594-601
<b>Pinnacle</b> Versatile angular bench trunking system	602-606
<b>Pinnacle Pillar</b> Multi compartment trunking for perimeter locations	607
<b>Premier</b> Integrated trunking system with snap fit mouldings	608-615
<b>Norwich</b> Durable and popular trunking system	616-620
<b>Ega Industrial</b> Heavy duty trunking in a variety of sizes	622-627
<b>Ega Cornice</b> Trunking for wall/ceiling junctions	628-631

## Range

## Technical Data

### Conduit and Mini

<b>Egatube Conduit</b> High impact conduit with a comprehensive range of fittings	632-637
<b>Egatube Oval Conduit</b> Oval conduit	N/A
<b>Egaflex Conduit</b> Corrugated flexible conduit	N/A
<b>Ega Mini Trunking</b> Wide selection of mini trunking profiles and fittings	638-640

### Alarm and Communication

<b>Red Alert</b> Trunking for alarm circuit identification	638-640
<b>Ega Communication</b> Unobtrusive low profile trunking	638-640

## Material Specification

### PVCu

PVCu is used for the production of extrusions and mouldings and is universally accepted as having the most suitable properties for use within the electrical industry.

### Standards and Approvals

All MK PVCu products are manufactured in accordance with the requirements of BS EN 50085 Series, BS 4678: Part 4, BS EN 61386 Series and BS 4662. The PVCu material used has been tested by an approved laboratory in accordance with the requirements of the following British Standards: BS 4607: Part 1, BS 476: Part 7. Copies of test certificates are available upon request. MK has been awarded ISO 9001: 2008 accreditation. The system complies with all relevant requirements of BS 7671: 2008.

### CE marking

All relevant MK products in this brochure are CE marked, confirmation that they meet the EMC and LV directives.

### Performance

Strength	Impact resistance	High impact resistance under normal climatic conditions, BS 4678: medium duty	
	Charpy notched impact strength	25 kJ/m <sup>2</sup>	
	Tensile strength at break	at yield	34.62 N/mm <sup>2</sup>
		42.00 N/mm <sup>2</sup>	

### Fire performance

The PVC-U materials used in the manufacture of MK products are non-flame propagating in accordance with BS EN 61386, BS EN 50085 and BS 4678. Extrusion material has been tested by an accredited laboratory in accordance with the requirements of BS 476: part 7 and has achieved a Class 1Y classification. Moulding material has been tested by an accredited laboratory and conforms with IEC 695-2-1 at a severity of 650°C.

### Thermal properties

All MK PVCu products are designed to accommodate local thermal expansion. Fitting instructions explain the procedure required to deal with the differential movement at the interface with the building fabric.

Coefficient of linear expansion	55 x 10 <sup>-6</sup> /°C (5mm/3000mm with a temperature rise of 25°C)
Operating temperatures	-5° to 60°C
Vicat softening point	81°C
Thermal conductivity	0.19w/mk

### Chemical resistance

PVCu is non-corrosive and not affected by sea water. It has excellent resistance to mineral acids, alkalis and detergents, good resistance to alcohols, but liable to attack from solvents such as ketones, aromatics and hydrocarbons.

### Electrical

PVCu is non-conductive.

Dielectric strength	40 kV/mm in DBP
	17 kV/mm in tx oil
Resistivity	1014 Ω ohm

### Biological

Resistant to vermin and termites.

### Workability

All MK PVCu products are lightweight and can be readily cut and drilled with hand tools. Short component lengths can be readily incorporated, reducing wastage of material. All covers and accessories are manufactured to fine tolerances to ensure a tight fit with ease of removal. Stop ends are secured to the carriers. For details, see the relevant installation guide.

### Durability

All MK PVCu products are stable and will maintain their performance characteristics in accordance with the terms and conditions described above.

### Maintenance

Clip-on covers with optional screw fix and interchangeable accessories provide continuous accessibility for rewiring, extensions and modifications to an installation. Covers and accessories can be cleaned with a damp cloth and household detergent. The surface can be decorated with commercial paints if required.

### Mechanical performance

Impact resistance at -5°C, BS EN 50085: medium duty for trunking, BS EN 61386 heavy or medium, where relevant for conduits.

### Aluminium

#### Standards and approvals

The Prestige 3D Aluminium System is manufactured in accordance with the requirements of BS EN 50085-1:2005 and BS EN 50085-2-1:2006. 1, 2 & 3 Gang Boxes conforming to BS 4662 where applicable.

#### IEE Wiring Regulations

All products are designed and manufactured to allow installation to comply with all relevant requirements of the latest edition of BS 7671: 2008.

#### Quality Assurance

The system is manufactured to BS EN ISO 9001: 2008

#### Earth Continuity

The system makes provision for earth bonding where required in accordance with BS 7671: 2008.

When PVC cable trunking items are used that interrupt the earth continuity, Earth Kits (VP218 & VP219) are required to ensure continuity.

#### Impact Classification

Composite trunking systems (PVC / Al) will withstand "medium" impact to BS EN 50085. Metal components will withstand "heavy" impact as defined in BS EN 50085.

#### Thermal Properties

Min/Max installation and application temperature -5 to +60°C.

Coefficient of linear expansion 23 x 10<sup>-6</sup> per°C.

1mm/m for 40 degree rise.

#### Maintenance

Resistant to staining. Wipe with soapy water (neutral 5/7 ph value).

#### Electrical Properties

Resistance to 0.03 ohm mm<sup>2</sup>/m.

#### Chemical Properties

Corrosion only occurs, to any extent, when ph value is less than 3 or greater than 9.

## PVCu Chemical Resistance Table

The resistance of unplasticised PVC to a wide range of chemicals is listed in the table below.

The symbols used to denote performance are as follows:

- ▲ Satisfactory
- Some attack or absorption: the material may be considered for use when alternative materials are unsatisfactory and where limited life is acceptable. When PVC is to be used with such chemicals full scale trials under realistic conditions are necessary.
- Unsatisfactory: so rated because of decomposition, solution, swelling, loss of ductility etc, of the samples tested.

For clarification and for details of resistance to other chemicals please call our Technical Hotline on +44 (0)1268 563720.

Note: to determine the suitability of PVCu for external applications we strongly advise you contact the MK Technical Sales and Service Department on +44 (0)1268 563720.

CHEMICAL	CONCENTRATION	UNPLASTICISED PVC	
		20°C	60°C
acetaldehyde	40% aq. solution	▲	■
acetic acid	60% aq. solution	▲	■
acetic anhydride		■	■
acetone	Traces	■	■
alcohol, ethyl	40% w/w water	▲	●
alcohol, isopropyl		▲	▲
alcohol, menthyl	6% aq. solution	▲	▲
	100%	▲	●
aliphatic hydrocarbons		▲	▲
aluminium chloride		▲	▲
aluminium hydroxide		▲	▲
ammonia	0,885.G., aq. solution	▲	▲
	Anhydrous gas	■	■
	Anhydrous liquid	■	■
ammonium chloride		▲	▲
ammonium hydroxide		▲	▲
aniline		■	■
animal oils		▲	▲
aqua regia	Dilute	▲	▲
	Concentrated	▲	■
barium sulphate		▲	▲
beer		▲	▲
benzene		■	■
benzoyl chloride		■	■
borax		▲	▲
boric acid		▲	▲
brine		▲	▲
bromide	Traces, gas	●	■
	100% (dry gas)	■	■
	Liquid	■	■
calcium chloride	aq. solution	▲	▲
	20% in methyl alcohol	▲	▲
calcium hydroxide		▲	▲
calcium hypochlorite		▲	▲
carbon dioxide		▲	▲
carbonic acid		▲	▲
carbon monoxide		▲	▲
carbon tetrachloride		●	■
castor oil		▲	▲
chloric acid		▲	▲
chlorine	100% (dry gas)	▲	●
	10% (moist gas)	●	●
chlorine water	Sat. solution	●	●
chloroform		■	■
chrome allum		▲	▲
chromic acid	Plating solution	▲	▲

CHEMICAL	CONCENTRATION	UNPLASTICISED PVC	
		20°C	60°C
cider		▲	▲
citric acid		▲	▲
copper chloride		▲	▲
copper cyanide		▲	▲
copper nitrate		▲	▲
copper sulphate		▲	▲
cupric sulphate		▲	▲
cyclohexanone		■	■
detergent, synthetic	All concentrations	▲	▲
developers, photographic		▲	▲
dextrin		▲	▲
dextrose		▲	▲
dialzo salts		▲	▲
dichlorodifluoromethane		▲	▲
diethyl ether		■	■
emulsifiers	All concentrations	▲	▲
emulsions, photographic		▲	▲
ethyl acetate		■	■
ethylene glycol		▲	▲
ethylene oxide		■	■
fatty acids		▲	▲
ferric chloride		▲	▲
ferric nitrate		▲	▲
ferric sulphate		▲	▲
ferrous ammonium citrate		▲	▲
ferrous chloride		▲	▲
ferrous sulphate		▲	▲
fixing solution, photographic		▲	▲
fluorine		●	●
formaldehyde	40% w/w water	▲	▲
formic acid	50% solution	▲	▲
	100% solution	▲	■
fructose		▲	▲
fruit pulp		▲	▲
glucose		▲	▲
glycerol		▲	▲
grape sugar		▲	▲
heptane		▲	▲
hydrobromic acid	100%	▲	▲
hydrochloric acid	22% aq. solution	▲	▲
	Concentrated	▲	▲
hydrochloric acid	40% aq. solution	▲	●
	60% aq. solution	●	■
	Concentrated	▲	▲
hydrogen bromide	Anhydrous	▲	▲
hydrogen chloride	Anhydrous	▲	▲
hydrogen fluoride	Anhydrous	▲	▲
hydrogen peroxide	3% (10vol)	▲	▲
	12% (40vol)	▲	▲
	30% (100vol)	▲	▲
	90% and above	▲	▲
hydrogen sulphide		▲	▲
iodine	Solution in potassium iodine	■	■
lactic acid	10% aq. solution	▲	▲
	100%	●	●
lanoline		▲	▲
linoletic acid		▲	▲
linseed oil		▲	▲
magnesium hydroxide		▲	▲
maleic acid	50% aq. solution	▲	▲
	Concentrated	▲	●
metallic soaps (water soluble)		▲	▲
methyl bromide		■	■
methyl chloride		■	■
methyl cyclohexanone		■	■
methyl ethyl ketone		■	■
methyl isobutyl ketone		■	■
methylated spirit		▲	▲
methylene chloride		■	■
milk		▲	▲
mineral oil		▲	▲
mixed acids (sulphuric/nitric		▲	▲
	Various proportions)	●	■
molasses		▲	▲
naphtha		▲	▲
naphtalene		■	■
nicotine		▲	▲

CHEMICAL	CONCENTRATION	UNPLASTICISED PVC	
		20°C	60°C
nitric acid	5% aq. solution	▲	▲
	50% aq. solution	▲	●
nitrobenzene		■	■
oleic acid		▲	▲
oxalic acid		▲	▲
oxygen		▲	▲
ozone		▲	▲
paraffin		▲	▲
pentane		▲	▲
petrol		▲	▲
phosphoric acid	30% aq. solution	▲	▲
	95% aq. solution	▲	▲
photographic developers		▲	▲
potassium bromide		▲	▲
potassium carbonate		▲	▲
potassium cyanide		▲	▲
potassium ferricyanide		▲	▲
potassium hydroxide	10% aq. solution	▲	▲
	Concentrated	▲	▲
potassium hypochlorite		▲	▲
potassium permanganate		▲	▲
propane		▲	▲
propylene glycol		▲	▲
propylene oxide		■	■
saccharose		▲	▲
sea water		▲	▲
silver nitrate		▲	▲
soap solution		▲	▲
sodium bicarbonate		▲	▲
sodium bisulphate		▲	▲
sodium borate		▲	▲
sodium bromide		▲	▲
sodium carbonate		▲	▲
sodium chlorate		▲	▲
sodium chloride		▲	▲
sodium cyanide		▲	▲
sodium ferricyanide		▲	▲
sodium ferrocyanide		▲	▲
sodium fluoride		▲	▲
sodium hydroxide	40% aq. solution	▲	▲
	Concentrated	▲	▲
sodium hypochlorite 15% Cl		▲	▲
sodium hyposulphate		▲	▲
sodium nitrate		▲	▲
sodium peroxide		▲	▲
sodium silicate		▲	▲
sodium sulphate		▲	▲
sodium sulphide	25% aq. solution	▲	▲
	Concentration	▲	▲
sodium sulphite		▲	▲
soft soap		▲	▲
surface active agents (All concentrations)		▲	▲
(emulsifiers, synthetic detergents and wetting agents)		▲	▲
starch		▲	▲
stearic acid		▲	▲
sucrose		▲	▲
sulphur	Colloidal	▲	▲
sulphur dioxide	Dry	▲	▲
	Liquid	●	■
sulphuric acid	80% aq. solution	▲	▲
	90% aq. solution	▲	●
	Fuming	■	■
sulphurous acid	10% aq. solution	▲	▲
tallow		▲	▲
tanning extracts		▲	▲
tartaric acid		▲	▲
transformer oil		▲	▲
trichloroethane		■	■
trichloroethylene		■	■
turpentine		▲	▲
vegetable oils		▲	▲
vinegar		▲	▲
water		▲	▲
wetting agents	All concentrations	▲	▲
wines and spirits		▲	▲
xylene		■	■
zinc carbonate		▲	▲
zinc chloride		▲	▲
zinc sulphide		▲	▲

## Data Trunking System

### Standards and approvals

The Prestige 3D System is manufactured in accordance with the requirements of BS EN 50085-1: 2005 and BS 4662: 2006. Copies of test certificates are available upon request. The system complies with all the relevant requirements of BS 7671: 2008. MK has been awarded ISO 9002 accreditation.

### Features

- Greater trunking depth, increased data and power cable capacity, accepts 45mm deep back boxes
- Patented Cat 5e, 6 and 7 compliant Data Sweep, with no loss of capacity and without the need for bulbous, protruding corner covers
- Cat 5e, 6 and 7 compliant moulded flexible Internal and External Corners, moulded Flat Angles and Tees
- Divider Knockouts, making wiring easier and faster with no drilling or cutting
- Patented two stage Hinge Lids enables cables to be supported by the trunking cover during installation, and makes retro-installation of additional cables more simple
- All extrusions manufactured from 90% recycled material\*

### Prestige Antibac Blue

New from MK, an antibacterial cable management solution for power and data distribution in environments where hygiene is a priority.

### Prestige Compact

A Dado system which has a smaller footprint and offers a solution for confined locations, such as between radiators and window sills.



### Description

Prestige 3D is the new three compartment dado, skirting and compact trunking from MK that satisfies the growing data demands of cable management installations. As well as providing greater depth for larger cable capacity, Prestige 3D is rich in new features, offering installation benefits and improved cable management. Prestige 3D is Cat 5e, 6 and 7 compliant, with the new Data Sweep, Flat Angles and Tees, all allowing continuous cable capacity.

### Technical specification

#### CE marking

All relevant MK products in this brochure are CE marked, confirmation that they meet the EMC and LV directives.

#### Manufacture

All trunking components are manufactured from PVCu.

#### Appearance

Prestige 3D is manufactured in white. The trunking surface can be painted, if required, after installation. Antibac Blue must not be painted or otherwise coated.

#### Performance

Impact	Medium
Minimum Storage Temperature	-25°C
Minimum Installation Temperature	-5°C
Maximum Application Temperature	+60°C

#### Fire performance

The PVCu materials used in the manufacture of MK products are non-flame propagating in accordance with BS EN 50085-1: 2005.

Extrusion material has achieved classification 1Y in accordance with BS 476-7. Moulding material has achieved 650°C glow wire rating in accordance with BS EN 60695-2-11: 2001.

#### Thermal properties

Prestige 3D trunking is designed to accommodate local thermal expansion. Fitting instructions explain the procedure required to deal with the differential movement at the interface with the building fabric.

Linear Expansion: 4mm over every 3000mm with a temperature rise of 25°C.

#### Chemical resistance

The PVCu materials used are non-corrosive and not affected by seawater. It has excellent resistance to mineral acids, alkalis and detergents, good resistance to alcohols, but is liable to attack from solvents such as ketones, aromatics and hydrocarbons.

#### Electrical

Prestige 3D trunking is non-conductive.

Dielectric strength	40 kV/mm in DBP
	17 kV/mm in tx oil
Resistivity	1014 Ω cm

#### Biological

Prestige 3D trunking is resistant to vermin and termites.

#### Workability

Prestige 3D trunking is lightweight and can readily be cut and drilled to suit installation needs with hand tools.

#### Durability

Prestige 3D trunking is stable and will maintain its performance characteristics in accordance with the terms and conditions described above.

#### Maintenance

Clip-on covers with optional screw fix and interchangeable accessories provide continuous accessibility for rewiring, extensions and modifications to an installation. Covers and accessories can be cleaned with water and household detergent. The surface can be decorated with commercial paints if required.

\* Based on 2008 consumption



## Data Trunking System

### Dimensions (mm)

#### Profiles

Compartment CSA mm<sup>2</sup>

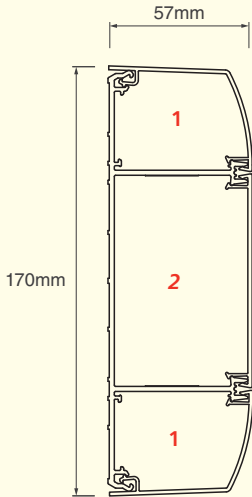
- 1 = 1763
- 2 = 3828
- 3 = 1952

#### Assembly

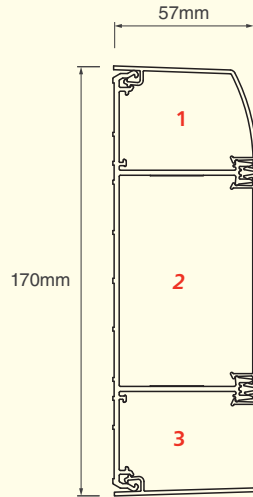
Dado = 1.58 kg/m  
Skirting = 1.60 kg/m

#### Wall Thickness

VP100 = 1.7mm  
VP110 = 1.7mm  
VP115 = 1.7mm  
VP180 = 2.0mm



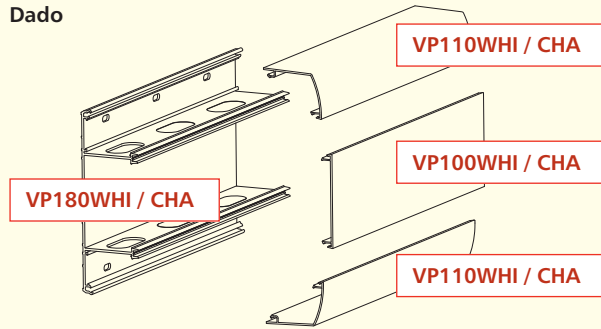
Dado



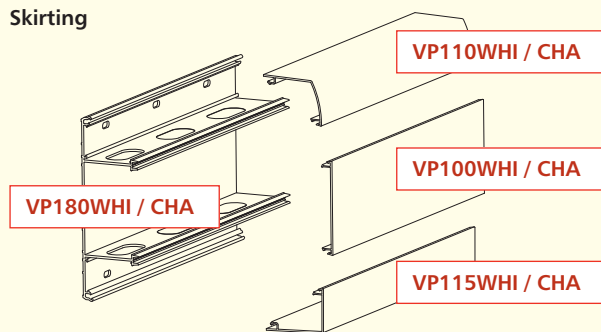
Skirting

### Component selection guide

#### Dado



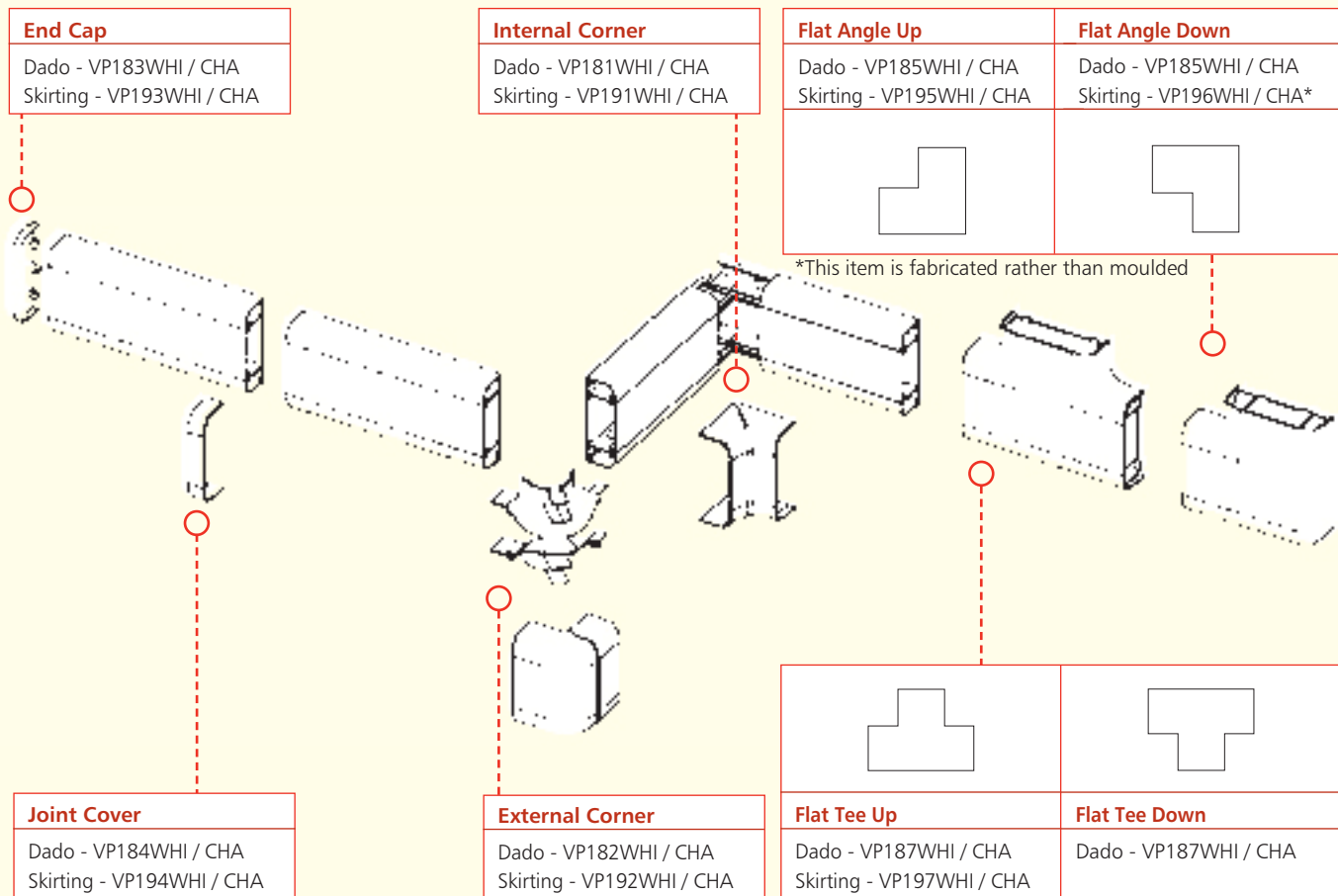
#### Skirting



CABLE CAPACITY											
Type of conductor	Size	Cable factor	Compartment 1		Compartment 2		Compartment 2 with 45mm deep box		Compartment 3		
			Full Term CSA (mm <sup>2</sup> )								
			1763		3828		610		1952		
			Term at 45% fill (mm <sup>2</sup> )								
793		1722		274		878					
Power cables			Number of cables at 45% fill								
PVC stranded	1.5mm <sup>2</sup>	8.6	92		200		31		102		
	2.5mm <sup>2</sup>	12.6	62		136		21		69		
	4mm <sup>2</sup>	16.6	47		103		16		52		
	6mm <sup>2</sup>	21.2	37		81		12		41		
Data cables			Number of cables at 45% fill (a) and full capacity (b)								
			a	b	a	b	a	b	a	b	
Cat 5E UTP	5.5mm dia.	30.2	26	58	57	126	9	20	29	64	
Cat 5E STP	6.0mm dia.	36.0	22	48	47	106	7	16	24	54	
Cat 6 UTP	6.5mm dia.	42.2	18	41	40	90	6	14	20	46	
Cat 6 STP	7.0mm dia.	49.0	16	35	35	78	5	12	17	39	
Cat 7	8.0mm dia.	64.0	12	27	26	59	4	9	13	30	

## Data Trunking System

### Component selection guide



**End Cap**  
Dado - VP183WHI / CHA  
Skirting - VP193WHI / CHA

**Internal Corner**  
Dado - VP181WHI / CHA  
Skirting - VP191WHI / CHA

**Flat Angle Up**  
Dado - VP185WHI / CHA  
Skirting - VP195WHI / CHA

**Flat Angle Down**  
Dado - VP185WHI / CHA  
Skirting - VP196WHI / CHA\*

**Joint Cover**  
Dado - VP184WHI / CHA  
Skirting - VP194WHI / CHA

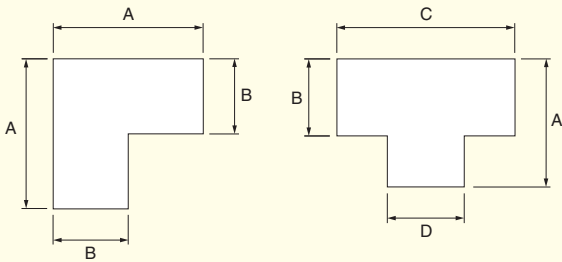
**External Corner**  
Dado - VP182WHI / CHA  
Skirting - VP192WHI / CHA

**Flat Tee Up**  
Dado - VP187WHI / CHA  
Skirting - VP197WHI / CHA

**Flat Tee Down**  
Dado - VP187WHI / CHA

\*This item is fabricated rather than moulded

### Flat angles and tees



FLAT ANGLES AND TEES DIMENSIONS (mm)					
LIST NO	DESCRIPTION	A	B	C	D
VP185WHI / CHA	Flat Angle	218mm	170mm		
VP187WHI / CHA	Flat Tee	202mm	170mm	235mm	170mm
VP195WHI / CHA	Flat Angle Up	218mm	170mm		
VP196WHI / CHA	Flat Angle Down	270mm	170mm		
VP197WHI / CHA	Flat Tee Up	202mm	170mm	235mm	170mm

## Prestige 3D Antibac Blue Installation

**When planning the installation establish the layout of your system, paying particular attention to:**

- **Direction Changes**
- **Feed Positions**
- **Component Spacing**

The carrier components are not treated with the antibacterial additive. As such these must always be fixed onto a surface where they will not be touched once the installation is complete.

During the installation of Prestige 3D Antibac Blue no special treatment of the product is required. There is no need for an installer to wear sterile gloves, use sterile tools or undertake special training.

Once installed, the Prestige 3D Antibac Blue system carries a 10 year guarantee, the same as all MK Cable Management products, giving both the installer and specifier confidence and peace of mind. The unique addition of a fluorescent additive gives further confidence, clearly identifying the product as Prestige 3D Antibac Blue. A bright blue glow under UV light indicates the antibacterial additive is present, a dull purple glow under UV light indicates standard PVCu.

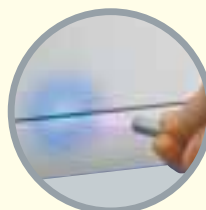


When maintaining the product after installation, no special treatment is required. The antibacterial additive depends on intimate contact between surfaces of the trunking and the user, so any barriers such as dirt or grime will reduce or negate the antibacterial effect. However, the exterior of the trunking can be cleaned very simply using a damp cloth with a mild detergent, which must be thoroughly wiped off. Alternatively the trunking can also be cleaned using Ultraviolet light. Prestige 3D Antibac Blue is not intended to replace standard cleaning regimes. It is an additional protection which can only operate efficiently if the surfaces are kept free of dirt and grime. Before hand-over to the client the entire trunking run must be thoroughly cleaned as described in the product installation guide.

Prestige 3D Antibac Blue product and packaging is recyclable. At the end of its useful life it should be recycled where facilities exist.

The additive used in Prestige 3D Antibac Blue is registered with the Environmental Protection Agency (EPA) and is compliant with the European Biocidal Products Directive (BPD).

Prestige 3D Antibac Blue is easily distinguishable from standard Prestige 3D, it has a different protective film and has a unique patent pending fluorescence under UV light which glows bright blue.



**Prestige 3D Antibac Blue**

## Data Trunking System

### Standards and approvals

The Prestige 3D Compact System is manufactured in accordance with the requirements of BS EN 50085-1:2005 and BS 4662: 2006. Copies of test certificates are available upon request. The system complies with all the relevant requirements of BS 7671: 2008. MK has been awarded ISO 9002 accreditation.

### Features

- Unique 'open box' mounting frames combined with divider knockouts to provide unhindered tool-free cable entry
- Patented Cat 5e, 6 and 7 compliant Data Sweep, with no loss of capacity and without the need for bulbous, protruding corner covers
- Cat 5e, 6 and 7 compliant moulded flexible Internal and External Corners, moulded Flat Angles and Tees
- Divider Knockouts, making wiring easier and faster with no drilling or cutting
- Patented two stage Hinge Lids enables cables to be supported by the trunking cover during installation, and makes retro-installation of additional cables more simple
- Pre-punched bases
- Attractive easy to fit single piece covers for flat angle and flat tee
- Curved outer covers that complement MK Logic Plus accessories
- All extrusions manufactured from 90% recycled material\*



### Description

Prestige 3D Compact satisfies the growing data demands in more confined locations. Prestige 3D Compact has a smaller footprint than Prestige Plus and Prestige 3D and is rich in features, offering installation benefits and improved data cable management. The new concept uses the full trunking depth with a sliding open box (frame) principal to ease power and data connections. Prestige 3D Compact trunking is capable of being installed to Cat 5e, 6 and 7 data cable installation requirements, and the depth is more conducive to data accessories.

The centre compartment is intended for accessory mounting only. Power and data cables are to be run in the outer compartments.

### Technical specification

#### CE marking

All relevant MK products in this brochure are CE marked, confirmation that they meet the EMC and LV directives.

#### Manufacture

All trunking components are manufactured from PVCu.

#### Appearance

Prestige 3D Compact is manufactured in white. The trunking surface can be painted, if required, after installation.

#### Performance

Impact	Medium
Minimum Storage Temperature	-25°C
Minimum Installation Temperature	-5°C
Maximum Application Temperature	+60°C

#### Fire performance

The PVCu materials used in the manufacture of MK products are non-flame propagating in accordance with BS EN 50085-1: 2005.

Extrusion material has achieved classification 1Y in accordance with BS 476-7: 1997. Moulding material has achieved 650°C glow wire rating in accordance with BS EN 60695-2-11: 2001.

#### Thermal properties

Prestige 3D Compact trunking is designed to accommodate local thermal expansion. Fitting instructions explain the procedure required to deal with the differential movement at the interface with the building fabric.

Linear Expansion: 4mm over every 3000mm with a temperature rise of 25°C.

#### Chemical resistance

The PVCu materials used are non-corrosive and not affected by seawater. It has excellent resistance to mineral acids, alkalis and detergents, good resistance to alcohols, but is liable to attack from solvents such as ketones, aromatics and hydrocarbons.

#### Electrical

Prestige 3D Compact trunking is non-conductive.

Dielectric strength	40 kV/mm in DBP
	17 kV/mm in tx oil
Resistivity	1014 Ωcm

#### Biological

Prestige 3D Compact trunking is resistant to vermin and termites.

#### Workability

Prestige 3D Compact trunking is lightweight and can readily be cut and drilled to suit installation needs with hand tools.

#### Durability

Prestige 3D Compact trunking is stable and will maintain its performance characteristics in accordance with the terms and conditions described above.

#### Maintenance

Clip-on covers with optional screw fix and interchangeable accessories provide continuous accessibility for rewiring, extensions and modifications to an installation. Covers and accessories can be cleaned with a damp cloth and household detergent. The surface can be decorated with commercial paints if required.

\* Based on 2008 consumption

## Data Trunking System

### Dimensions (mm)

#### Profiles

Compartment CSA mm<sup>2</sup>

1 = 742

2 = 1431

\*(X) = 3035

#### Assembly

Dado = 1.20 Kg/m

Extended Dado = 1.35 Kg/m

#### Wall Thickness

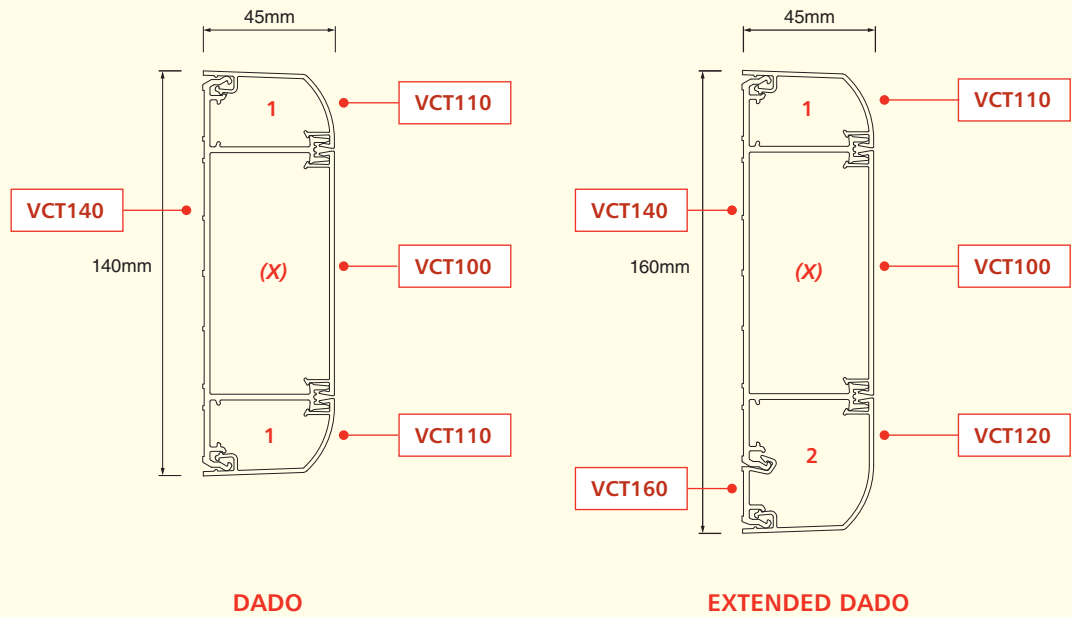
VCT100 = 1.7mm

VCT110 = 1.7mm

VCT120 = 1.7mm

VCT140 = 2.0mm

VCT160 = 2.0mm



DADO

EXTENDED DADO

CABLE CAPACITY									
Type of conductor	Size	Cable factor	Compartment 1		Compartment 2		Compartment (X)		
			Full Term CSA (mm <sup>2</sup> )						
			742	1431	3035				
			Term at 45% fill (mm <sup>2</sup> )						
			333	643	1365				
Power cables			Number of cables at 45% fill						
PVC stranded	1.5mm <sup>2</sup>	8.6	38	74	158				
	2.5mm <sup>2</sup>	12.6	26	51	108				
	4mm <sup>2</sup>	16.6	20	38	82				
	6mm <sup>2</sup>	21.2	15	30	64				
Data cables			Number of cables at 45% fill (a) and full capacity (b)						
			a	b	a	b	a	b	
Cat 5E UTP	5.5mm dia.	30.2	11	24	21	47	45	100	
Cat 5E STP	6.0mm dia.	36.0	9	20	17	39	37	84	
Cat 6 UTP	6.5mm dia.	42.2	7	17	15	33	32	71	
Cat 6 STP	7.0mm dia.	49.0	6	15	13	29	27	61	
Cat 7	8.0mm dia.	64.0	5	11	10	22	21	47	

\* Compartment (X) dimensions and capacity are given as guide only for instances where trunking is used for cable routing e.g. vertical drops/risers.

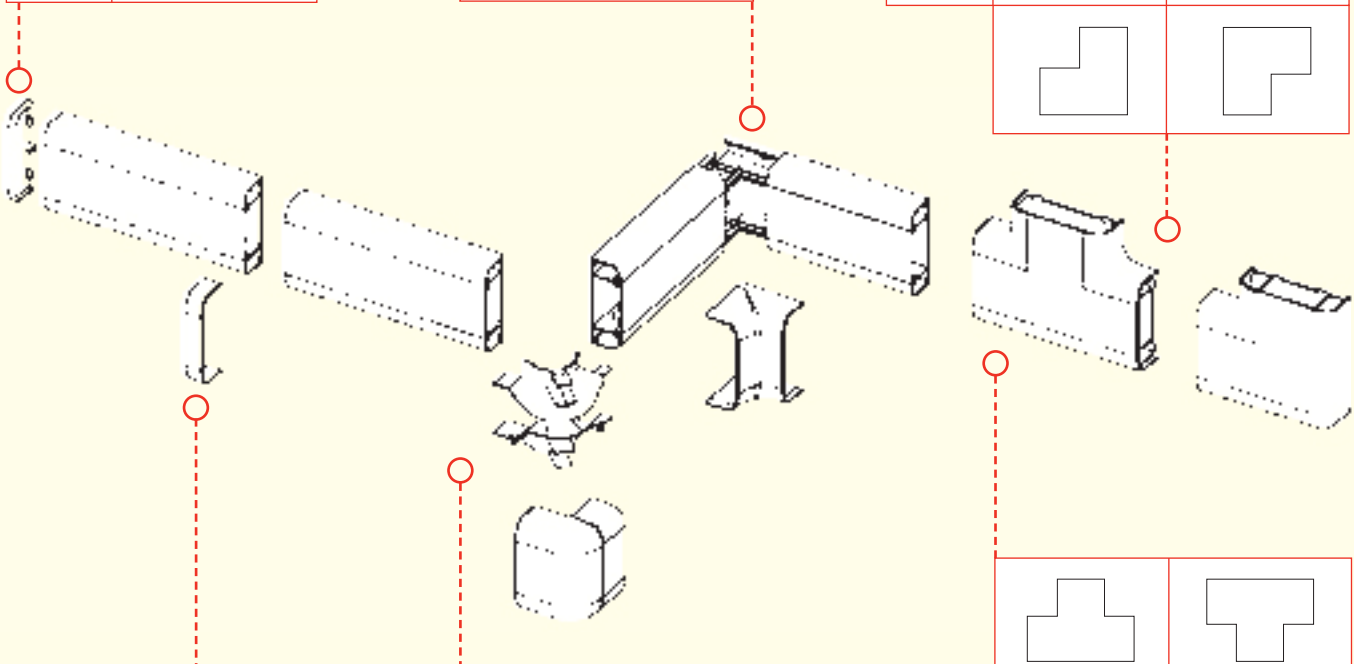
## Data Trunking System

### Component selection guide

Profile	End Cap
140mm	VCT143WHI
160mm	VCT163WHI

Profile	Internal Corner
140mm	VCT141WHI
160mm	VCT161WHI

Profile	Flat Angle Up	Flat Angle Down
140mm	VCT145WHI	VCT145WHI
160mm	VCT165WHI	VCT166WHI

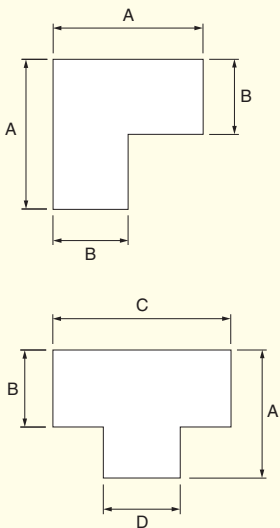


Profile	Joint Cover
140mm	VCT144WHI
160mm	VCT164WHI

Profile	External Corner
140mm	VCT142WHI
160mm	VCT162WHI

Profile	Flat Tee Up	Flat Tee Down
140mm	VCT147WHI	VCT147WHI
160mm	VCT167WHI	

### Flat angles and tees



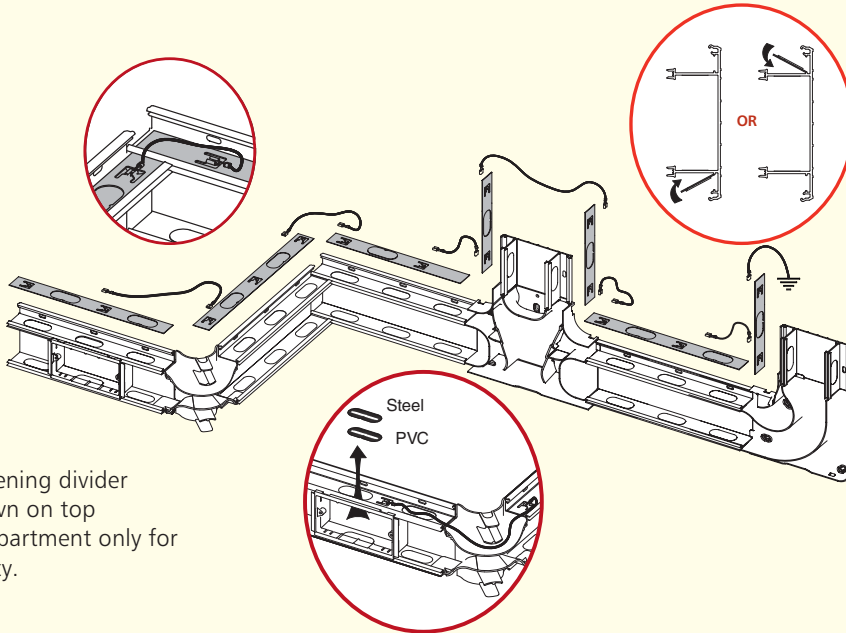
FABRICATED ANGLES AND TEES DIMENSIONS (mm)					
LIST NO	DESCRIPTION	A	B	C	D
VCT145WHI	Flat Angle 140 (Dado)	190mm	140mm		
VCT147WHI	Flat Tee 140 (Dado)	200mm	140mm	235mm	140mm
VCT165WHI	Flat Angle – Up 160 (Extended Dado)	215mm	160mm		
VCT166WHI	Flat Angle – Down 160 (Extended Dado)	215mm	160mm		
VCT167WHI	Flat Tee – Up 160 (Extended Dado)	220mm	160mm	235mm	140mm

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perimeter and distribution | cable management

## Data Trunking System

Screening assembly (optional)



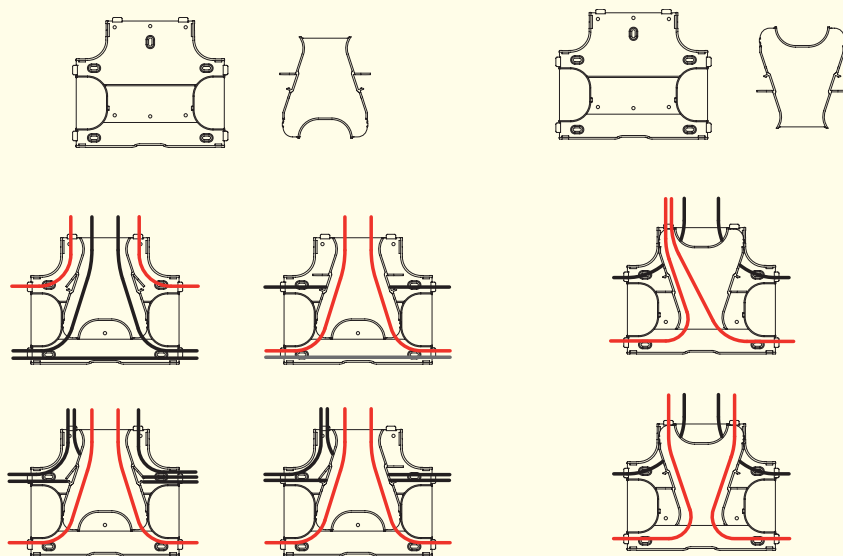
**Note**  
Screening divider shown on top compartment only for clarity.

PRODUCT IDENTIFICATION	
VP30 / VCT30 Screening Divider 1.5m (steel)	
VX31 Screening Cable 300mm	
VX32 Screening Braid 500mm	
VX33 Screening Cable 500mm plus	

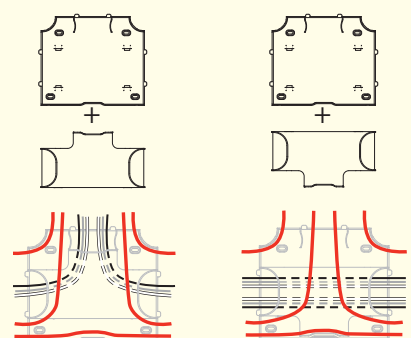
### Flat Tee Bridge

The Flat Tee's bridge can be fitted in two positions increasing the versatility of cable runs whilst maintaining the correct separation and Cat 5e, 6 and 7 compatibility.

### Prestige Compact



### Prestige 3D Dado and Skirting



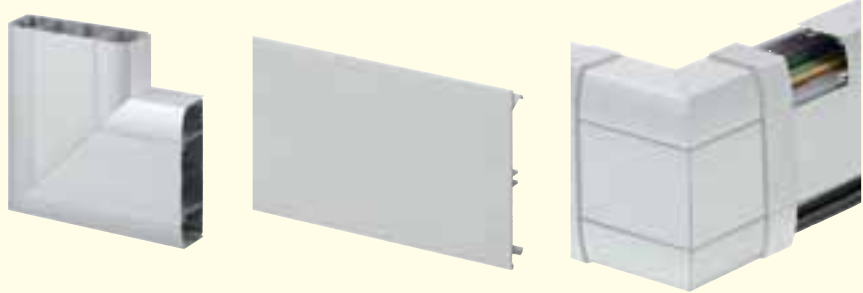
## Data Trunking System

### Standards and approvals

The Prestige 3D Aluminium System is manufactured in accordance with the requirements of BS EN 50085-1:2005 and BS EN 50085-2-1:2006, copies of the certification are available on request. MK has been awarded ISO 9002 accreditation.

### Features

- Fully Cat 5e, 6 and 7 compliant
- Available in Dado and Skirting Profile
- Product profile 170 x 57mm
- All profiles use the same carrier VP180ALM
- Choose from PVC or aluminium fittings depending on the application
- Choice of 2 colours - WHI and ALM
- Pre-drilled trunking base
- PVC fittings have all of the same features and benefits as Prestige 3D trunking
- Suitable for commercial offices, schools, colleges and laboratories
- 10 year guarantee
- Two step hinged lid
- Knockouts on main carrier for easier and faster installation
- Fabricated corners for a complete aluminium trunking system
- Ideal with the Edge range of sockets



### Description

**NEW** to the Prestige 3D family is its aluminium range of Dado and Skirting Trunking.

Available in 2 profiles, it satisfies the needs of a Cat 5e, 6 and 7 compliant system that is easier and faster to install, with a robust and aesthetically pleasing appearance.

### Technical specification

#### CE Marking

All relevant MK products are CE marked, confirmation that they meet the EMC and LV directives.

#### Manufacture

All PVC trunking components are manufactured in the UK. All Aluminium trunking components are manufactured in the UK.

#### Appearance

Prestige 3D Aluminium is manufactured in aluminium (6063, T6 Tempered) and the covers are either anodised or powder coated for the white finish (RAL 9003), the trunking surface can also be painted in other colours available on request.

#### Fire Performance

This product is designed not to burn.

#### Thermal Properties

The product is designed to accommodate anticipated thermal expansion and contraction, within the temperature range -5°C and +60°C.

#### Chemical Resistance

Corrosion only occurs to any great degree when pH is less than 3 or greater than 9 (acid/alkaline).

#### Biological

Resistant to attack from vermin and termites.

#### Workability

Prestige 3D Aluminium is lightweight and can be readily cut with hand tools.

#### Durability

Prestige 3D Aluminium is mechanically, electrically and chemically stable. It will maintain its performance characteristics if it is installed and maintained as per standard installation guidelines.

#### Maintenance

The product is suitable for normal cleaning with a dry cloth or a slightly damp cloth with mild detergent to remove stubborn dirt or grease. It can also be cleaned using Ultra-Violet light.

#### Guarantee

The products are provided with a ten year guarantee.

#### Environmental

The wiring devices will comply with the Wiring Devices RoHS strategy. The chemicals in the manufacturing process comply with the REACH regulations.



