## MK Electric Catalogue

by Honeywell

## 



WIRELESS
WIRING DEVICES
CIRCUIT PROTECTION
CABLE MANAGEMENT
POWER DISTRIBUTION SYSTEMS

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## Wireless

| Echo | $21-31$ | $437-440$ |
| :--- | :---: | :---: |
| Wireless, batteryless, self-powered technology |  |  |

## White

| Logic Plus <br> Widest selection of wiring devices in one range | $32-52$ | $441-484$ |
| :--- | :---: | :---: |
| Ceiling Accessories <br> Lampholders, pendant sets and ceiling switches | $53-56$ | $492-494$ |

## Decorative

| Decorative Introduction | $67-69$ |  |
| :--- | :---: | :---: |
| Elements <br> Revolutionary range of stylish wiring devices with touch control switches and <br> dimmers | $70-97$ | $497-525$ |
| Aspect <br> Range of slimline, flawless profile devices | $98-128$ | $441-484$ |
| Edge <br> Function and style with very slim profile frontplate | $130-166$ | $441-484$ |
| Albany Plus <br> Satin Gold and Brushed Chrome devices | $167-188$ | $441-484$ |

## Modular

| Grid Plus <br> Modular switching and monitoring system | $189-207$ | $526-532$ |
| :--- | :---: | :---: |

## Lighting Controls

| Link <br> Plug-in connection and distribution system for lighting | $58-62$ | $495-496$ |
| :--- | :---: | :---: |
| Sensors <br> A range of energy saving and lighting management products | $63-66$ | $485-491$ |
| High Power Dimmer <br> Range of dimmers to control large lighting loads | $208-210$ | $534-536$ |

# Wiring Devices \& Circuit Protection 

## Boxes and Ancillary Products

| Boxes <br> Wide selection of surface and flush mounted, metal and PVC boxes | $211-217$ | NA |
| :--- | :---: | :---: |
| Ancillary Products <br> A selection of miscellaneous wiring devices | $218-223$ | NA |

Surface

| Metalclad Plus <br> Tough, impact resistant surface mounted devices | $224-235$ | $441-484$ |
| :--- | :---: | :---: |

## Portable Power

| Duraplug <br> Durable, strong and reliable accessories | $236-239$ | $538-540$ |
| :--- | :---: | :---: |
| Plugs and Adaptors <br> High quality plugs and adaptors | $240-241$ | 541 |

## Ingress Protected

| Masterseal Plus <br> Comprehensive range of IP66 weatherproof devices | $242-249$ | $542-553$ |
| :--- | :---: | :---: |
| Commando Safetyswitch <br> Impact resistant switches for indoors or outdoors | $250-253$ | $554-555$ |
| Commando <br> Comprehensive selection of industrial plugs and connectors | $254-263$ | $556-567$ |
| Commando Combination Units <br> RCD protection with high impact PBT units | $264-267$ | $568-573$ |
| Commando Modular Combi <br> Factory built modular system for industrial and service applications | $268-269$ | NA |

## Circuit Protection

| Sentry <br> Consumer units and a wide variety of modular protection and control products | $271-286$ | $575-604$ |
| :--- | :---: | :---: |
| Sentrysocket <br> RCD protected switchsockets with active and passive control circuits | $288-289$ | $606-607$ |

## Perimeter and Distribution

| Prestige 3D Introduction | 290 |  |
| :---: | :---: | :---: |
| Prestige 3D Dado and Skirting <br> Three compartment dado trunking system for compliance with Cat 6 structured cabling | 291-296 | 612-615 |
| Prestige 3D Antibac Blue <br> Antibacterial solution for power and data distribution in environments where hygiene is priority | 297-303 | 616-617 |
| Prestige 3D Compact <br> 3 compartment trunking with a smaller footprint for more confined installations | 305-310 | 618-621 |
| Prestige 2com <br> Two compartments provide maximum data capacity around radiused bends | 311-316 | 623-629 |
| Prestige Poles and Posts <br> Poles and Posts for supplying multi-services to work stations | 318-319 | 630-631 |
| Powerlink Plus <br> Busbar trunking system with flush fitting accessories | 321-331 | 632-639 |
| Pinnacle <br> Versatile angular bench trunking system | 332-337 | 640-644 |
| Premier <br> Integrated trunking system with snap fit mouldings | 338-343 | 645-649 |
| Norwich <br> Durable and popular trunking system | 344-345 | 650-654 |
| Ega Industrial <br> Heavy duty trunking in a variety of sizes | 346-347 | 656-661 |
| Ega Cornice <br> Trunking for wall/ceiling junctions | 348-349 | 662-665 |

## Conduit and Mini

| Egatube Conduit <br> High impact conduit with a comprehensive range of fittings | $350-360$ | $666-671$ |
| :--- | :---: | :---: |
| Ega Mini Trunking <br> Wide selection of mini trunking profiles and fittings | $361-365$ | $672-674$ |

## Alarm and Communication

| Red Alert <br> Trunking for alarm circuit identification | $366-370$ | $672-674$ |
| :--- | :---: | :---: |