## Data Trunking System

### Dimensions (mm)

#### Profiles

Compartment CSA mm<sup>2</sup>

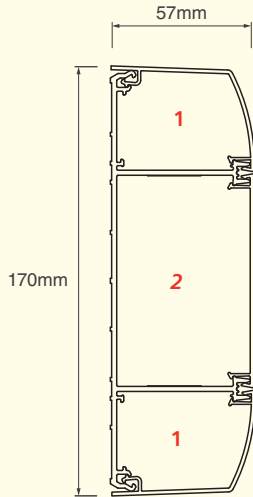
- 1 = 1763
- 2 = 3828
- 3 = 1952

#### Assembly

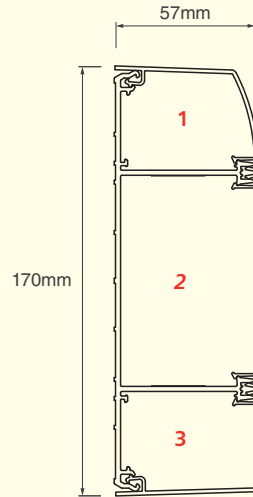
Dado = 3.22 kg/m  
Skirting = 3.24 kg/m

#### Wall Thickness

VP100 = 1.7mm  
VP110 = 1.7mm  
VP115 = 1.7mm  
VP180 = 2.0mm



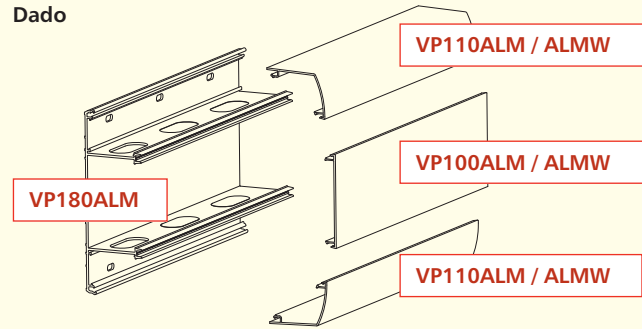
Dado



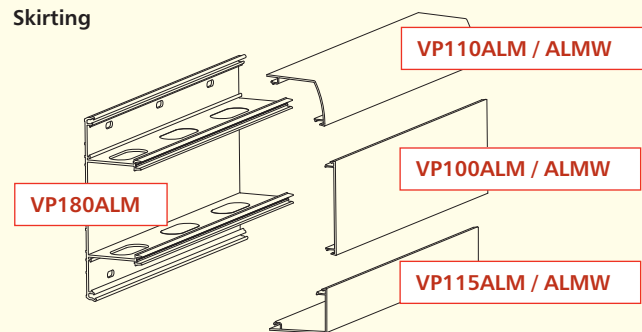
Skirting

### Component selection guide

#### Dado



#### Skirting



CABLE CAPACITY										
Type of conductor	Size	Cable factor	Compartment 1		Compartment 2		Compartment 2 with 45mm deep box		Compartment 3	
			Full Term CSA (mm <sup>2</sup> )							
			1763		3828		610		1952	
			Term at 45% fill (mm <sup>2</sup> )							
793		1722		274		878				
Power cables			Number of cables at 45% fill							
PVC stranded	1.5mm <sup>2</sup>	8.6	92		200		31		102	
	2.5mm <sup>2</sup>	12.6	62		136		21		69	
	4mm <sup>2</sup>	16.6	47		103		16		52	
	6mm <sup>2</sup>	21.2	37		81		12		41	
Data cables			Number of cables at 45% fill (a) and full capacity (b)							
			a	b	a	b	a	b	a	b
Cat 5E UTP	5.5mm dia.	30.2	26	58	57	126	9	20	29	64
Cat 5E STP	6.0mm dia.	36.0	22	48	47	106	7	16	24	54
Cat 6 UTP	6.5mm dia.	42.2	18	41	40	90	6	14	20	46
Cat 6 STP	7.0mm dia.	49.0	16	35	35	78	5	12	17	39
Cat 7	8.0mm dia.	64.0	12	27	26	59	4	9	13	30

[www.mkelectric.co.uk](http://www.mkelectric.co.uk)



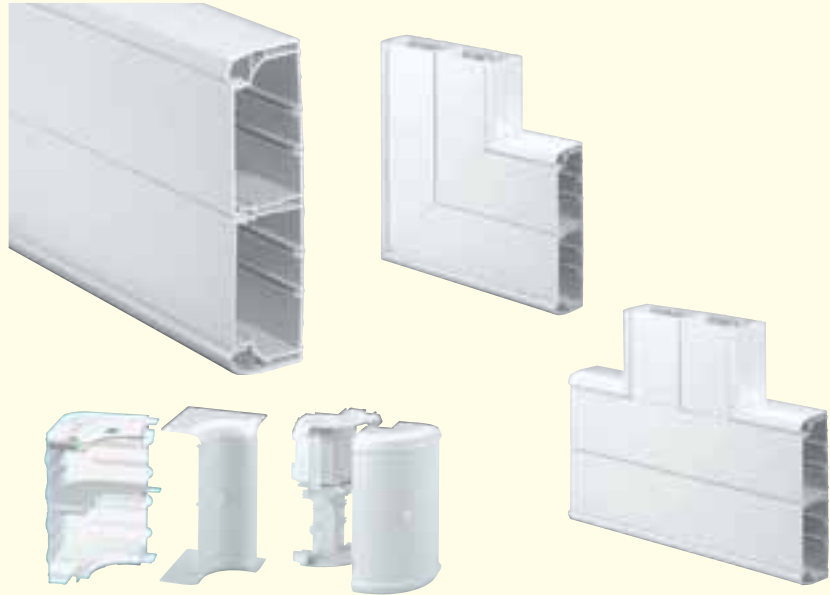
MEIGAN clean earth facility 2 gang socket outlet, engraved  
"Medical Equipment Only"

Available on a worldwide basis, the MK Design Service is supported by a dedicated team to ensure the seamless delivery of your chosen products. Visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk) for more information

## Data Trunking System

### Features

- System bend radius 50mm  
Exceeds Cat 5e, 6 and 7 data cable requirements
- Attractive styling complementary to Logic Plus
- Aesthetic one piece fitting covers with carriers
- Two equal compartments – maximises wiring compartment capacity
- Accessory mounting in either or both compartments – giving flexibility/versatility
- Unobtrusive screw fixing covers to maximise security against tampering
- Ease of installation – butt jointed construction, no mitring required
- Economical – cost effective 3 components (2 x lids, 1 base)
- Suitable for skirting or dado mounting
- Pre-drilled base – ease/speed of installation
- Accommodates matching MK and other BS switches and sockets
- Interfaces with MK Premier, and Ega Industrial and Ega Mini Trunking and Conduit Systems
- Strong PVCu sections are resistant to impact
- Manufactured to high precision standards
- Full range of components, spares and accessories
- Mounting frames for LJU6C and Euro data outlets – cost effective, minimum space requirement (for mounting in SELV compartment only).
- Choice of 180 RAL paint colours
- All extrusions manufactured from 90% recycled material\*



### Description

The Prestige 2com trunking is a symmetrical two compartment system offering a Cat 6 flexible solution to routing data cabling whilst maintaining a slow bend radius of 50mm, with a separate compartment for power cables. The trunking is normally surface mounted at dado or skirting height but may also be used vertically. The covers are of the snap-on type with the option of screw fixing for added security against vandalism. Special accessories include adaptors for connection to the full range of MK Ega Mini Trunking.

### Technical specification

#### Materials

All components are manufactured from PVCu. Carriers, covers and cable dividers are extruded. Carrier couplers, corner carriers, stop ends and accessory boxes are formed by injection moulding.

#### Colours

The system is available in a standard white colour, with a choice of over 180 RAL paint colours on special orders.

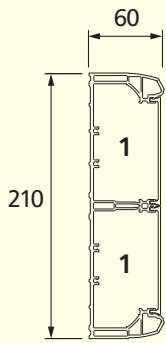
#### Outlets

The system is designed to accommodate the complementary range of Logic Plus switches and sockets. Other MK wiring devices may also be used.

\* Based on 2008 consumption

## Data Trunking System

### Dimensions (mm)



VTS2001WHI main carrier +  
2 x VTS5WHI straight covers

Weight:

2.41 Kg/m

#### Wall thickness:

VTS2001WHI = 2.5mm, 2.0mm

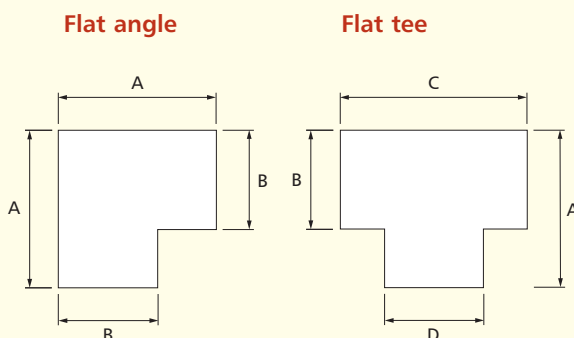
VTS5WHI = 1.7mm

PRESTIGE 2COM CABLE CAPACITY										
Type of Conductor	Size	Cable Factor	Compartment 1		Compartment 1 with 25mm back box		Compartment 1 with 35mm back box		Compartment 1 Ext Corner 50mm Data Bend	
			<b>Full Term CSA 100% Fill (mm<sup>2</sup>)</b>							
			<b>4466</b>	<b>2236</b>	<b>1633</b>	<b>1633</b>	<b>1633</b>	<b>1633</b>	<b>3132</b>	<b>3132</b>
			<b>Term at 45% Fill (mm<sup>2</sup>)</b>							
			<b>2009</b>	<b>1006</b>	<b>734</b>	<b>734</b>	<b>734</b>	<b>734</b>	<b>1409</b>	<b>1409</b>
Power Cables			Number of Cables at 45% Fill							
PVC Stranded	1.5mm <sup>2</sup>	8.6	233	116	85	85	85	85	163	163
	2.5mm <sup>2</sup>	12.6	159	79	58	58	58	58	111	111
	4mm <sup>2</sup>	16.6	121	60	44	44	44	44	84	84
	6mm <sup>2</sup>	21.2	94	47	34	34	34	34	66	66
Data Cables			Number of Cables at 45% Fill (a) and Full Capacity (b)							
			a	b	a	b	a	b	a	b
Cat5E UTP	5.5mm dia.	30.2	66	147	33	74	24	54	46	103
Cat5E STP	6.0mm dia.	36.0	55	124	27	62	20	45	39	87
Cat6 UTP	6.5mm dia.	42.2	47	105	23	52	17	38	33	74
Cat6 STP	7.0mm dia.	49.0	41	91	20	45	14	33	28	63

### Components

#### Flat angles and tees

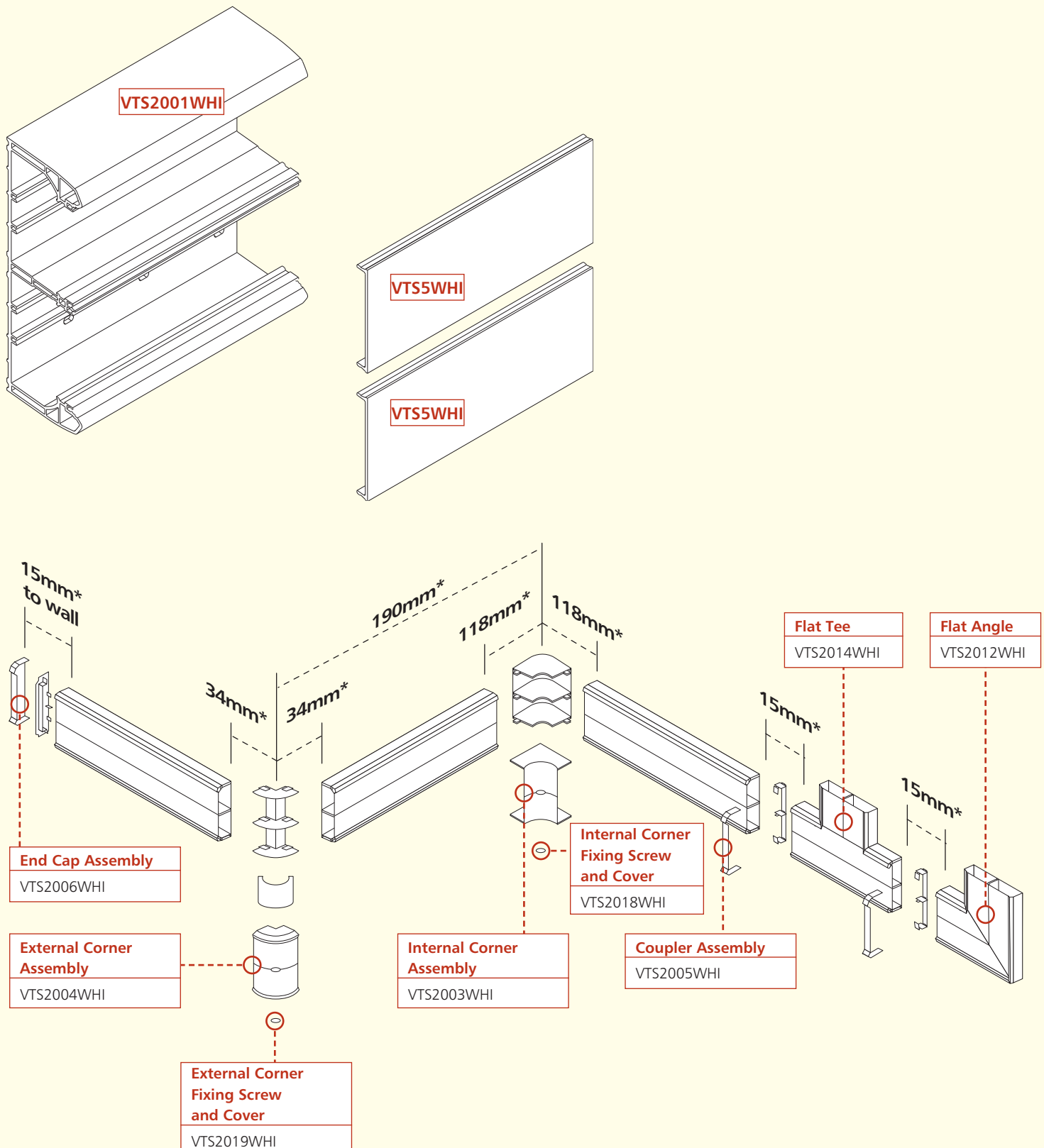
These components are fabricated sections and space must be allowed for their inclusion in runs of trunking. All other components snap on over standard trunking profiles.



DIMENSIONS (mm)				
Flat angle	A	B		
VTS2012WHI	310	210		
Flat T details	A	B	C	D
VTS2014WHI	310	210	410	210

## Data Trunking System

### Component selection guide



\* Minimum distance

## Data Trunking System

### Installation guide

#### General installation guidelines

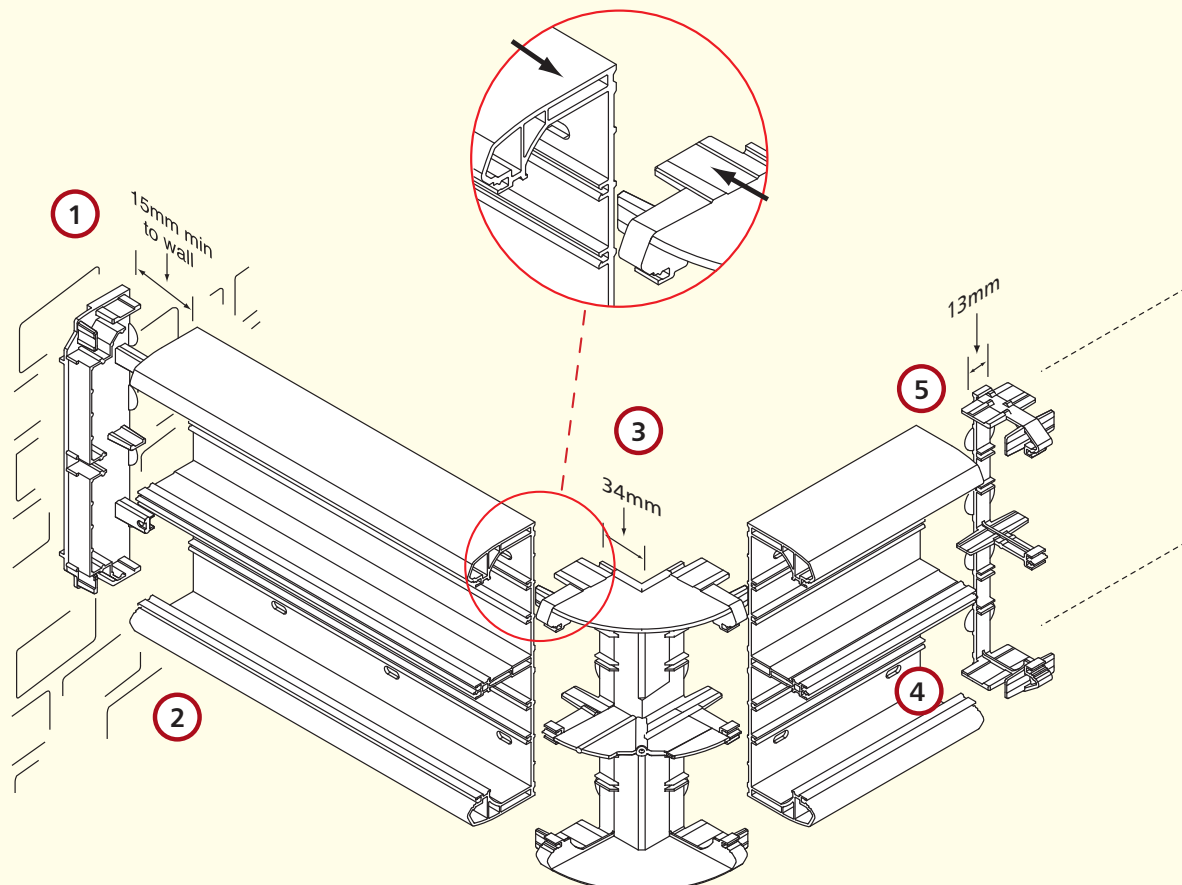
#### Tools and sundries required for installation:

1. Fine toothed tenon saw or a hacksaw with a 32 – 26 TPI blade for cutting the trunking, or preferably a circular saw with a 350mm diameter fine tungsten tipped blade (100TPI approx.)
2. All purpose knife or fine file for trimming of trunking
3. Spirit level, Plumb Bob and chalk line
4. A range of screwdrivers (flat or cross point) to suit fixing screws and Earth Carrier Connectors
5. A 5.5mm Ø drill bit and No.8 Round head or Pan head screws with suitable washers to secure the trunking.
6. Soft faced mallet to aid lid fitting

#### Planning the Installation

It is important to spend some time planning the installation, before starting. Time spent on planning the layout at this stage can avoid mistakes later on. The installation is designed for a non-conductive substrate, if you have any queries please contact: MK Technical Sales Service Department. Telephone 01268 563720.

1. Surface to which the trunking is to be installed should be flat and prepared for decorating.
2. Establish the layout of the trunking run with particular attention to the following: -
  - a. Changes in direction of the trunking.
  - b. The position of any feeds to or from the system.
  - c. The position of any connections with existing trunking/wiring systems.
  - d. Allow for minimum distances between corners, couplers, screw fixings, angles and tees (please see individual technical sections for details).
  - e. When installing at skirting level, ensure room is also allowed for future floor coverings to be fitted below trunking.

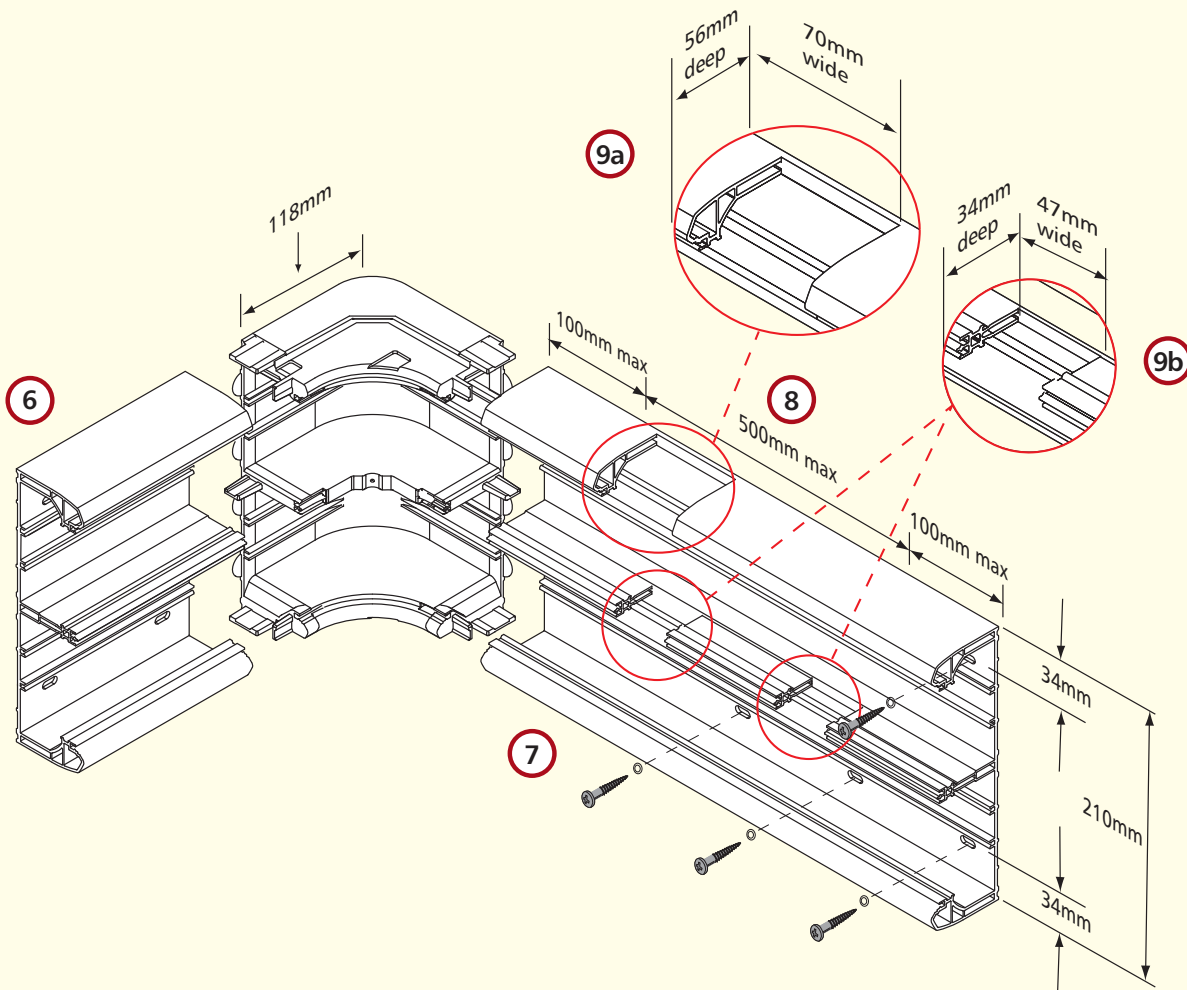


## Data Trunking System

### General notes

Prior to installation strike a line of trunking using a plumb and chalk line for vertical, and spirit levels for horizontal runs.

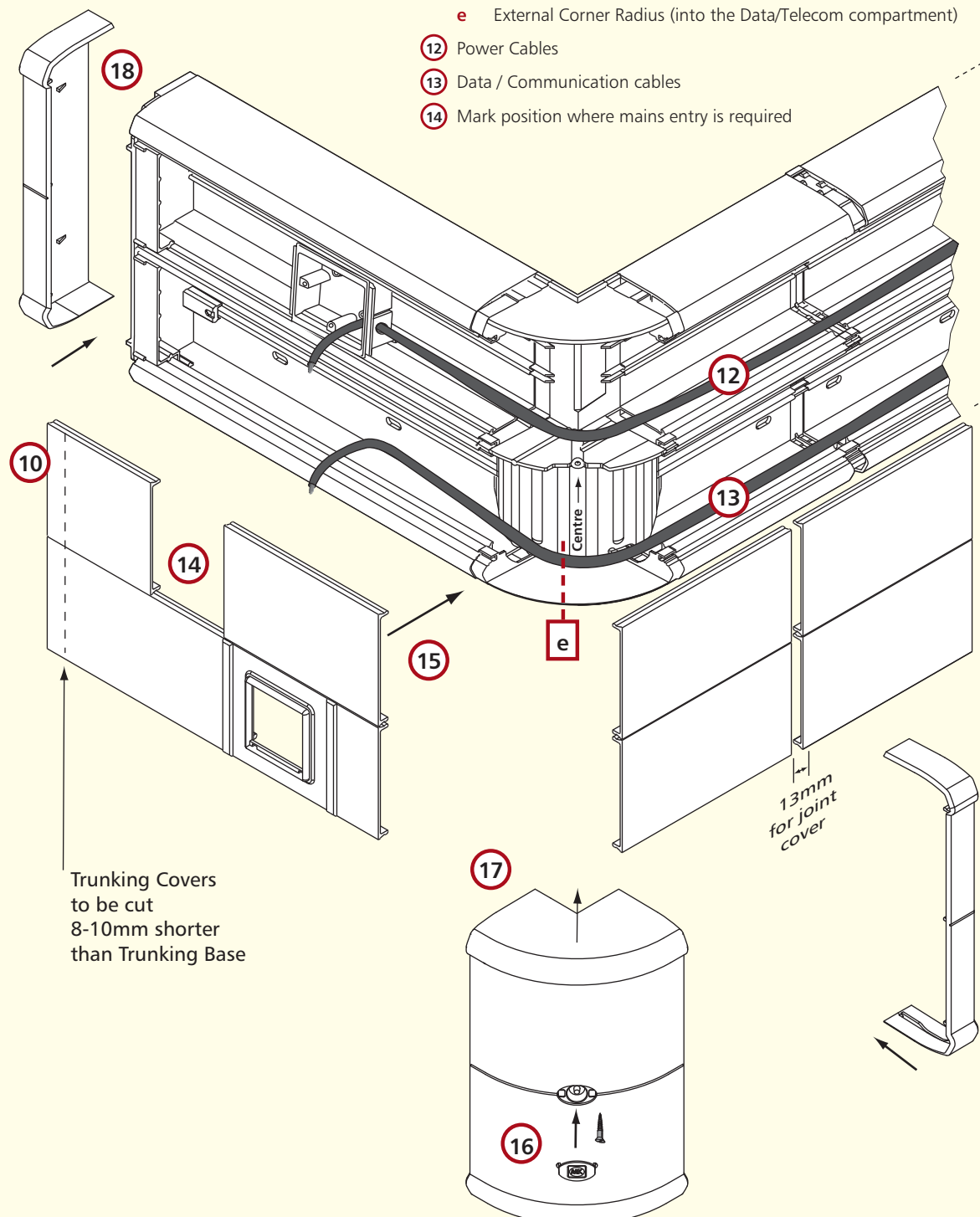
- 1 Drill Holes in supporting walls prior to fixing
- 2 When mounting at skirting level allowance should be made for thickness of floor finish
- 3 Start Installation at a corner position
- 4 Debur all carrier cut ends
- 5 Carrier couplers must be placed at all junctions between carriers
- 6 Leave a gap of 5mm for expansion in long runs
- 7 Fixings require washers and No. 8 Round or Pan head screws
- 8 Fixings to be at 500mm centres and also at points within 100mm of each end
- 9 Cut trunking to allow for mini trunking / conduit (9a) and box adaptor crossover bridge (9b).



## Data Trunking System

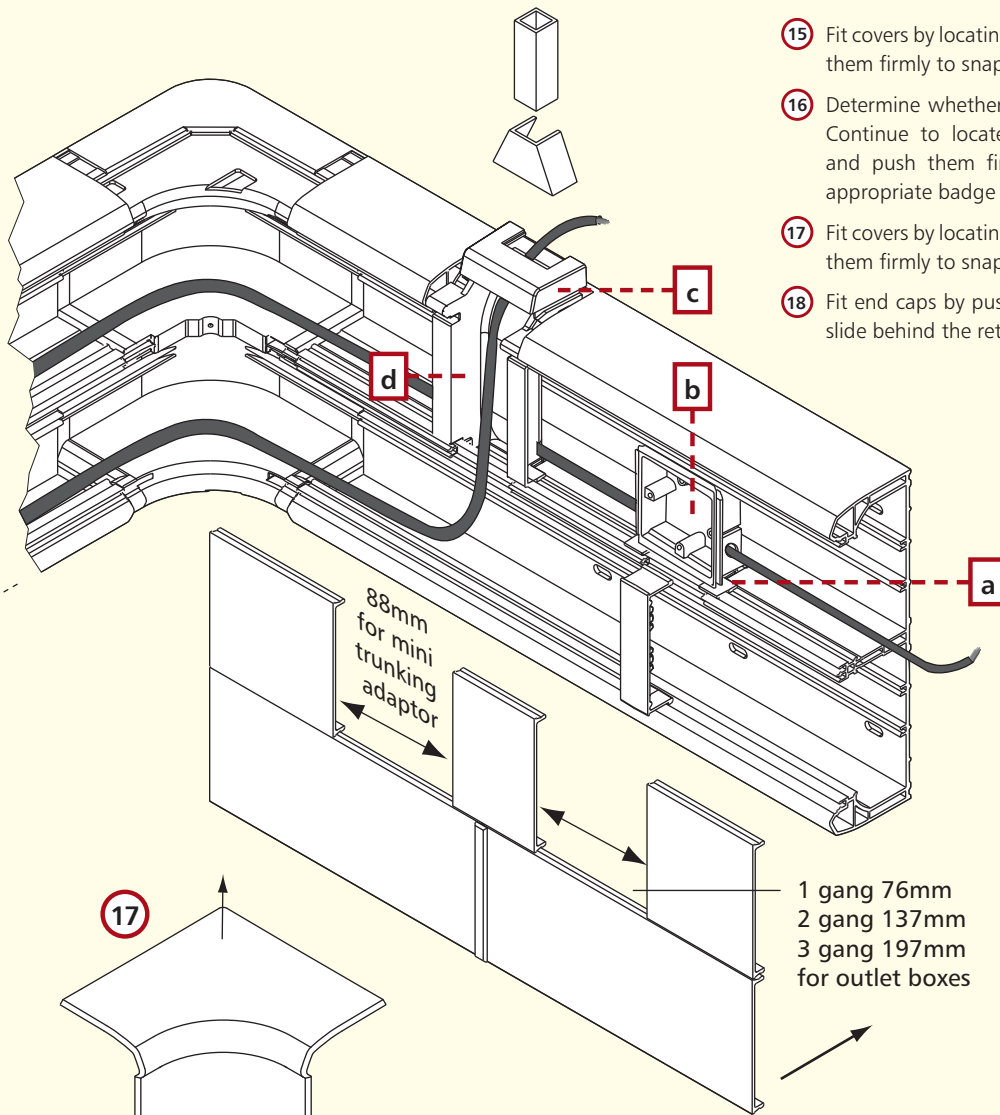
### Installation guide continued

- 10 Debur all cover cut ends
- 11 Insert accessories in the following order
  - a Box adaptor
  - b Accessory Boxes
  - c Appropriate slide (VTS2081 shown)
  - d Cross over bridge
  - e External Corner Radius (into the Data/Telecom compartment)
- 12 Power Cables
- 13 Data / Communication cables
- 14 Mark position where mains entry is required





## Data Trunking System



- 15 Fit covers by locating them correctly into position and pushing them firmly to snap in place.
- 16 Determine whether corners need to be screw fixed (Fig 1). Continue to locate correctly the Corner and Joint covers and push them firmly until they snap into place. Fit the appropriate badge to the Corner Covers.
- 17 Fit covers by locating them correctly into position and pushing them firmly to snap in place.
- 18 Fit end caps by pushing them on from the front so the clips slide behind the retainers and engage in the main carrier.

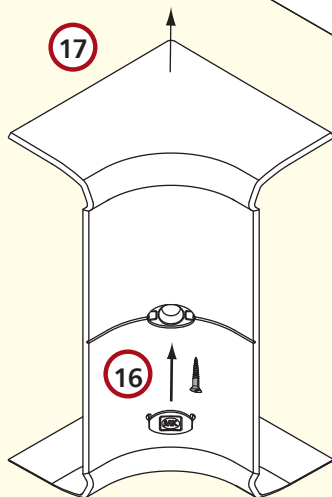
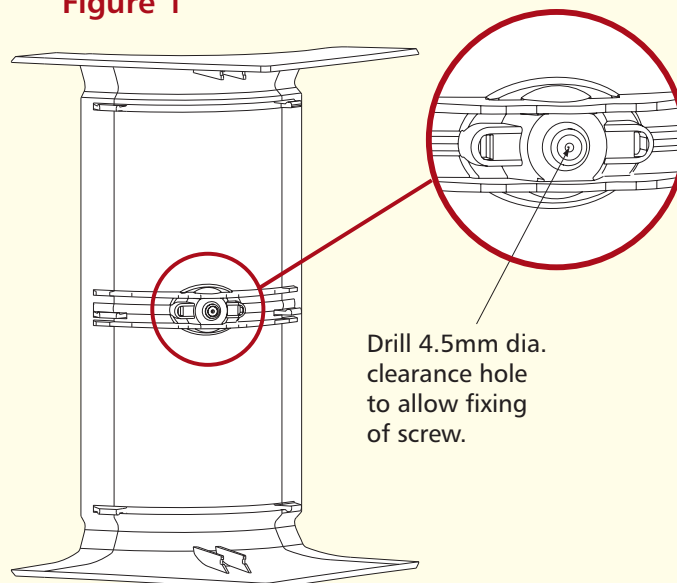


Figure 1



## Power Post and Power Pole

### Standards and approvals

Prestige Power Post and Power Poles are manufactured in accordance with the requirements of BS 4678 Part 4.

All systems comply with all relevant requirements of BS 7671: 2008.

#### Features

- Supply multi-services to work stations
- Discreet, fit neatly under desk (Power Post only)
- 2 colours available
- Compatible with MK and other manufacturer's fittings
- Easy to assemble and install
- Durable and impact resistant
- All PVC extrusions manufactured from 90% recycled materials\*

\* Based on 2008 consumption.



### Description

#### Power Post

MK Power Post provides a means to supply multi-services to work stations as an alternative to, or in conjunction with services outlet boxes. They fit neatly under desks and provide up to ten accessory outlets for any combination of power, telecommunications and data services.

Power Posts have a natural anodised aluminium body and are available with PVCu covers in a choice of charcoal or white, or white powder coated aluminium body with white PVCu cover. It is recommended that Power Posts are fitted with MK accessories which have thin profile front plates and are available in co-ordinating colours.

When used in conjunction with Interact or Cablelink Plus Screeded Floor systems, Power Posts provide even greater flexibility in cable distribution.



#### Power Pole

MK Power Pole, similar in construction to the Power Post, is a multi-compartment system segregating power, data and telecom circuits and can accommodate a complete range of accessories including fire alarm manual call points.

It is suitable for both suspended and solid ceiling applications.

Prestige Power Poles can be easily cut to size on site and are equipped with a jacking facility to assist installation and ensure secure location.



### Technical specification

#### Materials

Aluminium AW 6060.

Complying with BS EN 573 and BS EN 755

PVCu materials used in the manufacture of MK products are self extinguishing non-flame propagating in accordance with BS 4678 Part 4.

Extrusion material has been tested by a UKAS accredited laboratory in accordance with the requirements of BS476: part 7 and has achieved a Class 1Y.

Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695-2-1 at a severity of 650°C

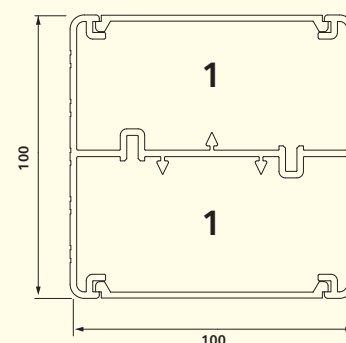
#### IEE Wiring Regulations

Designed and manufactured to comply in all respects with BS 7671: 2008 (IEE wiring regulations 17th Edition: 2008)

#### Quality Assurance

The system is manufactured to BS EN ISO 9001

### Dimensions (mm)

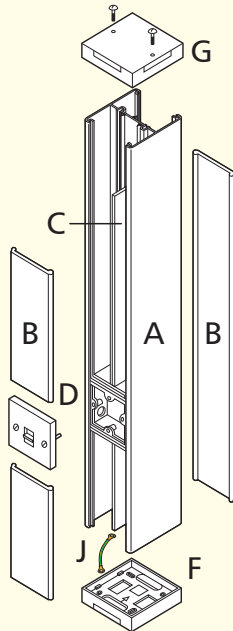


For a full range of corresponding products, see pages 330-331 in the product selector.

### PRESTIGE POLE AND POST CABLE CAPACITY

Type of Conductor	Size	Cable Factor	Compartment 1		Compartment 1 with PPC20 backbox	
			Full Term CSA 100% Fill (mm <sup>2</sup> )			
			4196		1625	
			Term at 45% Fill (mm <sup>2</sup> )			
			1888		731	
Power Cables			Number of Cables at 45% Fill			
PVC Stranded	1.5mm <sup>2</sup>	8.6	219		85	
	2.5mm <sup>2</sup>	12.6	149		58	
	4mm <sup>2</sup>	16.6	113		44	
	6mm <sup>2</sup>	21.2	89		34	
Data Cables			Number of Cables at 45% Fill (a) and Full Capacity (b)			
			a	b	a	b
Cat5E UTP	5.5mm dia.	30.2	62	138	24	53
Cat5E STP	6.0mm dia.	36.0	52	116	20	45
Cat6 UTP	6.5mm dia.	42.2	44	99	17	38
Cat6 STP	7.0mm dia.	49.0	38	85	14	33

## Power Post and Power Pole

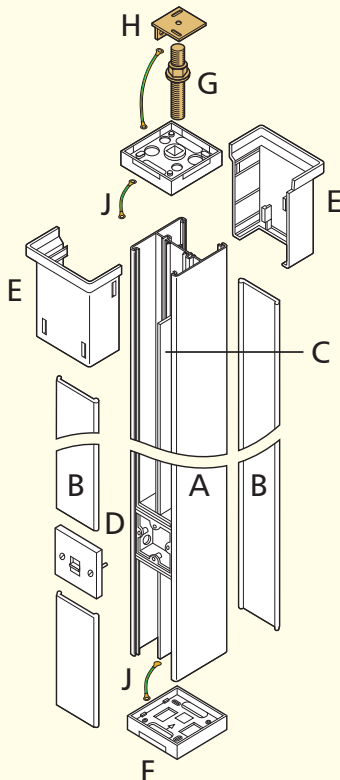


### Power Post assembly

DIMENSIONS		
List. No.	Size (overall) mm	Weight kg (each)
PPT650	650 x100 x100	3.32

Part	Description	Qty.
A	Power Post Body (650mm long)	1
B	Cover Section (650mm long)	2*
C	Dividing Strip (not supplied)	
D	Outlet Box Assembly	5
E	SELOK Pins (not shown)	4
F	End Load Plate	1
G	Top Cover + Screws	1
J	Earth Link Strap	1

\*Four cover sections are supplied with PPT650ALM – 2 x White & 2 x Charcoal



### Power Pole assembly

DIMENSIONS		
List. No.	Size (overall) mm	Weight kg (each)
PPA100	3600 x100 x100	15.0

Part	Description	Qty.
A	Power Pole Body 3.6m long	1
B	Cover Section 3.6m long	2*
C	Dividing Strip 3.0m long	2
D	Outlet Box Assembly	6
E	Top End Collar	1
F	End Load Plates	2
G	Jacking Screw Assembly	1
H	Jack Locating Plate	1
J	Earth Link Strap	3

\*Four cover sections are supplied with PPT100ALM – 2 x White & 2 x Charcoal

### Installation

Power Poles and Power Posts are supplied as complete kits as per list and are to be assembled as described in the appropriate Installation Instruction booklet.

Additional accessory boxes are available, List No. PPC20.

Additional Dividing strip is available, List No. PPC10.

## Skirting and Dado Trunking System

### Technical specification

#### Electrical

Voltage rating:  
63A, 250V a.c.

Voltage drop:  
L to N = 3.47 mV/A/metre run  
L to E = 3.47 mV/A/metre run  
N to E = 3.47 mV/A/metre run

Earth fault loop impedance:  
L to E = 3.47 mΩ/m run.

Conditional short circuit rating:  
(Fuse links BS 88 – 100A and BS 1361 100A).

Prospective current 16.5 KA

Mechanical withstand 10.0 KA peak min.

#### Materials

PVCu materials used in the manufacture of MK products are self extinguishing non-flame propagating in accordance with BS 4678 Part 4.

Extrusion material has been tested by a UKAS accredited laboratory in accordance with the requirements of BS476: part 7 and has achieved a Class 1Y.

Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695-2-1 at a severity of 650°C

#### IEE Wiring Regulations

Designed and manufactured to comply in all respects with BS 7671: 2008 (IEE wiring regulations 17th Edition: 2008)

#### Quality Assurance

The system is manufactured to BS EN ISO 9001



### Description

Powerlink Plus is a trunking distribution system which contains within its profile a 63A single phase set of busbars and facilities for carrying telecommunications and data services cables. Co-ordinated within the system is a wide variety of electrical and extra low voltage (ELV) outlets.

On the mains side these include specially designed sockets, both switched and unswitched, non-standard switchsockets, switches, connection units and, via a simple interface, facilities for mounting all standard MK outlets.

ELV outlets include a master telephone socket outlet, an isolated co-axial socket outlet, "handset" telephone linejack outlet, computer sockets, a blank box and cover to accommodate other ELV requirements and, via a simple interface, facilities for mounting all single gang, standard MK ELV outlets. Also available are BNC type, LJU6C/RJ45 outlets, Euro Outlets and a blank to accommodate other ELV requirements.



### Features

- Wide variety of visually and physically compatible mains and ELV outlets
- Complete segregation between mains and ELV
- Stylish and elegant appearance
- Easy to assemble, extend and modify
- Durable and impact resistant
- Attractive styling
- Suitable for skirting or dado mounting
- 3 compartment trunking
- Manufactured to high precision standards
- All extrusions manufactured from 90% recycled material\*

\* Based on 2008 consumption

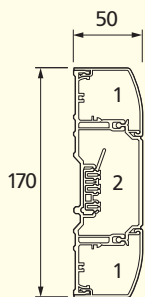
For a full range of corresponding products, see pages 333-343 in the product selector.

## Skirting and Dado Trunking System

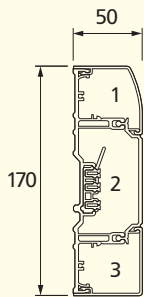
### Dimensions (mm)

The dado trunking is divided into three compartments. Two identical outer compartments are mainly for ELV cables with a third central compartment containing the busbars with a cableway above. The cable carrying capacity can be increased by introducing an extension trunking below the surface track.

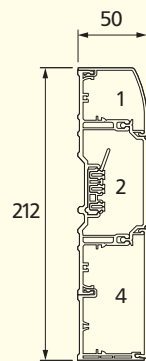
Cross section through Dado trunking



Cross section through Skirting and Dado trunking



Cross section through Skirting and Dado trunking with extension



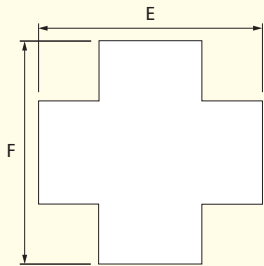
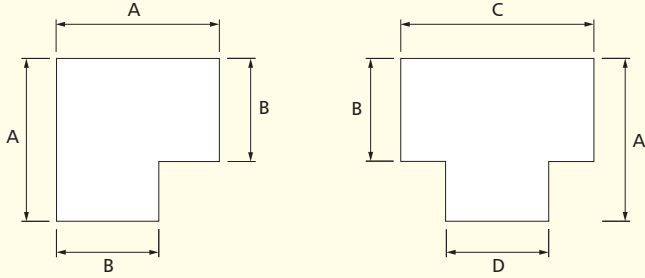
WALL THICKNESS	
Trunking base	2.4mm
Centre compartment cover	2.5mm
Curved cover	1.5mm
Extension cover	2.5mm
Extension base	3.0mm

WEIGHT (KG)			
Type		Number of compartments with screening	
		1	2
Dado trunking without busbar (K1903)	2.4	3.0	3.6
Dado trunking with busbar (K1963)	3.0	3.6	4.2
Extension trunking (K1913)	1.0	2.3	–

POWERLINK PLUS CABLE CAPACITY												
Type of Conductor	Size	Cable Factor	Cmpt 1 (curved)	Cmpt 2 (without busbar)	Cmpt 2 (with busbar)	Cmpt 3 (square)	Cmpt 4 (extension)					
			<b>Full Term CSA 100% Fill (mm<sup>2</sup>)</b>									
			<b>943</b>	<b>2968</b>	<b>2528</b>	<b>1044</b>	<b>2685</b>					
			<b>Term at 45% Fill (mm<sup>2</sup>)</b>									
			<b>424</b>	<b>1335</b>	<b>1137</b>	<b>469</b>	<b>1208</b>					
Power Cables		Number of Cables at 45% Fill										
PVC Stranded	1.5mm <sup>2</sup>	8.6	49	155	132	54	140					
	2.5mm <sup>2</sup>	12.6	33	105	90	37	95					
	4mm <sup>2</sup>	16.6	25	80	68	28	72					
	6mm <sup>2</sup>	21.2	20	62	53	22	56					
Data Cables		Number of Cables at 45% Fill (a) and Full Capacity (b)										
			a	b	a	b	a	b	a	b	a	b
Cat5E UTP	5.5mm dia.	30.2	14	31	44	98	0	0	15	34	40	88
Cat5E STP	6.0mm dia.	36.0	11	26	37	82	0	0	13	29	33	74
Cat6 UTP	6.5mm dia.	42.2	10	22	31	70	0	0	11	24	28	63
Cat6 STP	7.0mm dia.	49.0	8	19	27	60	0	0	9	21	24	54

## Skirting and Dado Trunking System

### Components

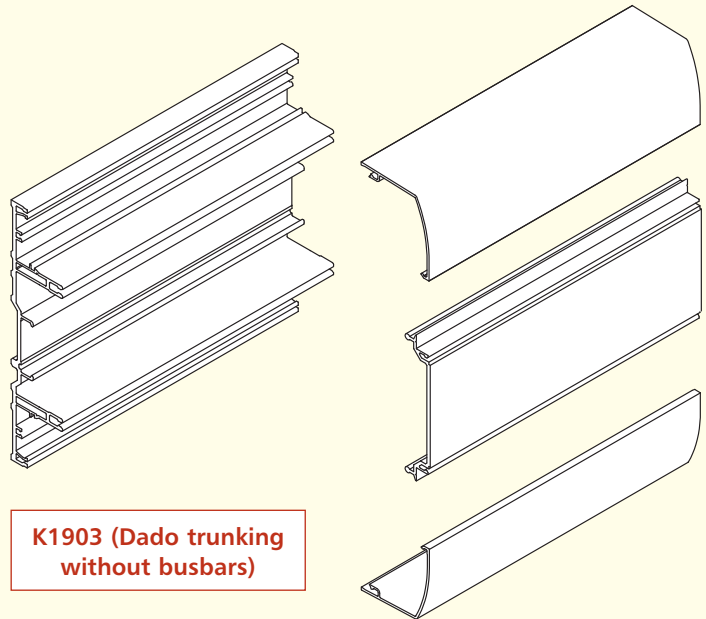


### Flat angles and tees

These components are fabricated sections and space must be allowed for their inclusion in runs of trunking. All other components snap on over standard trunking profiles.

DIMENSIONS (MM)					
Flat Angle	A	B	Flat Cross	E	F
Dado	270	170		370	370
Skirting	270	170		–	–
Skirting (with extension)	315	215		–	–

DIMENSIONS (MM)				
Flat Tee	A	B	C	D
Dado	270	170	320	170



**K1903 (Dado trunking without busbars)**

## Skirting and Dado Trunking System

### Component selection guide

Trunking	End Cap
K1963	K1904
K1903	K1904
K1962	K1944
K1902	K1944
K1913	K1914

Trunking	Flat Cross
K1963	K1974
K1903	K1974

Trunking	Flat Angle Up	Flat Angle Down
K1963	K1992	K1992
K1903	K1992	K1992
K1962	K1957	K1958
K1902	K1957	K1958
K1916	K1994	K1993

Trunking	Ext Corner
K1963	K1906
K1903	K1906
K1962	K1912
K1902	K1912
K1913	K1916

Trunking	Int Corner
K1963	K1905
K1903	K1905
K1962	K1911
K1902	K1911
K1913	K1915

Trunking	Coupler
K1963	K1908
K1903	K1908
K1962	K1945
K1902	K1945
K1916	K1918

Trunking	Flat Tee Up	Flat Tee Down
K1963	K1973	K1972
K1903	K1973	K1972

Trunking	End Cap
10mm <sup>2</sup>	1923WHI
25mm <sup>2</sup>	1924WHI

Trunking	Flat Cross
K1963	K1974
K1903	K1974

Trunking	Flat Angle Up	Flat Angle Down
K1963	K1992	K1992
K1903	K1992	K1992
K1962	K1957	K1958
K1902	K1957	K1958
K1916	K1994	K1993

Trunking	Ext Corner
K1963	K1906
K1903	K1906
K1962	K1912
K1902	K1912
K1913	K1916

Trunking	Int Corner
K1963	K1905
K1903	K1905
K1962	K1911
K1902	K1911
K1913	K1915

Trunking	Coupler
K1963	K1908
K1903	K1908
K1962	K1945
K1902	K1945
K1916	K1918

Trunking	Flat Tee Up	Flat Tee Down
K1963	K1973	K1972
K1903	K1973	K1972

Trunking	Flat Cross
K1963	K1974
K1903	K1974

Trunking	Flat Angle Up	Flat Angle Down
K1963	K1992	K1992
K1903	K1992	K1992
K1962	K1957	K1958
K1902	K1957	K1958
K1916	K1994	K1993

Trunking	Flat Tee Up	Flat Tee Down
K1963	K1973	K1972
K1903	K1973	K1972

Trunking	Flat Cross
K1963	K1974
K1903	K1974

Trunking	Flat Angle Up	Flat Angle Down
K1963	K1992	K1992
K1903	K1992	K1992
K1962	K1957	K1958
K1902	K1957	K1958
K1916	K1994	K1993

Trunking	Flat Tee Up	Flat Tee Down
K1963	K1973	K1972
K1903	K1973	K1972

Trunking	Flat Cross
K1963	K1974
K1903	K1974

Trunking	Flat Angle Up	Flat Angle Down
K1963	K1992	K1992
K1903	K1992	K1992
K1962	K1957	K1958
K1902	K1957	K1958
K1916	K1994	K1993

Trunking	Flat Tee Up	Flat Tee Down
K1963	K1973	K1972
K1903	K1973	K1972

\* Minimum distance

## Skirting and Dado Trunking System

### Installation guide

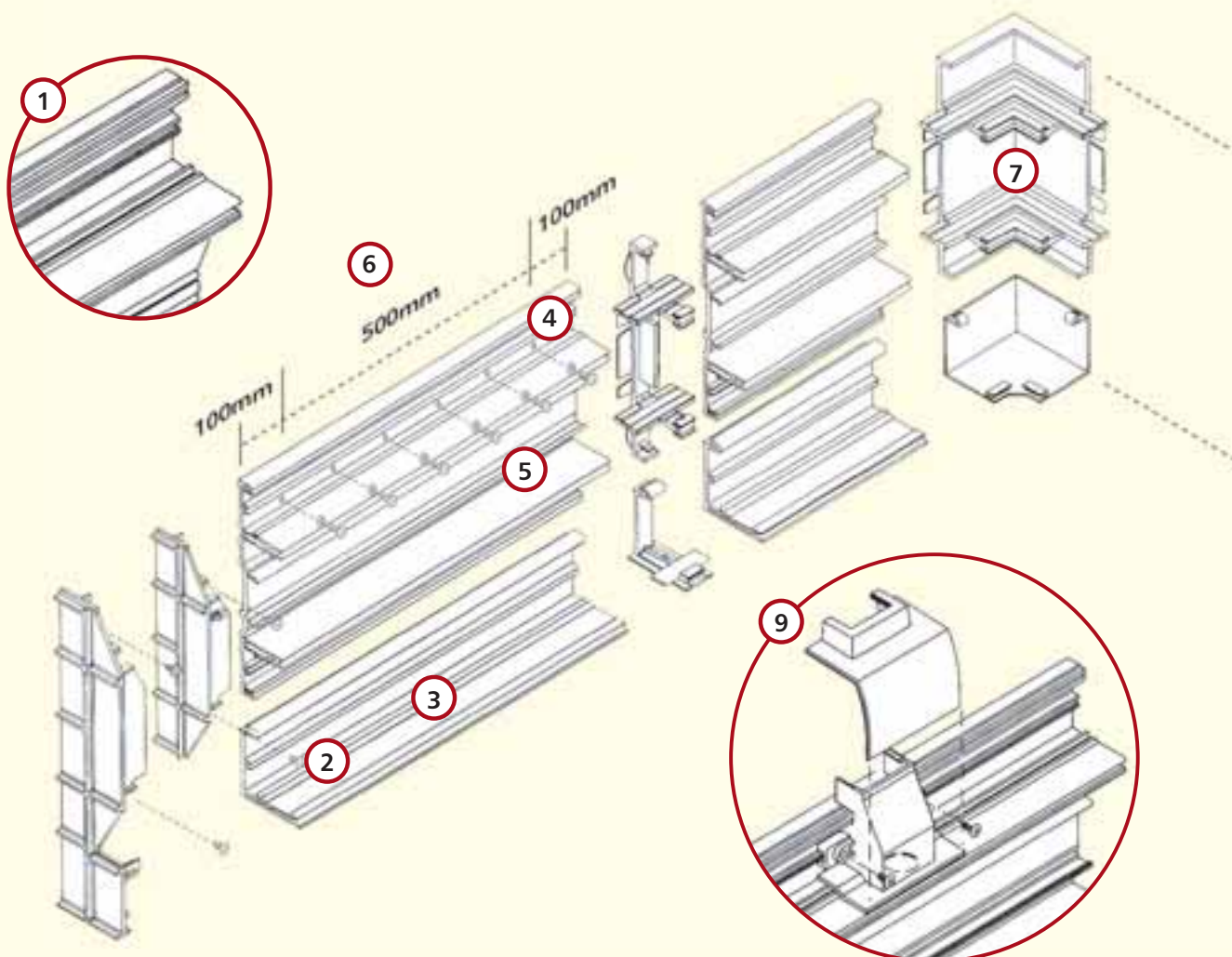
#### General notes

Prior to installation strike a line of trunking using a plumb and chalk line for vertical, and spirit levels for horizontal runs.

- ① Surface track accommodates 63 amp busbar with an integral duct directly above mains.
- ② Data and Telecom cables.
- ③ Extension trunking can be added after installation.\*
- ④ Pre cut slots and circular holes at 100mm centres permit fixing holes to be drilled and a wallplug with screw inserted after the surface track has been positioned.
- ⑤ When fixing trunking use bushes provided and No. 8 wood screws.
- ⑥ Ensure trunking base is secured within 100mm from the end and a maximum of 500mm apart on either side along the length.
- ⑦ Check levels frequently – particularly at corners.

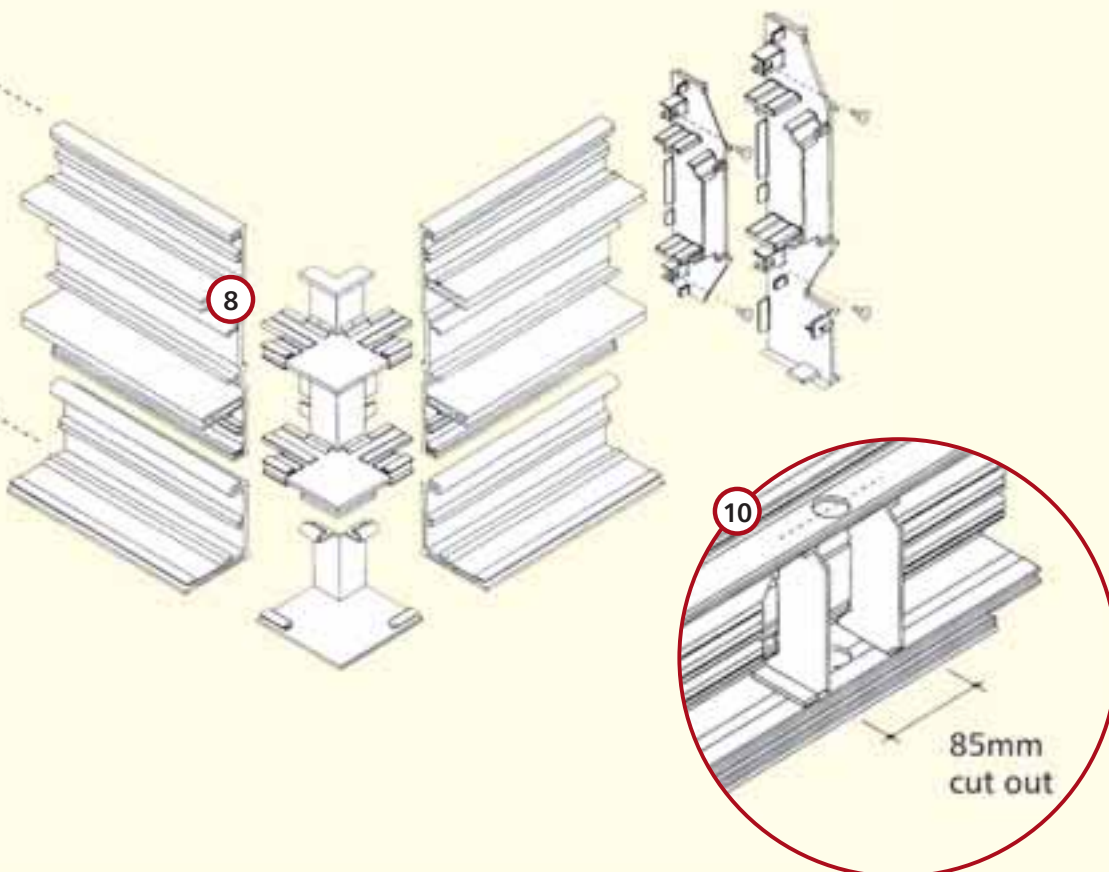
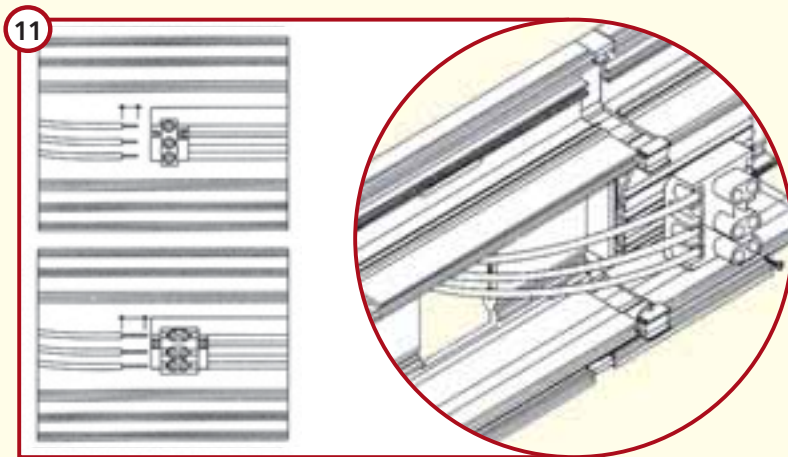
- ⑧ Debur all cut ends using a file or a sharp knife.
- ⑨ For mini trunking adaptors drill a 20mm diameter hole through the wall of the centre compartment using drill guide. Insert the tunnel and fix with two screws provided.
- ⑩ Bridging busbar compartment – if required to take cables from top compartment to bottom or vice versa – drill holes to align with top and bottom holes of the centre compartment. Cut out 85mm from the busbar at the required position. Install cable link (1919) to the busbar and snap fit cable crossing barrier (K1937CHA) over cables.
- ⑪ Commence installation at cable entry position. Route cables into the central section, wire in to the selected cable termination and plug into adjacent busbar and secure with screws supplied.

\* It is recommended that the extension trunking is used in all skirting installations so that the position of the electrical outlets will be a suitable height above the finished floor level.





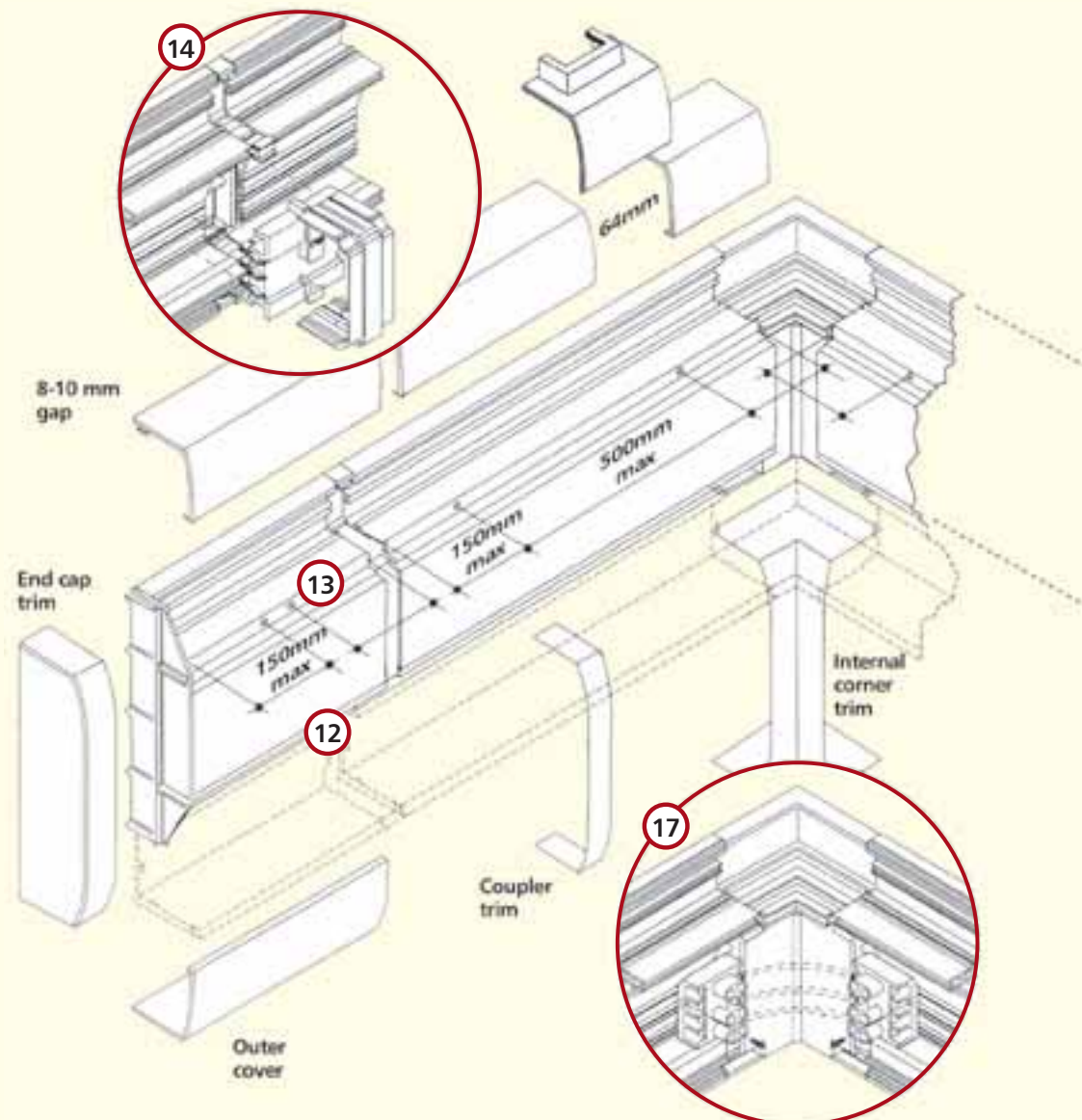
## Skirting and Dado Trunking System



## Skirting and Dado Trunking System

### Installation guide continued

- 12** Cut central cover to length to fit exactly between the exposed frontplates of accessories. At coupling positions leave expansion gaps by cutting the central cover to the same length as the trunking base.
- 13** Secure centre covers to the main base with the screws provided every 500mm max, top and bottom and within 150mm of accessories and fittings.
- 14** At the junction of two adjacent lengths of trunking busbar plug in the coupler to maintain electrical continuity. It is fitted over a protector in the coupler carrier.
- 15** Data / Telecoms Devices – Secure enclosure box over centre compartment with screws supplied. Run cabling into enclosure and terminate onto outlet on frontplate. Secure front cover to enclosure box with screws provided.
- 16** Accessories for extension trunking – Fit ELV plate by clipping onto the centre cover and extension trunking.
- 17** Internal and external corners – Connect the lengths of busbar using the cable link assembly (1919) and secure trunking using the screws provided.
- 18** Moulded corner and coupler shields should be fitted before fitting any covers. They are secured by the central covers overlapping each side of the component and do not require additional fixing.



## Skirting and Dado Trunking System

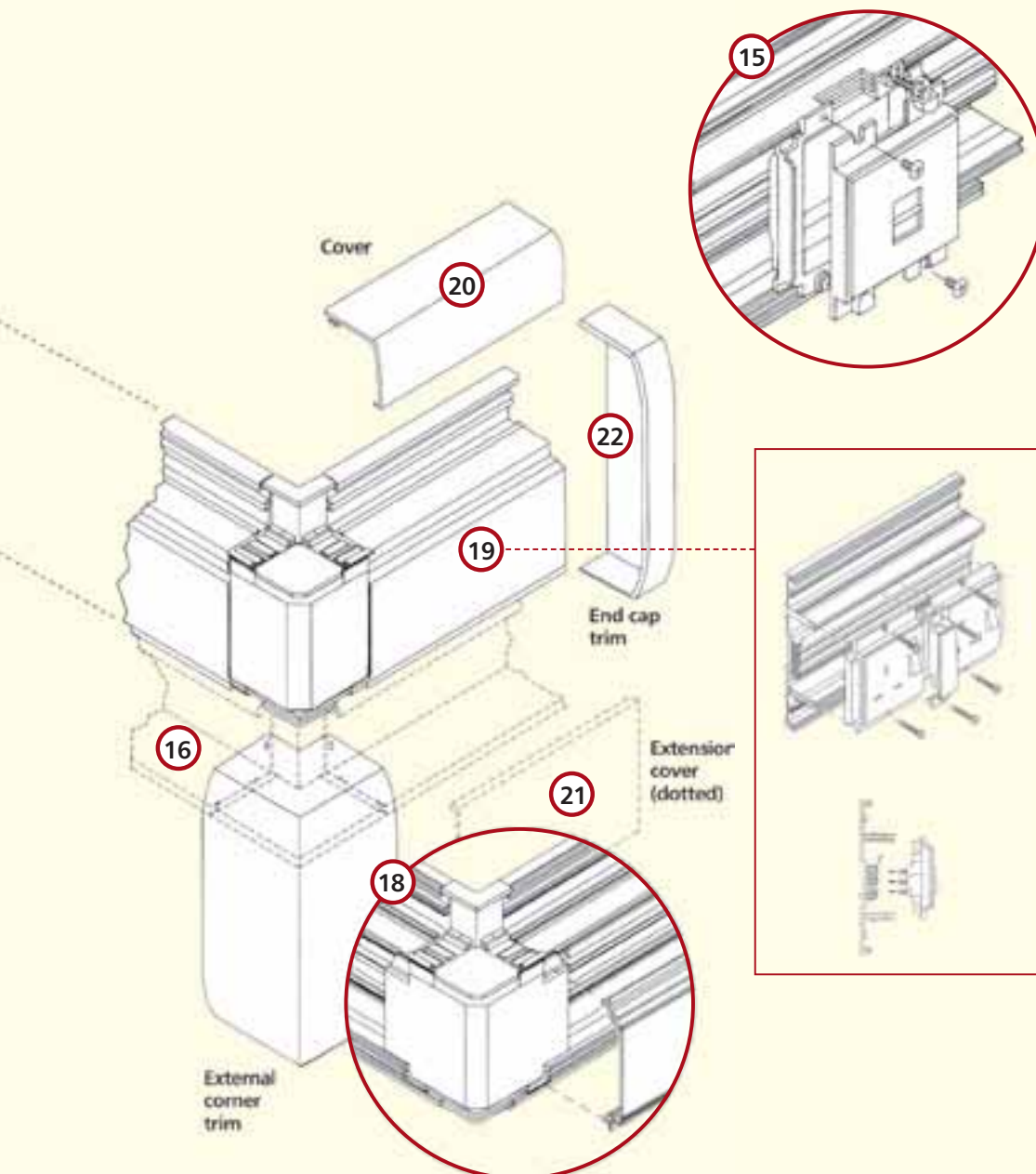
**19** Powerlink Plus Sockets – Plug the socket onto the busbars in the required region ensuring that the socket clips fully locate firmly on to their corresponding busbars. Secure with screws provided. Note – do not tamper with busbar clips.

Plug on connection units – Connect the load conductors which are either routed through the centre compartment of the trunking or enter through the flex outlet. Plug connection unit onto busbar where required and secure as described above.

**20** Outer Covers – For central covers and end cap retainers, leave a gap of 8-10mm and snap fit onto trunking.

**21** Extension cover – Snap and fit onto trunking but leave a gap of 15mm at the coupling position and align exposed joints with outer cover.

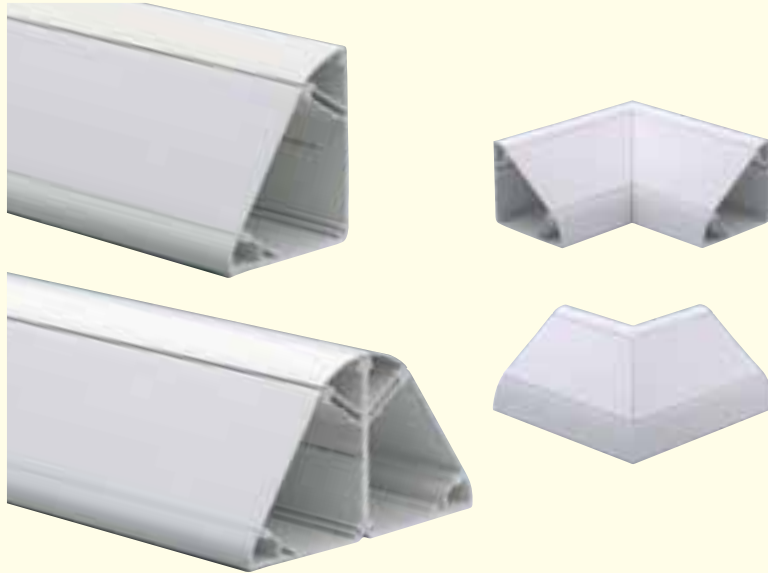
**22** Snap fit end caps then other trims after fitting all central and outer covers.



## Bench and Shelf Trunking

### Features

- Available in a single or double configuration
- May be fitted either direct to the work surface or inverted above the working area
- Cable segregation is provided by two separate compartments with the facility to further subdivide the main compartment by means of a clip-in cable divider
- Single profiles may be converted to a back to back double assembly. A one-piece centre lid and double end caps complete the coupling
- Prefabricated internal and external corners
- Coupler sets for greater strength and protection
- Bench units are also available to match the system
- All extrusions manufactured from 90% recycled material\*



### Description

Pinnacle is an angular bench trunking system ideally suited for distributing LV electrical and communication services in laboratories, schools and workshops and other applications where the service contacts are mounted on or above desks and benches.

### Technical specification

#### Materials

PVCu materials used in the manufacture of MK products are self extinguishing non-flame propagating in accordance with BS 4678 Part 4.

Extrusion material has been tested by a UKAS accredited laboratory in accordance with the requirements of BS476: part 7 and has achieved a Class 1Y.

Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695-2-1 at a severity of 650°C

#### IEE Wiring Regulations

Designed and manufactured to comply in all respects with BS 7671: 2008 (IEE wiring regulations 17th Edition: 2008)

#### Quality Assurance

The system is manufactured to BS EN ISO 9001

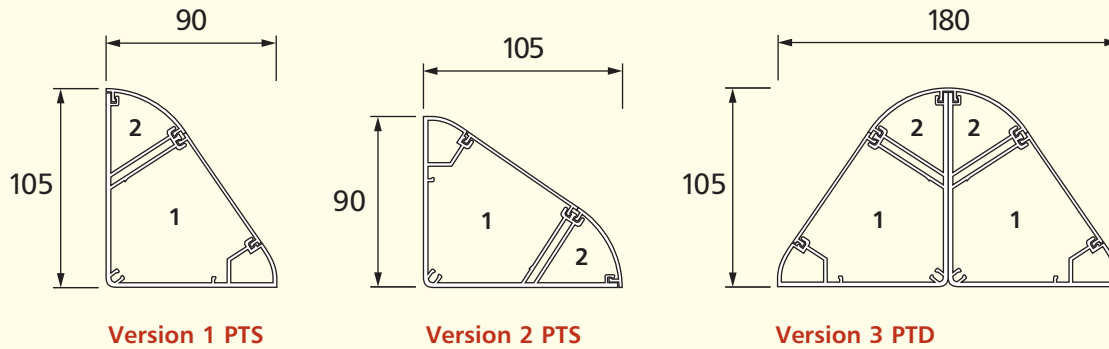


Pinnacle trunking is available in a choice of colours, White and Special. The Special offers a choice of over 180 RAL paint colours.

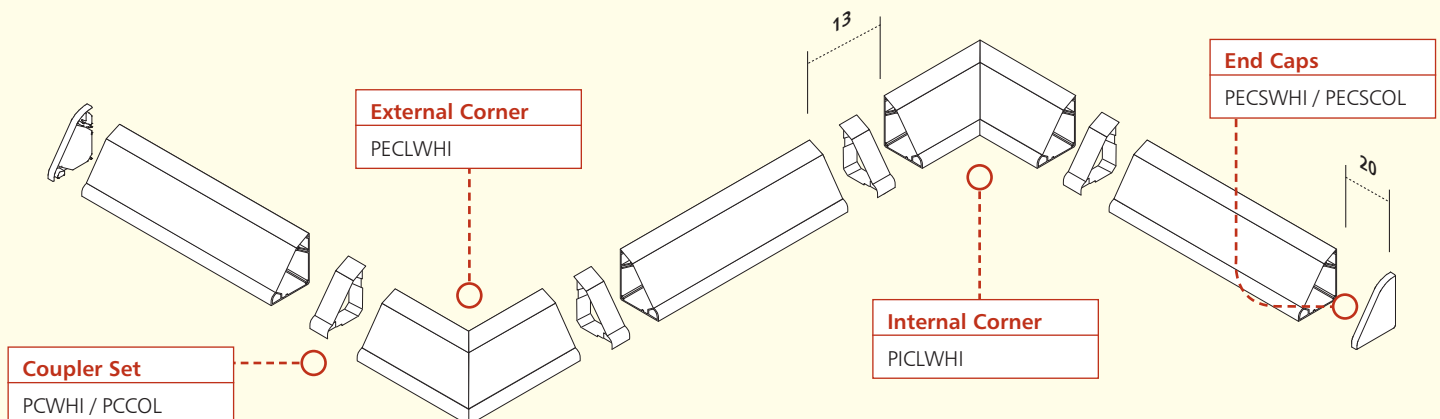
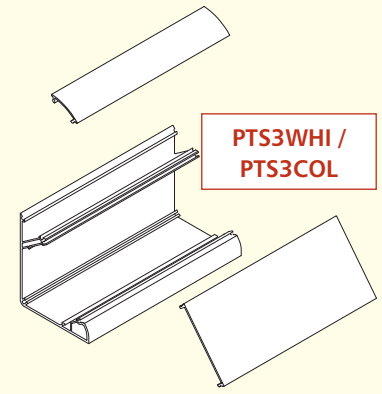
\* Based on 2008 consumption

## Bench and Shelf Trunking

### Dimensions (mm)



PINNACLE CABLE CAPACITY										
Type of Conductor	Size	Cable Factor	Compartment 1	Compartment 1 with 25mm backbox	Compartment 1 with 35mm backbox	Compartment 1				
			<b>Full Term CSA 100% Fill (mm<sup>2</sup>)</b>							
			4510	2499	1857	460				
			<b>Term at 45% Fill (mm<sup>2</sup>)</b>							
			2029	1124	835	207				
Power Cables			Number of Cables at 45% Fill							
PVC Stranded	1.5mm <sup>2</sup>	8.6	235	130	97	24				
	2.5mm <sup>2</sup>	12.6	161	89	66	16				
	4mm <sup>2</sup>	16.6	122	67	50	12				
	6mm <sup>2</sup>	21.2	95	53	39	9				
Data Cables			Number of Cables at 45% Fill (a) and Full Capacity (b)							
			a	b	a	b	a	b	a	b
Cat5E UTP	5.5mm dia.	30.2	67	149	37	82	27	61	6	15
Cat5E STP	6.0mm dia.	36.0	56	125	31	69	23	51	5	12
Cat6 UTP	6.5mm dia.	42.2	48	106	26	59	19	44	4	10
Cat6 STP	7.0mm dia.	49.0	41	92	22	51	17	37	4	9



## Installation guide

### General notes

Prior to installation strike a line of trunking using a plumb and chalk line for vertical, and spirit levels for horizontal runs.

### Incoming Supply Cables

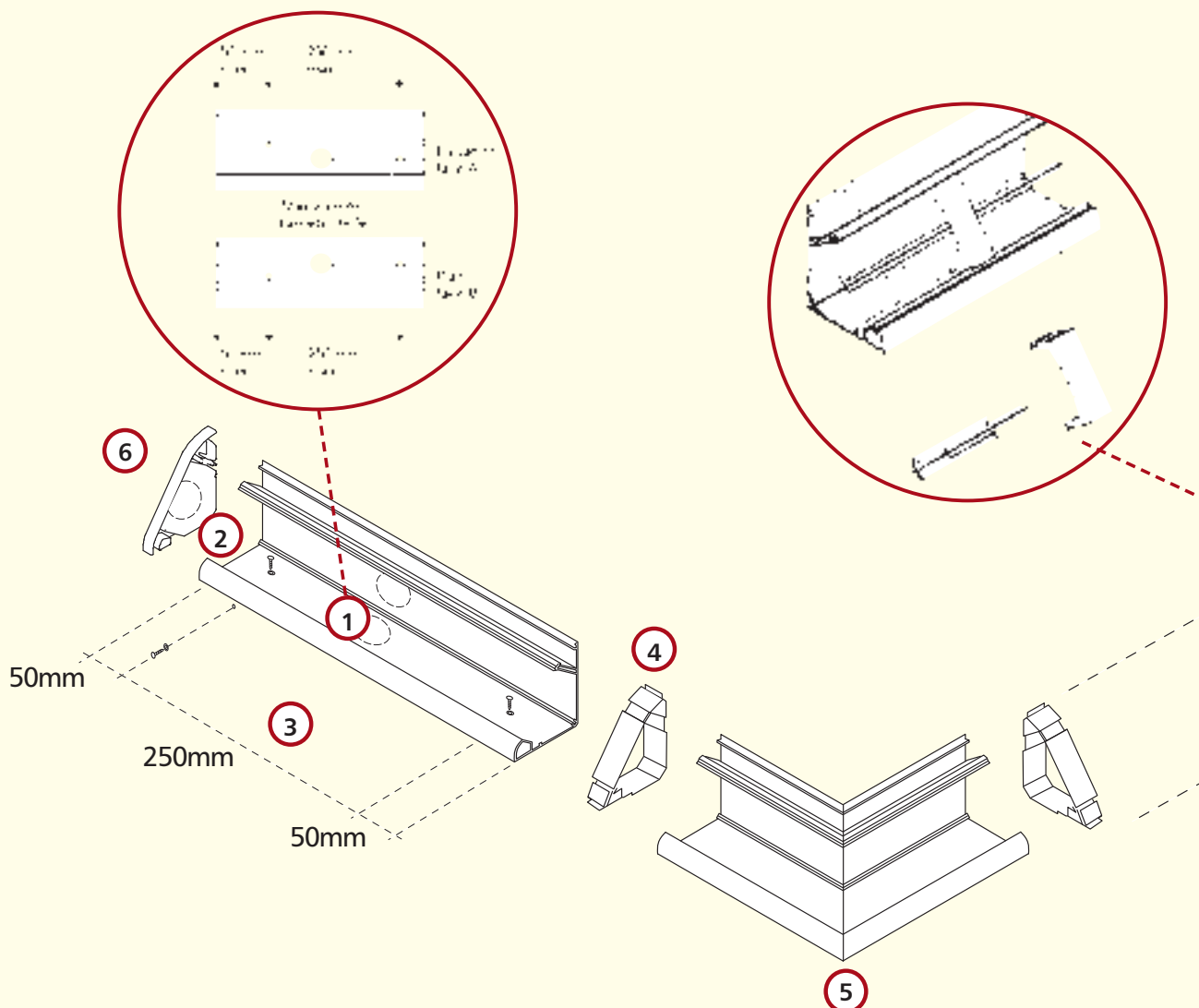
- 1 Establish location of incoming cable supplies. Entry into the trunking can be from the back, base or end caps and is achieved by drilling up to a 25mm hole using the drill base centres in the trunking and inserting a conduit gland.
- 2 Holes of 20mm can be drilled into the end caps for access to the large compartment using one of a series of moulded drill centres.

### Fixing

- 3 Trunking requires fixing at staggered centres, 250mm maximum along the length with the first and last fixing not more than 50mm from the end of each length. Drill trunking with 6mm holes using drill guides and fix with pan or round head screws and washers (Note: Tighten screws

firmly and back off slightly to allow for movement). For double trunking installation fix both bases this way.

- 4 Couplers - Always use a trunking coupler and cover at the junction between each length and at corners to maintain IP4X Classification. To fix push the coupler carrier onto the end of the free trunking length. Slide up to fixed trunking and push home.
- 5 Internal and External Corners – Remove covers. Push a coupler onto each end and assemble to trunking. Position trunking and corner. Check that the internal corner base fits snugly into the corner. Fix trunking base as previously described.
- 6 End caps – Having located the length of trunking and cut if required push fit the end cap firmly onto the trunking ensuring that it is butted up tight. Note: where greater retention is required use MK adhesive EW PLUS to bond the end cap to the trunking base only. Avoid adhesive contact with covers.
- 7 Cable Retainer without central divider installed.



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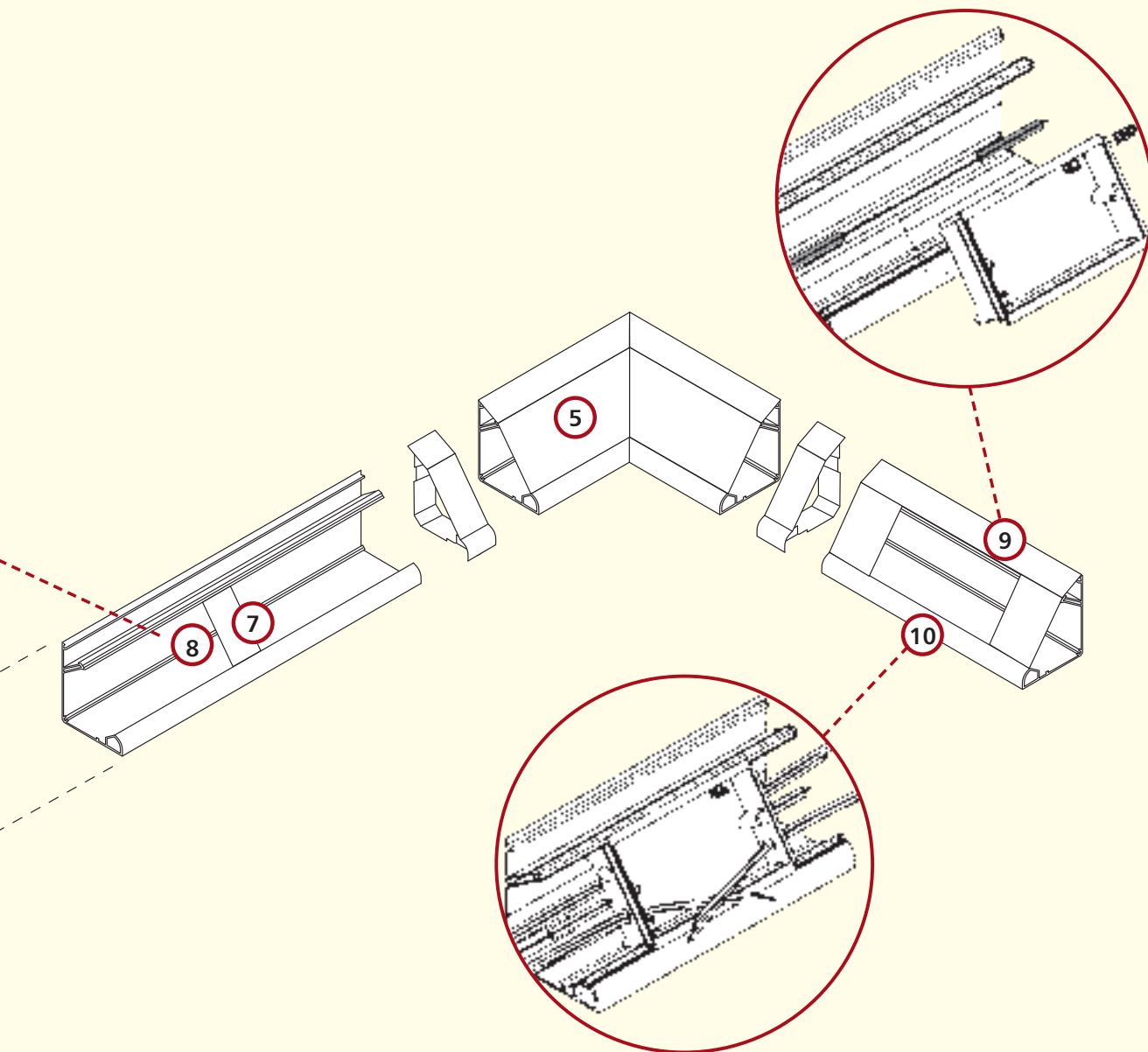
perimeter and distribution | cable management

- 8 The divider and cable retainer interlock should be installed together whenever the divider is used.

**Divider** – To achieve the correct fit a portion of the divider needs to be removed prior to fitting. The divider is formed with a series of depth gauge lines to assist when cutting. These also serve to determine the correct cut out when using outlet boxes. Having prepared the cut outs as required push fit the divider into the preformed groove in the internal corner of the trunking.

**Cable Retainer** – Incorporate as many cable retainers as required to provide restraint and support for cables. This is particularly critical when trunking is mounted overhead in a downward facing position. These should be no more than 600mm centres maximum and within 100mm of an end or corner. The cable retainer is supplied with a series of shallow slots. Use the centre slot to engage the outer cut edge of the cable divider. The legs of the cable retainer engage behind the projections within the large compartment.

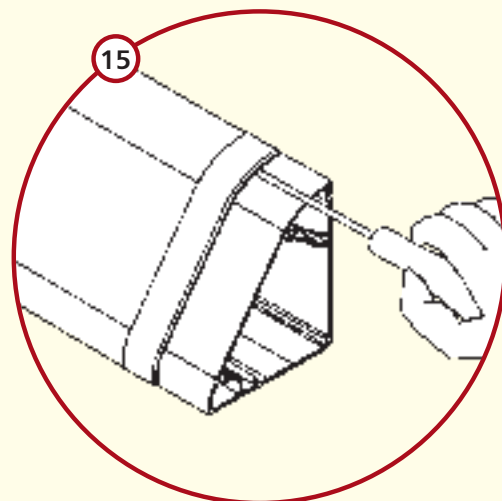
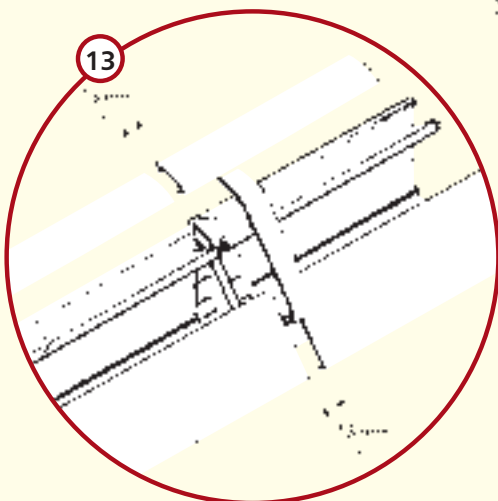
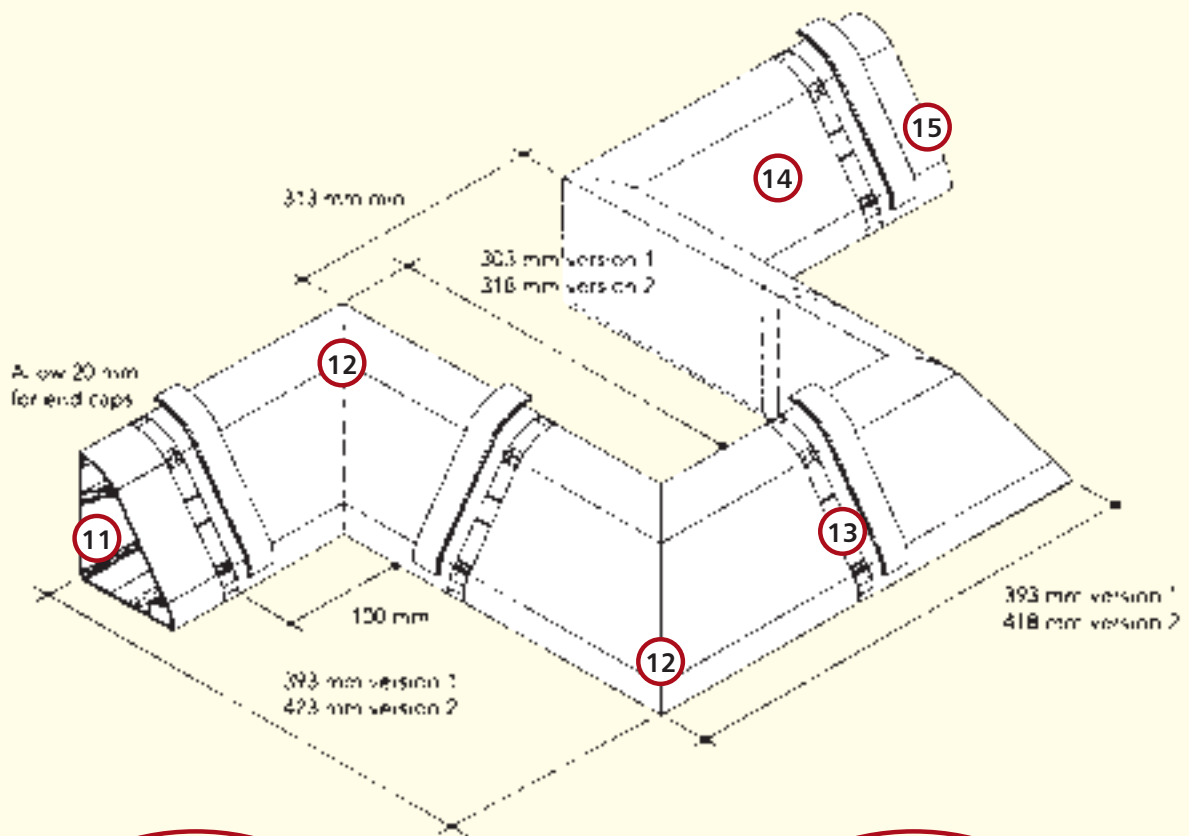
- 9 Determine location of outlets and select correct depth box. Remove knockouts to suit cable entry. Push fit brass terminal (K3716) if required into the aperture in the base of the box.
- 10 Drill the large compartment walls using the drill guide groove to allow cables to feed when supplying from small compartment. Press and clip box into the trunking body engaging the rear projections. Note: Where dividers are installed they need to be reduced to accommodate the selected depth box. Adjacent boxes should not be more than 25mm apart.



**Covers**

- ⑪ Slide cover under end cap where required before locating correctly in position. Pushing firmly snap into place. The top cover in the double (back to back) trunking locks the two trunking bodies together.
- ⑫ Internal and external corner covers should be installed with couplers. Leave a gap of 13mm at the junction between corner cover and the trunking covers to allow fitting of coupler covers. Correctly position and snap firmly into place.
- ⑬ At joint couplers, overlap the coupler carrier flanges with the lids. The gap left between the covers will allow for the fitting of joint covers. Having satisfactorily installed all trunking covers firmly push fit the coupler covers into place overlapping all the cover completely.

- ⑭ Removal – Main compartment cover removal is readily achieved if a wiring accessory or coupler is present. Remove the accessory and exerting pressure to the underside of the cover with the head of a flat screwdriver to initiate disengagement, peel the cover back.
- ⑮ When no accessory is available remove a moulded coupler cover by placing the head of a small flat screwdriver at the junction with the trunking cover and lever outwards slowly disengaging the cover moulding. When levering off coupler covers protect trunking faces from damage. When the coupler cover is removed initiate clip disengagement of trunking covers and peel back.





## Pinnacle Pillar

### Standards and approvals

Conforms to the heavy duty requirement of BS 4678 Part 4 and the IP4X classification of EN 60529

CE compliant meeting the LV directive

### Technical specification

#### Materials

PVCu materials used in the manufacture of MK products are self extinguishing non-flame propagating in accordance with BS 4678 Part 4.

Extrusion material has been tested by a UKAS accredited laboratory in accordance with the requirements of BS476: part 7 and has achieved a Class 1Y.

Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695-2-1 at a severity of 650°C

#### IEE Wiring Regulations

Designed and manufactured to comply in all respects with BS 7671: 2008 (IEE wiring regulations 17th Edition: 2008)

#### Quality Assurance

The system is manufactured to BS EN ISO 9001



### Description

Pinnacle Pillars are versatile, vertical multi-compartment systems providing a means to supply LV power, data and telecom services from ceiling or floor voids to specific perimeter locations.

### Installation

This unit cannot be free standing and requires to be fully supported to an adequate wall or structure for its entire length.

See Installation Guide 41973PL for details

## Integrated Trunking

### Features

- Wide range of integrated components maximise versatility in application
- Simple, clean lines
- Easy to assemble and install
- Data bend option 32mm radius
- High impact resistance and durability
- Tapered joints provide complete protection at junctions masking cut ends
- Continuity of cable distribution through different sized trunking is provided by special end reducers
- Clip on covers provide continuous access for wiring modifications
- All extrusions manufactured from 90% recycled material\*

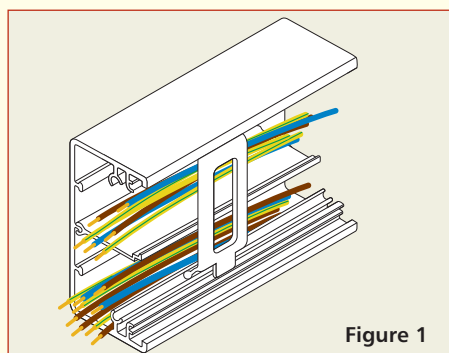
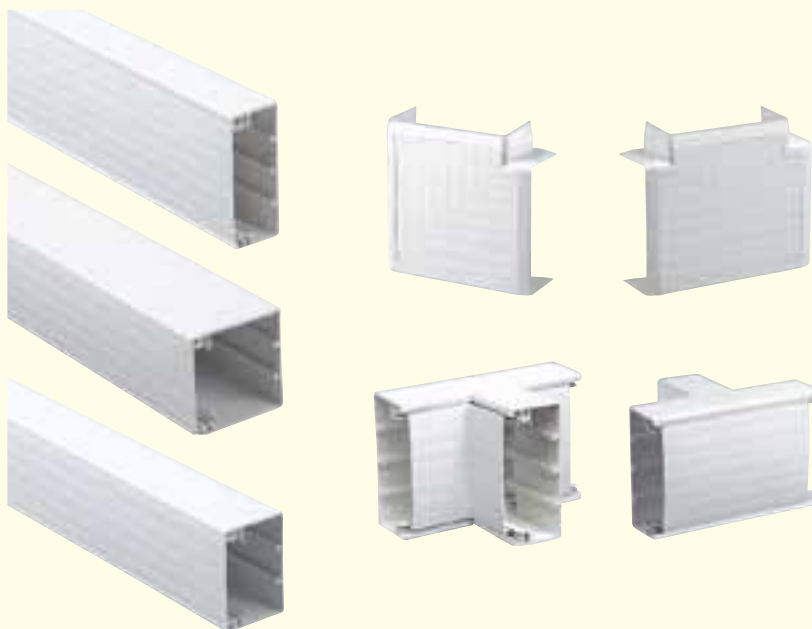


Figure 1

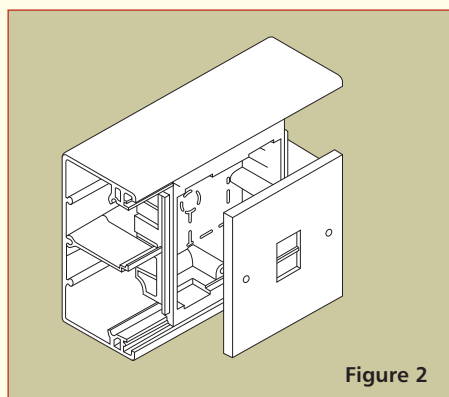


Figure 2

### Description

Premier is an integrated PVCu trunking system for general cable distribution. A comprehensive range of tees, angles, reducers and junctions make a very wide range of configurations possible and the system can be wall or ceiling mounted.

6 trunking sizes are available (see dimensions overleaf) offering the user distribution solutions, from incoming mains to the most remote power, telecom or data outlet.

### Cable segregation (see figure 1)

Each trunking profile incorporates a series of preformed locators which accept clip-in dividers for cable segregation. Special dividers are provided to maintain cable segregation behind outlet positions. Clip-in components are provided for retaining cables within each compartment prior to trunking lids being fitted.

### Finish

Premier lid components are decoratively textured in contrasting linear patterns giving a subtle 'striped' effect.

All other components are in white with a semi matt finish.

### Accessories boxes and Mounting Frames (see figure 2)

One, two and three gang outlets boxes in 25mm, 28mm and 35mm depths and one and two gang outlet frames, allow power, telecom and data outlets to be incorporated where required. MK plug-in lighting can be used with all trunking sizes.

### Colour

The system is available in a standard white colour, plus a choice of over 180 RAL paint colours to special order (minimum order value applies).

### Technical specification

#### Materials

PVCu materials used in the manufacture of MK products are self extinguishing non-flame propagating in accordance with BS 4678 Part 4.

Extrusion material has been tested by a UKAS accredited laboratory in accordance with the requirements of BS476: part 7 and has achieved a Class 1Y.

Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695-2-1 at a severity of 650°C

#### IEE Wiring Regulations

Designed and manufactured to comply in all respects with BS 7671: 2008 (IEE wiring regulations 17th Edition: 2008)

#### Quality Assurance

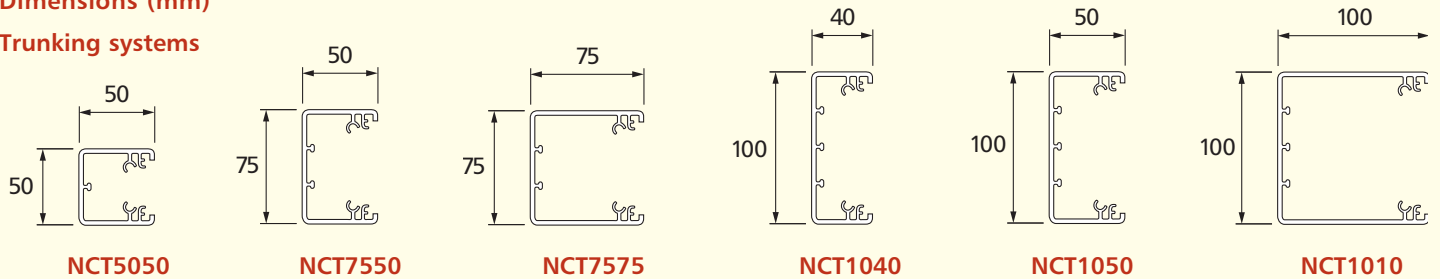
The system is manufactured to BS EN ISO 9001

\* Based on 2008 consumption

## Integrated Trunking

### Dimensions (mm)

#### Trunking systems



PREMIER CABLE CAPACITY																								
Type of Conductor	Size	Cable Factor	NCT5050	NCT7550	NCT7575	NCT1040	NCT1050	NCT1010	NCT1040 with 25mm backbox	NCT1050 with 25mm backbox	NCT1050 with 35mm backbox	NCT1010 with 25mm backbox	NCT1010 with 35mm backbox											
			Full Term CSA 100%Fill (mm <sup>2</sup> )																					
			1881	3039	4754	3091	4041	8725	1081	1866	1224	6550	5908											
			Term at 45% Fill (mm <sup>2</sup> )																					
			846	1367	2139	1390	1818	3926	486	839	550	2947	2658											
Power Cables			Number of Cables at 45% Fill																					
PVC	1.5mm <sup>2</sup>	8.6	98	158	248	161	211	456	56	97	63	342	309											
Stranded	2.5mm <sup>2</sup>	12.6	67	108	169	110	144	311	38	66	43	233	210											
	4mm <sup>2</sup>	16.6	50	82	128	83	109	236	29	50	33	177	160											
	6mm <sup>2</sup>	21.2	39	64	100	65	85	185	22	39	25	139	125											
Data Cables			Number of Cables at 45% Fill (a) and Full Capacity (b)																					
			a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
Cat5E UTP	5.5mm dia.	30.2	28	62	45	100	70	157	46	102	60	133	130	288	16	35	27	61	18	40	97	216	88	195
Cat5E STP	6.0mm dia.	36.0	23	52	37	84	59	132	38	85	50	112	109	242	13	30	23	51	15	34	81	181	73	164
Cat6 UTP	6.5mm dia.	42.2	20	44	32	72	50	112	32	73	43	95	93	206	11	25	19	44	13	29	69	155	62	140
Cat6 STP	7.0mm dia.	49.0	17	38	27	62	43	97	28	63	37	82	80	178	9	22	17	38	11	24	60	133	54	120

### Applications

The Premier system is ideal for use in factories, workshops, schools, portable accommodation and general commercial buildings where integration of cable distribution with accessory mounting facility is desirable.

Generally systems can be used as follows:

50 x 50, 75 x 50 and 75 x 75mm – general cable distribution.

100 x 40 and 100 x 50mm – where mounting accessories are also required.

100 x 100mm – where mounting accessories and/or generous cable distribution is required.

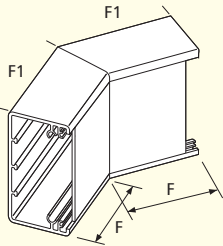
ACCESSORIES		
	For use with	List No.
One gang accessory box and frame	NCT1040, NCT1050, NCT1010 for power and ELV outlets requiring 25mm deep box	VTS6025
	NCT1050/NCT1010 for power and ELV outlets requiring 35mm deep box	VTS6035
	NCT1040, NCT1050, NCT1010 for power and ELV outlets requiring extra deep accessory space	VTS6000
Two gang accessory box and frame	NCT1040, NCT1050, NCT1010 for power and ELV outlets requiring 25mm deep box	VTS7025
	NCT1050/NCT1010 for power and ELV outlets requiring 35mm deep box	VTS7035
	NCT1040, NCT1050, NCT1010 for power and ELV outlets requiring extra deep accessory space	VTS7000
Three gang accessory box	NCT1040, NCT1050, NCT1010 for power and ELV outlets requiring 28mm deep box	VTS8028
Mini trunking adaptor	Integrates Premier with YEA1, YEA2, YEA200, YEA3 CMA1, CMA3, CMA4 Mini trunking fittings	NYT100
Partition wall cover	NCT1040	NWC1040

## Integrated Trunking

### Components

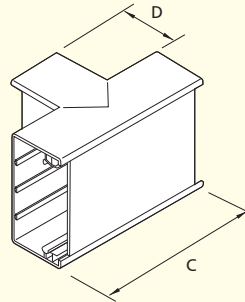
The five components that follow are fabricated sections and space must be allowed for their inclusion in runs of trunking. All other components snap on over standard trunking profiles.

#### Internal angle (135°) NMI



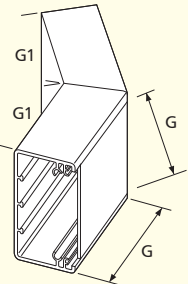
	F mm	F1 mm	
NMI	5050	75	96
7550	75	96	
7575	75	106	
1040	75	92	
1050	75	96	
1010	75	116	

#### External Tee NTE



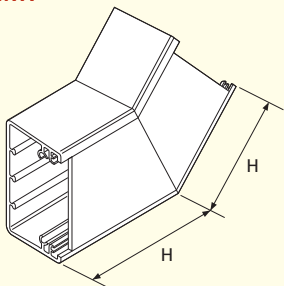
	C mm	D mm	
NTE	5050	150	50
7550	150	50	
7575	225	75	
1040	150	60	
1050	150	50	
1010	250	75	

#### External angle (135°) NMO



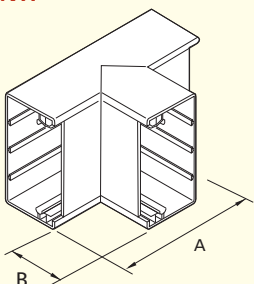
	G mm	G1 mm	
NMO	1050	96	75
7550	96	75	
7575	106	75	
1040	92	75	
1050	96	75	
1010	116	75	

#### Flat angle (135°) NMT



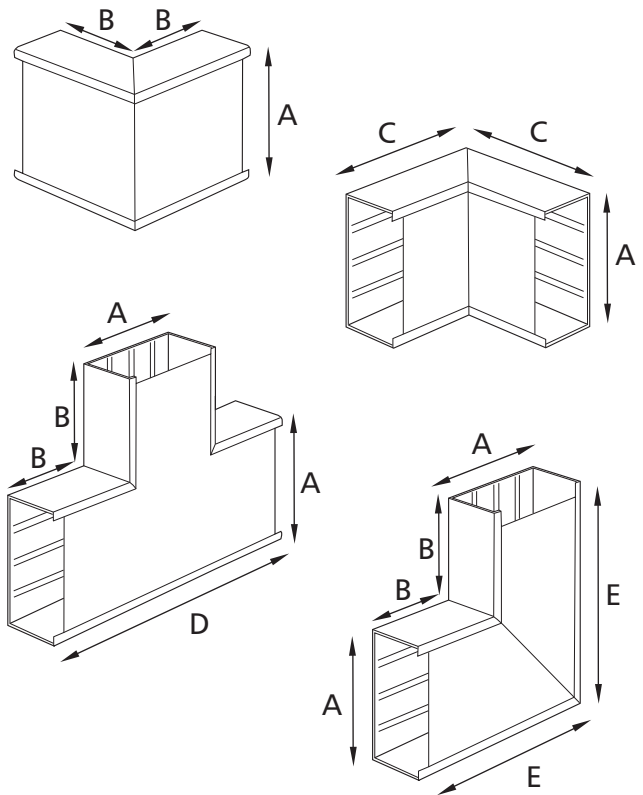
	H mm	
NMT	5050	96
7550	106	
7575	106	
1040	116	
1050	116	
1010	116	

#### Internal Tee NTI



	A mm	B mm	
NTI	5050	150	50
7550	150	50	
7575	225	75	
1040	150	60	
1050	150	50	
1010	250	75	

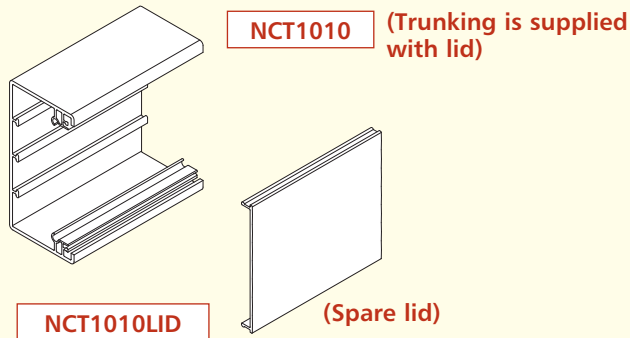
#### Fabricated fittings (for 1050 only)



#### DIMENSIONS (mm)

A	B	C	D	E
100	75	125	250	175

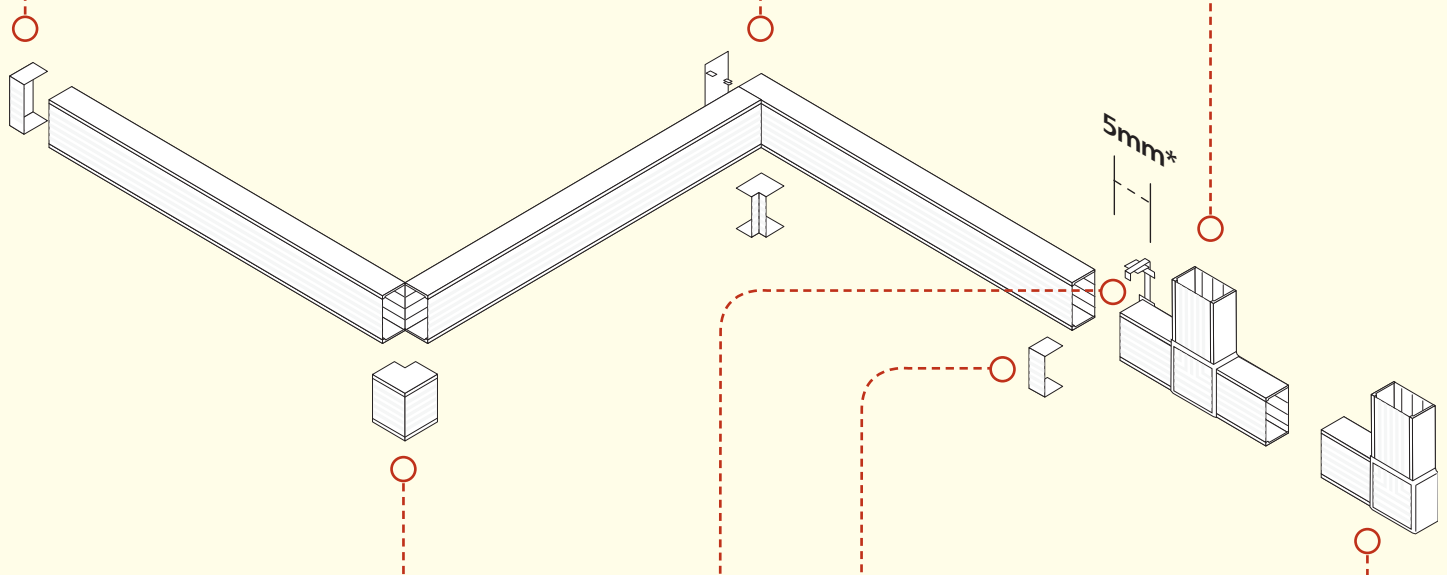
## Integrated Trunking



Profile	End Cap
50 x 50	NEP5050
75 x 50	NEP7550
75 x 75	NEP7575
100 x 40	NEP1040
100 x 50	NEP1050
100 x 100	NEP1010

Profile	Int Corner Corner	With Data
50 x 50	NAI5050	
75 x 50	NAI7550	
75 x 75	NAI7575	
100 x 40	NAI1040	
100 x 50	NAI1050	NDAI1050
100 x 100	NAI1010	

Profile	Flat Tee Corner	With Data
50 x 50	NTF5050	
75 x 50	NTF7550	
75 x 75	NTF7575	
100 x 40	NTF1040	
100 x 50	NTF1050	NDAF1050
100 x 100	NTF1010	



Profile	Ext Corner Corner	With Data
50 x 50	NAE5050	
75 x 50	NAE7550	
75 x 75	NAE7575	
100 x 40	NAE1040	
100 x 50	NAE1050	NDAE1050
100 x 100	NAE1010	

Profile	Int Coupler Cover	Joint
50 x 50	NCI5050	NJC5050
75 x 50	NCI7550	NJC7550
75 x 75	NCI7575	NJC7575
100 x 40	NCI1040	NJC1040
100 x 50	NCI1050	NJC1050
100 x 100	NCI1010	NJC1010

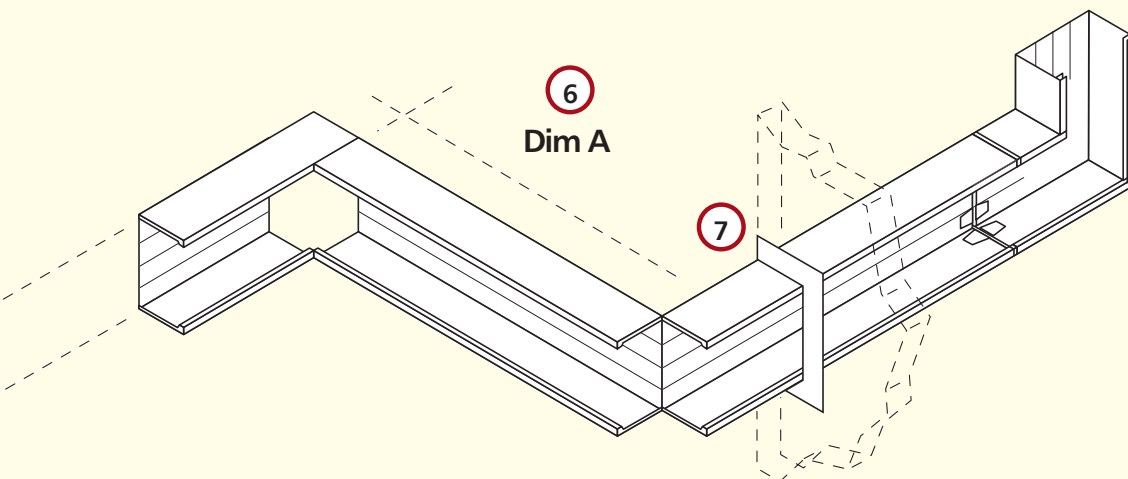
Profile	Flat Angle Corner	With Data
50 x 50	NAF5050	
75 x 50	NAF7550	
75 x 75	NAF7575	
100 x 40	NAF1040	
100 x 50	NAF1050	NDAF1050
100 x 100	NAF1010	

Note: Diagram shows profile 1050

\* Minimum distance



## Integrated Trunking



## Integrated Trunking

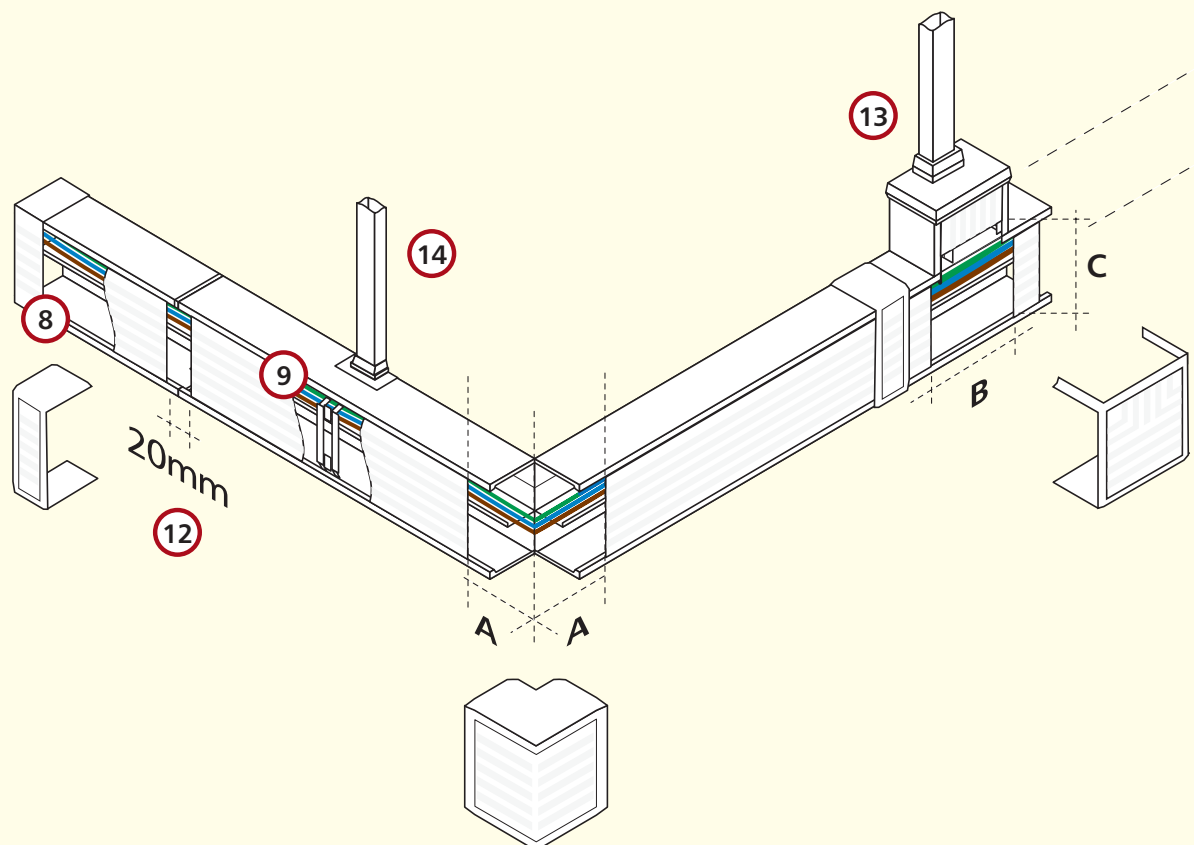
### Installation guide continued

- 8 Clip in cable dividers prior to cabling. Divider clip fits to the tee bar mounting rail extruded on the trunking base. To correctly fit divider, the extension foot of the female clip profile is mounted below the tee bar for horizontal runs, and to the right hand side of vertical runs.
- 9 Cable retainers clip into the semi-circular grooves extruded within the trunking profile. Retainers should be installed at 750mm maximum centres on straight runs or within 100mm of each end, corner or change of plane.
- 10 Internal corners – measure distance into corner and cut trunking length 2mm short.
- 11 Wall plates should be used to maintain enclosure function of trunking.
- 12 Leave a gap of 20mm to allow fitting of joint cover moulding.
- 13 To join lengths of different sized trunking use the appropriate reducer. For correct alignment of adjacent trunking bodies temporarily clip reducers into fixed trunking.
- 14 For mini trunking, clip adaptor from YEA range into aperture to suit mini-trunking size YT1 to YT3.

**At internal corners, external corners, flat angles and flat tees, leave gaps between lids and the end trunking body as shown below:**

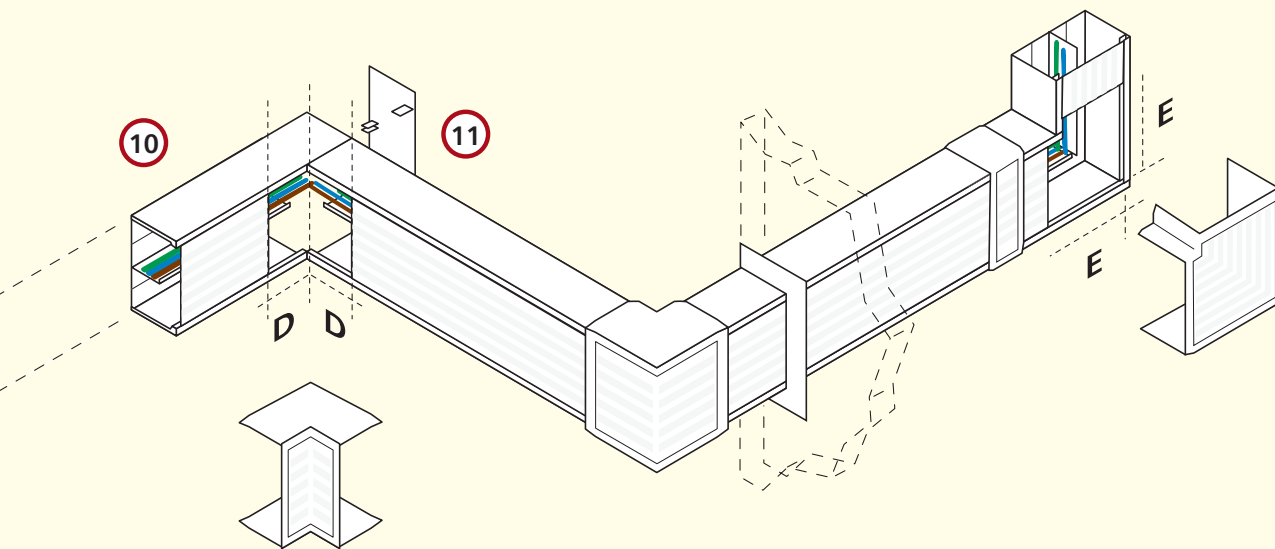
- 10 Internal corners – measure distance into corner and cut trunking length 2mm short.
- 11 Wall plates should be used to maintain enclosure function of trunking.

		50x50	75x50	75x75	100x40	100x50	100x100
External Corner	A	62	62	87	52	62	140
	B	74	99	99	124	124	124
Flat Tee	C	65	90	90	115	115	115
	D	62	62	87	52	62	140
Internal Corner	E	66	90	90	115	115	140





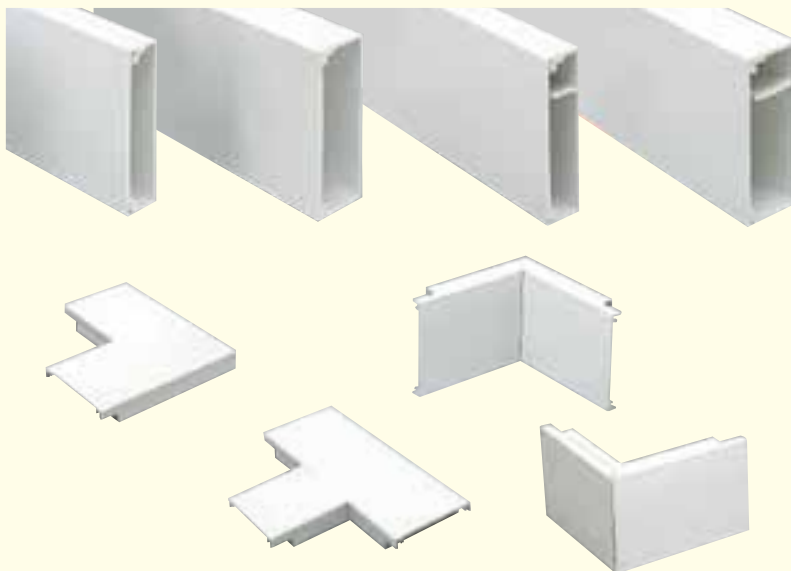
## Integrated Trunking



## Trunking

### Features

- 2 sizes with one or two compartments
- Easy to add sockets and outlets once installed
- Wall or ceiling mounting possible
- Wide range of integrated components maximises versatility of application
- Unobtrusive and neat
- Easy to assemble and install
- Durable and impact resistant to Heavy Classification BS 4678 Part 4
- All extrusions manufactured from 90% recycled material\*



### Technical specification

#### Materials

PVCu materials used in the manufacture of MK products are self extinguishing non-flame propagating in accordance with BS 4678 Part 4.

Extrusion material has been tested by a UKAS accredited laboratory in accordance with the requirements of BS476: part 7 and has achieved a Class 1Y.

Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695-2-1 at a severity of 650°C

#### IEE Wiring Regulations

Designed and manufactured to comply in all respects with BS 7671: 2008 (IEE wiring regulations 17th Edition: 2008)

#### Quality Assurance

The system is manufactured to BS EN ISO 9001

### Description

Norwich trunking is available in two depths with one or two compartments for wall or ceiling mounting. The standard version is 40mm deep with a 25mm deep option, where lack of space makes the projection critical. Accessory mounting frames are located within the trunking, providing a visually co-ordinated system with the facility to relocate and extend accessory outlet positions as required.

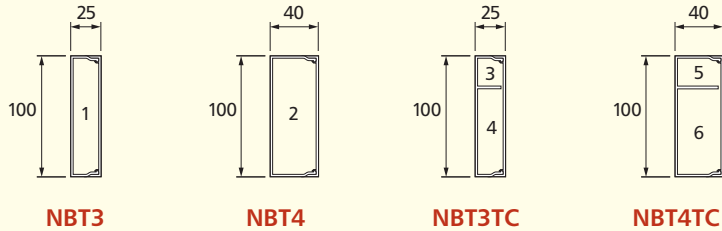
The system is widely used in schools, offices and commercial installations because of its durability and the ability to retrofit extra sockets and outlets as required.

**Material:** PVCu **Colour:** White only

\* Based on 2008 consumption

## Trunking

### Dimensions (mm)



NORWICH CABLE CAPACITY														
Type of Conductor	Size	Cable Factor	NBT3 (1)	NBT3TC (3)	NBT3TC (4)	NBT4 (2)	NBT4TC (5)	NBT4TC (6)						
			Full Term CSA 100%Fill (mm <sup>2</sup> )											
			1805	384	1383	3230	706	2455						
			Term at 45% Fill (mm <sup>2</sup> )											
			812	172	622	1453	317	1104						
Power Cables			Number of Cables at 45% Fill											
PVC Stranded	1.5mm <sup>2</sup>	8.6	94	20	72	168	36	128						
	2.5mm <sup>2</sup>	12.6	64	13	49	115	25	87						
	4mm <sup>2</sup>	16.6	48	10	37	87	19	66						
	6mm <sup>2</sup>	21.2	38	8	29	68	14	52						
Data Cables			Number of Cables at 45% Fill (a) and Full Capacity (b)											
			a	b	a	b	a	b	a	b	a	b	a	b
Cat5E UTP	5.5mm dia.	30.2	26	59	5	12	20	45	48	106	10	23	36	81
Cat5E STP	6.0mm dia.	36.0	22	50	4	10	17	38	40	89	8	19	30	68
Cat6 UTP	6.5mm dia.	42.2	19	42	4	9	14	32	34	76	7	16	26	58
Cat6 STP	7.0mm dia.	49.0	16	36	3	7	12	28	29	65	6	14	22	50

Note: NBT3 & NBT3TC are not deemed suitable for terminating Cat6 cabling.

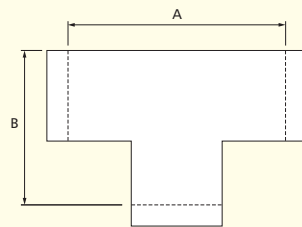
### Components

The four components shown opposite are fabricated sections and space must be allowed for inclusion in runs of trunking. All other components snap on over standard trunking profiles.

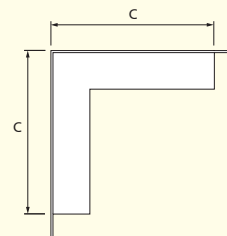
List No.	Component dimensions			
	A	B	C	D
NBT3	240	170	125	125
NBT4	240	170	140	140

The four components shown below are fabricated sections and space must be allowed for inclusion in runs of trunking. All other components snap on over standard trunking profiles.

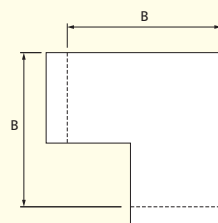
#### Flat Tee



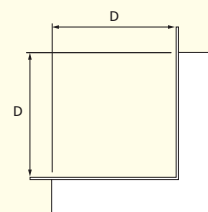
#### External Corner



#### Flat Angle



#### Internal Corner



# Trunking

## Installation guide

### General notes

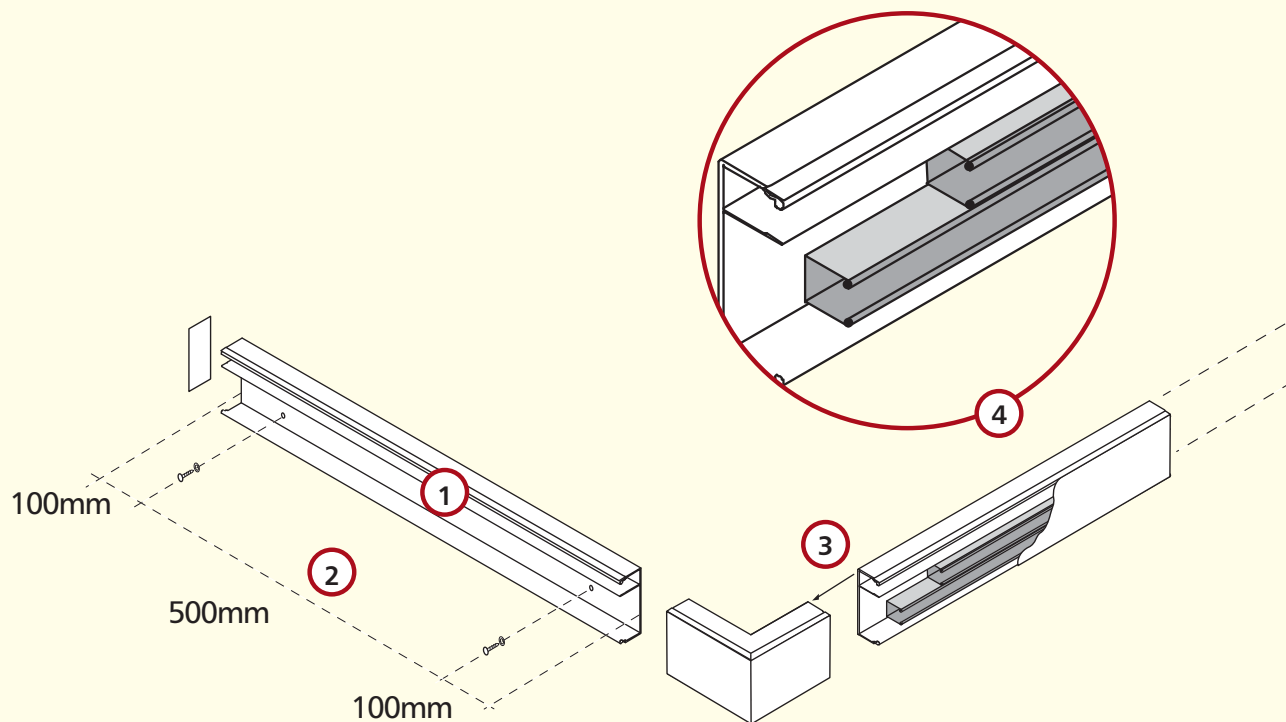
Prior to installation strike a line of trunking using a plumb and chalk line for vertical, and spirit levels for horizontal runs.

### Fixing

- ① Cut and fix the continuous carrier at not more than 500mm centres along its entire length and not more than 100mm from the end of a run, and at intersection with other systems.
- ② Locate and secure, with a minimum of two screws, the carrier for flat angles, external angles, internal angles and flat tees.
- ③ Close butt to the carrier using internal couplers – see 5.

### Cable segregation

- ④ Further segregation within the single or two compartment trunking can be achieved during or following the installation by inserting the appropriate size of Mini-trunking sections. Fit the socket insertion units, install the conductors and cable runs and draw the conductors through. Fix the clip on cover using the back up couplers at the intersections.
- ⑤ The couplers can also serve as cable retaining straps prior to the cover being fitted. Stagger the joints in the cover with the joints in the carrier and offset by 50mm. Bond the end stop to the main trunking using Egaweld PLUS solvent weld



## Trunking

### Junction with Mini-trunking

- ⑥ Locate the position of the junction. Drill the carrier with the correct sized hole to accommodate the number of cables required. Position the correct UEA/-adaptor using a short length of compatible Mini-trunking as a guide.

The trunking should stop 6mm from the face of the Norwich trunking to allow the adaptor to fit tight. Bond the adaptor to the Norwich trunking using Egaweld PLUS solvent weld

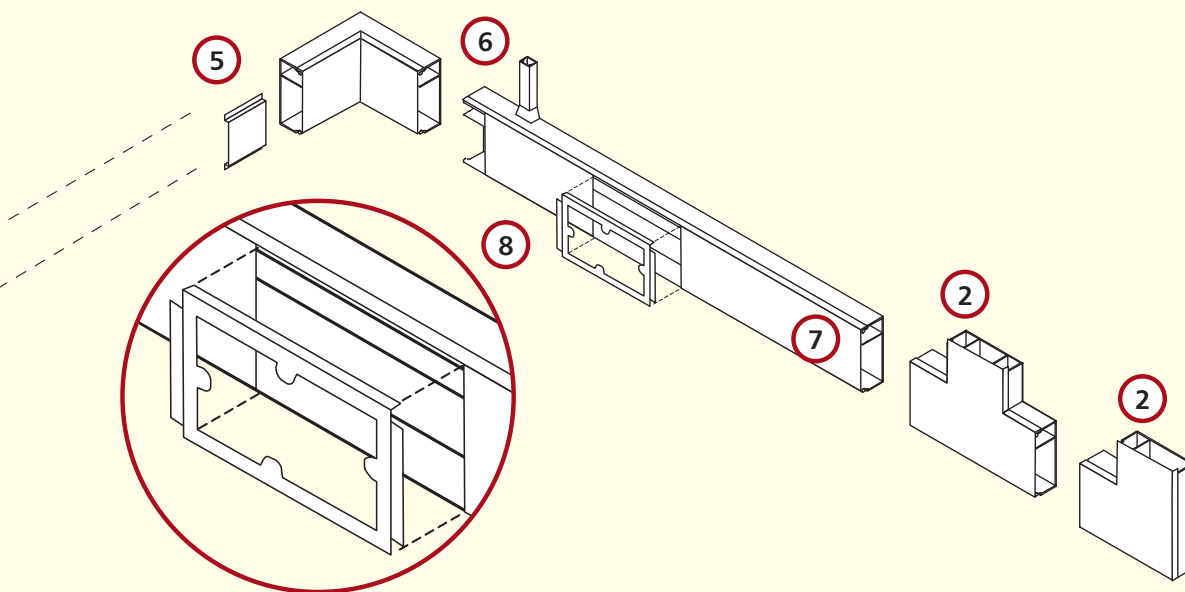
Remove the temporary trunking guide and proceed with the installation.

### Cover

- ⑦ Covers simply clip onto base.

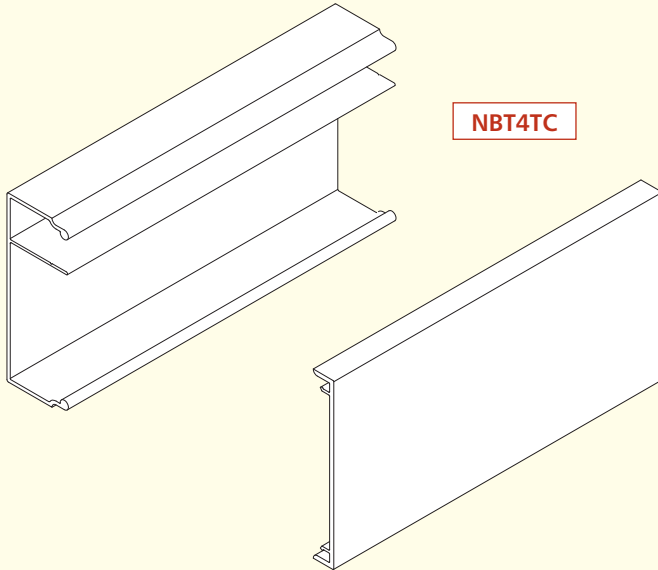
### Accessories

- ⑧ The 'clip on' accessory mounting frames will accept most standard one and two gang socket plates and socket mounting with back box enables telephone circuitry to be segregated from other services.



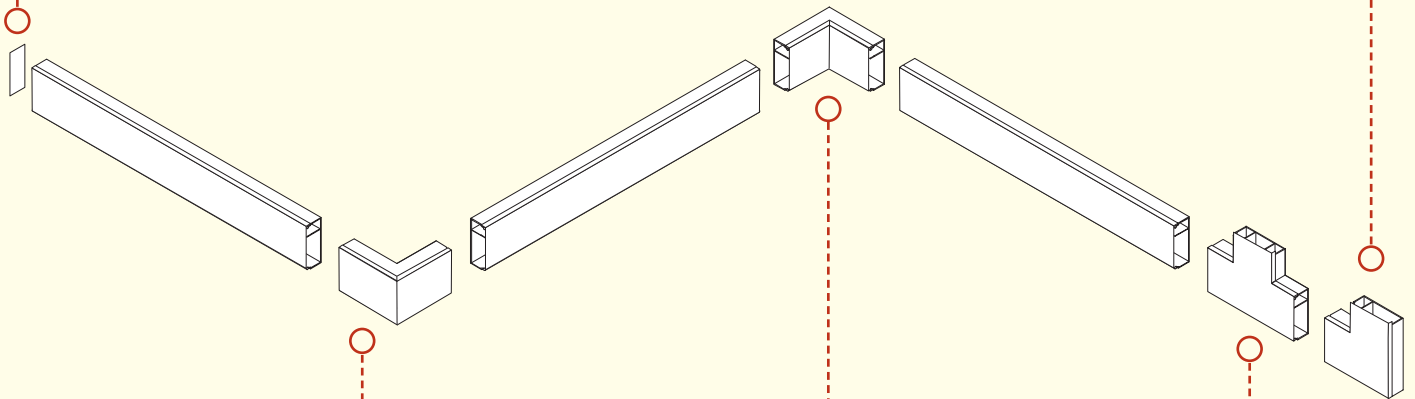
# Trunking

## Component selection guide



Profile	End Cap
100 x 25mm (NBT3 & NBT3TC)	NEP3
100 x 40mm (NBT4 & NBT4TC)	NEP4

Profile	Flat Angle
<b>Single</b>	
100 x 25mm (NBT3)	NAF3
100 x 40mm (NBT4)	NAF4
<b>Twin – Compartment to outside</b>	
100 x 25mm (NBT3TC)	NAF3TC
100 x 40mm (NBT4TC)	NAF4TC
<b>Twin – Compartment to inside</b>	
100 x 25mm (NBT3TC)	NAF3TCSI
100 x 40mm (NBT4TC)	NAF4TCSI



Profile	Ext Corner
100 x 25mm (NBT3)	NAE3
100 x 40mm (NBT4)	NAE4
100 x 25mm (NBT3TC)	NAE3TC
100 x 40mm (NBT4TC)	NAE4TC

Profile	Int Corner
100 x 25mm (NBT3)	NAI3
100 x 40mm (NBT4)	NAI4
100 x 25mm (NBT3TC)	NAI3TC
100 x 40mm (NBT4TC)	NAI4TC

Profile	Flat Tee
100 x 25mm (NBT3)	NTF3
100 x 40mm (NBT4)	NTF4
100 x 25mm (NBT3TC)	NTF3TC
100 x 40mm (NBT4TC)	NTF4TC

technical hotline +44 (0)1268 563720



Echo switch (transmitter) - Edge polished chrome

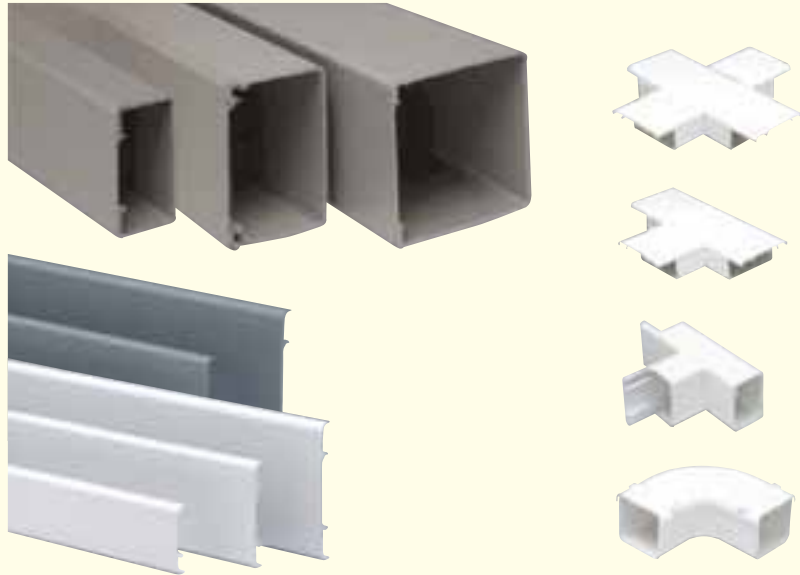
Available on a worldwide basis, the MK Design Service is supported by a dedicated team to ensure the seamless delivery of your chosen products. To find out more visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)

## Industrial Trunking

### Features

- Wide range of trunking sizes and capacity
- Wide range of integrated components maximises versatility of application
- Available in white or grey
- Extremely durable and impact resistant to Heavy Classification BS 4678, Part 4
- Easy to assemble and install
- All trunking fittings are supplied plain without couplings to avoid wastage
- External couplings strengthen the trunking and internal coupling pieces
- All extrusions manufactured from 90% recycled material\*

Specified sizes, pages 360-361.



### Technical specification

#### Materials

PVCu materials used in the manufacture of MK products are self extinguishing non-flame propagating in accordance with BS 4678 Part 4.

Extrusion material has been tested by a UKAS accredited laboratory in accordance with the requirements of BS476: part 7 and has achieved a Class 1Y.

Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695-2-1 at a severity of 650°C

#### IEE Wiring Regulations

Designed and manufactured to comply in all respects with BS 7671: 2008 (IEE wiring regulations 17th Edition: 2008)

#### Quality Assurance

The system is manufactured to BS EN ISO 9001

### Description

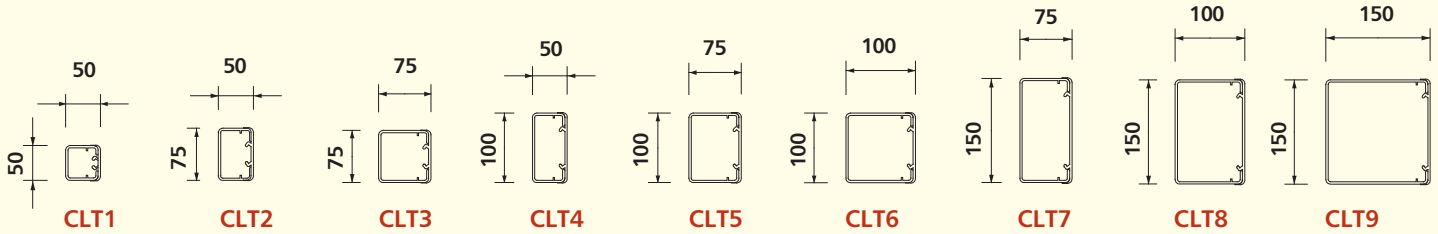
Ega Industrial trunking is a PVCu heavy duty system available in white or grey, used extensively for industrial wiring purposes. It is available in a large variety of sizes and has found wide acceptance throughout the world. Its durability, safety and strength are well proven.

Nine basic sizes are available ranging from 50 x 50 mm to 150 x 150 mm complete with a comprehensive variety of fittings. The trunkings have a simple clip on cover which positively locates when hand pressure is applied and enables fast, efficient installation.

\* Based on 2008 consumption



## Industrial Trunking

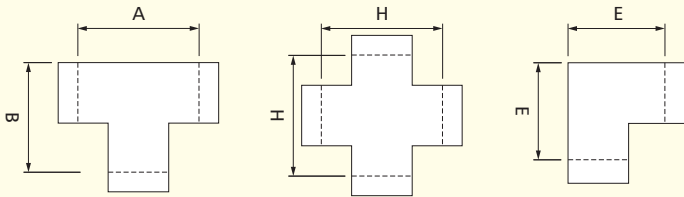


EGA INDUSTRIAL CABLE CAPACITY																					
Type of Conductor	Size	Cable Factor	CLT1	CLT2	CLT3	CLT4	CLT5	CLT6	CLT7	CLT8	CLT9										
			<b>Full Term CSA 100%Fill (mm<sup>2</sup>)</b>																		
			2130	3312	5117	4408	6841	9270	10446	14175	21566										
			<b>Term at 45% Fill (mm<sup>2</sup>)</b>																		
			958	1490	2302	1983	3078	4171	4700	6378	9704										
<b>Power Cables</b>			<b>Number of Cables at 45% Fill</b>																		
PVC Stranded	1.5mm <sup>2</sup>	8.6	111	173	267	230	357	485	546	741	1128										
	2.5mm <sup>2</sup>	12.6	76	118	182	157	244	331	373	506	770										
	4mm <sup>2</sup>	16.6	57	89	138	119	185	251	283	384	584										
	6mm <sup>2</sup>	21.2	45	70	108	93	145	196	221	300	457										
<b>Data Cables</b>			<b>Number of Cables at 45% Fill (a) and Full Capacity (b)</b>																		
			a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	
Cat5E UTP	5.5mm dia.	30.2	31	70	49	109	76	169	65	145	101	226	138	306	155	345	211	469	321	714	
Cat5E STP	6.0mm dia.	36.0	26	59	41	92	63	142	55	122	85	190	115	257	130	290	177	393	269	599	
Cat6 UTP	6.5mm dia.	42.2	22	50	35	78	54	121	46	104	72	162	98	219	111	247	151	335	229	511	
Cat6 STP	7.0mm dia.	49.0	19	43	30	67	46	104	40	89	62	139	85	189	95	213	130	289	198	440	

## Industrial Trunking

### Components

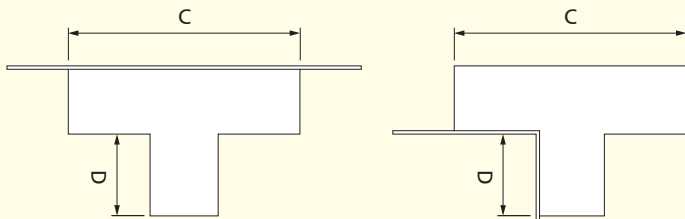
The following components are fabricated sections and space must be allowed for inclusion in runs of trunking. All other components fit over standard trunking profiles.



Flat Tee (FTF)

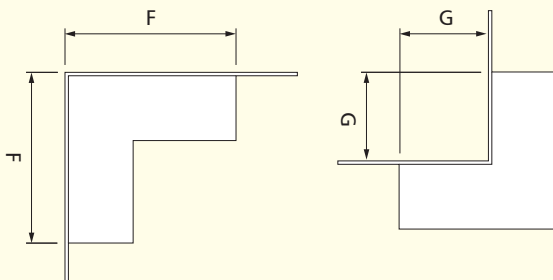
Flat Cross (FCU)

Flat Angle (FAF)



Internal Tee (FTI)

External Tee (FTE)



Internal Corner (FAI)

External Corner (FAE)

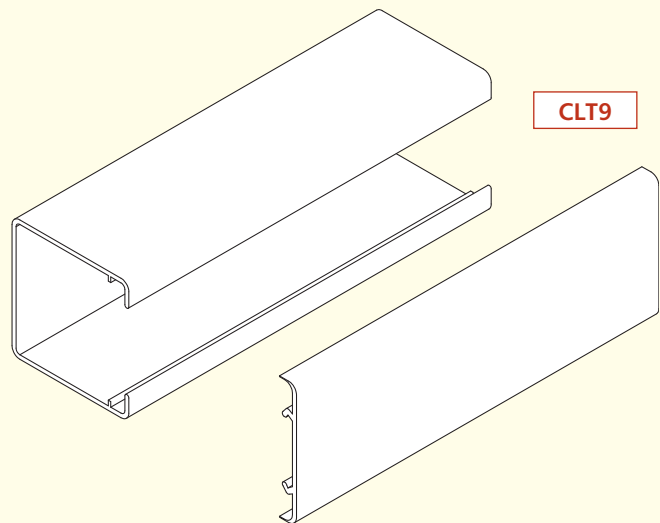
### DIMENSIONS

#### List. No. Components dimensions (mm)

CLT/	A	B	C	D	E	F	G	H
CLT1	*100	*90	170	60	*80	*125	*65	*100
CLT2	*150	*115			115	110	60	*150
CLT3	*150	*115	225	75	*115	150	75	*150
CLT4	220	160	170	60	160	110	60	220
CLT5	250	175			175	150	75	250
CLT6	250	175	250	75	175	175	75	250
CLT7	330	240			240	165	90	330
CLT8	380	265			265	215	115	380
CLT9	380	265			265	265	115	380

\* indicates moulded items

### Component selection guide



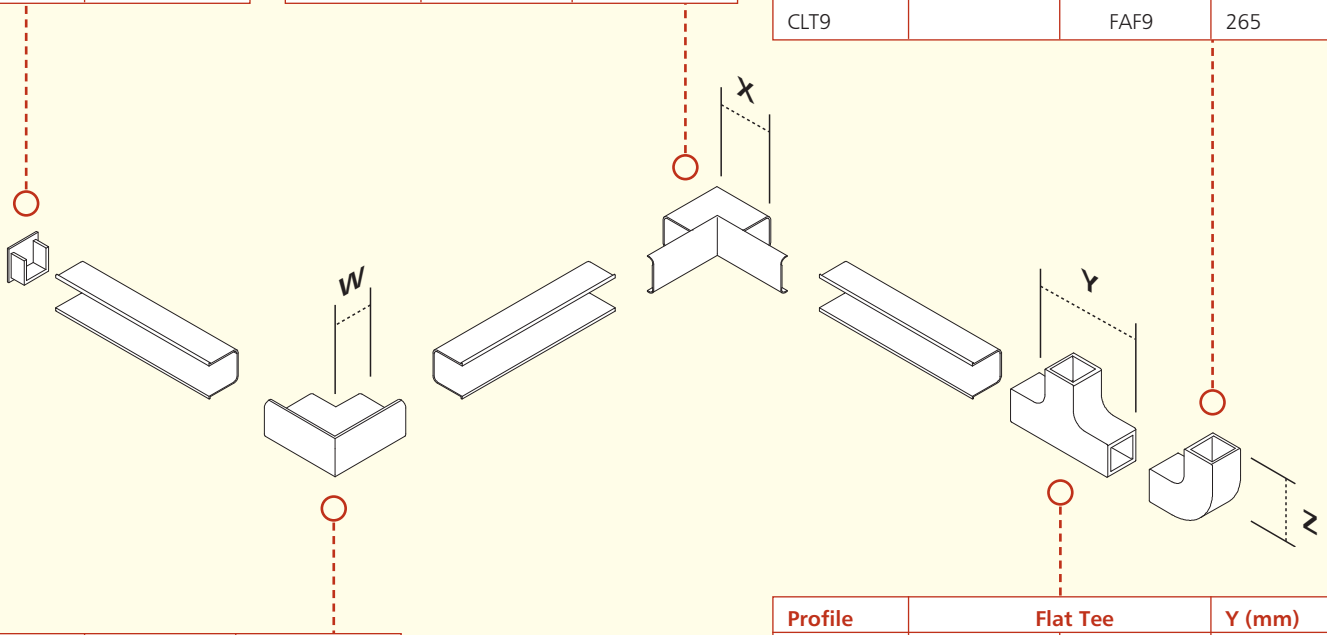
## Industrial Trunking

### Component selection guide

Profile	End Cap
CLT1	TEP1
CLT2	TEP2
CLT3	TEP3
CLT4	TEP4
CLT5	TEP5
CLT6	TEP6
CLT7	TEP7
CLT8	TEP8
CLT9	TEP9

Profile	Int Corner	X (mm)
CLT1	FAI1	125
CLT2	FAI2	110
CLT3	FAI3	150
CLT4	FAI4	110
CLT5	FAI5	150
CLT6	FAI6	175
CLT7	FAI7	165
CLT8	FAI8	215
CLT9	FAI9	265

Profile	Flat Angle		Z (mm)
	Moulded	Fabricated	
CLT1		FAF1	125
CLT2		FAF2	110
CLT3		FAF3	150
CLT4		FAF4	110
CLT5		FAF5	150
CLT6		FAF6	175
CLT7		FAF7	165
CLT8		FAF8	215
CLT9		FAF9	265



Profile	Ext Corner	W (mm)
CLT1	FAE1	65
CLT2	FAE2	60
CLT3	FAE3	75
CLT4	FAE4	60
CLT5	FAE5	75
CLT6	FAE6	75
CLT7	FAE7	90
CLT8	FAE8	115
CLT9	FAE9	115

Profile	Flat Tee		Y (mm)
	Moulded	Fabricated	
CLT1		FTF1	170
CLT2		FTF2	170
CLT3		FTF3	225
CLT4		FTF4	170
CLT5		FTF5	225
CLT6		FTF6	250
CLT7		FTF7	255
CLT8		FTF8	330
CLT9		FTF9	380

# Industrial Trunking

## Installation guide

### General notes

Prior to installation strike a line of trunking using a plumb and chalk line for vertical, and spirit levels for horizontal runs.

### Fixing

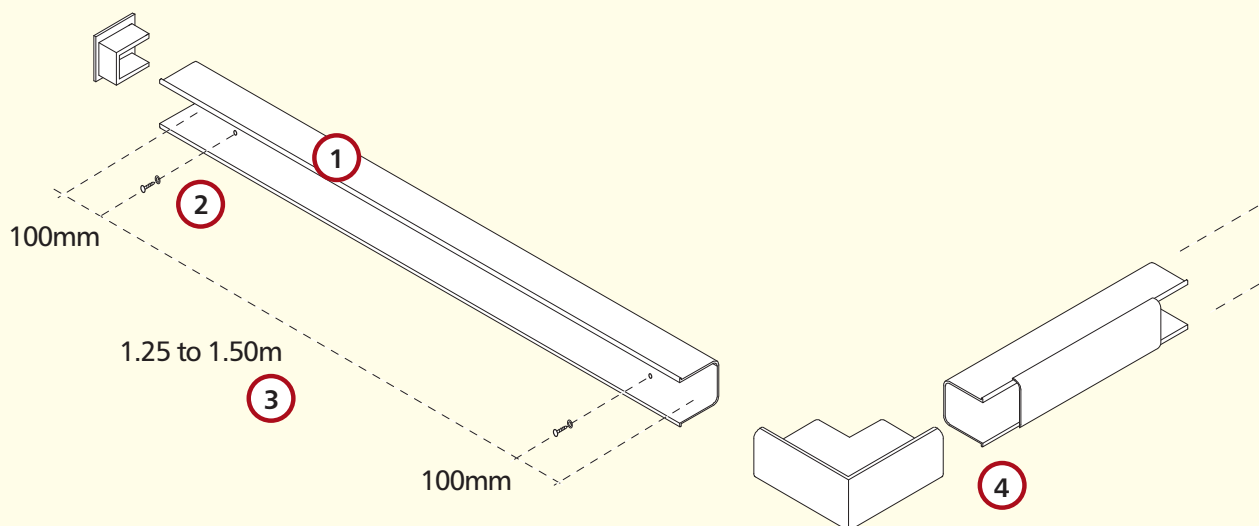
- ① Fix trunking with screws or gas nail gun. It is essential that the hole in the trunking is considerably oversized to allow for expansion.
- ② Washers should be used under the head of the screw. The screw should not be tightened to its full extent to allow for movement.
- ③ For suspended trunking it is advisable to provide fixings every 1.25 m to 1.5 m and a maximum of 100mm either side of coupling.
- ④ Trunking and lid joints should be staggered to increase the strength of couplings.

### Fixing lids

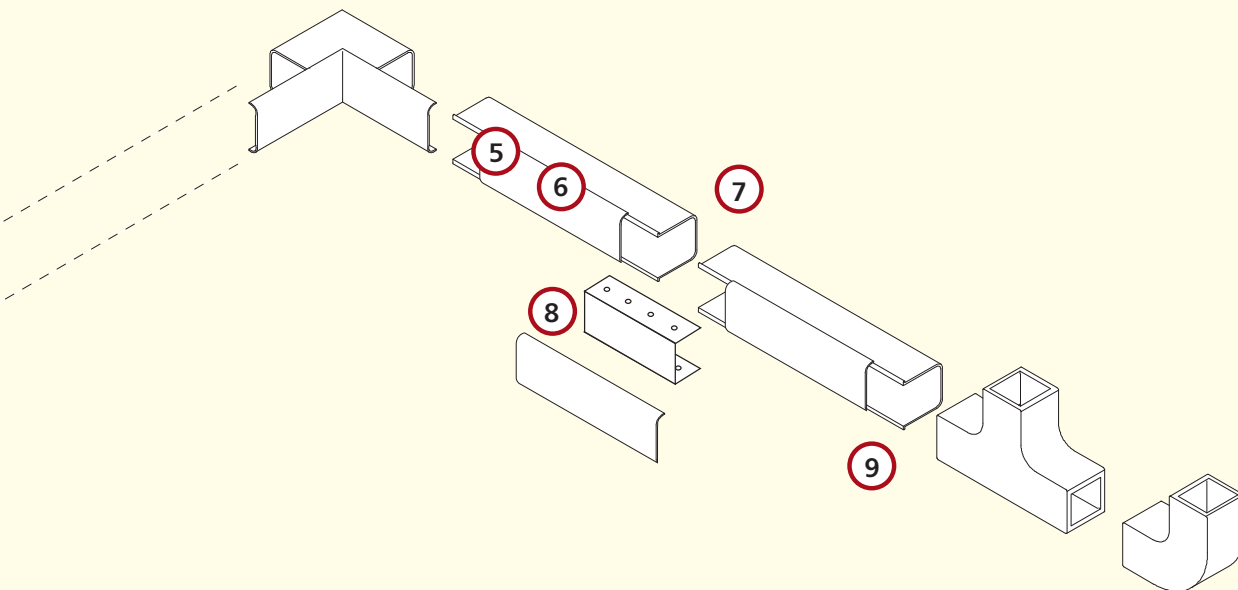
- ⑤ Fix lid by sliding it onto the trunking at one end, aligning it to the run of trunking and then curving the cover at the same time as pressing the continuous clip into the trunking gap.
- ⑥ To remove lid grasp the trunking firmly at one end and pull in peeling motion so that the cover is gradually freed along its whole length.

### Joining fittings

- ⑦ Drill trunking with a 7.2mm drill. Bridge pieces are available for retaining the cable in the trunking and the special corrugated shape allows them to be used as a support for dividing fillets required within the trunking.
- ⑧ External couplings are fitted by means of the special plastic rivet (ref: TPR/1). To connect couplings to trunking the trunking must be drilled centrally, size 7.2mm, and the rivet inserted.
- ⑨ Economical joints can be made using a vinyl adhesive tape especially where added strength is obtained by the lid and trunking being joined in different positions. The joint created is weather resistant and is ideal for surface installation and in conditions of wide temperature variations.



## Industrial Trunking



## Cornice Trunking

### Features

- Two trunking profiles
- Wide range of integrated components maximises versatility of application
- Fully compatible with Ega Mini Trunking systems
- Neat and unobtrusive
- Accessories designed to overlap edge of trunking cover, hiding joint line
- Easy to assemble and install
- Durable and impact resistant to Medium Classification BS 4678 Part 4
- All extrusions manufactured from 90% recycled material\*

### Technical specification

#### Materials

PVCu materials used in the manufacture of MK products are self extinguishing non-flame propagating in accordance with BS 4678 Part 4.

Extrusion material has been tested by a UKAS accredited laboratory in accordance with the requirements of BS 476 Part 7 and has achieved a Class 1Y.

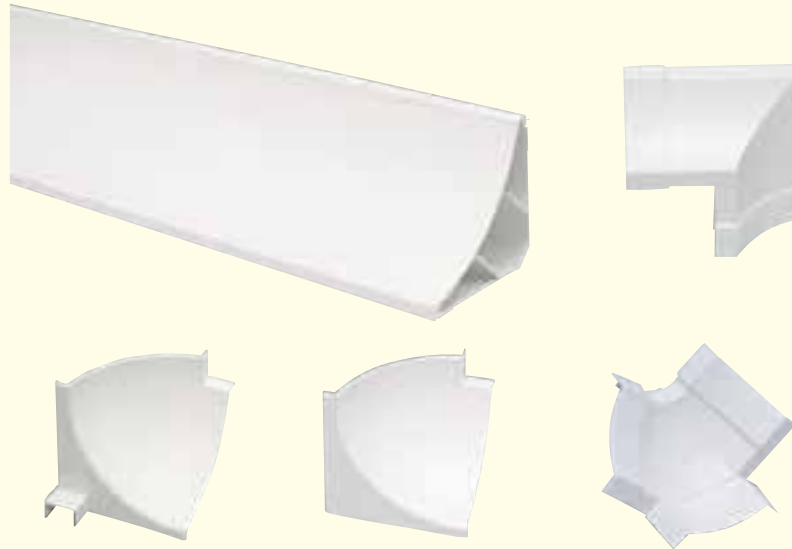
Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695-2-1 at a severity of 650°C

#### IEE Wiring Regulations

Designed and manufactured to comply in all respects with BS 7671: 2008 (IEE wiring regulations 17th Edition: 2008)

#### Quality Assurance

The system is manufactured to BS EN ISO 9001



### Description

Ega Standard and Compact Cornice Trunking Systems are manufactured from PVCu. They are designed to be mounted on interior surfaces, at the interface of wall and ceiling for the protection of electrical cables.

Standard trunking consists of a base, containing three separate compartments, and a common cover. Compact trunking has a single compartment.

Both types are compatible with Ega Mini Trunking.

The smaller, single compartment trunking is ideal for domestic rewires, whereas the larger three compartment trunking is best suited to commercial and sheltered housing applications.

Various types of services can be accommodated, such as mains wiring, lighting circuits, alarm warden call systems and data.

The system is available in a standard white colour.

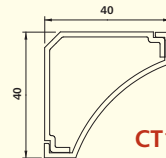
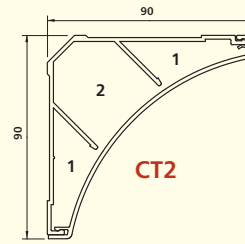
\* Based on 2008 consumption

technical hotline +44 (0)1268 563720

perimeter and distribution | cable management

EGA CORNICE CABLE CAPACITY								
Type of Conductor	Size	Cable Factor	CT1	CT2 Cmpt 1	CT2 Cmpt 2			
			<b>Full Term CSA 100% Fill (mm<sup>2</sup>)</b>					
			755	636	1441			
			<b>Term at 45% Fill (mm<sup>2</sup>)</b>					
			339	286	648			
Power Cables		Number of Cables at 45% Fill						
PVC Stranded	1.5mm <sup>2</sup>	8.6	39	33	75			
	2.5mm <sup>2</sup>	12.6	26	22	51			
	4mm <sup>2</sup>	16.6	20	17	39			
	6mm <sup>2</sup>	21.2	15	13	30			
Data Cables		No. of Cables at 45% Fill (a) and Full Capacity (b)						
			a	b	a	b	a	b
Cat5E UTP	5.5mm dia.	30.2	11	25	9	21	21	47
Cat5E STP	6.0mm dia.	36.0	9	20	7	17	18	40
Cat6 UTP	6.5mm dia.	42.2	8	17	6	15	15	34
Cat6 STP	7.0mm dia.	49.0	6	15	5	12	13	29

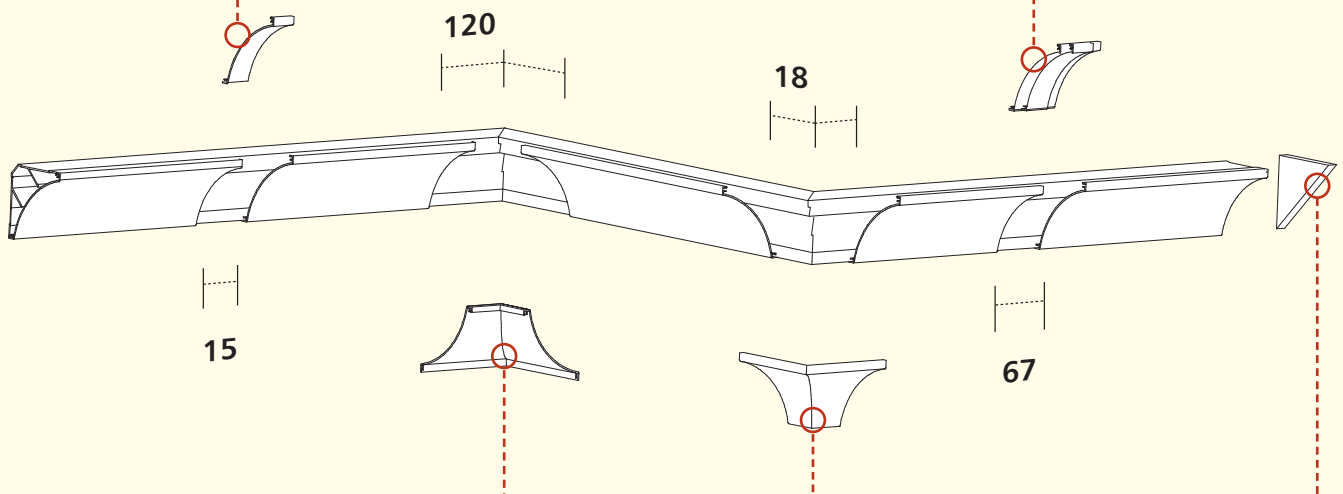
Dimensions (mm)



Component selection guide (dimensions in mm)

Profile	Joint Cover
40 x 40mm (CT1)	JJC1
90 x 90mm (CT2)	JJC2

Profile	Mini Trunking Adaptor
40 x 40mm (CT1)	CA1
90 x 90mm (CT2)	CA2



Profile	Int Corner
40 x 40mm (CT1)	CIP1
90 x 90mm (CT2)	CIP2

Profile	Ext Corner
40 x 40mm (CT1)	CXP1
90 x 90mm (CT2)	CXP2

Profile	End Cap
40 x 40mm (CT1)	CEP1
90 x 90mm (CT2)	CEP2

## Cornice Trunking

### Installation guide

#### General notes

Prior to installation strike a line of trunking using a plumb and chalk line for vertical, and spirit levels for horizontal runs.

#### 1 Installation

- a Separate the cover from the backing. Measure the walls and cut trunking base to length making due allowance for external corner mitres. Fix base to wall/ceiling using woodscrews or bolts, with large washers. Oversized holes must be drilled to allow for expansion.
- b The base should be fixed to both wall and ceiling at 500mm intervals giving a staggered arrangement

#### 2 Spurs

- a Spurs from the main Cornice trunking across ceilings or down walls are made using a Mini Trunking Adaptor (CA1 for Compact or CA2 for Standard) in conjunction with the appropriately sized Mini Trunking spout adaptor.
- b In Standard Cornice, the cable retaining strap enables cables to be segregated from other services used in conjunction with a mini trunking adaptor. A hole of 25mm or less must be drilled and the cable should be looped through the aperture as shown. A cable retaining strap is also available for Compact Cornice.

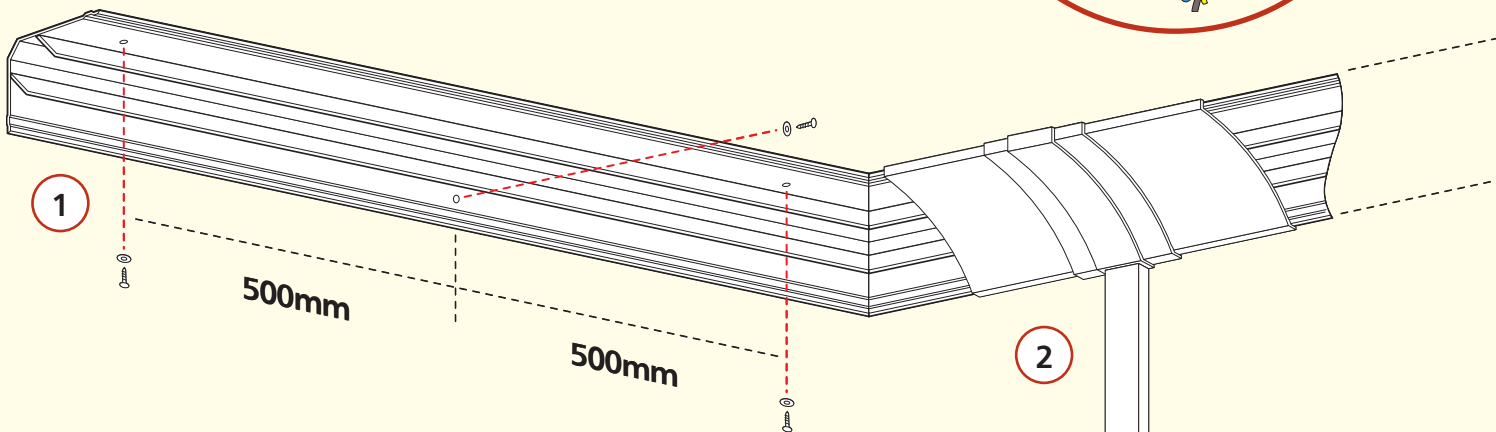
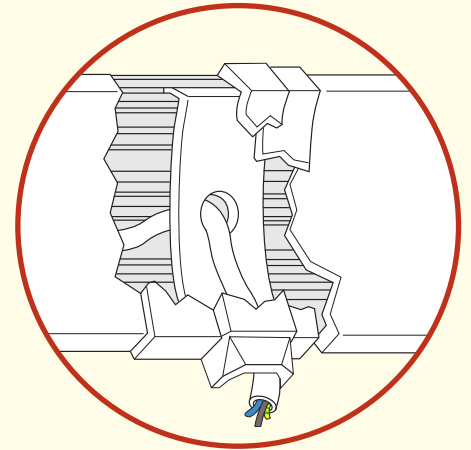
Locate ceiling and wall spur then mark base to indicate the end of the lid run. Fit Ega Mini Trunking as appropriate using the relevant Mini Trunking spout adaptor (YEA). Install wiring using retaining strap(s) as necessary.

#### 3 Corners and Accessories

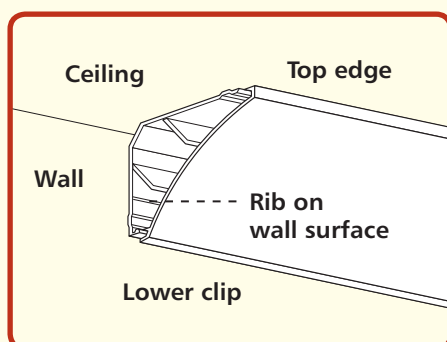
- a Mitre base to ensure moulded accessories fit. Cut lid square having made suitable allowance for the width of the accessories and the overlap required to fit under joint covers.

- b All fittings clip onto an exposed section of the trunking base. Allow suitable gaps in trunking lid.

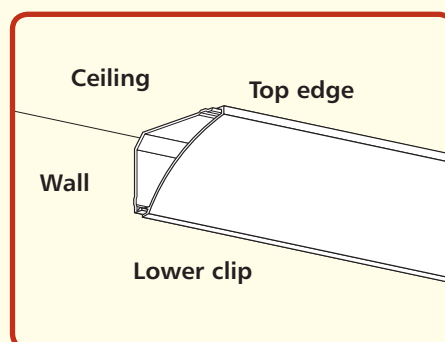
Mark the base with position and width of the accessories and cut the lid the appropriate length, taking due notice of the gap allowances. (Standard Cornice shown).



#### Standard Cornice



#### Compact Cornice





## 4 Covers

**Installation** – Locate the top edge, adjacent to the ceiling, with upper back clip.

The lower clip is then fitted by exerting pressure against the front face, pushing towards the wall (Standard Cornice Shown).

**Removal** – Gain access to the interior of the trunking. Remove one of the accessory mouldings and carefully insert screwdriver, under the top edge and lever forward so as to disengage clip.

In restricted spaces, engage a hook behind the ceiling edge of the cover, and pull forward to disengage.

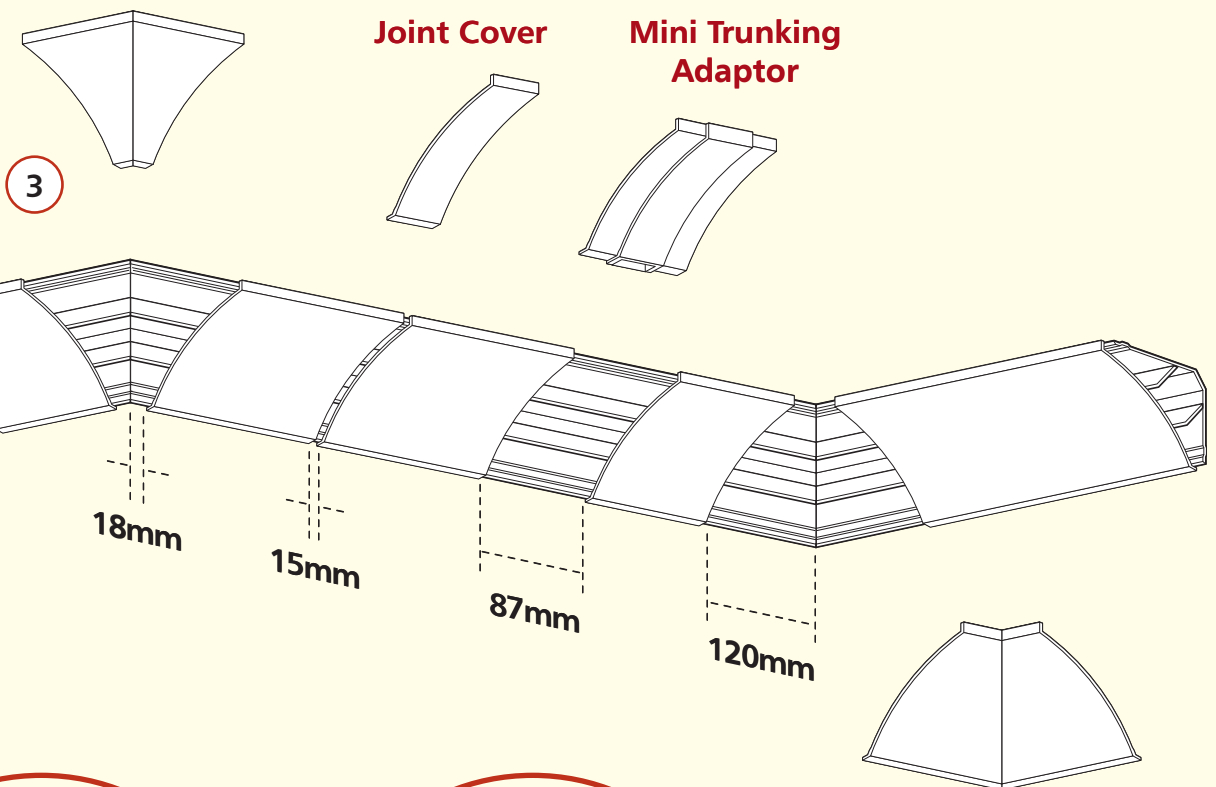
The lower clip is then disengaged in the same way.

## Notes

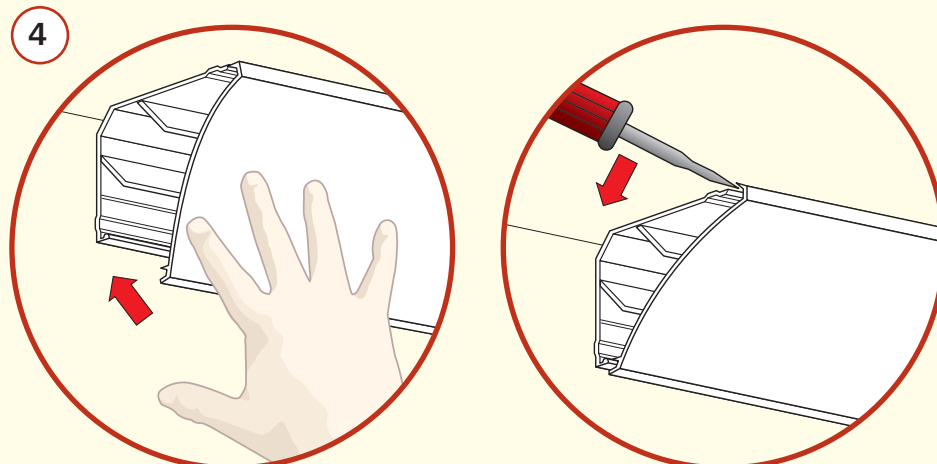
**Jointing** – Where gaps occur, a gap of 5mm must be left between base sections to allow for expansion. The cover must overlap this joint by a minimum of 50mm.

**Finishing** – In circumstances where the wall or ceiling is uneven, a flexible sealer or mastic can be used to fill any gaps which occur along the edge of the trunking. Relief finishes, such as Artex, must be smoothed down with a spatula, for a width of 25mm minimum, along the line of the trunking in order to enable cover removal.

### External Corner



### Internal Corner



## Conduit and fittings

### Features

- Wide range of sections and sizes
- Oval, round and corrugated sections are compatible
- Simple and fast installation
- Very wide range of components maximises versatility of application
- Very durable and impact resistant
- 3 grades of round conduit to suit various site conditions
- All extrusions manufactured from 90% recycled material\*



### Technical specification

#### Materials

PVCu materials used in the manufacture of MK products are self extinguishing non-flame propagating in accordance with BS 4678 Part 4.

Extrusion material has been tested by a UKAS accredited laboratory in accordance with the requirements of BS 476 Part 7 and has achieved a Class 1Y.

Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695-2-1 at a severity of 650°C

#### IEE Wiring Regulations

Designed and manufactured to comply in all respects with BS 7671: 2008 (IEE wiring regulations 17th Edition: 2008)

#### Quality Assurance

The system is manufactured to BS EN ISO 9001

### Description

Eगतube high impact PVCu conduit offers a cost effective solution for both new and refurbishment contracts.

The conduit is available in oval sections (5 sizes), in 3 grades of round section (6 sizes of each) and as a flexible corrugated version (4 sizes).

The wide range of fittings and ancillary products means that almost any installation can be specified for with confidence.

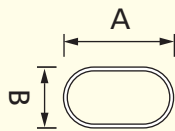
Eगतube conduits are light in weight, the smaller sizes can be bent cold and they can easily be cut using a hacksaw or Egasnips. This means that installation can be 50% quicker than using steel. Repairs and alterations are also simpler and quicker to make.

\* Based on 2008 consumption

## Conduit and fittings

### Dimensions (mm)

#### Oval section conduit (ref EOC)



Oval conduit is mainly used for switch drops and general domestic installations in both buried and surface installations. Manufactured in accordance with requirements of BS 4607 Part 5 and BS EN 50085 Part 1 and Part 2-1.

List. No.	Size mm A B	Wall thickness mm	Weight kg/m	Cross section area mm <sup>2</sup>
EOC1	13 8	0.9	0.036	60
EOC2	16 10	0.9	0.049	103
EOC3	22.5 11	0.9	0.084	172
EOC4	29 11	1.0	0.097	225
EOC5	29 16	1.0	0.125	336
EOC6	23 14	0.8	0.081	238

Standard length 3 metres.

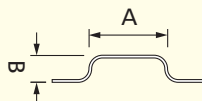
Flexible conduit (ref EF)

Suitable for connection of vibrating equipment or to provide tight bends for interconnecting conduits. Can be surface mounted or cast in concrete and can be used with standard conduit fittings. Manufactured in accordance with BS EN 61386-1.

List. No.	Diameter mm	Weight kg/m	Cross section area mm <sup>2</sup>
EF1	16	0.05	107
EF2	20	0.064	189
EF3	25	0.094	308

Standard lengths 50 metre coils.

#### Rectangular channelling (ref REC)

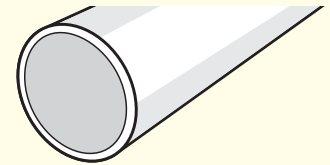


Used for switch drops and general domestic installations mainly in carcass situations.

List. No.	Size mm A B	Wall thickness mm	Weight kg/m
REC1	12.5 8	0.9	0.047
REC2	25 8	0.9	0.051
REC3	38 9.5	0.9	0.069

Standard length 2 metres.

#### Round section heavy gauge high impact conduit (ref. HIP)



This is acknowledged to be the finest PVCu conduit available and is designed to withstand the most arduous site conditions and extremes of weather.

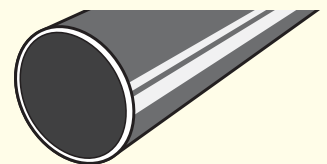
Temperature range  $-5^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ .

Complies with BS EN 61386 Part 1 Heavy Impact.

List. No.	Outside diameter mm	Wall thickness mm	Weight kg/m	Cross section area mm <sup>2</sup>
HIP1	16	1.7	0.102	121
HIP2	20	1.8	0.150	209
HIP3	25	1.9	0.205	350
HIP4	32	2.5	0.322	573
HIP5	38	2.5	0.394	859
HIP6	50	3.1	0.684	1506

Standard lengths 3 metres.

#### Round section light gauge high impact conduit (ref. HLG)



Suitable for applications where heavy compressive strength is not required. The high impact characteristic combined with the lighter gauge provides excellent physical properties for flush and surface applications.

Temperature range  $-5^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ .

Complies with BS EN 61386 Part 1 Heavy Impact.

List. No.	Outside diameter mm	Wall thickness mm	Weight kg/m	Cross section area mm <sup>2</sup>
HLG1	16	1.1	0.076	143
HLG2	20	1.3	0.102	237
HLG3	25	1.5	0.170	376
HLG4	32	1.5	0.214	654
HLG5	38	1.5	0.259	954
HLG6	50	1.9	0.417	1676

Standard lengths 3 metres

## Conduit and fittings

### Cable capacities of conduit

#### 17th Edition of the I.E.E. Wiring Regulations Selection and Erection of Wiring Systems

The 17th Edition of the Wiring Regulations, Chapter 52 'Selection and Erection of Wiring Systems', describes methods to provide a means of compliance with Regulation 522-8.

The number of cables drawn into or laid in an enclosure of a wiring system shall be such that no damage is caused to the cables or to the enclosure during their installation.

The method employs a unit system, each cable size being allocated a factor. The sum of all factors for the cables intended to be run in the same enclosure is compared against the factors given for conduit in order to determine the size of the conduit necessary to accommodate those cables.

#### Types of run

It has been found necessary, for conduit, to distinguish between:-

1. Straight runs not exceeding 3 metres in length, and
2. Straight runs exceeding 3 metres, or runs of any length incorporating bends or sets

The term "bend" signifies a British Standard 90° bend, and one double set is equivalent to one bend.

For case 1, each conduit size is represented by only one factor. For case 2, each conduit size has a variable factor which is dependent on the length of run and the number of bends or sets. For a particular size of cable the factor allocated to it for case 1 is not the same as for case 2.

### Variable factors

A number of variable factors affect any attempt to arrive at a standard method of assessing the capacity of conduit.

Some of these are:

- reasonable care (of drawing-in)
- acceptable use of the space available
- tolerance in cable sizes
- tolerance in conduit

The following tables can only give guidance as to the maximum number of cables which should be drawn in. The sizes should ensure an easy pull with low risk of damage to the cables.

Only the ease of drawing-in is taken into account. The electrical effects of grouping is not. As the number of circuits increases the current carrying capacity of the cable decreases. Cable sizes have to be increased with consequent increase in cost of cable and conduit.

Single-core PVC insulated cables in straight runs of conduit not exceeding 3 metres in length.

- For each cable it is intended to use, obtain the term from Table A1.
- Add the cable terms together and compare the total with the conduit terms given in Table A2.
- The conduit size which will satisfactorily accommodate the cables is that size having a factor equal to or exceeding the sum of the cable factors

Single-core PVC insulated cables in straight runs of conduit exceeding 3 metres in length or in runs of any length incorporating bends or sets

- For each cable it is intended to use, obtain the appropriate terms from Table A3.
- Add all the cable terms so obtained and compare with the conduit terms given in Table A4, taking into account the length of run it is intended to use and the number of bends and sets in that run.
- The conduit size which will satisfactorily accommodate the cables is that size having a terms equal to or exceeding the sum of the cable terms.

## Conduit and fittings

TABLE A1		
Cable terms for short straight runs		
Type of conductor	Conductor cross-sectional area (mm <sup>2</sup> )	Term
Solid	1	22
	1.5	27
	2.5	39
Stranded	1.5	31
	2.5	43
	4	58
	6	88
	10	146
	16	202
	25	385

TABLE A2	
Conduit terms for short straight runs	
Conduit dia (mm)	Term
16	290
20	460
25	800
32	1400
38	1900
50	3500

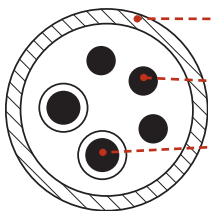
CAPACITY EXAMPLE	
<b>Number of cables for a 3.0 metre run with three bends</b>	
	<p><b>CONDUIT</b> 20mm dia. (Term 182) Table A4</p> <p><b>CABLE SOLID</b> 2.5mm<sup>2</sup> (3 qty) (Term 30) Table A3</p> <p><b>CABLE STRANDED</b> 4.0mm<sup>2</sup> (2 qty) (Term 43) Table A3</p> <p>Term total – (30+30+30)+(43+43) = <b>176</b></p>
The conduit size is satisfactory (Term 182) to accommodate the cables shown (Term 176).	

TABLE A3		
Cable terms for long straight runs, or runs incorporate bends		
Solid or stranded conductor	Conductor cross-sectional area mm <sup>2</sup>	Term
	1	16
	1.5	22
	2.5	30
	4	43
	6	58
	10	105
	16	145
	25	217

TABLE A4																				
Conduit terms for long straight runs, or runs incorporating bends																				
Length of run (m)	Conduit dia mm																			
	16	20	25	32	16	20	25	32	16	20	25	32	16	20	25	32	16	20	25	32
	Straight				One bend				Two bends				Three bends				Four bends			
1					188	303	543	947	177	286	514	900	158	256	463	818	130	213	388	692
1.5					182	294	528	923	167	270	487	857	143	233	422	750	111	182	333	600
2					177	286	514	900	158	256	463	818	130	213	388	692	97	159	292	529
2.5					171	278	500	878	150	244	442	783	120	196	358	643	86	141	260	474
3					167	270	487	857	143	233	422	750	111	182	333	600				
3.5	179	290	521	911	162	263	475	837	136	222	404	720	103	169	311	563				
4	177	286	514	900	158	256	463	818	130	213	388	692	97	159	292	529				
4.5	174	282	507	889	154	250	452	800	125	204	373	667	91	149	275	500				
5	171	278	500	878	150	244	442	783	120	196	358	643	86	141	260	474				
6	167	270	487	857	143	233	422	750	111	182	333	600								
7	162	263	475	837	136	222	404	720	103	169	311	563								
8	158	256	463	818	130	213	388	692	97	159	292	529								
9	154	250	452	800	125	204	373	667	91	149	275	500								
10	150	244	442	783	120	196	358	643	86	141	260	474								

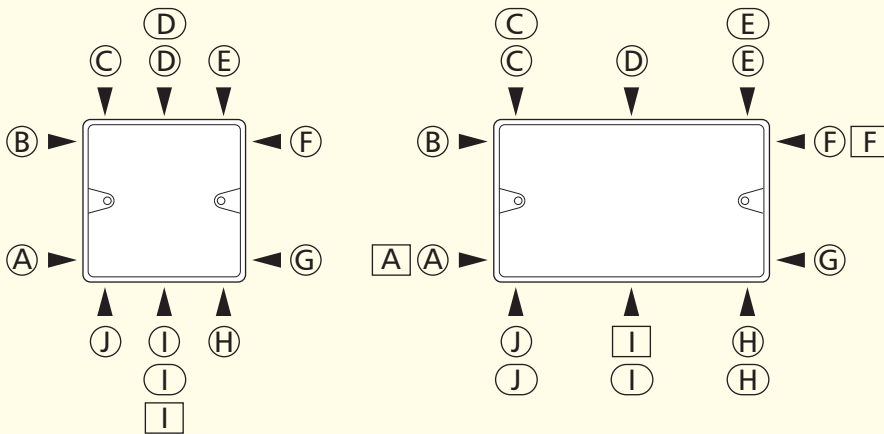
Covered by Tables A1 and A2

## Conduit and fittings

### Boxes

This table breaks down box specifications showing gang, entry points, cut outs and corner types.

List No.	Mounting	Gang	Entry Type			Cut-Outs in back	Corner
			Rectangular	Round	Oval		
ESU61	flush	1	-	-	DI	1	-
ESU81	flush	1	-	ABCEFGHJ	-	-	-
ESU8ML	flush	1	-	ABCEFGHJ	-	1	-
ESU82ML	flush	2	-	ABCDEFGHJ	I	2	-
ESU92ML	flush	2	-	BCDEGHJ	I	2	-
ESU9ML	flush	1	-	BCEGHJ	-	1	-
ESU241	surface	1	I	D	-	2	round
ESU242	surface	2	AFI	D	-	2	round
ESU261	surface	1	-	D	-	1	square
ESU262	surface	2	-	D	-	-	square
ESU281	surface	1	-	I	-	1	square
ESU282	surface	2	I	D	-	1	square



## Conduit and fittings

### Fixing

Egatube round conduit is fixed in the normal way with saddles or clips. (Various types of saddles are available). The distance between saddles should not exceed that stated in the following table, or less in hot temperatures.

Nominal Conduit Size (mm)	Maximum distance between Supports (m)	
	Horizontal	Vertical
Not exceeding 16	0.75	1.00
Exceeding 16 but not exceeding 25	1.5	1.75
Exceeding 25 but not exceeding 40	1.75	2.00
Exceeding 40	2.00	2.00

It is recommended that all boxes be fixed first wherever practicable, using the two fixing holes provided in circular boxes. Lines may then be struck for the saddle run and the saddles should be fixed 225mm on either side of bend or boxes. The tubing may then be 'sprung' into the box spouts. It will be noted that the saddles are designed to be a sliding fit on the conduit and it is important to see that all fixings should be sliding fits (see Expansion).

### Expansion

A rise in temperature of 25°C would cause an increase of 5mm in a 3 metre length of conduit. This may be ignored in flush work where the tube is bonded to the concrete or plaster.

In surface work, however, precautions must be taken or expansion will cause the tube to bow, although where bends and sets are close together these take up any expansion. Where long straight runs occur in conditions of varying temperatures, care must be taken to overcome problems by using expansion couplers. These are couplers of double normal length with a shoulder formed 19mm from one end. Conduit is secured into this end of about 75mm long which is a sliding fit over the other conduit. The other conduit is inserted about 50mm into the coupler leaving it free to move 25mm in either direction, which is ample for even the greatest extremes of temperature. For straight runs it is advisable to use an expansion coupling every 6 metres.

### Adhesives

#### Egaweld Plus

Waterproof for making watertight joints between PVC conduit, trunking and fittings.

A statement regarding COSHH regulations is available on the MK website – [www.mkelectric.co.uk](http://www.mkelectric.co.uk)

### Light fittings

When considering the use of totally enclosed lighting fittings, remember that the I.E.E. Wiring Regulations restrict the use of PVCu boxes to loads of 3 kg and a temperature of 60°C. When conditions in excess of these figures are anticipated, the use of either the heat resistant boxes or conduit boxes suffixed 'EL' are recommended.

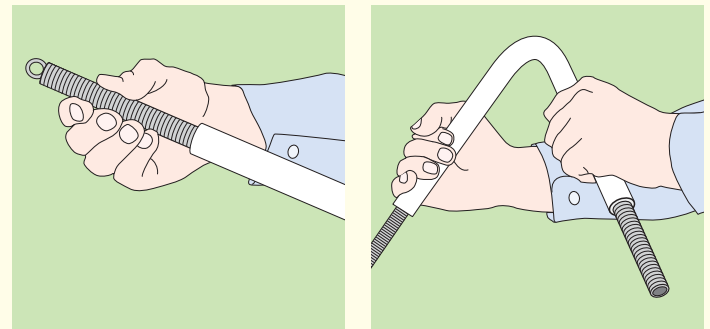
The "EL" conduit boxes will support a load of up to 10 kgs at 60°C.

### Fittings

A wide range of fittings are available, see Product Selector for details.

### Bending

To bend circular conduit, insert the appropriate spring. The spring has an "eye" formed on one end, to which a cord should be attached in order to withdraw the spring. The bend is then made by hand. Twice the angle required should be bent and the tube then allowed to ease back to the desired position. Do not attempt to force the bend back with the spring inserted, as this action will damage the spring. When withdrawing the spring it is suggested that it be twisted in an anti-clockwise direction thus reducing the diameter of the spring and providing easy withdrawal. It is important to use the correct size spring. In cold weather it may be necessary to warm the tube slightly at the point where the bend is to be made. Always saddle the tubing as quickly as possible after bending.



## Ega Mini, Communication and Red Alert Trunking

### Standards and approvals

EGA mini-trunking systems are manufactured in accordance with the requirements of BS EN 50085-1 and BS 4678 Part 4 and achieve medium impact classification.

Red Alert mini-trunking complies with the following:

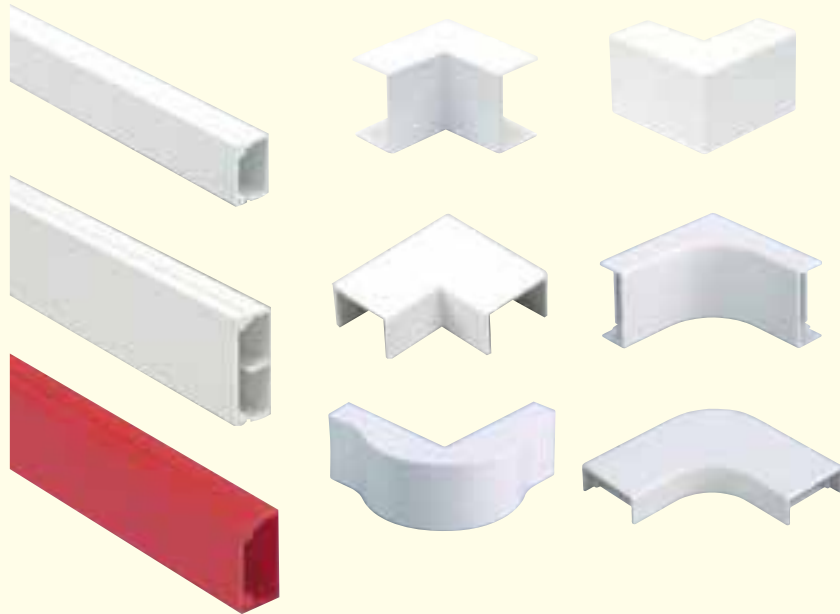
BS 5839 Fire detection and alarm systems in buildings (if used with fire product, ie. cables, cables must still be secured with metal securing clips **inside** trunking or trunking held with metal clip **around** trunking to comply with BS 5839 Part 1.)

BS 4662 Boxes for the enclosure of electrical accessories

BS EN 50085-1 and BS 4678 Part 4 Cable trunking made of insulating material.

All systems comply with all relevant requirements of the latest Edition of the IEE Wiring Regulations.

Ega Mini Trunking systems are Class 1Y for spread of flame when tested in accordance with BS 476 Part 7.



### Technical specification

#### Materials

PVCu materials used in the manufacture of MK products are self extinguishing non-flame propagating in accordance with BS 4678 Part 4.

Extrusion material has been tested by a UKAS accredited laboratory in accordance with the requirements of BS 476 Part 7 and has achieved a Class 1Y.

Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695-2-1 at a severity of 650°C

#### IEE Wiring Regulations

Designed and manufactured to comply in all respects with BS 7671: 2008 (IEE wiring regulations 17th Edition: 2008)

#### Quality Assurance

The system is manufactured to BS EN ISO 9001

### Features

- Wide range of trunking profiles
- Red Alert profile for alarm circuits
- Wide range of integrated components maximises versatility of application
- Unobtrusive and neat
- Easy to assemble and install
- Durable and impact resistant to Medium Classification BS EN 50085-1 and BS 4678 Part 4
- Communication trunking for voice and data
- Speedfix options allow fast installation
- All extrusions manufactured from 90% recycled material\*

\* Based on 2008 consumption



## Ega Mini, Communication and Red Alert Trunking

### Description

A range of trunking systems designed for cable distribution in new or refurbishment projects in the domestic and commercial sectors.



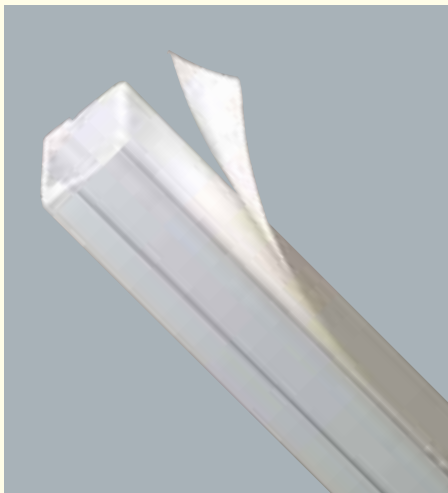
### Red Alert

Available in red, simplifies alarm circuit identification and is specifically designed for use with light duty mineral insulated cables.



### Communication trunkings

Designed to take smaller diameter telecommunications and data cabling. There are three sizes available and the systems are complete with a range of fittings.



### Speedfix trunkings

These are self-adhesive profiles used to distribute data and voice cabling.

All systems are compatible and have simple clip on lids which positively locate when hand pressure is applied.

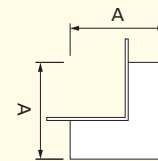


### Circular boxes

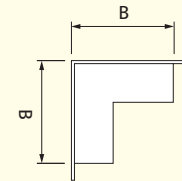
These are designed to accept standard ceiling roses, pull switches and plug-in lighting fittings. The base incorporates an earth terminal facility (order terminal separately). Red Alert bases are supplied with earth terminal. 50.8 mm fixing centres and M4 Pillar inserts. Load suspension 3 kg @ 60°C max.

### Components

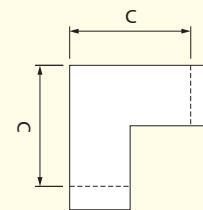
The four components shown below are fabricated sections and space must be allowed for inclusion in runs of trunking. All other components snap on over standard trunking profiles.



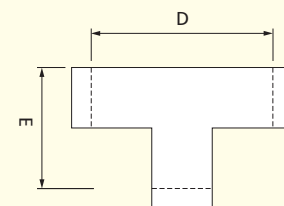
EXTERNAL CORNER (90°) YAE	
List No	A
YAE7	80mm



INTERNAL CORNER (90°) YAI	
List No	B
YAI7	50mm



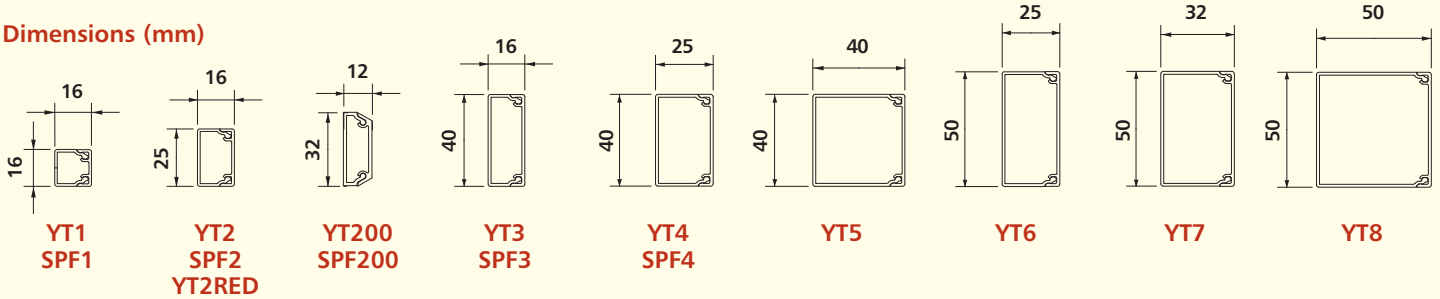
FLAT ANGLE (90°) YAF	
List No	C
YAF7	100mm



FLAT TEE (90°) YTF		
List No	D	E
YTF7	150mm	100mm

## Ega Mini, Communication and Red Alert Trunking

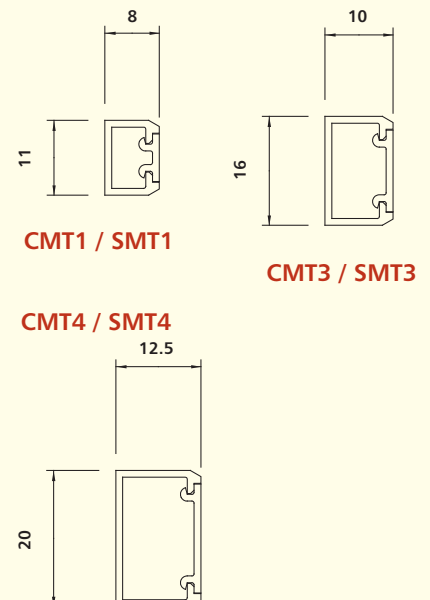
### Dimensions (mm)



EGA MINI AND RED ALERT CABLE CAPACITY																								
Type of Conductor	Size	Cable Factor	YT1 / SPF1	YT2 / SPF2 / YT2RED	YT200 / SPF200	YT3 / SPF3	ZT3 (each cmpt)	YT4 / SPF4	ZT4 (each cmpt)	YT5	YT6	YT7	YT8											
			<b>Full Term CSA 100% Fill (mm<sup>2</sup>)</b>																					
		154	276	234	458	224	795	387	1312	948	1273	2037												
			<b>Term at 45% Fill (mm<sup>2</sup>)</b>																					
		69	124	105	206	100	357	174	590	426	572	916												
Power Cables		Number of Cables at 45% Fill																						
PVC	1.5mm <sup>2</sup>	8.6	8	14	12	23	11	41	20	68	49	66	106											
Stranded	2.5mm <sup>2</sup>	12.6	5	9	8	16	7	28	13	46	33	45	72											
	4mm <sup>2</sup>	16.6	4	7	6	12	6	21	10	35	25	55												
	6mm <sup>2</sup>	21.2	3	5	4	9	4	16	8	27	20	43												
Data Cables		Number of Cables at 45% Fill (a) and Full Capacity (b)																						
		a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	
Cat5E UTP	5.5mm dia.	30.2	2	5	4	9	3	7	6	15	3	7	11	26	5	12	19	43	14	31	18	42	30	67
Cat5E STP	6.0mm dia.	36.0	1	4	3	7	2	6	5	12	2	6	9	22	4	10	16	36	11	26	15	35	25	56
Cat6 UTP	6.5mm dia.	42.2	1	3	2	6	2	5	4	10	2	5	8	18	4	9	13	31	10	22	13	30	21	48
Cat6 STP	7.0mm dia.	49.0	1	3	2	5	2	4	4	9	2	4	7	16	3	7	12	26	8	19	11	25	18	41

EGA COMMUNICATION CABLE CAPACITY											
Type of Conductor	Size	Cable Factor	CMT1 / SMT1		CMT3 / SMT3		CMT4 / SMT4				
			<b>Term CSA 100% Fill (mm<sup>2</sup>)</b>								
			44	102	156						
			<b>45% Fill (mm<sup>2</sup>)</b>								
			19	45	70						
Power Cables		Number of Cables at 45% Fill									
PVC Stranded	1.5mm <sup>2</sup>	8.6	2		5		8				
	2.5mm <sup>2</sup>	12.6	1	3	5						
	4mm <sup>2</sup>	16.6	1	2	4						
	6mm <sup>2</sup>	21.2	0	2	3						
Data Cables		Number of Cables at 45% Fill (a) and Full Capacity (b)									
			a	b	a	b	a	b			
Cat5E UTP	5.5mm dia.	30.2	0	1	1	3	2	5			
Cat5E STP	6.0mm dia.	36.0	0	1	1	2	1	4			
Cat6 UTP	6.5mm dia.	42.2	0	1	1	2	1	3			
Cat6 STP	7.0mm dia.	49.0	0	0	0	2	1	3			

### Dimensions (mm)



LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
<b>B</b>			CLT50LID	12m	360	ECG2*	100	366
BET1	50	371	CLT75LID	12m	360	ECG3BLK	50	366
BET2	50	371	CLT100LID	12m	360	ECG4BLK**	50	366
BMB2WHI	50	366	CLT150LID	12m	360	ECL2	100	367
BMS2WHI	50	367	CMA1WHI	25	384	ECL3	100	367
BOB3WHI	50	373	CMA3WHI	25	384	ECL4	50	367
<b>C</b>			CMA4WHI	25	384	ECL5	25	367
CA1	10	362	CMT1D1WHI	60m	384	ECL6	25	367
CA2	10	362	CMT1WHI	60m	384	ECR12	10	368
CAL22WHI	1	363	CMT3WHI	60m	384	ECR12EL	10	368
CAL23WHI	1	363	CMT4WHI	60m	384	ECT1	1	371
CAR22WHI	1	363	CO3WHI	50	373	EDC1	25	371
CAR23WHI	1	363	CO4WHI	50	373	EEB1BLK	5	370
CCP53BLK	1	223	CST1WHI	25	363	EEC1BLK	25	365
CCP133PBLK	1	223	CST2WHI	10	363	EEC2	100	365
CCP153BLK	1	223	CT1WHI	30m	362	EEC3	50	365
CEA2WHI	50	366	CT2WHI	12m	363	EEC4	10	365
CEP1WHI	10	363	CXP1WHI	10	363	EEC5	10	365
CEP2WHI	10	363	CXP2WHI	10	363	EEC6	10	365
CI1WHI	10	363	<b>D</b>			EER3	25	371
CIP1WHI	10	363	DRA10	1	371	EER5	25	371
CIP2WHI	10	363	DRA20	1	371	EER6	25	371
CJC1WHI	10	363	<b>E</b>			EER7	25	371
CJC2WHI	10	363	EBF2BLK	100	367	EER8	25	371
CLT1	12m	360	EBF3BLK	100	367	EER9	25	371
CLT2	12m	360	EBF4BLK	50	367	EF1WHI	50m	374
CLT3	12m	360	EBF5BLK	50	367	EF2WHI	50m	374
CLT4	12m	360	ECC1	50	365	EF3WHI	50m	374
CLT5	6m	360	ECC2	50	365	EFA2	100	366
CLT6	6m	360	ECC3	50	365	EFA3	50	366
CLT7	6m	360	ECC4	50	365	EFA4	25	366
CLT8	3m	360	ECC5WHI	50	365	EFA5	25	366
CLT9	3m	360	ECG1BLK	50	366	EFA6	10	366
						EGF5WHI	10	361

LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
EGF6WHI	10	361	EP2	100	367	ES5	50	365
EHL1GRY	100	367	EP2S	100	367	ES6	50	365
EHL2GRY	100	367	EP3	100	367	ESB1	50	365
EHL3GRY	100	367	EP3S	100	367	ESB2	100	365
EHL4GRY	50	367	EQB2	25	367	ESB3	100	365
EHL5GRY	25	367	EQB3	25	367	ESB4	50	365
EIB2	25	366	EQE2	25	366	ESB5	25	365
EIB3	25	366	EQS2	100	365	ESB6	25	365
EIE2	25	366	EQS3	100	365	ESC1	50	365
EIS2	25	365	EQT2	25	366	ESC2	100	365
EIS3	25	365	EQT3	25	366	ESC3	50	365
EIT2	25	366	ER1	50	367	ESC4	50	365
EIT3	25	366	ER2	50	367	ESC5	25	365
EL1	100	370	ER3	25	367	ESC6	20	365
EL2	50	370	ER7	10	367	ESS2	1	367
EL3	50	370	ERB1	10	369	ESS3	1	367
ELS2	1	367	ERB2	10	369	ESU8MLWHI	25	372
ELS3	1	367	ERB3	2	369	ESU9MLWHI	25	372
EMA1*	50	366	ERB4	10	369	ESU61WHI	25	372
EMA2	100	366	ERB5	10	369	ESU81WHI	25	372
EMA3	50	366	ERB6	2	369	ESU82MLWHI	10	372
EMA4	25	366	ERB7	5	369	ESU231WHI	25	379
EMA5	25	366	ERB8BLK	5	369	ESU241WHI	25	372
EMA6	10	366	ERB9	1	369	ESU242WHI	10	372
ENB2	25	364	ERB10	5	369	ESU261WHI	25	372
ENB3	10	364	ERB11WHI	4	369	ESU262WHI	10	372
ENB4	5	364	ERB12	1	369	ESU281WHI	25	372
ENB5	2	364	ERB13	10	369	ESU282WHI	10	372
ENB6	2	364	ERB14	10	369	ESU501RED	5	383
EOC1WHI	150m	373	ERB15	2	369	ESU501WHI	5	383
EOC2WHI	150m	373	ES1	100	365	ESU502RED	5	383
EOC3WHI	150m	373	ES2	100	365	ESU502WHI	5	383
EOC4WHI	150m	373	ES3	100	365	ESU503RED	5	383
EOC5WHI	150m	373	ES4	50	365	ESU503WHI	5	383

For product codes that contain a \* please see the relevant product page for full details

LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
ESU504RED	5	383	FAE2	1	361	FC4136BLK	1	222
ESU504WHI	5	383	FAE3	1	361	FC4136WHI	1	222
ESU2211WHI	25	379	FAE4	1	361	FCT133BLK	10	222
ESU2223WHI	10	379	FAE5	1	361	FCT133ORG	10	222
ESU2311WHI	25	379	FAE6	1	361	FCT133WHI	10	222
ESU2323WHI	10	379	FAE7	1	361	FCU1	1	361
ESU2512WHI	25	379	FAE8	1	361	FCU2	1	361
ESU2523WHI	10	379	FAE9	1	361	FCU3	1	361
ESU2713WHI	10	379	FAF1	1	361	FCU5	1	361
ESU2721WHI	10	379	FAF2	1	361	FCU6	1	361
ESU3511WHI	25	379	FAF3	1	361	FCU9	1	361
ESU3523WHI	10	379	FAF4	1	361	FTE1	1	360
ESU4423WHI	5	379	FAF5	1	361	FTE3	1	360
ESU32125WHI	10	379	FAF6	1	361	FTE4	1	360
ESU32140WHI	10	379	FAF7	1	361	FTE6	1	360
ESU32225WHI	10	379	FAF8	1	361	FTF1	1	360
ESU32240WHI	10	379	FAF9	1	361	FTF2	1	360
ESUUSB17WHI	5	379	FAI1*	1	361	FTF3	1	360
ESUUSB19WHI	5	379	FAI2	1	361	FTF4	1	360
ESUUSB22WHI	5	379	FAI3	1	361	FTF5	1	360
ESUUSB53WHI	5	379	FAI4	1	361	FTF6	1	360
EWPLUS	1	371	FAI5	1	361	FTF7	1	360
EXL135BLK	1	221	FAI6	1	361	FTF8	1	360
EXL135WHI	1	221	FAI7	1	361	FTF9	1	360
EXL136BLK	1	221	FAI8	1	361	FTI1	1	360
EXL136WHI	1	221	FAI9	1	361	FTI3	1	360
EXL137BLK	1	221	FC133BLK	10	222	FTI4	1	360
EXL137WHI	1	221	FC133ORG	10	222	FTI6	1	360
<b>F</b>			FC133WHI	10	222	<b>G</b>		
FAB1WHI	50	374	FC153BLK	10	222	GWR1WHI	1	199
FAB2WHI	50	374	FC4134BLK	1	222	<b>H</b>		
FAB3WHI	50	374	FC4134WHI	1	222	HIP1	90m	365
FAE1*	1	361	FC4135BLK	1	222	HIP2	90m	365
			FC4135WHI	1	222			

LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
HIP3	90m	365	K182BNI	1	151	K293ALM	1	217
HIP4	30m	365	K182BRC	5	170	K294ALM	1	217
HIP5BLK	30m	365	K182BSS	5	170	K330GRA	10	48
HIP6BLK	30m	365	K182GRA	10	54	K330WHI	10	48
HLG1WHI	90m	365	K182PCR	5	170	K337KOWHI	10	48
HLG2WHI	90m	365	K182POC	1	151	K337WHI	10	48
HLG3WHI	90m	365	K182SAG	5	170	K370D1WHI	10	48
HLG4WHI	30m	365	K182WHI	10	54	K370GRA	10	48
HLG5WHI	30m	365	K184ALM	5	214	K370WHI	10	48
HLG6WHI	30m	365	K184BLN	1	151	K377WHI	10	48
<b>K100-K999</b>			K184BNI	1	151	K391BRC	10	171
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K170WHI	10	57, 109, 144, 217	K184BSS	5	170	K391PCR	10	171
K172ALM	10	216	K184GRA	10	54	K391SAG	10	171
K172BRC	5	170	K184PCR	5	170	K392BRC	10	171
K172BSS	5	170	K184POC	1	151	K392BSS	10	171
K172PCR	5	170	K184SAG	5	170	K392PCR	10	171
K172SAG	5	170	K184WHI	10	54	K392SAG	10	171
K172WHI	10	57	K185WHI	1	54	K393BRC	5	171
K180WHI	10	57, 107, 143, 216	K186BLK	10	57, 107, 143, 216	K393BSS	5	171
K181ALM	10	214	K186WHI	10	57, 107, 143, 216	K393PCR	5	171
K181BLN	1	151	K188BLK	10	57, 107, 143, 216	K393SAG	5	171
K181BNI	1	151	K188WHI	10	57, 107, 143, 216	K394BRC	5	171
K181BRC	5	170	K190WHI	5	58	K394BSS	5	171
K181BSS	5	170	K191WHI	5	58	K394PCR	5	171
K181PCR	5	170	K192WHI	5	58	K394SAG	5	171
K181POC	1	151	K193WHI	5	58	K420WHI	10	58
K181SAG	5	170	K194WHI	5	58	K421WHI	10	58
K181WHI	10	54	K290WHI	1	217	K422WHI	10	58
K182ALM	5	214	K291ALM	1	217	K427WHI	10	58
K182BLN	1	151	K292ALM	1	217	K452WHI	1	217
						K455WHI	1	217
						K457WHI	1	217
						K458WHI	1	217

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K487WHI	10	58	K781RED	10	46	K948BRC	5	161
K541R	1	41	K781WHI	10	46	K948BSS	5	161
K600	10	206	K808WHI	1	79	K948KOBRC	5	161
K601	10	206	K811WHI	1	79	K948KOBSS	5	161
K602	10	206	K812WHI	1	79	K948KOPCR	5	161
K603	10	206	K818WHI	1	79	K948KOSAG	5	161
K604	10	206	K829ALM	5	198, 218	K948PCR	5	161
K605	10	206	K830ALM	5	198, 218	K948SAG	5	161
K606	10	206	K841ALM	5	211	K954ALM	10	213
K607	10	206	K842ALM	5	211	K954KOALM	1	213
K608	10	206	K843ALM	5	211	K958BRC	5	162
K609	10	206	K848ALM	5	211	K958BSS	5	162
K610	10	206	K850ALM	5	211	K958SAG	5	162
K612	10	206	K863	5	197	K961BRC	5	160
K700WHI	10	47	K897ALM	5	198, 218	K961BSS	5	160
K701WHI	1	47	K897WHI	5	218	K961D6BRC	5	160
K703BRC	5	163	K899ALM	10	198, 218	K961D6BSS	5	160
K703BSS	5	163	K899WHI	10	218	K961D6PCR	5	160
K703PCR	5	163	K931BRC	5	160	K961D6SAG	5	160
K703SAG	5	163	K931BSS	5	160	K961PCR	5	160
K706WHI	1	47	K931PCR	5	160	K961SAG	5	160
K707BRC	5	164	K931SAG	5	160	K962ALM	10	212
K708WHI	1	79	K932ALM	10	213	K962D6ALM	1	212
K711WHI	1	79	K941BRC	5	160	K963KOALM	1	212
K712WHI	1	79	K941BSS	5	160	K971BRC	5	161
K732BLU	1	158	K941KOBRC	5	160	K971BSS	5	161
K733BRC	5	158	K941KOBSS	5	160	K971D6BRC	5	161
K733BSS	5	158	K941KOPCR	5	160	K971D6BSS	5	161
K733CEBLU	5	159	K941KOSAG	5	160	K971D6SAG	5	161
K733PCR	5	158	K941PCR	5	160	K971KOBRC	5	161
K770WHI	10	46	K941SAG	5	160	K971KOBSS	5	161
K771WHI	10	46	K942ALM	10	212	K971KOSAG	5	161
K772WHI	10	46	K942D5ALM	1	212	K971PCR	5	161
K780WHI	10	46	K942KOALM	1	212	K971SAG	5	161

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K972D6ALM	5	213	K1278BLN	1	149	K1536BRCLV	1	167
K978BRC	5	162	K1278BNI	1	149	K1536BSSLV	1	167
K978BSS	5	162	K1278POC	1	149	K1536PCRLV	1	167
K978PCR	5	162	K1400	1	196	K1536SAGLV	1	167
K978SAG	5	162	K1401M	1	196	K1539WHI	1	53
K983ALM	5	213	K1401S	1	196	K1541BRC	1	167
K986ALM	5	213	K1402M	1	196	K1541BSS	1	167
K989ALM	5	213	K1402S	1	196	K1541PCR	1	167
K989D1ALM	5	213	K1501WHILV	1	52	K1541SAG	1	167
<b>K1000-9999</b>			K1511WHI	1	53	K1541WHI	1	53
K1030WHI	10	48	K1521WHILV	1	52	K1551BRC	1	165
K1040KOWHI	10	48	K1522WHILV	1	52	K1551BRCLV	1	167
K1040WHI	10	48	K1525WHI	1	53	K1551BSS	1	165
K1060D1WHI	10	48	K1531WHI	1	53	K1551BSSLV	1	167
K1060WHI	10	48	K1532BRC	1	166	K1551PCR	1	165
K1070D1WHI	10	48	K1532BRCLV	1	167	K1551PCRLV	1	167
K1070WHI	10	48	K1532BSS	1	166	K1551SAG	1	165
K1090WHI	10	53	K1532BSSLV	1	167	K1551SAGLV	1	167
K1246D1RED	10	46	K1532PCR	1	166	K1552BRC	1	166
K1246D1WHI	10	46	K1532PCRLV	1	167	K1552BRCLV	1	167
K1246WHI	10	46	K1532SAG	1	166	K1552BSS	1	166
K1247ALM	5	211	K1532SAGLV	1	167	K1552BSSLV	1	167
K1247D6ALM	1	211	K1532WHI	1	53	K1552PCR	1	166
K1248ALM	5	211	K1533BRC	1	166	K1552PCRLV	1	167
K1248D6ALM	1	211	K1533BSS	1	166	K1552SAG	1	166
K1257D1WHI	10	46	K1533PCR	1	166	K1552SAGLV	1	167
K1257WHI	10	46	K1533SAG	1	166	K1561BRC	1	168
K1258BSS	10	156	K1533WHI	1	53	K1561BSS	1	168
K1258PCR	10	156	K1534BRC	1	165	K1561PCR	1	168
K1259BRC	5	157	K1534BSS	1	165	K1561SAG	1	168
K1259BSS	5	157	K1534PCR	1	165	K1561WHI	1	53
K1259PCR	5	157	K1534SAG	1	165	K1631WHI	1	53
			K1534WHI	1	53	K1641WHI	1	53

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K1800WHI	5	45, 157	K1920WHI	1	339	K1964CHA	1	337
K1816KOWHI	1	45	K1925WHI	10	343	K1964CHA135	1	337
K1816WHI	1	45	K1926WHI	10	339	K1964WHI	1	337
K1826KOWHI	1	45	K1927CHA	10	339	K1964WHI135	1	337
K1826WHI	1	45	K1927WHI	10	339	K1965CHA	1	337
K1901WHI	10	339	K1929CHA	1	339	K1965CHA135	1	337
K1902CHA	3m	336	K1929WHI	1	339	K1965WHI	1	337
K1902WHI	3m	336	K1932CHA	15m	339	K1965WHI135	1	337
K1903CHA	3m	336	K1932WHI	15m	339	K1966CHA	1	337
K1903WHI	3m	336	K1935CHA	15m	339	K1966WHI	1	337
K1904CHA	1	336	K1935WHI	15m	339	K1966WHI135	1	337
K1904WHI	1	336	K1936CHA	15m	339	K1967CHA	1	337
K1905CHA	1	337	K1936WHI	15m	339	K1967WHI	1	337
K1905WHI	1	337	K1937CHA	5	343	K1967WHI135	1	337
K1906CHA	1	337	K1941CHA	5	342	K1968CHA	1	337
K1906WHI	1	337	K1941WHI	5	342	K1968WHI	1	337
K1907WHI	10	339	K1944CHA	1	336	K1968WHI135	1	337
K1908CHA	5	336	K1944WHI	1	336	K1972CHA	1	338
K1908WHI	5	336	K1945CHA	5	336	K1972WHI	1	338
K1911CHA	1	337	K1945WHI	5	336	K1973CHA	1	338
K1911WHI	1	337	K1949CHA	1	339	K1973WHI	1	338
K1912CHA	1	337	K1949WHI	1	339	K1974CHA	1	338
K1912WHI	1	337	K1957CHA	1	338	K1974WHI	1	338
K1913CHA	6m	336	K1957WHI	1	338	K1977CHA	5	342
K1913WHI	6m	336	K1958CHA	1	338	K1977WHI	5	342
K1914CHA	1	336	K1958WHI	1	338	K1987CHA	5	343
K1914WHI	1	336	K1961CHA	1	337	K1987WHI	5	343
K1915CHA	1	337	K1961CHA135	1	337	K1989CHA	5	342
K1915WHI	1	337	K1961WHI	1	337	K1989WHI	5	342
K1916CHA	1	337	K1961WHI135	1	337	K1992CHA	1	338
K1916WHI	1	337	K1962CHA	3m	336	K1992WHI	1	338
K1918CHA	5	336	K1962WHI	3m	336	K1993CHA	1	338
K1918WHI	5	336	K1963CHA	3m	336	K1993WHI	1	338

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K1994CHA	1	338	K2271ALM	5	212	K2747D1RED	5	44
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K2025WHI	5	200	K2446ALM	5	210	K2757D1RED	5	44
K2031WHI	10	200	K2446D6ALM	1	210	K2757D1WHI	10	44
K2061WHI	5	200	K2448BRC	5	156	K2757D2WHI	10	44
K2062WHI	5	200	K2448BSS	5	156	K2757GRA	10	44
K2131WHI	5	200	K2448PCR	5	156	K2757WHI	10	44
K2132WHI	5	200	K2448SAG	5	156	K2826BRC	5	157
K2133WHI	10	200	K2458BRC	10	155	K2826BSS	5	157
K2134WHI	10	200	K2458BSS	10	155	K2826PCR	5	157
K2140WHI	10	192, 200	K2458PCR	10	155	K2826SAG	5	157
K2142WHI	5	192, 200	K2458SAG	10	155	K2857ALM	1	214
K2151WHI	10	75, 200	K2476CEWHI	1	44	K2859ALM	1	214
K2152WHI	5	200	K2476D1RED	10	45	K2871ALM	5	211
K2153WHI	5	200	K2476D1WHI	10	45	K2873ALM	5	211
K2158BSS	5	159	K2476GRA	10	44	K2881BRC	10	157
K2160WHI	10	75, 200	K2476WHI	10	44	K2881BSS	10	157
K2161WHI	5	200	K2477ALM	5	210	K2881PCR	10	157
K2172WHI	5	200	K2477D6ALM	1	210	K2881SAG	10	157
K2181WHI	10	192, 199	K2493WHI	10	46	K2883BRC	10	157
K2183WHI	5	192, 199	K2647WHI	5	44	K2883BSS	10	157
K2185WHI	5	199	K2657D1RED	5	44	K2883PCR	10	157
K2200	10	199	K2657GRA	10	44	K2883SAG	10	157
K2202	5	199	K2657WHI	10	44	K2891WHI	10	46
K2211ALM	5	192, 197	K2737WHI	5	44	K2893WHI	10	46
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K2213ALM	5	192, 197	K2741WHI	1	45	K2945D5ALM	1	210
K2214ALM	5	192, 197	K2746CEWHI	10	44	K2945D6ALM	1	210
K2240BRC	5	164	K2746D1RED	10	45	K2946ALM	5	210
K2240BSS	5	164	K2746D1WHI	10	45	K2946D5ALM	1	210
K2240SAG	5	164	K2746D2WHI	10	45	K2946D6ALM	1	210
K2251WHI	10	46	K2746GRA	10	44	K2947BRC	5	156
K2252WHI	5	46	K2746WHI	10	44	K2947BSS	5	156

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K2947CEBLU	5	158	K3092WHI	10	213	K3431BSS	10	173
K2947CEBRC	5	156	K3182WHI	1	215	K3431PCR	10	173
K2947CEBSS	5	156	K3184WHI	1	215	K3431SAG	10	173
K2947CEPCR	5	156	K3203WHI	10	75	K3432	1	192
K2947D6BRC	5	156	K3212WHI	10	73	K3432BRC	10	173
K2947D6BSS	5	156	K3220WHI	10	73	K3432BSS	10	173
K2947PCR	5	156	K3230WHI	10	73	K3432PCR	10	173
K2947SAG	5	156	K3232WHI	10	73	K3432SAG	10	173
K2948BRC	5	155	K3233WHI	5	73	K3433	1	192
K2948BSS	5	155	K3240WHI	10	73	K3433BRC	5	173
K2948D6BRC	5	155	K3241WHI	5	73	K3433BSS	5	173
K2948D6BSS	5	155	K3242LSF	10	73	K3433PCR	5	173
K2948PCR	5	155	K3242WHI	10	73	K3433SAG	5	173
K2948SAG	5	155	K3243LSF	5	73	K3434	1	192
K2949BSS	5	159	K3243WHI	5	73	K3434BRC	5	173
K2958BLU	1	158	K3329BRC	5	168	K3434BSS	5	173
K2958BRC	10	155	K3329BSS	5	168	K3434PCR	5	173
K2958BSS	10	155	K3329PCR	5	168	K3434SAG	5	173
K2958PCR	10	155	K3329SAG	5	168	K3436	1	192
K2958SAG	10	155	K3330BRC	10	168	K3436BRC	1	173
K2977ALM	5	210	K3330BSS	10	168	K3436BSS	1	173
K2977D5ALM	1	210	K3330PCR	10	168	K3436PCR	1	173
K2977D6ALM	1	210	K3330SAG	10	168	K3436SAG	1	173
K3012WHI	10	214	K3369ALM	5	199, 218	K3438	1	193
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K3045WHI	5	210	K3390WHI	5	218	K3438PCR	1	173
K3046WHI	5	210	K3401	1	193	K3438SAG	1	173
K3054WHI	10	213	K3401BRC	10	174	K3439	1	193
K3062WHI	10	212	K3401BSS	10	174	K3439BRC	1	174
K3072WHI	10	213	K3401PCR	10	174	K3439BSS	1	174
K3077WHI	10	210	K3401SAG	10	174	K3439PCR	1	174
K3086WHI	10	213	K3431	1	192	K3439SAG	1	174
K3091WHI	10	213	K3431BRC	10	173	K3442	1	193

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K3442BRC	1	174	K3540WHI	10	58	K3591ALM	5	213
K3442BSS	1	174	K3550WHI	10	59	K3592ALM	5	213
K3442PCR	1	174	K3551WHI	10	59	K3593ALM	5	213
K3442SAG	1	174	K3552DABWHI	10	59	K3631GRA	10	60
K3448	1	193	K3552WHI	10	59	K3631WHI/GRA	10	192
K3448BRC	1	174	K3553DABWHI	10	59	K3631WHI	10	60
K3448BSS	1	174	K3553WHI	10	59	K3632GRA	10	60
K3448PCR	1	174	K3554DABWHI	10	59	K3632WHI/GRA	10	192
K3448SAG	1	174	K3555WHI	10	59	K3632WHI	10	60
K3454	1	193	K3557WHI	10	59	K3633GRA	10	60
K3454BRC	1	174	K3561DABWHI	5	59	K3633WHI/GRA	10	192
K3454BSS	1	174	K3561WHI	5	59	K3633WHI	10	60
K3454PCR	1	174	K3562WHI	5	59	K3634GRA	10	60
K3454SAG	1	174	K3563DABWHI	5	59	K3634WHI/GRA	10	192
K3491ALM	10	192, 218	K3563WHI	5	59	K3634WHI	10	60
K3491WHI	10	218	K3564DABWHI	5	59	K3636GRA	1	60
K3492ALM	10	192, 218	K3565DABWHI	5	59	K3636WHI/GRA	1	192
K3492WHI	10	218	K3566DABWHI	5	59	K3636WHI	1	60
K3493ALM	5	192, 218	K3580BRC	5	168	K3638GRA	1	60
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K3522WHI	10	60	K3585BRC	1	169	K3782ALM	5	214
K3523WHI	10	60	K3585BSS	1	169	K3786ALM	1	38, 219
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K3827WHI	10	53	K4048	1	63	K4499POC	1	99, 135
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K4016	1	63	K4150WHI	10	47	K4500ABSBLV	1	99, 135
K4017	1	63	K4152WHI	5	47	K4500BLKLV	1	190
K4018	1	63	K4204	1	76	K4500BRC*LV	1	99, 135
K4019	1	63	K4208	1	76	K4500BSS*LV	1	99, 135
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K4025BLU	1	64	K4214WHI	10	74	K4500LBKBLV	1	99, 135
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K4025RED	1	64	K4230WHI	10	74	K4500LIVWLV	1	99, 135
K4025YEL	1	64	K4232WHR	10	74	K4500PBR*LV	1	99, 135
K4030	1	64	K4233WHR	5	74	K4500POC*LV	1	99, 135
K4031	1	64	K4240WHR	10	74	K4500SAA*LV	1	135
K4032	1	64	K4242LSF	10	74	K4500SAG*LV	1	99, 135
K4033	1	64	K4242WHR	10	74	K4500TCOBLV	1	99, 135
K4034	1	64	K4243LSF	5	74	K4500TIRBLV	1	99, 135
K4035	1	64	K4243WHR	5	74	K4500WHILV	1	190
K4036	1	64	K4404BLN	1	149	K4500WHIWL	1	99, 135
K4037	1	64	K4404BNI	1	149	K4501ABSBLV	1	99, 135
K4038	1	64	K4404POC	1	149	K4501BLKLV	1	190
K4039	1	64	K4499ABSB	1	99, 135	K4501BRC*LV	1	99, 135
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K4501SAG*LV	1	99, 135	K4767BSS*	1	36	K4871WHI	10	51
K4501TCOBLV	1	99, 135	K4767SAG*	1	36	K4872D2WHI	10	51
K4501TIRBLV	1	99, 135	K4780WHI	1	52	K4872GRA	10	51
K4501WHILV	1	190	K4781GRA	10	52	K4872WHI	10	51
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K4671BRC	5	164	K4785WHI	10	52	K4878PWHI	10	51
K4671BSS	5	164	K4786GRA	1	36	K4879WHI	5	51
K4671PCR	5	164	K4786WHI	1	36	K4880ABSB	1	91, 127
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K4672PCR	5	164	K4836AMB	10	98, 134, 189	K4880DBZB	1	91, 127
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K4673BRC	5	164	K4836RED	10	98, 134, 189	K4880LBKB	1	91, 127
K4673BSS	5	164	K4841WHI	5	52	K4880LBS*	1	91, 127
K4673PCR	5	164	K4842WHI	5	52	K4880LIVW	1	91, 127
K4673SAG	5	164	K4848BWHI	5	52	K4880PBR*	1	91, 127
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K5094BNI	1	152	K5236BSS	5	163	K5307BNI	1	150
K5094POC	1	152	K5236PCR	5	163	K5307BNILV	1	150
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K5864WHI	5	55, 103, 139, 215	K6816YEL	5	241	K9013YEL	1	246
K5887BLK	5	55, 103, 139, 215, 232	K6825	5	241	K9014BLU	1	248
K5887WHI	5	55, 103, 139, 215, 232	K6825YEL	5	241	K9015RED	1	250
K5971BLN	1	149	K6840	1	242	K9016RED	1	252
K5971BNI	1	149	K6840YEL	1	242	K9017GRN	1	254
K5971POC	1	149	K8041s	10	291	K9018VLT	1	256
K6000s	1	284	K8821ALM	10	192, 217	K9019VLT	1	256
K6001s	1	284	K8822ALM	5	192, 217	K9020WHI	1	256
K6061sMAG	1	280	K8823ALM	5	192, 193	K9021WHI	1	256
K6062sMAG	1	280	K8825ALM	1	193	K9022WHI	1	256
K6063sMAG	1	280	K8826ALM	1	193	K9023YEL	1	246
K6102ALM	1	211, 293	K8827ALM	1	193	K9024BLU	1	248
K6211ALM	1	211, 293	K8891ALM	10	192, 217	K9025RED	1	250
K6211WHI	1	45, 293	K8892ALM	5	192, 217	K9026RED	1	250
K6231ALM	1	211, 293	K8893ALM	5	192, 193	K9032YEL	1	246
K6231WHI	1	45, 293	K8895ALM	1	193	K9033BLU	1	248
K6233ALM	1	211, 293	K8898ALM	1	193	K9036BLU	1	248
K6233WHI	1	45, 293	K8900ALM	1	193	K9037RED	1	250
K6300WHI	1	45, 293	K8901ALM	5	217	K9038RED	1	252
K6301BRC	5	157, 293	K8901ALM	10	192	K9039BLK	1	253
K6303WHI	1	45, 293	K8902ALM	5	217	K9043YEL	1	246
K6304BRC	1	293	K8902ALM	10	192	K9044BLU	1	248
K6304BSS	1	293	K9000YEL	1	246	K9045RED	1	250
K6304BSS	5	158	K9001BLU	1	248	K9046RED	1	252
			K9002RED	1	250	K9047GRN	1	254
			K9003GRY	1	255	K9053YEL	1	246

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K9054BLU	1	248	K9124BLU	1	248	K9202RED	1	250
K9055RED	1	250	K9125RED	1	250	K9203GRY	1	255
K9056RED	1	250	K9126RED	1	250	K9204GRY	1	255
K9063BLU	1	248	K9132YEL	1	246	K9205YEL	1	246
K9065BLU	1	248	K9133BLU	1	248	K9206BLU	1	248
K9066RED	1	250	K9135YEL	1	246	K9207RED	1	250
K9071RED	1	250	K9136BLU	1	248	K9208RED	1	252
K9092RED	1	250	K9137RED	1	250	K9209BLK	1	253
K9093RED	1	252	K9139BLK	1	253	K9210GRN	1	254
K9097RED	1	250	K9142YEL	1	246	K9211GRN	1	254
K9099BLU	1	248	K9143BLU	1	248	K9213YEL	1	246
K9100YEL	1	246	K9144RED	1	250	K9214BLU	1	248
K9101BLU	1	248	K9145RED	1	252	K9215RED	1	250
K9102RED	1	250	K9146GRN	1	254	K9216RED	1	252
K9103GRY	1	255	K9155YEL	1	246	K9232YEL	1	246
K9104GRY	1	255	K9156BLU	1	248	K9233BLU	1	248
K9105YEL	1	246	K9157RED	1	250	K9235YEL	1	246
K9106BLU	1	248	K9158RED	1	250	K9236BLU	1	248
K9107RED	1	250	K9164BLU	1	248	K9237RED	1	250
K9108RED	1	252	K9165RED	1	250	K9238BLK	1	253
K9109BLK	1	253	K9170RED	1	250	K9239YEL	1	246
K9110GRN	1	254	K9172BLU	1	248	K9240BLU	1	248
K9111GRN	1	254	K9182RED	1	250	K9241RED	1	250
K9113YEL	1	246	K9183RED	1	252	K9242RED	1	252
K9114BLU	1	248	K9187RED	1	250	K9252GRN	1	254
K9115RED	1	250	K9189BLU	1	248	K9253VLT	1	256
K9116RED	1	252	K9190BLU	1	248	K9254VLT	1	256
K9117GRN	1	254	K9191RED	1	250	K9255WHI	1	256
K9118VLT	1	256	K9192RED	1	250	K9256WHI	1	256
K9119VLT	1	256	K9193YEL	1	246	K9257WHI	1	256
K9120WHI	1	256	K9194BLU	1	248	K9258GRN	1	254
K9121WHI	1	256	K9195RED	1	252	K9264BLU	1	248
K9122WHI	1	256	K9200YEL	1	246	K9265RED	1	250
K9123YEL	1	246	K9201BLU	1	248	K9269RED	1	250

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K9274BLU	1	248	K9413YEL	1	246, 266	K9607BLU	1	249
K9282RED	1	250	K9414BLU	1	248, 266	K9608RED	1	251
K9283RED	1	252	K9415RED	1	250, 266	K9609YEL	1	247
K9284BLK	1	253	K9416RED	1	252, 266	K9610BLU	1	249
K9292RED	1	250	K9417GRN	1	254, 267	K9611RED	1	251
K9293RED	1	252	K9432YEL	1	246, 266	K9612RED	1	251
K9294YEL	1	246	K9433BLU	1	248, 266	K9632YEL	1	247
K9298BLU	1	248	K9437RED	1	250, 266	K9633BLU	1	249
K9306BLU	1	249	K9444BLU	1	248, 266	K9634RED	1	251
K9311BLU	1	249	K9445RED	1	250, 266	K9635RED	1	252
K9312RED	1	251	K9446RED	1	252, 266	K9636BLK	1	253
K9322RED	1	251	K9447GRN	1	254, 267	K9638YEL	1	247
K9324BLU	1	249	K9465RED	1	250	K9639BLU	1	249
K9327RED	1	251	K9470RED	1	250	K9640RED	1	251
K9330RED	1	251	K9472BLU	1	248	K9641RED	1	252
K9342RED	1	251	K9481RED	1	250	K9642YEL	1	247
K9343RED	1	252	K9482RED	1	250	K9643BLU	1	249
K9344BLK	1	253	K9483BLU	1	248	K9644RED	1	251
K9352RED	1	251	K9518VLT	1	256	K9645RED	1	251
K9353RED	1	252	K9519VLT	1	256	K9664BLU	1	249
K9355BLU	1	249	K9520WHI	1	256	K9665RED	1	251
K9356YEL	1	247	K9521WHI	1	256	K9670RED	1	251
K9359RED	1	251	K9522WHI	1	256	K9688BLU	1	249
K9362RED	1	251	K9544BLU	1	249, 266	K9691RED	1	251
K9369BLU	1	249	K9565RED	1	251, 266	K9692RED	1	252
K9400YEL	1	246, 266	K9570RED	1	251, 266	K9694RED	1	251
K9401BLU	1	248, 266	K9582RED	1	251	K9700YEL	1	247
K9403GRY	1	255, 266	K9592RED	1	251	K9701BLU	1	249
K9404GRY	1	255, 267	K9600YEL	1	247	K9706RED	1	251
K9405YEL	1	246, 266	K9601BLU	1	249	K9710BLU	1	249
K9406BLU	1	248, 266	K9602RED	1	251	K9711RED	1	251
K9407RED	1	250, 266	K9603RED	1	252	K9725VLT	1	256
K9410GRN	1	254, 267	K9605GRN	1	254	K9726VLT	1	256
K9411GRN	1	267	K9606YEL	1	247	K9732YEL	1	247

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K9733BLU	1	249	K9786RED	1	251	K9907YEL	1	257
K9736RED	1	251	K9787RED	1	251	K9908BLU	1	257
K9737BLK	1	253	K9788YEL	1	247	K9910RED	1	257
K9740BLU	1	249	K9789BLU	1	249	K9911RED	1	257
K9741RED	1	251	K9790RED*	1	251	K9944	5	232
K9751RED	1	251	K9791RED*	1	251	K9981	10	258
K9752RED	1	251	K9792BLU	1	249	K9982	10	258
K9754RED	1	252	K9793RED*	1	251	K9983	10	258
K9755RED	1	252	K9802YEL	1	246, 267	K9996	10	258
K9756GRY	1	255	K9803BLU	1	249	<b>K10000-K99999</b>		
K9761YEL	1	246	K9807RED	1	251, 267	K13023YEL	1	246
K9762BLU	1	248	K9812RED	1	250	K13024BLU	1	248
K9763RED	1	250	K9815RED	1	251, 267	K13025RED	1	250
K9764RED	1	250	K9822RED	1	250	K13026RED	1	250
K9765RED	1	250	K9825BLU	1	249	K13043YEL	1	246, 262
K9766RED	1	250	K9826BLU	1	249	K13044BLU	1	248, 262
K9767YEL	1	247	K9827RED	1	251	K13053YEL	1	246
K9768RED	1	251	K9828BLU	1	248	K13054BLU	1	248
K9769YEL	1	247	K9829RED	1	251	K13055RED	1	250
K9771BLU	1	249	K9842RED	1	250	K13056RED	1	250
K9772BLU	1	249	K9844BLK	1	253	K13143YEL	1	246, 262
K9773BLU	1	249	K9852RED	1	250	K13144BLU	1	248, 62
K9774BLU	1	249	K9853RED	1	252	K13173YEL	1	262
K9775BLU	1	249	K9855YEL	1	246	K13174BLU	1	262
K9776BLU	1	249	K9856BLU	1	248	K13175RED	1	262
K9777RED	1	251	K9857BLU	1	248	K13176RED	1	262
K9778RED	1	251	K9858RED	1	250	K13184BLU	1	262
K9779RED	1	251	K9859RED	1	250	K13185RED	1	262
K9780YEL	1	247	K9865YEL	1	246, 267	K13186RED	1	262
K9781BLU	1	249	K9866BLU	1	249, 267	K13193YEL	1	262
K9782RED	1	251	K9870RED	1	251, 267	K13194BLU	1	262
K9783RED	1	251	K9873RED	1	251, 267	K13200YEL	1	246
K9784YEL	1	247	K9883BLU	1	249	K13201BLU	1	248
K9785BLU	1	249	K9884RED	1	251			

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K13207RED	1	250	K13471BSS*	1	120	K13476POC*	1	37
K13215RED	1	250	K13471DBZB	1	120	K13476SAG*	1	37
K13232YEL	1	246	K13471LBKB	1	120	K13476TCOB	1	37
K13233BLU	1	248	K13471LBS*	1	120	K13476TIRB	1	37
K13237RED	1	250	K13471LIVW	1	120	K13476WHIW	1	37
K13241RED	1	250	K13471PBR*	1	120	K13477ABSB	1	37
K13309YEL	1	263	K13471POC*	1	120	K13477BRC*	1	37
K13310BLU	1	263	K13471SAA*	1	120	K13477BSS*	1	37
K13311RED	1	263	K13471SAG*	1	120	K13477DBZB	1	37
K13312RED	1	263	K13471TCOB	1	120	K13477LBKB	1	37
K13342YEL	1	263	K13471TIRB	1	120	K13477LBS*	1	37
K13343BLU	1	263	K13471WHIW	1	120	K13477LIVW	1	37
K13344RED	1	263	K13472ABSB	1	121	K13477PBR*	1	37
K13345RED	1	263	K13472BRC*	1	121	K13477SAA*	1	37
K13346YEL	1	263	K13472BSS*	1	121	K13477SAG*	1	37
K13347YEL	1	263	K13472DBZB	1	121	K13477TCOB	1	37
K13348BLU	1	263	K13472LBKB	1	121	K13477TIRB	1	37
K13349BLU	1	263	K13472LBS*	1	121	K13477WHIW	1	37
K13350RED	1	263	K13472LIVW	1	121	K13600YEL	1	247
K13351RED	1	263	K13472PBR*	1	121	K13601BLU	1	249
K13352RED	1	263	K13472POC*	1	121	K13607RED	1	251
K13353RED	1	263	K13472SAA*	1	121	K13615RED	1	251
K13413YEL	1	262	K13472SAG*	1	121	K13623YEL	1	247
K13414BLU	1	262	K13472TCOB	1	121	K13624BLU	1	249
K13415RED	1	262	K13472TIRB	1	121	K13625RED	1	251
K13416RED	1	262	K13472WHIW	1	121	K13626RED	1	251
K13433BLU	1	262	K13476ABSB	1	37	K13632YEL	1	247
K13434RED	1	262	K13476BRC*	1	37	K13633BLU	1	249
K13435RED	1	262	K13476BSS*	1	37	K13637RED	1	251
K13463BLU	1	262	K13476DBZB	1	37	K13641RED	1	251
K13464RED	1	262	K13476LBKB	1	37	K13653YEL	1	247
K13465RED	1	262	K13476LBS*	1	37	K13654BLU	1	249
K13471ABSB	1	120	K13476LIVW	1	37	K13655RED	1	251
K13471BRC*	1	120	K13476PBR*	1	37	K13656RED	1	251

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K13713YEL	1	263	K14114TCOB	1	121	K14182DBZ	1	137
K13714BLU	1	263	K14114TIRB	1	121	K14182LBK	1	137
K13715RED	1	263	K14114WHIW	1	121	K14182LBS	1	137
K13716RED	1	263	K14172ABS	10	143	K14182LIV	1	137
K13733BLU	1	263	K14172BRC	10	143	K14182PBR	1	137
K13734RED	1	263	K14172BSS	10	143	K14182POC	1	137
K13735RED	1	263	K14172DBZ	10	143	K14182SAA	1	137
K14100ABSB	1	114	K14172LBK	10	143	K14182SAG	1	137
K14100BRC*	1	114	K14172LBS	10	143	K14182TCO	1	137
K14100BSS*	1	114	K14172LIV	10	143	K14182TIR	1	137
K14100DBZB	1	114	K14172PBR	10	143	K14182WHI	1	137
K14100LBKB	1	114	K14172POC	10	143	K14184ABS	1	137
K14100LBS*	1	114	K14172SAA	10	143	K14184BRC	1	137
K14100LIVW	1	114	K14172SAG	10	143	K14184BSS	1	137
K14100PBR*	1	114	K14172TCO	10	143	K14184DBZ	1	137
K14100POC*	1	114	K14172TIR	10	143	K14184LBK	1	137
K14100SAA*	1	114	K14172WHI	10	143	K14184LBS	1	137
K14100SAG*	1	114	K14181ABS	1	137	K14184LIV	1	137
K14100TCOB	1	114	K14181BRC	1	137	K14184PBR	1	137
K14100TIRB	1	114	K14181BSS	1	137	K14184POC	1	137
K14100WHIW	1	114	K14181DBZ	1	137	K14184SAA	1	137
K14101	1	198	K14181LBK	1	137	K14184SAG	1	137
K14102	1	198	K14181LBS	1	137	K14184TCO	1	137
K14114ABSB	1	121	K14181LIV	1	137	K14184TIR	1	137
K14114BRC*	1	121	K14181PBR	1	137	K14184WHI	1	137
K14114BSS*	1	121	K14181POC	1	137	K14200ABSB	1	114
K14114DBZB	1	121	K14181SAA	1	137	K14200BRC*	1	114
K14114LBKB	1	121	K14181SAG	1	137	K14200BSS*	1	114
K14114LBS*	1	121	K14181TCO	1	137	K14200DBZB	1	114
K14114LIVW	1	121	K14181TIR	1	137	K14200LBKB	1	114
K14114PBR*	1	121	K14181WHI	1	137	K14200LBS*	1	114
K14114POC*	1	121	K14182ABS	1	137	K14200LIVW	1	114
K14114SAA*	1	121	K14182BRC	1	137	K14200PBR*	1	114
K14114SAG*	1	121	K14182BSS	1	137	K14200POC*	1	114

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K14200SAA*	1	114	K14246TCOB	1	113	K14302DBZ	1	122
K14200SAG*	1	114	K14246TIRB	1	113	K14302LBK	1	122
K14200TCOB	1	114	K14246WHIW	1	113	K14302LBS	1	122
K14200TIRB	1	114	K14268ABSB	1	112	K14302LIV	1	122
K14200WHIW	1	114	K14268BRC*	1	112	K14302PBR	1	122
K14201	1	198	K14268BSS*	1	112	K14302POC	1	122
K14202	1	198	K14268DBZB	1	112	K14302SAG	1	122
K14205ABSB	1	114	K14268LBKB	1	112	K14302SSA	1	122
K14205BRC*	1	114	K14268LBS*	1	112	K14302TCO	1	122
K14205BSS*	1	114	K14268LIVW	1	112	K14302TIR	1	122
K14205DBZB	1	114	K14268PBR*	1	112	K14302WHI	1	122
K14205LBKB	1	114	K14268POC*	1	112	K14305ABSB	1	121
K14205LBS*	1	114	K14268SAA*	1	112	K14305BRC*	1	121
K14205LIVW	1	114	K14268SAG*	1	112	K14305BSS*	1	121
K14205PBR*	1	114	K14268TCOB	1	112	K14305DBZB	1	121
K14205POC*	1	114	K14268TIRB	1	112	K14305LBKB	1	121
K14205SAA*	1	114	K14268WHIW	1	112	K14305LBS*	1	121
K14205SAG*	1	114	K14301ABS	1	122	K14305LIVW	1	121
K14205TCOB	1	114	K14301BRC	1	122	K14305PBR*	1	121
K14205TIRB	1	114	K14301BSS	1	122	K14305POC*	1	121
K14205WHIW	1	114	K14301DBZ	1	122	K14305SAA*	1	121
K14206	1	198	K14301LBK	1	122	K14305SAG*	1	121
K14207	1	198	K14301LBS	1	122	K14305TCOB	1	121
K14246ABSB	1	113	K14301LIV	1	122	K14305TIRB	1	121
K14246BRC*	1	113	K14301PBR	1	122	K14305WHIW	1	121
K14246BSS*	1	113	K14301POC	1	122	K14320ABSB	1	144
K14246DBZB	1	113	K14301SAG	1	122	K14320BRC*	1	144
K14246LBKB	1	113	K14301SSA	1	122	K14320BSS*	1	144
K14246LBS*	1	113	K14301TCO	1	122	K14320DBZB	1	144
K14246LIVW	1	113	K14301TIR	1	122	K14320LBKB	1	144
K14246PBR*	1	113	K14301WHI	1	122	K14320LBS*	1	144
K14246POC*	1	113	K14302ABS	1	122	K14320LIVW	1	144
K14246SAA*	1	113	K14302BRC	1	122	K14320PBR*	1	144
K14246SAG*	1	113	K14302BSS	1	122	K14320POC*	1	144

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K14320SAA*	1	144	K14325BRC*	1	145	K14330PBR	1	145
K14320SAG*	1	144	K14325BSS*	1	145	K14330POC	1	145
K14320TCOB	1	144	K14325DBZB	1	145	K14330SAA	1	145
K14320TIRB	1	144	K14325LBKB	1	145	K14330SAG	1	145
K14320WHIW	1	144	K14325LBS*	1	145	K14330TCO	1	145
K14321ABSB	1	145	K14325LIVW	1	145	K14330TIR	1	145
K14321BRC*	1	145	K14325PBR*	1	145	K14330WHI	1	145
K14321BSS*	1	145	K14325POC*	1	145	K14331	1	192
K14321DBZB	1	145	K14325SAA*	1	145	K14331ABS	1	124
K14321LBKB	1	145	K14325SAG*	1	145	K14331BRC	1	124
K14321LBS*	1	145	K14325TCOB	1	145	K14331BSS	1	124
K14321LIVW	1	145	K14325TIRB	1	145	K14331DBZ	1	124
K14321PBR*	1	145	K14325WHIW	1	145	K14331LBK	1	124
K14321POC*	1	145	K14329ABS	1	145	K14331LBS	1	124
K14321SAA*	1	145	K14329BRC	1	145	K14331LIV	1	124
K14321SAG*	1	145	K14329BSS	1	145	K14331PBR	1	124
K14321TCOB	1	145	K14329DBZ	1	145	K14331POC	1	124
K14321TIRB	1	145	K14329LBK	1	145	K14331SAA	1	124
K14321WHIW	1	145	K14329LBS	1	145	K14331SAG	1	124
K14322ABSB	1	145	K14329LIV	1	145	K14331TCO	1	124
K14322BRC*	1	145	K14329PBR	1	145	K14331TIR	1	124
K14322BSS*	1	145	K14329POC	1	145	K14331WHI	1	124
K14322DBZB	1	145	K14329SAA	1	145	K14332	1	192
K14322LBKB	1	145	K14329SAG	1	145	K14332ABS	1	125
K14322LBS*	1	145	K14329TCO	1	145	K14332BRC	1	125
K14322LIVW	1	145	K14329TIR	1	145	K14332BSS	1	125
K14322PBR*	1	145	K14329WHI	1	145	K14332DBZ	1	125
K14322POC*	1	145	K14330ABS	1	145	K14332LBK	1	125
K14322SAA*	1	145	K14330BRC	1	145	K14332LBS	1	125
K14322SAG*	1	145	K14330BSS	1	145	K14332LIV	1	125
K14322TCOB	1	145	K14330DBZ	1	145	K14332PBR	1	125
K14322TIRB	1	145	K14330LBK	1	145	K14332POC	1	125
K14322WHIW	1	145	K14330LBS	1	145	K14332SAA	1	125
K14325ABSB	1	145	K14330LIV	1	145	K14332SAG	1	125

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LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
K14332TCO	1	125	K14345ABSB	1	113	K14347LBS*	1	112
K14332TIR	1	125	K14345BRC*	1	113	K14347LIVW	1	112
K14332WHI	1	125	K14345BSS	1	113	K14347PBR*	1	112
K14333	1	192	K14345DBZB	1	113	K14347POC*	1	112
K14333ABS	1	125	K14345LBKB	1	113	K14347SAA*	1	112
K14333BRC	1	125	K14345LBS*	1	113	K14347SAG*	1	112
K14333BSS	1	125	K14345LIVW	1	113	K14347TCOB	1	112
K14333DBZ	1	125	K14345PBR*	1	113	K14347TIRB	1	112
K14333LBK	1	125	K14345POC*	1	113	K14347WHIW	1	112
K14333LBS	1	125	K14345SAA*	1	113	K14348	1	193
K14333LIV	1	125	K14345SAG*	1	113	K14348ABS	1	125
K14333PBR	1	125	K14345TCOB	1	113	K14348BRC	1	125
K14333POC	1	125	K14345TIRB	1	113	K14348BSS	1	125
K14333SAA	1	125	K14345WHIW	1	113	K14348DBZ	1	125
K14333SAG	1	125	K14346	1	192	K14348LBK	1	125
K14333TCO	1	125	K14346ABS	1	125	K14348LBS	1	125
K14333TIR	1	125	K14346BRC	1	125	K14348LIV	1	125
K14333WHI	1	125	K14346BSS	1	125	K14348PBR	1	125
K14334	1	192	K14346DBZ	1	125	K14348POC	1	125
K14334ABS	1	125	K14346LBK	1	125	K14348SAA	1	125
K14334BRC	1	125	K14346LBS	1	125	K14348SAG	1	125
K14334BSS	1	125	K14346LIV	1	125	K14348TCO	1	125
K14334DBZ	1	125	K14346PBR	1	125	K14348TIR	1	125
K14334LBK	1	125	K14346POC	1	125	K14348WHI	1	125
K14334LBS	1	125	K14346SAA	1	125	K14349	1	193
K14334LIV	1	125	K14346SAG	1	125	K14349ABS	1	125
K14334PBR	1	125	K14346TCO	1	125	K14349BRC	1	125
K14334POC	1	125	K14346TIR	1	125	K14349BSS	1	125
K14334SAA	1	125	K14346WHI	1	125	K14349DBZ	1	125
K14334SAG	1	125	K14347ABSB	1	112	K14349LBK	1	125
K14334TCO	1	125	K14347BRC*	1	112	K14349LBS	1	125
K14334TIR	1	125	K14347BSS*	1	112	K14349LIV	1	125
K14334WHI	1	125	K14347DBZB	1	112	K14349PBR	1	125
K14336BSS*	1	121	K14347LBKB	1	112	K14349POC	1	125

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LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
K14349SAA	1	125	K14354WHI	1	126	K14358LBK	1	126
K14349SAG	1	125	K14355ABSB	1	116	K14358LBS	1	126
K14349TCO	1	125	K14355BRC*	1	116	K14358LIV	1	126
K14349TIR	1	125	K14355BSS*	1	116	K14358PBR	1	126
K14349WHI	1	125	K14355DBZB	1	116	K14358POC	1	126
K14352	1	193	K14355LBKB	1	116	K14358SAA	1	126
K14352ABS	1	126	K14355LBS*	1	116	K14358SAG	1	126
K14352BRC	1	126	K14355LIVW	1	116	K14358TCO	1	126
K14352BSS	1	126	K14355PBR*	1	116	K14358TIR	1	126
K14352DBZ	1	126	K14355POC*	1	116	K14358WHI	1	126
K14352LBK	1	126	K14355SAA*	1	116	K14361ABSB	1	121
K14352LBS	1	126	K14355SAG*	1	116	K14361BRC*	1	121
K14352LIV	1	126	K14355TCOB	1	116	K14361BSS*	1	121
K14352PBR	1	126	K14355TIRB	1	116	K14361DBZB	1	121
K14352POC	1	126	K14355WHIW	1	116	K14361LBKB	1	121
K14352SAA	1	126	K14357ABSB	1	112	K14361LBS*	1	121
K14352SAG	1	126	K14357BRC*	1	112	K14361LIVW	1	121
K14352TCO	1	126	K14357BSS*	1	112	K14361PBR*	1	121
K14352TIR	1	126	K14357DBZB	1	112	K14361POC*	1	121
K14352WHI	1	126	K14357LBKB	1	112	K14361SAA*	1	121
K14354	1	193	K14357LBS*	1	112	K14361SAG*	1	121
K14354ABS	1	126	K14357LIVW	1	112	K14361TCOB	1	121
K14354BRC	1	126	K14357PBR*	1	112	K14361TIRB	1	121
K14354BSS	1	126	K14357POC*	1	112	K14361WHIW	1	121
K14354DBZ	1	126	K14357SAA*	1	112	K14371ABSB	1	120
K14354LBK	1	126	K14357SAG*	1	112	K14371BRC*	1	120
K14354LBS	1	126	K14357TCOB	1	112	K14371BSS*	1	120
K14354LIV	1	126	K14357TIRB	1	112	K14371DBZB	1	120
K14354PBR	1	126	K14357WHIW	1	112	K14371LBKB	1	120
K14354POC	1	126	K14358	1	193	K14371LBS*	1	120
K14354SAA	1	126	K14358ABS	1	126	K14371LIVW	1	120
K14354SAG	1	126	K14358BRC	1	126	K14371PBR*	1	120
K14354TCO	1	126	K14358BSS	1	126	K14371POC*	1	120
K14354TIR	1	126	K14358DBZ	1	126	K14371SAA*	1	120

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LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
K14371SAG*	1	120	K14378BSS	1	116	K14381PBR*	1	115
K14371TCOB	1	120	K14378DBZ	1	116	K14381POC*	1	115
K14371TIRB	1	120	K14378LBK	1	116	K14381SAA*	1	115
K14371WHIW	1	120	K14378LBS	1	116	K14381SAG*	1	115
K14372ABSB	1	120	K14378LIV	1	116	K14381TCOB	1	115
K14372BRC*	1	120	K14378PBR	1	116	K14381TIRB	1	115
K14372BSS*	1	120	K14378POC	1	116	K14381WHIW	1	115
K14372DBZB	1	120	K14378SAA*	1	116	K14382ABSB	1	115
K14372LBKB	1	120	K14378SAG	1	116	K14382BRC*	1	115
K14372LBS*	1	120	K14378TCO	1	116	K14382BSS*	1	115
K14372LIVW	1	120	K14378TIR	1	116	K14382DBZB	1	115
K14372PBR*	1	120	K14378WHI	1	116	K14382LBKB	1	115
K14372POC*	1	120	K14379BSS	1	117	K14382LBS*	1	115
K14372SAA*	1	120	K14380ABSB	1	115	K14382LIVW	1	115
K14372SAG*	1	120	K14380BRC*	1	115	K14382PBR*	1	115
K14372TCOB	1	120	K14380BSS*	1	115	K14382POC*	1	115
K14372TIRB	1	120	K14380DBZB	1	115	K14382SAA*	1	115
K14372WHIW	1	120	K14380LBKB	1	115	K14382SAG*	1	115
K14373ABSB	1	120	K14380LBS*	1	115	K14382TCOB	1	115
K14373BRC*	1	120	K14380LIVW	1	115	K14382TIRB	1	115
K14373BSS*	1	120	K14380PBR*	1	115	K14382WHIW	1	115
K14373DBZB	1	120	K14380POC*	1	115	K14383ABSB	1	113
K14373LBKB	1	120	K14380SAA*	1	115	K14383BRC*	1	113
K14373LBS*	1	120	K14380SAG*	1	115	K14383BSS*	1	113
K14373LIVW	1	120	K14380TCOB	1	115	K14383DBZB	1	113
K14373PBR*	1	120	K14380TIRB	1	115	K14383LBKB	1	113
K14373POC*	1	120	K14380WHIW	1	115	K14383LBS*	1	113
K14373SAA*	1	120	K14381ABSB	1	115	K14383LIVW	1	113
K14373SAG*	1	120	K14381BRC*	1	115	K14383PBR*	1	113
K14373TCOB	1	120	K14381BSS*	1	115	K14383POC*	1	113
K14373TIRB	1	120	K14381DBZB	1	115	K14383SAA*	1	113
K14373WHIW	1	120	K14381LBKB	1	115	K14383SAG*	1	113
K14378ABS	1	116	K14381LBS*	1	115	K14383TCOB	1	113
K14378BRC	1	116	K14381LIVW	1	115	K14383TIRB	1	113

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LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
K14383WHIW	1	113	K14432LBK	1	123	K14434SAG	1	123
K14401	1	193	K14432LBS	1	123	K14434TCO	1	123
K14401ABS	1	126	K14432LIV	1	123	K14434TIR	1	123
K14401BRC	1	126	K14432PBR	1	123	K14434WHI	1	123
K14401BSS	1	126	K14432POC	1	123	K14521ABS	1	122
K14401DBZ	1	126	K14432SAA	1	123	K14521BRC	1	122
K14401LBK	1	126	K14432SAG	1	123	K14521BSS	1	122
K14401LBS	1	126	K14432TCO	1	123	K14521DBZ	1	122
K14401LIV	1	126	K14432TIR	1	123	K14521LBK	1	122
K14401PBR	1	126	K14432WHI	1	123	K14521LBS	1	122
K14401POC	1	126	K14433ABS	1	123	K14521LIV	1	122
K14401SAA	1	126	K14433BRC	1	123	K14521PBR	1	122
K14401SAG	1	126	K14433BSS	1	123	K14521POC	1	122
K14401TCO	1	126	K14433DBZ	1	123	K14521SAA	1	122
K14401TIR	1	126	K14433LBK	1	123	K14521SAG	1	122
K14401WHI	1	126	K14433LBS	1	123	K14521TCO	1	122
K14431ABS	1	123	K14433LIV	1	123	K14521TIR	1	122
K14431BRC	1	123	K14433PBR	1	123	K14521WHI	1	122
K14431BSS	1	123	K14433POC	1	123	K14522ABS	1	122
K14431DBZ	1	123	K14433SAA	1	123	K14522BRC	1	122
K14431LBK	1	123	K14433SAG	1	123	K14522BSS	1	122
K14431LBS	1	123	K14433TCO	1	123	K14522DBZ	1	122
K14431LIV	1	123	K14433TIR	1	123	K14522LBK	1	122
K14431PBR	1	123	K14433WHI	1	123	K14522LBS	1	122
K14431POC	1	123	K14434ABS	1	123	K14522LIV	1	122
K14431SAA	1	123	K14434BRC	1	123	K14522PBR	1	122
K14431SAG	1	123	K14434BSS	1	123	K14522POC	1	122
K14431TCO	1	123	K14434DBZ	1	123	K14522SAA	1	122
K14431TIR	1	123	K14434LBK	1	123	K14522SAG	1	122
K14431WHI	1	123	K14434LBS	1	123	K14522TCO	1	122
K14432ABS	1	123	K14434LIV	1	123	K14522TIR	1	122
K14432BRC	1	123	K14434PBR	1	123	K14522WHI	1	122
K14432BSS	1	123	K14434POC	1	123	K14647ABSB	1	113
K14432DBZ	1	123	K14434SAA	1	123	K14647BRC*	1	113

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K14647BSS*	1	113	K14709DBZB	1	117	K14780SAA*	1	115
K14647DBZB	1	113	K14709LBKB	1	117	K14780SAG*	1	115
K14647LBKB	1	113	K14709LBS*	1	117	K14780TCOB	1	115
K14647LBS*	1	113	K14709LIVW	1	117	K14780TIRB	1	115
K14647LIVW	1	113	K14709PBR*	1	117	K14780WHIW	1	115
K14647PBR*	1	113	K14709POC*	1	117	K14781ABSB	1	115
K14647POC*	1	113	K14709SAA*	1	117	K14781BRC*	1	115
K14647SAA*	1	113	K14709SAG*	1	117	K14781BSS*	1	115
K14647SAG*	1	113	K14709TCOB	1	117	K14781DBZB	1	115
K14647TCOB	1	113	K14709TIRB	1	117	K14781LBKB	1	115
K14647TIRB	1	113	K14709WHIW	1	117	K14781LBS*	1	115
K14647WHIW	1	113	K14710ABSB	1	117	K14781LIVW	1	115
K14657ABSB	1	112	K14710BRC*	1	117	K14781PBR*	1	115
K14657BRC*	1	112	K14710BSS*	1	117	K14781POC*	1	115
K14657BSS*	1	112	K14710DBZB	1	117	K14781SAA*	1	115
K14657DBZB	1	112	K14710LBKB	1	117	K14781SAG*	1	115
K14657LBKB	1	112	K14710LBS*	1	117	K14781TCOB	1	115
K14657LBS*	1	112	K14710LIVW	1	117	K14781TIRB	1	115
K14657LIVW	1	112	K14710PBR*	1	117	K14781WHIW	1	115
K14657PBR*	1	112	K14710POC*	1	117	K14790ABS	1	116
K14657POC*	1	112	K14710SAA*	1	117	K14790BRC	1	116
K14657SAA*	1	112	K14710SAG*	1	117	K14790BSS	1	116
K14657SAG*	1	112	K14710TCOB	1	117	K14790DBZ	1	116
K14657TCOB	1	112	K14710TIRB	1	117	K14790LBK	1	116
K14657TIRB	1	112	K14710WHIW	1	117	K14790LBS	1	116
K14657WHIW	1	112	K14780ABSB	1	115	K14790LIV	1	116
K14701	10	126	K14780BRC*	1	115	K14790PBR	1	116
K14702	10	127	K14780BSS*	1	115	K14790POC	1	116
K14703	10	127	K14780DBZB	1	115	K14790SAA	1	116
K14704	10	127	K14780LBKB	1	115	K14790SAG	1	116
K14706	10	127	K14780LBS*	1	115	K14790TCO	1	116
K14709ABSB	1	117	K14780LIVW	1	115	K14790TIR	1	116
K14709BRC*	1	117	K14780PBR*	1	115	K14790WHI	1	116
K14709BSS*	1	117	K14780POC*	1	115	K14791ABS	1	116

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LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
K14791BRC	1	116	K14891LIV	1	124	K14893TIR	1	124
K14791BSS	1	116	K14891PBR	1	124	K14893WHI	1	124
K14791DBZ	1	116	K14891POC	1	124	K14896ABS	1	124
K14791LBK	1	116	K14891SAA	1	124	K14896BRC	1	124
K14791LBS	1	116	K14891SAG	1	124	K14896BSS	1	124
K14791LIV	1	116	K14891TCO	1	124	K14896DBZ	1	124
K14791PBR	1	116	K14891TIR	1	124	K14896LBK	1	124
K14791POC	1	116	K14891WHI	1	124	K14896LBS	1	124
K14791SAA	1	116	K14892ABS	1	124	K14896LIV	1	124
K14791SAG	1	116	K14892BRC	1	124	K14896PBR	1	124
K14791TCO	1	116	K14892BSS	1	124	K14896POC	1	124
K14791TIR	1	116	K14892DBZ	1	124	K14896SAA	1	124
K14791WHI	1	116	K14892LBK	1	124	K14896SAG	1	124
K14801	10	127	K14892LBS	1	124	K14896TCO	1	124
K14859ABSB	1	121	K14892LIV	1	124	K14896TIR	1	124
K14859BRC*	1	121	K14892PBR	1	124	K14896WHI	1	124
K14859BSS*	1	121	K14892POC	1	124	K14931ABSB	1	118
K14859DBZB	1	121	K14892SAA	1	124	K14931BRC*	1	118
K14859LBKB	1	121	K14892SAG	1	124	K14931BSS*	1	118
K14859LBS*	1	121	K14892TCO	1	124	K14931DBZB	1	118
K14859LIVW	1	121	K14892TIR	1	124	K14931LBKB	1	118
K14859PBR*	1	121	K14892WHI	1	124	K14931LBS*	1	118
K14859POC*	1	121	K14893ABS	1	124	K14931LIVW	1	118
K14859SAA*	1	121	K14893BRC	1	124	K14931PBR*	1	118
K14859SAG*	1	121	K14893BSS	1	124	K14931POC*	1	118
K14859TCOB	1	121	K14893DBZ	1	124	K14931SAA*	1	118
K14859TIRB	1	121	K14893LBK	1	124	K14931SAG*	1	118
K14859WHIW	1	121	K14893LBS	1	124	K14931TCOB	1	118
K14891ABS	1	124	K14893LIV	1	124	K14931TIRB	1	118
K14891BRC	1	124	K14893PBR	1	124	K14931WHIW	1	118
K14891BSS	1	124	K14893POC	1	124	K14941ABSB	1	118
K14891DBZ	1	124	K14893SAA	1	124	K14941BRC*	1	118
K14891LBK	1	124	K14893SAG	1	124	K14941BSS*	1	118
K14891LBS	1	124	K14893TCO	1	124	K14941DBZB	1	118

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K14941LBKB	1	118	K14958SAG*	1	119	K14978BSS*	1	119
K14941LBS*	1	118	K14958TCOB	1	119	K14978DBZB	1	119
K14941LIVW	1	118	K14958TIRB	1	119	K14978LBKB	1	119
K14941PBR*	1	118	K14958WHIW	1	119	K14978LBS*	1	119
K14941POC*	1	118	K14961ABSB	1	118	K14978LIVW	1	119
K14941SAA*	1	118	K14961BRC*	1	118	K14978PBR*	1	119
K14941SAG*	1	118	K14961BSS*	1	118	K14978POC*	1	119
K14941TCOB	1	118	K14961DBZB	1	118	K14978SAA*	1	119
K14941TIRB	1	118	K14961LBKB	1	118	K14978SAG*	1	119
K14941WHIW	1	118	K14961LBS*	1	118	K14978TCOB	1	119
K14948ABSB	1	119	K14961LIVW	1	118	K14978TIRB	1	119
K14948BRC*	1	119	K14961PBR*	1	118	K14978WHIW	1	119
K14948BSS*	1	119	K14961POC*	1	118	K14989ABSB	1	119
K14948DBZB	1	119	K14961SAA*	1	118	K14989BRC*	1	119
K14948LBKB	1	119	K14961SAG*	1	118	K14989BSS*	1	119
K14948LBS*	1	119	K14961TCOB	1	118	K14989DBZB	1	119
K14948LIVW	1	119	K14961TIRB	1	118	K14989LBKB	1	119
K14948PBR*	1	119	K14961WHIW	1	118	K14989LBS*	1	119
K14948POC*	1	119	K14971ABSB	1	118	K14989LIVW	1	119
K14948SAA*	1	119	K14971BRC*	1	118	K14989PBR*	1	119
K14948SAG*	1	119	K14971BSS*	1	118	K14989POC*	1	119
K14948TCOB	1	119	K14971DBZB	1	118	K14989SAA*	1	119
K14948TIRB	1	119	K14971LBKB	1	118	K14989SAG*	1	119
K14948WHIW	1	119	K14971LBS*	1	118	K14989TCOB	1	119
K14958ABSB	1	119	K14971LIVW	1	118	K14989TIRB	1	119
K14958BRC*	1	119	K14971PBR*	1	118	K14989WHIW	1	119
K14958BSS*	1	119	K14971POC*	1	118	K23471ABSB	1	87
K14958DBZB	1	119	K14971SAA*	1	118	K23471BRC*	1	87
K14958LBKB	1	119	K14971SAG*	1	118	K23471BSS*	1	87
K14958LBS*	1	119	K14971TCOB	1	118	K23471DBZB	1	87
K14958LIVW	1	119	K14971TIRB	1	118	K23471LBKB	1	87
K14958PBR*	1	119	K14971WHIW	1	118	K23471LBS*	1	87
K14958POC*	1	119	K14978ABSB	1	119	K23471LIVW	1	87
K14958SAA*	1	119	K14978BRC*	1	119	K23471PBR*	1	87

For product codes that contain a \* please see the relevant product page for full details

LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
K23471POC*	1	87	K23476DBZB	1	37	K24171TIR	1	107
K23471SAG*	1	87	K23476LBKB	1	37	K24171WHI	1	107
K23471TCOB	1	87	K23476LBS*	1	37	K24172ABS	1	107
K23471TIRB	1	87	K23476LIVW	1	37	K24172BRC	1	107
K23471WHIW	1	87	K23476PBR*	1	37	K24172BSS	1	107
K23472ABSB	1	87	K23476POC*	1	37	K24172DBZ	1	107
K23472BRC*	1	87	K23476SAG*	1	37	K24172LBK	1	107
K23472BSS*	1	87	K23476TCOB	1	37	K24172LBS	1	107
K23472DBZB	1	87	K23476TIRB	1	37	K24172LIV	1	107
K23472LBKB	1	87	K23476WHIW	1	37	K24172PBR	1	107
K23472LBS*	1	87	K23477ABSB	1	37	K24172POC	1	107
K23472LIVW	1	87	K23477BRC*	1	37	K24172SAG	1	107
K23472PBR*	1	87	K23477BSS*	1	37	K24172TCO	1	107
K23472POC*	1	87	K23477DBZB	1	37	K24172TIR	1	107
K23472SAG*	1	87	K23477LBKB	1	37	K24172WHI	1	107
K23472TCOB	1	87	K23477LBS*	1	37	K24181ABS	1	101
K23472TIRB	1	87	K23477LIVW	1	37	K24181BRC	1	101
K23472WHIW	1	87	K23477PBR*	1	37	K24181BSS	1	101
K23473ABSB	1	88	K23477POC*	1	37	K24181DBZ	1	101
K23473BRC*	1	88	K23477SAG*	1	37	K24181LBK	1	101
K23473BSS*	1	88	K23477TCOB	1	37	K24181LBS	1	101
K23473DBZB	1	88	K23477TIRB	1	37	K24181LIV	1	101
K23473LBKB	1	88	K23477WHIW	1	37	K24181PBR	1	101
K23473LBS*	1	88	K24171ABS	1	107	K24181POC	1	101
K23473LIVW	1	88	K24171BRC	1	107	K24181SAG	1	101
K23473PBR*	1	88	K24171BSS	1	107	K24181TCO	1	101
K23473POC*	1	88	K24171DBZ	1	107	K24181TIR	1	101
K23473SAG*	1	88	K24171LBK	1	107	K24181WHI	1	101
K23473TCOB	1	88	K24171LBS	1	107	K24182ABS	1	101
K23473TIRB	1	88	K24171LIV	1	107	K24182BRC	1	101
K23473WHIW	1	88	K24171PBR	1	107	K24182BSS	1	101
K23476ABSB	1	37	K24171POC	1	107	K24182DBZ	1	101
K23476BRC*	1	37	K24171SAG	1	107	K24182LBK	1	101
K23476BSS*	1	37	K24171TCO	1	107	K24182LBS	1	101

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LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
K24182LIV	1	101	K24305BRC*	1	88	K24330SAG	1	109
K24182PBR	1	101	K24305BSS*	1	88	K24330TCO	1	109
K24182POC	1	101	K24305DBZB	1	88	K24330TIR	1	109
K24182SAG	1	101	K24305LBKB	1	88	K24330WHI	1	109
K24182TCO	1	101	K24305LBS*	1	88	K24331	1	192
K24182TIR	1	101	K24305LIVW	1	88	K24331ABS	1	90
K24182WHI	1	101	K24305PBR*	1	88	K24331BRC	1	90
K24184ABS	1	101	K24305POC*	1	88	K24331BSS	1	90
K24184BRC	1	101	K24305SAG*	1	88	K24331DBZ	1	90
K24184BSS	1	101	K24305TCOB	1	88	K24331LBK	1	90
K24184DBZ	1	101	K24305TIRB	1	88	K24331LBS	1	90
K24184LBK	1	101	K24305WHIW	1	88	K24331LIV	1	90
K24184LBS	1	101	K24329ABS	1	109	K24331PBR	1	90
K24184LIV	1	101	K24329BRC	1	109	K24331POC	1	90
K24184PBR	1	101	K24329BSS	1	109	K24331SAG	1	90
K24184POC	1	101	K24329DBZ	1	109	K24331TCO	1	90
K24184SAG	1	101	K24329LBK	1	109	K24331TIR	1	90
K24184TCO	1	101	K24329LBS	1	109	K24331WHI	1	90
K24184TIR	1	101	K24329LIV	1	109	K24332	1	192
K24184WHI	1	101	K24329PBR	1	109	K24332ABS	1	90
K24301ABS	1	89	K24329POC	1	109	K24332BRC	1	90
K24301BRC	1	89	K24329SAG	1	109	K24332BSS	1	90
K24301BSS	1	89	K24329TCO	1	109	K24332DBZ	1	90
K24301DBZ	1	89	K24329TIR	1	109	K24332LBK	1	90
K24301LBK	1	89	K24329WHI	1	109	K24332LBS	1	90
K24301LBS	1	89	K24330ABS	1	109	K24332LIV	1	90
K24301LIV	1	89	K24330BRC	1	109	K24332PBR	1	90
K24301PBR	1	89	K24330BSS	1	109	K24332POC	1	90
K24301POC	1	89	K24330DBZ	1	109	K24332SAG	1	90
K24301SAG	1	89	K24330LBK	1	109	K24332TCO	1	90
K24301TCO	1	89	K24330LBS	1	109	K24332TIR	1	90
K24301TIR	1	89	K24330LIV	1	109	K24332WHI	1	90
K24301WHI	1	89	K24330PBR	1	109	K24333	1	192
K24305ABSB	1	88	K24330POC	1	109	K24333ABS	1	91

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LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
K24333BRC	1	91	K24336POC*	1	88	K24348BRC	1	91
K24333BSS	1	91	K24336SAG*	1	88	K24348BSS	1	91
K24333DBZ	1	91	K24336TCOB	1	88	K24348DBZ	1	91
K24333LBK	1	91	K24336TIRB	1	88	K24348LBK	1	91
K24333LBS	1	91	K24336WHIW	1	88	K24348LBS	1	91
K24333LIV	1	91	K24346	1	192	K24348LIV	1	91
K24333PBR	1	91	K24346ABS	1	91	K24348PBR	1	91
K24333POC	1	91	K24346BRC	1	91	K24348POC	1	91
K24333SAG	1	91	K24346BSS	1	91	K24348SAG	1	91
K24333TCO	1	91	K24346DBZ	1	91	K24348TCO	1	91
K24333TIR	1	91	K24346LBK	1	91	K24348TIR	1	91
K24333WHI	1	91	K24346LBS	1	91	K24348WHI	1	91
K24334	1	192	K24346LIV	1	91	K24357ABSB	1	84
K24334ABS	1	91	K24346PBR	1	91	K24357BRC*	1	84
K24334BRC	1	91	K24346POC	1	91	K24357BSS*	1	84
K24334BSS	1	91	K24346SAG	1	91	K24357DBZB	1	84
K24334DBZ	1	91	K24346TCO	1	91	K24357LBKB	1	84
K24334LBK	1	91	K24346TIR	1	91	K24357LBS*	1	84
K24334LBS	1	91	K24346WHI	1	91	K24357LIVW	1	84
K24334LIV	1	91	K24347ABSB	1	84	K24357PBR*	1	84
K24334PBR	1	91	K24347BRC*	1	84	K24357POC*	1	84
K24334POC	1	91	K24347BSS*	1	84	K24357SAG*	1	84
K24334SAG	1	91	K24347DBZB	1	84	K24357TCOB	1	84
K24334TCO	1	91	K24347LBKB	1	84	K24357TIRB	1	84
K24334TIR	1	91	K24347LBS*	1	84	K24357WHIW	1	84
K24334WHI	1	91	K24347LIVW	1	84	K24371ABSB	1	87
K24336ABSB	1	88	K24347PBR*	1	84	K24371BRC*	1	87
K24336BRC*	1	88	K24347POC*	1	84	K24371BSS*	1	87
K24336BSS*	1	88	K24347SAG*	1	84	K24371DBZB	1	87
K24336DBZB	1	88	K24347TCOB	1	84	K24371LBKB	1	87
K24336LBKB	1	88	K24347TIRB	1	84	K24371LBS*	1	87
K24336LBS*	1	88	K24347WHIW	1	84	K24371LIVW	1	87
K24336LIVW	1	88	K24348	1	193	K24371PBR*	1	87
K24336PBR*	1	88	K24348ABS	1	91	K24371POC*	1	87

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LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
K24371SAG*	1	87	K24381LBKB	1	85	K24383WHIW	1	85
K24371TCOB	1	87	K24381LBS*	1	85	K24521ABS	1	89
K24371TIRB	1	87	K24381LIVW	1	85	K24521BRC	1	89
K24371WHIW	1	87	K24381PBR*	1	85	K24521BSS	1	89
K24372ABSB	1	87	K24381POC*	1	85	K24521DBZ	1	89
K24372BRC*	1	87	K24381SAG*	1	85	K24521LBK	1	89
K24372BSS*	1	87	K24381TCOB	1	85	K24521LBS	1	89
K24372DBZB	1	87	K24381TIRB	1	85	K24521LIV	1	89
K24372LBKB	1	87	K24381WHIW	1	85	K24521PBR	1	89
K24372LBS*	1	87	K24382ABSB	1	84	K24521POC	1	89
K24372LIVW	1	87	K24382BRC*	1	84	K24521SAG	1	89
K24372PBR*	1	87	K24382BSS*	1	84	K24521TCO	1	89
K24372POC*	1	87	K24382DBZB	1	84	K24521TIR	1	89
K24372SAG*	1	87	K24382LBKB	1	84	K24521WHI	1	89
K24372TCOB	1	87	K24382LBS*	1	84	K24522ABS	1	89
K24372TIRB	1	87	K24382LIVW	1	84	K24522BRC	1	89
K24372WHIW	1	87	K24382PBR*	1	84	K24522BSS	1	89
K24373ABSB	1	87	K24382POC*	1	84	K24522DBZ	1	89
K24373BRC*	1	87	K24382SAG*	1	84	K24522LBK	1	89
K24373BSS*	1	87	K24382TCOB	1	84	K24522LBS	1	89
K24373DBZB	1	87	K24382TIRB	1	84	K24522LIV	1	89
K24373LBKB	1	87	K24382WHIW	1	84	K24522PBR	1	89
K24373LBS*	1	87	K24383ABSB	1	85	K24522POC	1	89
K24373LIVW	1	87	K24383BRC*	1	85	K24522SAG	1	89
K24373PBR*	1	87	K24383BSS*	1	85	K24522TCO	1	89
K24373POC*	1	87	K24383DBZB	1	85	K24522TIR	1	89
K24373SAG*	1	87	K24383LBKB	1	85	K24522WHI	1	89
K24373TCOB	1	87	K24383LBS*	1	85	K24541ABS	1	90
K24373TIRB	1	87	K24383LIVW	1	85	K24541BRC	1	90
K24373WHIW	1	87	K24383PBR*	1	85	K24541BSS	1	90
K24381ABSB	1	85	K24383POC*	1	85	K24541DBZ	1	90
K24381BRC*	1	85	K24383SAG*	1	85	K24541LBK	1	90
K24381BSS*	1	85	K24383TCOB	1	85	K24541LBS	1	90
K24381DBZB	1	85	K24383TIRB	1	85	K24541LIV	1	90

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LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
K24541PBR	1	90	K24657BSS*	1	84	K24740TCOB	1	85
K24541POC	1	90	K24657DBZB	1	84	K24740TIRB	1	85
K24541SAG	1	90	K24657LBKB	1	84	K24740WHIW	1	85
K24541TCO	1	90	K24657LBS*	1	84	K24742ABSB	1	85
K24541TIR	1	90	K24657LIVW	1	84	K24742BRC*	1	85
K24541WHI	1	90	K24657PBR*	1	84	K24742BSS*	1	85
K24561ABS	1	90	K24657POC*	1	84	K24742DBZB	1	85
K24561BRC	1	90	K24657SAG*	1	84	K24742LBKB	1	85
K24561BSS	1	90	K24657TCOB	1	84	K24742LBS*	1	85
K24561DBZ	1	90	K24657TIRB	1	84	K24742LIVW	1	85
K24561LBK	1	90	K24657WHIW	1	84	K24742PBR*	1	85
K24561LBS	1	90	K24709ABSB	1	86	K24742POC*	1	85
K24561LIV	1	90	K24709BRC*	1	86	K24742SAG*	1	85
K24561PBR	1	90	K24709BSS*	1	86	K24742TCOB	1	85
K24561POC	1	90	K24709DBZB	1	86	K24742TIRB	1	85
K24561SAG	1	90	K24709LBKB	1	86	K24742WHIW	1	85
K24561TCO	1	90	K24709LBS*	1	86	K24780ABSB	1	85
K24561TIR	1	90	K24709LIVW	1	86	K24780BRC*	1	85
K24561WHI	1	90	K24709PBR*	1	86	K24780BSS*	1	85
K24647ABSB	1	84	K24709POC*	1	86	K24780DBZB	1	85
K24647BRC*	1	84	K24709SAG*	1	86	K24780LBKB	1	85
K24647BSS*	1	84	K24709TCOB	1	86	K24780LBS*	1	85
K24647DBZB	1	84	K24709TIRB	1	86	K24780LIVW	1	85
K24647LBKB	1	84	K24709WHIW	1	86	K24780PBR*	1	85
K24647LBS*	1	84	K24740ABSB	1	85	K24780POC*	1	85
K24647LIVW	1	84	K24740BRC*	1	85	K24780SAG*	1	85
K24647PBR*	1	84	K24740BSS*	1	85	K24780TCOB	1	85
K24647POC*	1	84	K24740DBZB	1	85	K24780TIRB	1	85
K24647SAG*	1	84	K24740LBKB	1	85	K24780WHIW	1	85
K24647TCOB	1	84	K24740LBS*	1	85	K24781ABSB	1	85
K24647TIRB	1	84	K24740LIVW	1	85	K24781BRC*	1	85
K24647WHIW	1	84	K24740PBR*	1	85	K24781BSS*	1	85
K24657ABSB	1	84	K24740POC*	1	85	K24781DBZB	1	85
K24657BRC*	1	84	K24740SAG*	1	85	K24781LBKB	1	85

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K24781LBS*	1	85	K24958ABSB	1	86	K24971POC*	1	86
K24781LIVW	1	85	K24958BRC*	1	86	K24971SAG*	1	86
K24781PBR*	1	85	K24958BSS*	1	86	K24971TCOB	1	86
K24781POC*	1	85	K24958DBZB	1	86	K24971TIRB	1	86
K24781SAG*	1	85	K24958LBKB	1	86	K24971WHIW	1	86
K24781TCOB	1	85	K24958LBS*	1	86	K24978ABSB	1	87
K24781TIRB	1	85	K24958LIVW	1	86	K24978BRC*	1	87
K24781WHIW	1	85	K24958PBR*	1	86	K24978BSS*	1	87
K24859ABSB	1	88	K24958POC*	1	86	K24978DBZB	1	87
K24859BRC*	1	88	K24958SAG*	1	86	K24978LBKB	1	87
K24859BSS*	1	88	K24958TCOB	1	86	K24978LBS*	1	87
K24859DBZB	1	88	K24958TIRB	1	86	K24978LIVW	1	87
K24859LBKB	1	88	K24958WHIW	1	86	K24978PBR*	1	87
K24859LBS*	1	88	K24961ABSB	1	86	K24978POC*	1	87
K24859LIVW	1	88	K24961BRC*	1	86	K24978SAG*	1	87
K24859PBR*	1	88	K24961BSS*	1	86	K24978TCOB	1	87
K24859POC*	1	88	K24961DBZB	1	86	K24978TIRB	1	87
K24859SAG*	1	88	K24961LBKB	1	86	K24978WHIW	1	87
K24859TCOB	1	88	K24961LBS*	1	86	K36101CLR	1	239
K24859TIRB	1	88	K24961LIVW	1	86	K36102CLR	1	239
K24859WHIW	1	88	K24961PBR*	1	86	K36103CLR	1	239
K24941ABSB	1	86	K24961POC*	1	86	K46031GRY	1	236
K24941BRC*	1	86	K24961SAG*	1	86	K46031WHI	1	236
K24941BSS*	1	86	K24961TCOB	1	86	K46101CLR	1	236
K24941DBZB	1	86	K24961TIRB	1	86	K46101GRY	1	236
K24941LBKB	1	86	K24961WHIW	1	86	K46101WHI	1	236
K24941LBS*	1	86	K24971ABSB	1	86	K46102CLR	1	236
K24941LIVW	1	86	K24971BRC*	1	86	K46102GRY	1	236
K24941PBR*	1	86	K24971BSS*	1	86	K46102WHI	1	236
K24941POC*	1	86	K24971DBZB	1	86	K46103CLR	1	236
K24941SAG*	1	86	K24971LBKB	1	86	K46103GRY	1	236
K24941TCOB	1	86	K24971LBS*	1	86	K46103WHI	1	236
K24941TIRB	1	86	K24971LIVW	1	86	K46111CLR	1	236
K24941WHIW	1	86	K24971PBR*	1	86	K46111GRY	1	236

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K46111WHI	1	236	K56401BLK	1	230	K56423GRY	1	231
K46131CLR	1	236	K56401GRY	1	230	K56423WHI	1	231
K46131GRY	1	236	K56401WHI	1	230	K56425BLK	1	230
K46131WHI	1	236	K56402BLK	1	230	K56425GRY	1	230
K46135CLR	1	236	K56402GRY	1	230	K56425WHI	1	230
K46135GRY	1	236	K56402WHI	1	230	K56480BLK	1	229
K46135WHI	1	236	K56406BLK	1	230	K56480GRY	1	229
K46202CLR	1	236	K56406GRY	1	230	K56480WHI	1	229
K46202GRY	1	236	K56406WHI	1	230	K56481BLK	1	229
K46202WHI	1	236	K56407BLK	1	230	K56481GRY	1	229
K46206CLR	1	236	K56407GRY	1	230	K56481WHI	1	229
K46206GRY	1	236	K56407WHI	1	230	K56482BLK	1	229
K46206WHI	1	236	K56408BLK	1	230	K56482GRY	1	229
K55000BLK	1	41, 233	K56408GRY	1	230	K56482WHI	1	229
K55000GRY	1	41, 233	K56408WHI	1	230	K56483BLK	1	229
K55000WHI	1	41, 233	K56409BLK	1	230	K56483GRY	1	229
K55400BLK	1	38, 233	K56409GRY	1	230	K56483WHI	1	229
K55400GRY	1	38, 233	K56409WHI	1	230	K56485BLK	1	229
K55400WHI	1	38, 233	K56410BLK	1	230	K56485GRY	1	229
K55406BLK	1	38, 233	K56410GRY	1	230	K56485WHI	1	229
K55406GRY	1	38, 233	K56410WHI	1	230	K56486BLK	1	229
K55406WHI	1	38, 233	K56414BLK	1	230	K56486GRY	1	229
K56231BLK	1	229, 293	K56414GRY	1	230	K56486WHI	1	229
K56231GRY	1	229, 293	K56414WHI	1	230	K56487BLK	1	229
K56231WHI	1	229, 293	K56420BLK	1	231	K56487GRY	1	229
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K56400GRY	1	230	K56422WHI	1	231	K56501WHI	1	232
K56400WHI	1	230	K56423BLK	1	231	K56502GRY	1	232

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K56502WHI	1	232	KD263s	1	266	LDF21PBRB	1	29
K56503GRY	1	232	KD316s	1	267	LDF21POCB	1	29
K56503WHI	1	232	KD332s	1	267	LDF22BSSB	1	29
K56506BLK	1	232	KD363s	1	267	LDF22BSSW	1	29
K56506GRY	1	232	KPAD	1	41, 233	LDF22LBSB	1	29
K56506WHI	1	232	KST6100AWHI	1	66	LDF22LBSW	1	29
<b>KA – KZ</b>			KST6100CWHI	1	66	LDF22PBRB	1	29
KAX26s	10	291	KST6400AWHI	1	66	LDF22POCB	1	29
KB116s	1	266	KT6360BWHI	1	66	LDM31UC	1	28
KB132s	1	266	<b>L</b>			LDM32UC	1	28
KB163s	1	266	LCP102BLK	10	223	LDM61UC	1	28
KB216s	1	266	LCP102PORG	10	223	LFD51UC	1	28
KB232s	1	266	LCP102SBLK	10	223	LFD52UC	1	28
KB263s	1	266	LCP102SORG	10	223	LIB1UCHA	1	27
KB316s	1	267	LCP103BLK	10	223	LIB2UCHA	1	27
KB332s	1	267	LCP103PBLK	10	223	LIM1UC	1	27
KB363s	1	267	LCP103PWHI	10	223	LIM2UC	1	27
KC116s	1	266	LCP103SBLK	10	223	LNB1WHI	25	365
KC132s	1	266	LCP103SWHI	10	223	LNB2WHI	100	365
KC163s	1	266	LCP103WHI	10	223	LNB3WHI	50	365
KC216s	1	266	LDBC1U	1	30	LNB4WHI	50	365
KC232s	1	266	LDF11CHA	1	29	LNB5WHI	25	365
KC263s	1	266	LDF11CHM	1	29	LNB6WHI	25	365
KC316s	1	267	LDF11TTA	1	29	LPIR1U	1	30
KC332s	1	267	LDF11WHI	1	29	LPTDM1U	1	30
KC363s	1	267	LDF12CHA	1	29	LPTSM1U	1	30
KCMR701AWHI	1	66	LDF12CHM	1	29	LRC14ULBS	1	27
KCMR707AWHI	1	66	LDF12TTA	1	29	LRC130	1	30
KD116s	1	266	LDF12WHI	1	29	LSF11CHA	1	29
KD132s	1	266	LDF21BSSB	1	29	LSF11CHM	1	29
KD163s	1	266	LDF21BSSW	1	29	LSF11TTA	1	29
KD216s	1	266	LDF21LBSB	1	29	LSF11WHI	1	29
KD232s	1	266	LDF21LBSW	1	29	LSF12CHA	1	29
						LSF12CHM	1	29



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NCU1010WHI	1	356	NMD5050WHI	2	355	NTF1040WHI	2	355
NCU1040WHI	1	356	NMH100WHI	1	356	NTF1050WHI	2	355
NCU1050WHI	1	356	NMI1010WHI	1	356	NTF5050WHI	2	355
NCU5050WHI	1	356	NMI1040WHI	1	356	NTF7550WHI	2	355
NCU7550WHI	1	356	NMI1050WHI	1	356	NTF7575WHI	2	355
NCU7575WHI	1	356	NMI5050WHI	1	356	NTI1010WHI	1	355
NDAE1050WHI	2	354	NMI7550WHI	1	356	NTI1040WHI	1	355
NDAF1050WHI	2	355	NMI7575WHI	1	356	NTI1050WHI	1	355
NDAI1050WHI	2	354	NMO1010WHI	1	356	NTI5050WHI	1	355
NDTF1050WHI	2	355	NMO1050WHI	1	356	NTI7550WHI	1	355
NEP3WHI	10	358	NMO5050WHI	1	356	NTI7575WHI	1	355
NEP4WHI	10	358	NMO7550WHI	1	356	NTR21WHI	1	357
NEP1010WHI	5	355	NMO7575WHI	1	356	NTR31WHI	1	357
NEP1040WHI	5	355	NMT1010WHI	1	356	NTR32WHI	1	357
NEP1050WHI	5	355	NMT1040WHI	1	356	NTR41WHI	1	357
NEP5050WHI	5	355	NMT1050WHI	1	356	NTR42WHI	1	357
NEP7550WHI	5	355	NMT5050WHI	1	356	NTR61WHI	1	357
NEP7575WHI	5	355	NMT7550WHI	1	356	NTR62WHI	1	357
NFAE1050WHI*	2	354	NMT7575WHI	1	356	NTR63WHI	1	357
NFAF1050WHI*	2	354	NSO1TWHI	5	359	NTR64WHI	1	357
NFAI1050WHI*	2	354	NSO1WHI	10	359	NUB401WHI	10	355
NFC1010WHI	1	356	NSO2WHI	5	359	NUB402WHI	10	355
NFC1040WHI	1	356	NSP100WHI	10	357	NUB501WHI	10	355
NFC1050WHI	1	356	NTE1010WHI	1	355	NUB502WHI	10	355
NFC5050WHI	1	356	NTE1040WHI	1	355	NUB1002WHI	10	355
NFC7550WHI	1	356	NTE1050WHI	1	355	NVS40WHI	36m	355
NFC7575WHI	1	356	NTE5050WHI	1	355	NVS50WHI	36m	355
NFTF1050WHI*	2	355	NTE7550WHI	1	355	NVS75WHI	36m	355
NJC1010WHI	5	354	NTE7575WHI	1	355	NVS100WHI	36m	355
NJC1040WHI	5	354	NTF3TCWHI	1	358	NWC1040WHI	5	356
NJC1050WHI	5	354	NTF3WHI	1	358	NWP1040WHI	5	357
NJC5050WHI	10	354	NTF4TCWHI	1	358	NWP1050WHI	5	357
NJC7550WHI	10	354	NTF4WHI	1	358	NWP5050WHI	5	357

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<b>O</b>			PICHWHI	1	347	<b>R</b>		
OA3WHI	50	373	PICLWHI	1	347	REC1WHI	150m	374
OS2WHI	100	373	PPA100ALM	1	330	REC2WHI	150m	374
OS3WHI	100	373	PPA100LIDWHI	2	331	REC3WHI	150m	374
OS4WHI	100	373	PPA100WHI	1	330	RK1WHI	100	361
<b>P</b>			PPC10WHI	3m	331	<b>S</b>		
P53BLK	10	223	PPC20WHI	1	331	SIC	100	371
P153BLK	10	223	PPC40WHI	1	331	SMB2BLK	50	367
PBUD2COL	1	348	PPC50WHI	1	331	SMB3BLK	50	367
PBUD2WHI	1	348	PPC60CHA	10	331	SMB4BLK	50	367
PBUD3WHI	1	348	PPC60WHI	10	331	SMB5BLK	25	367
PBUD21WHI	1	348	PPK1WHI	1	331	SMB6BLK	25	367
PBUS1WHI	1	348	PPT650ALM	1	330	SMT1D1WHI	60m	384
PBUS2WHI	1	348	PPT650WHI	1	330	SMT1WHI	60m	384
PBUS3WHI	1	348	PSC2WHI	20m	349	SMT3D1WHI	60m	384
PBUS21COL	1	348	PSC3WHI	30m	349, 350	SMT3WHI	60m	384
PBUS21WHI	1	348	PTD2COL	2m	346	SMT4D1WHI	60m	384
PCCD2WHI	10m	349	PTD2WHI	2m	346	SMT4WHI	60m	384
PCCD3WHI	30m	349, 350	PTD3COL	3m	346	SPF1D1WHI	60m	376
PCCOL	10	347	PTD3WHI	3m	346	SPF1WHI	60m	376
PCCS2WHI	20m	349	PTPD630WHI	1	350	SPF2D1WHI	60m	376
PCCS3WHI	30m	349, 350	PTPD3000WHI	1	350	SPF2WHI	30m	376
PCWHI	10	347	PTPS630WHI	1	350	SPF3D1WHI	32m	376
PD2WHI	20m	347	PTPS3000WHI	1	350	SPF3WHI	30m	376
PECDCOL	5	347	PTS2COL	4m	346	SPF4WHI	30m	376
PECDFWHI	5	347	PTS2WHI	4m	346	<b>T</b>		
PECHWHI	1	347	PTS3COL	6m	346	TCE6	5	361
PECLWHI	1	347	PTS3WHI	6m	346	TCE7*	1	361
PECSCOL	10	347	<b>Q</b>			TCE8*	1	361
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TCI1	10	361	VCT25WHI	10	314	VP105WHI	50	300, 307
TCI2	10	361	VCT30*	10	314	VP110ALM	30m	318
TCI3	5	361	VCT35WHI	1	314	VP110ALMW	30m	318
TCI4	5	361	VCT100WHI	30m	312	VP110CHA	30m	298
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TEP1	10	361	VCT110WHI	30m	312	VP115ALMW	30m	318
TEP2	10	361	VCT120WHI	15m	312	VP115CHA	30m	298
TEP3	5	361	VCT121WHI	25	314	VP115WHI	30m	298
TEP4	5	361	VCT122WHI	10	314	VP121CHA*	25	300, 320
TEP5	5	361	VCT140WHI	6m	312	VP121WHI*	25	300, 307, 320
TEP6	5	361	VCT141WHI	2	313	VP122CHA*	10	300, 320
TEP7*	1	361	VCT142WHI	2	313	VP122WHI*	10	300, 307, 320
TEP8*	1	361	VCT143WHI	2	313	VP123CHA*	5	300, 320
TEP9*	1	361	VCT144WHI	5	313	VP123WHI*	5	300, 307, 320
TFC1	5	361	VCT145WHI	2	313	VP124CHA**	25	300, 320
TFC3	5	361	VCT147WHI			VP124WHI**	25	300, 307, 320
TFC4	5	361	UP/DOWN	1	313	VP125CHA**	10	300, 320
TFC6	1	361	VCT148WHI	10	314	VP125WHI**	10	300, 307, 320
TPR1GRY	200	361	VCT160WHI	15m	312	VP129ALM	50	320
TPR1WHI	200	361	VCT161WHI	2	313	VP129ALMW	50	320
TR21	1	361	VCT162WHI	2	313	VP129CHA	50	300
TR31	1	361	VCT163WHI (2X L/R PAIRS)	2	313	VP129WHI	50	300
TR41	1	361	VCT164WHI	5	313	VP131CHA	25	300, 320
TR61	1	361	VCT165WHI	2	313	VP131WHI	25	300, 307, 320
TR64	1	361	VCT166WHI	2	313	VP132CHA	10	300, 320
TR86	1	361	VCT167WHI	1	313	VP132WHI	10	300, 307, 320
TR96	1	361	VCT168WHI	10	314	VP180ALM	6m	318
<b>U</b>			VP30**	15m	300, 307	VP180CHA	6m	298
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UEA3WHI	25	378	VP100ALMW	30m	318	VP181GRY*	2	319
			VP100CHA*	30m	298	VP181WHI	2	298, 319
						VP182CHA	2	299

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VP183CHA	1	299	VP198CHA	10	299	VPAB115WHI	30m	306
VP183WHI	1	299	VP198WHI	10	299	VPAB129WHI**	50	307
VP184CHA	5	299	VP200ALM	2	319	VPAB181WHI	2	306
VP184GRY	5	318	VP200ALMW	2	319	VPAB182WHI	2	306
VP184WHI	5	299, 318	VP201ALM	2	319	VPAB183WHI	1	306
VP185CHA	1	299	VP201ALMW	2	319	VPAB184WHI	5	307
VP185GRY	1	319	VP202ALM	1	319	VPAB185WHI	1	307
VP185WHI	1	299, 319	VP202ALMW	1	319	VPAB187WHI	1	307
VP187CHA	1	299	VP202GRY	1	319	VPAB191WHI	2	306
VP187GRY	1	319	VP202WHI	1	319	VPAB192WHI	2	306
VP187WHI	1	299, 319	VP204ALM	1	319	VPAB193WHI	1	306
VP188CHA	10	299	VP204ALMW	1	319	VPAB194WHI	5	307
VP188WHI	10	299	VP205ALM	1	319	VPAB195WHI	1	307
VP189GRY	10	320	VP205ALMW	1	319	VPAB196WHI	1	307
VP189WHI	10	320	VP210ALM	2	319	VPAB197WHI	1	307
VP191CHA	2	298	VP210ALMW	2	319	VTS1000	20	300, 314
VP191GRY*	2	319	VP211ALM	2	319	VTS8035	5	349, 357
VP191WHI	2	298, 319	VP211ALMW	2	319	VTS5D1WHI	20m	326
VP192CHA	2	299	VP212ALM	1	319	VTS5WHI	30m	326
VP192GRY*	2	319	VP212ALMW	1	319	VTS11WHI	10	338, 347
VP192WHI	2	299, 319	VP212GRY	1	319	VTS12WHI	10	338
VP193CHA	1	299	VP212WHI	1	319	VTS25SWHI	10	327, 349
VP193WHI	1	299	VP214ALM	1	319	VTS50WHI	30m	327, 339
VP194CHA	5	299	VP214ALMW	1	319	VTS2001D1WHI	4m	326
VP194GRY	5	318	VP215ALM	1	319	VTS2001WHI	6m	326
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VP195GRY	1	319	VP216ALMW	1	319	VTS2005WHI	2	326
VP195WHI	1	299, 319	VP217	20	320	VTS2006WHI	2	326
VP196CHA**	1	299	VP218	1	320	VTS2007WHI	1	327
VP196WHI**	1	299	VP219	1	320	VTS2008WHI	1	327
VP197CHA	1	299	VP220	20	320	VTS2009WHI	1	327

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YCR1002ELWHI	10	384	YT2WHI	90m	376, 382	2ECR1	20	368
YCR2001EL	10	378	YT3D1WHI	32m	376	2ECR10	20	369
YCR2002EL	10	378	YT3WHI	45m	376, 382	2ECR13	20	368
YDAE3WHI	5	377	YT4CHA	30m	376	2ECR13BLK	25	75
YDAF3WHI	10	377	YT4D1WHI	32m	376	2ECR13ELWHI*	20	368
YDAI3WHI	10	377	YT4WHI	45m	376	2ECR13WHI	25	75
YDTF3WHI	10	377	YT5D1WHI	32m	376	2ECR14	20	369
YEA1WHI	25	378, 382	YT5WHI	45m	376	2ECR15	20	369
YEA2RED	25	382	YT6D1WHI	32m	376	2ECR17	20	368
YEA2WHI or CHA	25	378, 382	YT6WHI	30m	376	2ECR18	20	368
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YEP1WHI	20	377, 382	YT8WHI	12m	376	2ECR1WHI	25	75
YEP2RED	20	382	YT200D1WHI	32m	376	2ECR2	20	368
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YEP3WHI	20	377, 382	YTF1WHI	20	377, 382	2ECR2ELWHI	20	368
YEP4WHI or CHA	20	377	YTF3WHI	5	377, 382	2ECR3	20	368
YEP5WHI	20	377	YTF4WHI or CHA	5	377	2ECR3BLK	25	75
YEP6WHI	10	377	YTF5WHI	5	377	2ECR3ELWHI*	20	368
YEP7WHI	10	377	YTF6WHI	5	377	2ECR3WHI	25	75
YEP8WHI	10	377	YTF7WHI	1	377	2ECR3BLK	25	75
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YSA1WHI	10	378	YTF21WHI	20	377, 382	2ECR5	20	369
YSA2WHI	10	378	YTF22RED	20	382	2ECR5EL*	20	369
YSA3WHI	5	378	YTF22WHI or CHA	20	377, 382	2ECR6	20	369
YSA200WHI	10	378	YTF42WHI or CHA	5	377	2ECR6EL*	20	369
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YST22RED	10	382	YTO12WHI	10	378	2ECR7EL*	20	368
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1132BRO	10	204	1943WHI	5	341	1998	5	343
1133BRO	10	204	1946WHI	5	343	1999CHA	5	341
1146WHI	10	70	1947CHA	5	342	1999WHI	5	341
1149WHI	10	70	1947WHI	5	342	<b>2000-2999</b>		
1150WHI	10	70	1950CHA	5	340	2001ALM	5	198
1152WHI	10	70	1950WHI	5	340	2002ALM	5	198
1154WHI	10	70	1951CHA	5	340	2003ALM	5	198
1161WHI	10	69	1951WHI	5	340	2004ALM	5	198
1163WHI	10	69	1952CHA	5	340	2031WHI	10	200
1170WHI	10	69	1952WHI	5	340	2051WHI	10	68
1171WHI	10	69	1953CHA	5	340	2056WHI	5	68
1172WHI	10	70	1953WHI	5	340	2120WHI	10	199
1174WHI	10	70	1955CHA	5	340	2140WHI	10	200
1179WHI	10	70	1955WHI	5	340	2180WHI	10	199
1180WHI	10	69	1956CHA	5	340	2181WHI	10	199
1181WHI	10	69	1956WHI	5	340	2182WHI	5	199
1186WHI	10	70	1970CHA	5	341	2183WHI	5	199
1189WHI	10	70	1970WHI	5	341	2211ALM	5	197
1232D1	10	202	1971CHA	5	341	2212ALM	5	197
1610WHI	1	203	1971WHI	5	341	2213ALM	5	197
1909CHA	10	343	1976CHA	5	342	2214ALM	5	197
1909WHI	10	343	1976WHI	5	342	2531WHI	5	202
1919	5	343	1978CHA	5	342	2532WHI	5	202
1922ALM	5	339	1978WHI	5	342	2949WHI	5	202
1923WHI	10	343	1980CHA	5	341	2959WHI	10	202
1924WHI	10	343	1980WHI	5	341	<b>3000-3999</b>		
1928	10	343	1981CHA	5	341	3131WHI	5	68
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3191WHI	5	68	5560s	5	266, 278, 285	5945s	10	278, 285
3192D1WHI	5	68	5562s	1	291	5950s	10	278, 285
3192WHI	5	68	5604s	1	285	<b>6000-6999</b>		
3369ALM	5	199	5640s	1	279, 288	6016s	1	267, 278, 287
3370ALM	10	199	5650s	1	291	6032s	1	267, 278, 287
3390ALM	10	199	5660s	1	267, 279, 288	6080s	1	278, 287
3400ZIC	10	206	5660s	1	288	6084SLWHI	1	206
3405ZIC	10	206	5702s	1	285	6160s	1	279, 287
3709	100	205	5702sP1	1	284	6180s	1	279, 287
3710	100	205	5702sP2	1	284	6216s	1	267, 279, 288
3714	100	205	5704s	1	285	6220s	1	268
3715	100	205	5707s	1	268, 290	6240s	1	279, 288
3840ZIC	10	205	5711s	1	290	6263s	1	279, 289
3891ZIC	5	193	5716s	1	267, 279, 287	6316s	1	267, 279, 287
3895ZIC	5	193	5724s	1	268, 290	6363s	1	279, 289
3921ZIC	10	199	5731s	1	268, 290	6400s	1	279, 288
<b>4000-4999</b>			5732s	1	268, 290	6416s	1	267, 278, 287
4700WHI	10	203	5733s	1	268, 290	6420s	1	289
4724WHI	10	203	5740s	1	279, 287	6425s	1	268, 279, 288
<b>5000-5999</b>			5760s	1	267, 279, 287	6440s	1	268, 279, 288
5114WHI	1	203	5780s	1	267, 279, 287	6463s	1	268, 279, 289
5115WHI	1	203	5807s	1	268	6600s	1	279, 287
5116WHI	1	203	5824s	1	268, 290	6630s	1	267, 279, 288
5120ALM	1	198	5833s	1	268, 290	6640s	1	289
5144SS000T9	1	205	5860s	1	279, 287	6700	1	242
5243BRO	5	202	5880s	1	279, 287	6716s	1	267, 279, 288
5246BRO	5	202	5903s	10	278, 285	6720s	1	289
5257WHI	5	202	5906s	10	278	6730s	1	267, 279, 287
5268ALM	1	198	5910s	10	278, 285	6763	1	242
5500s	5	266, 278, 285	5916s	10	266, 278, 285	6800	1	242
5502s	1	285	5920s	10	278	6810	10	243
5504s	1	285	5925s	10	278	6813	10	243
5544s	5	291	5932s	10	266, 278, 285	6814	10	243
			5940s	10	278			

LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
6817	10	243	8329SSWHID1T9	5	68	11430BRMSMA	100	206
6818	10	243	8703s	10	278, 286	11430NIPMA	100	206
6819	10	243	8706s	10	278, 286	11435BRSMES	100	206
6863	1	242	8710s	10	278, 286	11435NIPME	100	206
6863YEL	1	242	8716s	10	266, 278, 286	11435NIPMJ	100	206
6980s	1	279, 288	8720s	10	278, 286	11750PST9	100	343
<b>7000-7999</b>			8725s	10	278, 286	11816PS	100	343
7179PS	10	205	8732s	10	266, 278, 286	11817PS	100	343
7240s	1	268, 289	8740s	10	278, 286	11827PS	100	343
7263s	1	268, 289	8750s	10	278, 286	12024SLT9	10	343
7440s	1	268, 289	<b>9000-9999</b>			13503	1	257
7463s	1	268, 289	9420SS	1	68	13504	1	257
7560s	1	278, 287	9933	1	232, 243	13505	1	257
7580s	1	278, 287	9953GRY	1	258	13506	1	257
7660s	1	278, 287	9960BLK	1	258	13507	1	257
7680s	1	278, 287	9965BLK	1	258	13508	1	257
7700s	1	267, 279, 287	9966BLK	1	258	17270SS	10	205
7800s	1	279, 287	9967BLK	1	258	21016SST9	25	343
7816s	1	278, 286	<b>10000-99999</b>			21017SST9	5	328
7832s	1	278, 286	11130NIPMA	100	206	43066SSBLKT9	100	206
7840s	1	278, 286	11135BRSMES	100	206	43066SSNIPT9	100	206
7860s	1	278, 287	11135BRSMF	100	206	43066SSPBRT9	100	206
7880s	1	278, 287	11135BRSMG	100	206	43066SSPBZT9	100	206
7932s	1	278, 286	11135BRSMK	100	206	43066SSWHIT9	100	206
7933s	1	278, 286	11135NIPMA	100	206	43352SSBLKT9	100	206
7934s	1	267, 278, 286	11135NIPMB	100	206	43352SSNIPT9	100	206
7935s	1	278, 286	11135NIPMC	100	206	43352SSPBRT9	100	206
7936s	1	267, 278, 286	11135NIPME	100	206	43352SSPBZT9	100	206
7937s	1	278, 286	11135NIPMF	100	206	43352SSWHIT9	100	206
7938s	1	278, 286	11135NIPMG	100	206	48370SSBLKT9	100	206
7939s	1	278, 286	11135NIPMK	100	206	48370SSNIPT9	100	206
<b>8000-8999</b>			11135NIPMN	100	206	48370SSPBRT9	100	206
8329SSWHI	10	68	11140NIPMA	100	206	48370SSWHIT9	100	206

For product codes that contain a \* please see the relevant product page for full details

LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.	LIST NO.	STD PCK	PAGE NO.
56423GRY	1	269						
56460GRY	5	232						
56460WHI	5	232						
56461BLK	5	232						
56461WHI	5	232						
56462BLK	5	232						
56462WHI	5	232						
56463BLK	5	232						
56463WHI	5	232						
56464GRY	5	232						
56464WHI	5	232						
56500GRY	1	232						
56500WHI	1	232						
56502GRY	1	232						
56502WHI	1	232						
56837BLK	5	232						
56881BLK	10	231, 269						
56882BLK	10	231, 269						
56883BLK	10	231, 269						
56889RED	10	231						
56890GRN	5	232						
56891BLK	10	231, 269						
56892BLK	10	231, 269						
56893BLK	10	231, 269						
56896BLK	10	231, 269						
64603WHI	10	224						
65503WHI	10	224						

## Superswitch range of wiring devices

This range of wiring devices offers customers a choice of white plastic Silk, decorative Flatplate, decorative Screwless, flexible Grid and Ceiling Accessories. Designed to meet the demanding requirements of contemporary living or commercial spaces, the Superswitch range offers quality products, with a no-quibble, five year guarantee\*. All Superswitch products comply with their relevant British Standards.

\*Excludes electronic products which carry a two year guarantee.

### Superswitch Silk

The Superswitch Silk range of white plastic wiring devices is the perfect choice for modern interiors. The sleek, low profile blends in with any décor, offering an unobtrusive finish to complement contemporary home or commercial interiors.

#### Features and Benefits:

- Contemporary Styling
- Tough and Scratch Resistant
- Ease of installation and end user added safety



### Superswitch Flatplate

The Superswitch Flatplate range has an ultra slim 1.5mm frontplate making this an ideal choice for modern interiors. The unique grey inserts and oval neons create a stylish design statement

#### Features and Benefits:

- 1.5mm profile frontplate
- Stylish design with grey inserts and oval neons
- Ease of installation and end user added safety





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superswitch | wiring devices



## Superswitch Screwless

The Superswitch Screwless range consists of a 9mm clip-on frontplate, which offers a superb aesthetic with no screws, and a perfect finish as the frontplate can be applied after painting or decorating. The unique grey inserts and oval neons create a stylish design statement.

### Features and Benefits:

- 9mm clip-on curved frontplate
- Stylish design with grey inserts and oval neons
- Ease of installation and end user added safety



## Superswitch Grid

The Superswitch Grid range is a modular system which compliments the other Superswitch wiring devices ranges. The range of modules includes are easy to fit and simply clip into the mounting frame. Available modules include switches, dimmers, indicator modules and more.

### Features and Benefits:

- Frontplates available in Superswitch Silk, Superswitch Flatplate and Superswitch Screwless
- Full range of printed switches available
- Ease of installation

To find out more about the Superswitch ranges visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)

## Cablelink Plus range of power and data distribution systems

The Ackermann range of products are now part of the MK Electric Cablelink Plus range. The full portfolio is still available, with all the additional benefits of MK and Honeywell. We continue to focus on both product functionality and installation practice – as well as striving to develop ever more innovative new products and features. Now, in a move to address the increasing demand placed on modern buildings.

Specifying and installing Cablelink Plus ranges of of Raised Floor and Screed Floor Systems, or Onix Plus™ will provide a robust power and data distribution system that ensures:

- **Superior load bearing performance** – tested to pr EN50085-2-2 to accept 5000N load, 10,000N load for Onix Plus™
- **Fully supports Cat 6 structured cabling systems** – features to ensure minimum wiring spaces and bend radii are achieved
- **Fast and simple installation every time** – new design features incorporated
- **5 year product guarantee** – quality, reliability and safety come as standard

To find out more about the Cablelink Plus ranges visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk)

### FASTER AND SIMPLER INSTALLATION

QUICK RELEASE BLADES



TWO PART MODULE



FLANGE FIXINGS

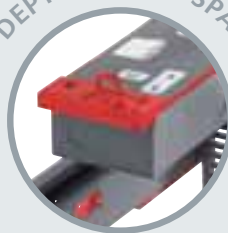


RATCHET LEVELLING SYSTEM



### SUPPORTING CAT 6 SYSTEMS

45MM DEPTH WIRING SPACE



CABLE FLY OVER



WAVEPLATE



ADJUSTABLE TRAY HEIGHT



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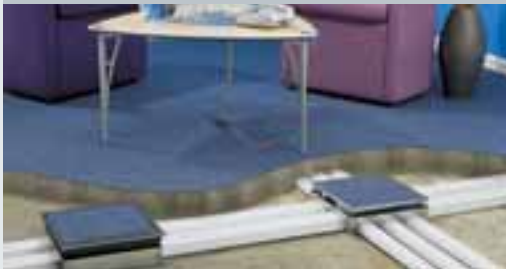
**cablelink plus** | power and data distribution



Cablelink Plus Modular



Cablelink Plus Single Pan Box



Cablelink Plus Screened System



DeskPod



Onix Plus™

## ROBUST DESIGN

LOAD PERFORMANCE



IMPROVED HANDLE



## MORE NEW PRODUCT FEATURES

UNIQUE LADDER DESIGN



SELF CLOSING LID



IMPROVED CORD CAPS



WET WASHABLE



OPTIONAL LOCKABLE LID



STAGGERED PLATES



ONIX PLUS™

## Ex-Or lighting management systems

Ex-Or Lighting Management Systems offers lighting controls for all applications and includes presence detection, lighting management, architectural dimming and scene-setting, and emergency lighting testing. Ex-Or Systems help customers achieve energy savings, reduce fuel bills, and create an optimum environment for staff or visitors.

### Ex-Or MLS Digital – Networked Managed Lighting System

MLS Digital offers a flexible, user-responsive, building-wide control solution via a network of communicating detectors, either integrated within individual luminaires or mounted remotely to control groups of lights.

#### Features and Benefits:

- Maximises customers' energy savings
- Zoned lighting for enhanced convenience and visual comfort
- Straightforward installation and simple commissioning
- Flexibility to accommodate changes in layout or usage without altering wiring



### Ex-Or LightSpot – Stand-alone Lighting Control by Presence Detection and Photocell

Ex-Or LightSpot controls are designed to save energy by ensuring that lights are never left burning needlessly in an area that has been vacated or where there is already enough natural light. Savings of 40% to 60% are usually made in office applications but they can be as high as 70% and more in areas such as warehouses.

#### Features and Benefits:

- Effective environmental and money-saving solution
- Lighting provided automatically and at correct levels
- Local control, so no major breakdown possible
- Enhanced security



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ex-or | lighting management systems

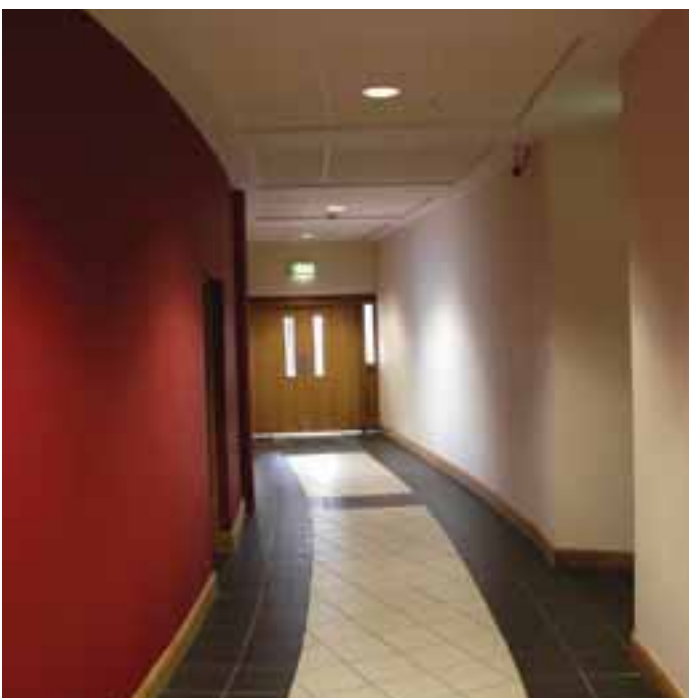


## Ex-Or Connect – Lighting Control Modules and Plug-in Connection Centres

Ex-Or Connect offers plug-in simplicity via a range of purpose-designed connection centres with varying degrees of sophistication. MLS Connect Digital can also incorporate FailSafe emergency lighting testing.

### Features and Benefits:

- Quicker and easier installation for time and cost savings
- Elimination of wiring faults as pre-wired luminaires and detectors are delivered direct to site
- Flexibility as luminaires and detectors can be changed or re-positioned without major disruption



## Ex-Or SceneSelect – Architectural Scene-setting and Dimming System

Ex-Or SceneSelect allows the user to create and recall custom pre-set scenes. Once the lighting is set up in the area for an activity, the combination of lighting levels is saved as a pre-set scene and the user can fade between different pre-sets at the touch of a button.

### Features and Benefits:

- Flexibility in design
- Increased lamp life and energy savings
- Ease of installation and configuration

To find out more the Ex-Or ranges of products visit [www.ex-or.com](http://www.ex-or.com)

## Friedland range of chimes, alarms and security lighting

Friedland offers you a comprehensive choice of Wired and Wirefree Chimes, Alarm Systems, Security Lighting and CCTV suitable for residential and commercial applications.

### Libra+

Libra+ is the stylish, state of the art range of wirefree chimes, and is Friedland's first chimes range to utilise the 868MHz frequency band, making Libra+ less liable to interference from other wirefree products.

#### Features and Benefits:

- Chime icons visually identify source of chime activation – a number of options are available including front door push and back door push
- CD quality sound and analogue volume control
- Operating range of up to 200m\*
- Portable/wall mounted and plug in



### Evo+ Wirefree Chimes

The Evo+ range of contemporary styled door chimes are ideal for use in the home and garden. All products have a 150m\* range, with CD quality chimes and range of colours.

#### Features and Benefits:

- Wirefree for easy installation
- Pre-programmed push to chime kits, for ease of installation
- Unique learning code for push to avoid interference with neighbours' chimes
- Available as a plug-in or portable chime



\* Maximum range between push and chime. Note: Building structures e.g. metal and thick wall may affect transmission range.

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**friedland** | chimes and security



## Wireless CCTV

Wireless CCTV systems are designed for easy installation and simply plug into an existing TV. CCTV cameras act as a visual deterrent and allow monitoring of visitors or intruders via a TV, with the ability to record what is seen. Wireless CCTV is ideal for protecting remote locations such as garages or outbuildings, or locations which make it difficult to run cabling such as alleyways and gardens.

### Features and Benefits:

- Simple to use, plug and play set up
- IP54 colour camera with night vision
- Operating open field range of 100m with 60° camera viewing angle
- 12 hours per channel video recording, with motion detector feature built into the DVR



## Response Alarms

Friedland Response is a comprehensive range of wired and wirefree security systems and accessories which are easy to install and easy to operate. A variety of kits are available to suit all installation requirements, with the ability to expand a system with additional accessories.

### Features and Benefits:

- Available as wired and wirefree systems
- Wide variety of kits available
- Full range of accessories to upgrade or expand systems
- Wireless systems operate on the 868 Mhz frequency

To find out more about Friedland Chimes and Security products visit [www.friedland.co.uk](http://www.friedland.co.uk)

**ABBREVIATIONS USED IN THIS CATALOGUE**

<b>17ED</b>	17th Edition	<b>M</b>	Master (High Power Dimmer)
<b>ABS</b>	Antique Brass	<b>MAG</b>	Magnolia
<b>ALM</b>	Aluminium	<b>MW</b>	Microwave
<b>ALMW</b>	Painted White Aluminium	<b>N</b>	Neon
<b>ALU</b>	Aluminium	<b>NIP</b>	Nickle Plated
<b>AMB</b>	Amber	<b>ORG</b>	Orange
<b>B</b>	Bell Symbol	<b>OV</b>	Oven
<b>B</b>	Black Inserts	<b>P</b>	Marked 'Press'
<b>BLK</b>	Black	<b>PBR</b>	Polished Brass
<b>BLN</b>	Black Nickel	<b>PBZ</b>	Polished Bronze (Ancillary Products only)
<b>BLU</b>	Blue	<b>PCR</b>	Polished Chrome
<b>BNI</b>	Brushed Nickel	<b>PH</b>	Plinth Heater
<b>BR</b>	Boiler	<b>POC</b>	Polished Chrome
<b>BRC</b>	Brushed Chrome	<b>RED</b>	Red
<b>BRO</b>	Brown	<b>S</b>	Switch
<b>BRS</b>	Brass (Ancillary Products Only)	<b>S</b>	Slave (High Power Dimmer)
<b>BSS</b>	Brushed Stainless Steel	<b>SAA</b>	Silver Anodised Aluminium
<b>CE</b>	Clean Earth	<b>SAG</b>	Satin Gold
<b>CH</b>	Cooker Hood	<b>SH</b>	Marked 'Shower'
<b>CHA</b>	Charcoal	<b>TCO</b>	Textured Copper
<b>CHM</b>	Champagne	<b>TD</b>	Tumble Dryer
<b>CK</b>	Marked 'Cooker'	<b>TIR</b>	Textured Iron
<b>CLR</b>	Clear	<b>TTA</b>	Titanium
<b>CM</b>	Coffee Machine	<b>UCB</b>	Uncapped Black Rockers
<b>COL</b>	Special RAL Colours (Cable Management only)	<b>UCW</b>	Uncapped White Rockers
<b>D</b>	Dimmer	<b>VLT</b>	Violet
<b>DAB</b>	Digital Audio Broadcast	<b>W</b>	With Window
<b>DBZ</b>	Desert Bronze	<b>W</b>	White Inserts
<b>DW</b>	Dishwasher	<b>WC</b>	Wine Cooler
<b>EL</b>	Marked 'EMG LTG' (Grid Plus Only)	<b>WD</b>	Waste Disposal
<b>FF</b>	Fridge Freezer	<b>WDA</b>	Warming Drawer
<b>FG</b>	Fridge	<b>WDR</b>	Washer Dryer
<b>FN</b>	Fan	<b>WH</b>	Marked 'Water Heater'
<b>FZ</b>	Freezer	<b>WHI</b>	White
<b>GLAA</b>	Glass, Aluminium	<b>WHI</b>	Porcelain White (Decorative Only)
<b>GLAB</b>	Glass, Black	<b>WL</b>	Worktop Lighting
<b>GLAG</b>	Glass, Green	<b>WM</b>	Washing Machine
<b>GLAGA</b>	Glass, Grooved Aluminium	<b>YEL</b>	Yellow
<b>GRA</b>	Graphite	<b>ZIC</b>	Zinc Plated LV
<b>GRN</b>	Green	<b>1</b>	Standard Carton Quantities are indicated by the number in the box after all product descriptions eg: <b>K2747WHI</b> <b>1</b> 2 GANG
<b>GRY</b>	Grey		
<b>HB</b>	Hob		
<b>HR</b>	Heater		
<b>IG</b>	Intumescent Gasket		
<b>IH</b>	Immersion Heater		
<b>KO</b>	Tamperproof Screw		
<b>L</b>	Neon Locator / Luminous		
<b>LBK</b>	Lustrous Black		
<b>LBS</b>	Lacquered Brushed Steel		
<b>LID</b>	Lid (Cable Management only)		
<b>LIV</b>	Lustrous Ivory		
<b>LSF</b>	Low Smoke and Fume		
<b>LV</b>	Low Voltage		



All previous issues are cancelled.

## General

The "Seller" means Novar ED&S Limited. The "Buyer" means the person, firm or company to whom the Seller supplies the Goods. All quotations are given and all orders are accepted on these terms, replace and supersede any other terms wherever appearing, and override and exclude any other terms stipulated or incorporated or referred to by the Buyer, whether in the order or in any negotiations, and any course of dealing established between the Seller, and the Buyer. All orders hereafter made by the Buyer shall be deemed to be made subject to these terms.

## Acceptance of Orders

No contract for the sale of goods ("the Goods") shall be concluded until either the Seller sends or otherwise communicates to the Buyer its acceptance of the Buyer's order or on the delivery to the Buyer of the Goods, whichever is the earlier. The Buyer acknowledges that there are no representations outside these terms that have induced the Buyer to enter into the contract (which expression shall include any contract of which these terms form part) and save as provided herein, these terms shall constitute the entire understanding between the parties for the sale of the Goods. No modification of these terms shall be effective unless made by an express written agreement between the parties. The signing by the Seller of any of the Buyer's documentation shall not imply any modification of these terms.

## Illustrations, Descriptive Matter and Dimensions

All descriptions and illustrations contained in catalogues, price lists and advertisements or otherwise communicated to the Buyer are intended merely to present a general idea of the Goods described therein, and nothing contained in any of them shall form any part of the contract.

## Designs

The Seller's policy is one of continuous improvement. The right to change designs at any time without notice is reserved.

## Samples

Notwithstanding that a sample of the Goods may have been exhibited to and inspected by the Buyer, it is hereby agreed that such sample was so exhibited and inspected solely to enable the Buyer to judge for himself the quality of the bulk and not so as to constitute a sale by sample. The Buyer shall take the Goods at his own risk as to their corresponding with the said sample or as to their quality condition or sufficiency for any purpose.

## Prices

All prices listed or quoted are provisional only and are subject to alteration without prior notice, and prices charged will be those current at the time of despatch of the Goods.

## Delivery

All delivery dates are estimates only and the time of delivery shall not be of the essence of the contract. In no circumstances shall the Seller be liable to compensate the Buyer in damages or otherwise for non-delivery or late delivery of the Goods or any of them for whatever reason or for any loss consequential or otherwise arising there from. The Seller reserves the right to make partial deliveries and to allocate available supplies amongst customers in time of shortage. The Seller shall be entitled to deliver the Goods in one or more consignments unless otherwise expressly agreed. For UK sales, delivery shall be deemed to take place when the Goods are despatched from the Seller's premises. The Seller shall not be liable for any loss of any kind to the Buyer arising from any damage to the Goods occurring after the risk has been passed to the Buyer however caused, nor shall any liability of the Buyer to the Seller be diminished or extinguished by reason of such loss.

## Carriage and Packing

Packing materials are in most instances non-returnable. The Seller will pack packing and carriage on all orders having a net value of £250 (exc.VAT) or over and the Goods will be consigned by carrier at goods rate. Orders instructing despatch by other means will be subject to a packing and carriage charge to cover additional cost. Orders of less than £250 (exc.VAT) net value will be consigned by parcel post up to 5kg in weight, otherwise goods will be consigned by carrier at goods rate.

A packing and carriage charge will be made for all such orders at the rate of £50 (exc.VAT).

## Instructions and Labels

The Buyer shall ensure that labels, names, reference numbers and marks on the Goods and packing materials and cases are not removed altered or covered whilst the Goods are in his possession and shall not remove any label or plaque affixed to the Goods referring any user thereof to the Seller's or any other party's instructions and/or recommendations for use. If any item comprised in the Goods is resold by the Buyer the Buyer shall bring to the attention of his purchaser all instructions and/or recommendations for use packed with the Goods or which the Seller has otherwise notified to the Buyer.

## Damage or Loss in Transit

When the price quoted includes delivery, the Seller shall repair or replace free of charge goods damaged in transit or not delivered in accordance with the advice note, provided that in the event of damage or shortage, written notification giving details of such damage or shortage must be sent to the Seller within 7 days of receipt, and in the event of non-delivery must be sent to the Seller within 14 days of the date shown on the advice note. Order number, advice note and date of despatch are required, and in the event of failure to give notice within the aforementioned period, the Goods will be deemed to be in all respects as invoiced.

## Returns

Goods supplied in accordance with the Buyer's orders cannot be accepted for return without the Seller's written consent. If such consent is given an administration charge will be made. Returned Goods must be sent carriage free and at the Buyer's risk and will only be accepted if packed in the original carton which in the Seller's

opinion is in a saleable condition. Only Goods of current design will be accepted for return.

## Payments

For UK and Republic of Ireland sales, payment is due before the end of the month following despatch. Value Added Tax for UK sales is payable and is calculated on the cash discounted value of each invoice. If the Seller shall allow provisional credit in respect of any part of the Goods it shall be without prejudice to its rights to refuse to give up possession of any other part of the Goods except against payment: and the whole of the price of all goods bought or agreed to be bought by the Buyer shall fall due and payable without demand immediately on the happening of any of the following events:-

- failure by the Buyer to pay any sum due to the Seller within 14 days of the due date for payment;
- commencement of the winding up of the Buyer;
- any act, event or occurrence entitling any creditor of the Buyer to petition for the bankruptcy of the Buyer.
- appointment of a receiver of any asset of the Buyer, or the levying of any distress or execution or any asset of the Buyer.

The failure of the Buyer to pay any part of the price of the Goods in due time shall entitle the Seller to treat such failure as a repudiation of the whole contract by the Buyer and to recover damages for such breach of contract.

Interest on all sums due shall run at the rate of 2 per cent per annum over the base lending rate of Barclays Bank plc until payment is received before as well as after any judgement therefor.

## Liability

These terms set out the Seller's entire liability in respect of the Goods and the Seller's liability under these terms shall be in lieu and to the exclusion of all other warranties, conditions, terms and liabilities expressed or implied statutory or otherwise in respect of the quality or the fitness for any particular purpose of the Goods or otherwise (notwithstanding any advice or representation to the Buyer, all liability in respect of which howsoever arising, is expressly excluded) except any implied by law which by law cannot be excluded. Save as provided in these terms and except as aforesaid the Seller shall not be under any liability, whether in contract, tort (including negligence) or otherwise, in respect of defects in the Goods or failure to correspond to specification or sample or for any injury, damage or loss resulting from such defects or failure or from any work done in connection therewith. The Seller shall be under no liability to any purchaser of the Goods from the Buyer. In any event the Seller's liability (if any) whether in contract, tort or otherwise in respect of any defect in the Goods, or for any breach of this Agreement or of any duty owed to the Buyer in connection herewith, shall be further limited in the aggregate to the price of the Goods in question.

Nothing in these terms shall restrict the Seller's liability for death or personal injury caused by the Seller's negligence.

## Indemnity

The Buyer shall indemnify the Seller in respect of all damage injury or loss occurring to any person or property and against all actions, suits, claims, demands, charges or expenses in connection therewith arising from the condition or use of the Goods in the event and to the extent that the damage injury or loss shall have been occasioned partly or wholly by the carelessness of the Buyer and his servants or agents or by any breach by the Buyer of its obligations to the Seller hereunder.

## U.K. and Republic of Ireland Sales

For UK and Republic of Ireland sales risk of loss or damage to the Goods shall pass to the Buyer at the time of delivery. The property in the Goods shall not pass to the Buyer until: all sums due or owing to the Seller by the Buyer on any account have been paid. The whole of the price shall not be treated as paid until any cheque, bill of exchange or other instrument of payment given by the Buyer has been met on presentation or otherwise honoured in accordance with its terms. The Seller may sue for the whole of the price at any time after it has become payable.

Until such time as the property in the Goods passes to the Buyer, the Buyer shall hold the Goods on a fiduciary basis as bailee of the Seller and shall keep the Goods separate from those of the Buyer and third parties and properly stored, protected, insured and identified as the Seller's property, but the Buyer shall be entitled to resell and use the Goods in the ordinary course of its business for the account of the Seller. Until property in Goods passes from the Seller, the entire proceeds of sale or otherwise of the Goods shall be held in trust for the Seller and shall not be mixed with any other money or paid into any overdrawn bank account and shall be at all material times identified as the Seller's money. Until such time as property in Goods passes from the Seller the Buyer shall upon request deliver up such of the Goods as have not ceased to be in existence, or resold to the Seller. If the Buyer fails to do so the Seller may enter upon any premises owned, occupied or controlled by the Buyer where the Goods are situated and repossess the Goods. The Buyer shall not pledge or in any way charge by way of security for any indebtedness any of the Goods which remain the property of the Seller. Without prejudice to the other rights of the Seller, if the Buyer does so all sums whatever owing by the Buyer to the Seller shall forthwith become due and payable.

## Export

All orders are accepted subject to a minimum value of £500. All Goods will be supplied and invoiced in multiples of carton quantities only. The basis of the prices quoted will be FOB as defined in Incoterms 2000 Edition, at a UK port which may be nominated by the Seller, or such other basis as may seem appropriate to the Seller in the circumstances. Payment unless otherwise agreed must be by irrevocable letter of credit confirmed by an established UK bank satisfactory to the Seller. The Seller has separate standard terms and conditions which apply to export sales, and a copy will be supplied to the export buyers.

## NOVAR ED&S Patents and Registered Designs

Many of the products offered for sale by the Seller are covered by

UK and foreign patents or other intellectual property rights. It is not feasible to mark each component or product with the appropriate patent numbers, but any relevant and reasonable enquiries will be dealt with on application, subject to reimbursement of the Seller's out of pocket expenses. The Seller also has rights in a number of names and trade marks, registered and unregistered. The Seller will take all necessary legal action in any part of the world against any party found to be manufacturing, selling or otherwise dealing with any article which infringes the Seller's patents, trade marks or other similar intellectual property rights.

## Force Majeure

Neither party shall be liable to the other for any failure or delay in the performance of any obligation hereunder as a result of strikes, lockouts, trade disputes, breakdown of plants, accident or other cause whatsoever beyond the reasonable control of the Seller or the Buyer respectively.

## Legal Construction

The contract shall be governed by and interpreted in accordance with English Law, and the Buyer submits to the jurisdiction of the Courts in England but the Seller may enforce the contract in any court of competent jurisdiction. A person who is not a party to the contract shall have no rights under the Contracts (Rights of Third Parties) Act 1999 to enforce any of its terms.

## Assignment

The Buyer shall not assign any benefit under the contract without the consent in writing of the Seller, which may if given be on such terms as to guarantee or indemnify or otherwise as the Seller thinks fit.

## Health and Safety at Work etc. Act 1974. Statement to purchasers and prospective purchasers

- Section 6\* of this Act provides that manufacturers, designers, importers or suppliers of articles for use at work have a duty to ensure, so far as is reasonably practicable, that the article will be safe and without risk to health at all times when it is being set, used, cleaned or maintained by a person at work. An absence of safety or risk to health is to be disregarded insofar as the case in or in relation to which it arises is shown to be one of the occurrence of which could not reasonably be foreseen and in determining whether any such duty as aforementioned has been performed regard shall be had to any relevant information or advice which has been provided by the manufacturer, designer, importer or supplier.
- Having regard to these provisions the following is given as a guide to the information which is readily available to you, in order that the obligations of all concerned may be met as fully as is reasonably practicable. This information relates to those products detailed in the Seller's catalogue(s) or associated literature.
- Information on the design, construction and installation of the Seller's products to ensure that so far as is reasonably practicable they are safe and without risk to health when properly used may be found in:
  - Regulations for Electrical Equipment of Buildings (published by the Institution of Electrical Engineers) Catalogues and product leaflets of the Seller.
  - Or may be obtained by specific request to the Seller.
- It is important that the products concerned should be installed, commissioned and maintained by, or under the supervision of competent persons in accordance with good engineering practice and:
  - The Regulations for the Electrical Equipment of Buildings
  - Codes of Practice
  - Statutory Requirements
  - Any instructions specifically advised by the Seller and where appropriate, with particular reference to information marked on the product.
- In accordance with the provisions of the Act, the Buyer is therefore requested to take such steps as are necessary to ensure that any appropriate information relevant to the Seller's products is made available by you to anyone concerned.

\* As amended by section 36 of the Consumer Protection Act 1987.

Novar ED&S Limited,  
The Arnold Centre,  
Paycocke Road,  
Basildon,  
Essex  
SS14 3EA

## MK Trade Mark.

Registered in Great Britain and other countries 'MK' are the initials of 'Multy-Kontakt' – a name coined to signify 'many points of contact' the salient feature of our pioneer spring-grip socket patented in 1919.



by Honeywell

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Standard Conditions of sale are subject to change, visit [www.mkelectric.co.uk](http://www.mkelectric.co.uk) for the latest version.

## Honeywell's Commitment to Health, Safety and the Environment

By integrating health, safety and environmental considerations into all aspects of our business, we protect our employees, our communities and the environment, achieve sustainable growth and accelerated productivity, drive compliance with all applicable regulations and develop technologies that expand the sustainable capacity of our world. Our health, safety and environmental management systems reflect our values and help us meet our business objectives.

- We protect the safety and health of our employees, and minimise the environmental footprint of our operations through efforts to prevent illness, injury and pollution.
- We actively promote and develop opportunities for expanding sustainable capacity by increasing fuel efficiency, improving security and safety, and reducing emissions of harmful pollutants.
- We are committed to compliance with all of our health, safety, environmental and legal requirements everywhere we operate.
- Our commitment to health, safety and the environment is an integral aspect of our design of products, processes and services, and of the lifecycle management of our products.
- Our management systems apply a global standard that provides protection of both human health and the environment during normal and emergency situations.
- We identify, control and endeavour to reduce emissions, waste and inefficient use of resources and energy.
- We are open with stakeholders and work within our communities to advance laws, regulation and practices that safeguard the public.
- We abide by the company's own strict standards in cases where local laws are less stringent.
- Our senior leadership and individual employees are accountable for their role in meeting our commitments.
- We measure and periodically review our progress and strive for continuous improvement.

These are our commitments to health, safety, and the environment, and to creating Sustainable Opportunity everywhere we operate.

# MK Electric Catalogue Rangefinder

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Prestige 3D Dado and Skirting	295-300	574-583
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### MK Electric UK

The Arnold Centre, Paycocke Road,  
Basildon, Essex, SS14 3EA,  
United Kingdom  
Customer Service Tel 01268 563404  
Customer Service Fax 01268 563405  
E-mail [mkorderenquiries@honeywell.com](mailto:mkorderenquiries@honeywell.com)

### Technical

Tech Helpline Tel 01268 563720  
Tech E-mail [mk.technical@honeywell.com](mailto:mk.technical@honeywell.com)

### Ireland

Sales Tel +353 1 429 6530  
Sales Fax 1 800 504 757 or +353 1 686 5484  
E-mail [ireland.sales@honeywell.com](mailto:ireland.sales@honeywell.com)  
[www.mkelectric.co.uk](http://www.mkelectric.co.uk)



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