## Power Distribution Systems

## Raised Floor Systems

| Interact Underfloor Power <br> Low profile Powertrack system for single or multi-Circuit applications | $371-376$ | $675-676$ |
| :--- | :---: | :---: |
| Cablelink Plus Modular <br> 2,3 and 4 module floorboxes designed for robustness | $377-382$ | $677-680$ |
| Cablelink Plus Single Pan Box <br> Floorbox ideal for floor voids with restricted space | $383-386$ | $681-682$ |
| Slab Boxes <br> Alternative power distribution system to floorboxes | $387-390$ | NA |
| Grommets <br> Ideal for use with Slab Box and DeskpodTM | $391-394$ | 683 |
| DeskPod ${ }^{\text {TM }}$ <br> Customisable and pre-configured desk modules | $395-401$ | 684 |

Screeded Floor Systems

| Onix Plus <br> TM <br> A unique alternative to hard floor power and data distribution | $403-411$ | $685-688$ |
| :--- | :---: | :---: |
| Cablelink Plus Screed System <br> Provides adaptable power and data distribution in screed floors | $413-424$ | $689-694$ |

## Overhead Systems

| Interact Overhead Power <br> $40 A$ overhead Powertrack system for single, three phase or dual circuit applications | $425-429$ | $695-696$ |
| :--- | :---: | :---: |
| Hangmann <br> Range of hanging power, data and compressed air modules | $430-432$ | NA |


| Full Product Index |  | $697-749$ |
| :--- | :--- | :--- |


| Abbreviation Key |  | 757 |
| :--- | :--- | :--- |
| Standard Conditions of Sale |  | 758 |

# MK ELECTRIC IS THE UK'S CHOICE 

ENERGY SAVINGS | HEALTH \& SAFETY | SUSTAINABILITY | QUALITY \& RELIABILITY

Part of the Honeywell Global Family

In more than 100 million homes and five million buildings worldwide, Honeywell products, components and systems deliver temperature control, comfort, energy conservation and safety. 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.

## This global access ensures MK's customers have access to the latest ideas and manufacturing advancements from around the world

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.

[^0] Saudi Arabia, Malaysia and India, sales offices across Europe and the Middle East, that distribute to over 100 countries and employ over 1500 people worldwide.

UK operations feature 4 locations, employs over 600 people, and is one of the few businesses to retain manufacturing sites in the UK for the UK market.

## Honeywell <br> $$
\mathrm{MK}^{\circ}
$$ Trunp OEx-Or CENTR日

Sockets | Wireless | Switches | Circuit Protection |
Thermostats | Cable Management Anti-Microbial |
Sensors | Lighting Management | Power Distribution |
Security Lighting | Doorbells | Building Control Systems |
Fluid Controls | Heating Controls

## HONEYWELL ENVIRONMENTAL AND ENERGY SOLUTIONS (E\&ES)


by Honeywell

For almost 100 years, MK Electric has led the market in electrical wiring accessories.

Today, MK Electric continues to lead the way in innovation with additions to the widest range of wiring accessories such as LED Dimmers, USB Charging Solutions, wireless, batteryless Echo switches, as well as the stylish MK Elements collection of wiring accessories.

MK Electric also manufactures a host of other products, including overhead and underfloor power and data distribution, cable management and circuit protection.

## Honeywell

Honeywell is the UK's leading supplier of domestic heating and combustion controls, with a portfolio of products that includes time, temperature, gas and water control offerings.

Honeywell also offers over 4,000 water and heating products, amounting to a wealth of coordinated, easy to use system solutions. The portfolio includes pressure reducing valves, thermostatic mixing valves, filtration and much more.


## Honeywell

Honeywell Doorbells represent the next generation in technology for the home，taking Friedland＇s 60 year heritage to create the best doorbells in the world．

The revolutionary range offers a wide selection of wireless and wired portfolios to ensure you never miss a visitor．

## （1）Ex－Or

## by Honeywell

Ex－Or are acknowledged leaders in developing elegant and innovative lighting control systems that are easy to install and maintain．Ex－Or solutions help customers to reduce their energy bills， lower their carbon footprints，and improve performance．

Ex－Or＇s range of new generation lighting controls switch lights off when no－one＇s there，and dim or switch them off when there＇s enough natural light，helping to reduce energy costs，sometimes as much as $70 \%$ ，year after year．

## Tマコロ

Trend is one of the world＇s leading Building Energy Management Systems manufacturers，Through close control and monitoring of heating，ventilation，air conditioning and other building services， Trend systems are able to minimise energy consumption and maintain consistently comfortable conditions－as well as bringing other key benefits such as lower plant maintenance costs．Systems are to be found in virtually every type of non－residential building，from schools， hospitals and leisure centres to office blocks，shops and factories．

## CENTFF＇ <br> by Honeywell

CentraLine is one of the fastest growing brands in the Building Automation industry．Established in 2004 by Honeywell as an independent brand for networked Building Automation，it has developed a Europe－wide infrastructure with 360 carefully selected and specially trained CentraLine PARTNERS．CentraLine solutions are based on leading Honeywell technology which is saving energy in more than 100 million homes and buildings worldwide．


## Made

## In Britain



## MK Electric: leading the market in Quality, Reliability, Safety and Responsibility since 1919.

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.

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.

## Where does it come from?

Over 80\% 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.

Wherever 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.


## 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 are accredited to the following third party assessed international standards:

ISO 9001
Quality
OHSAS 18001
ISO 14001

## 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".

## MK ELECTRIC BRAND VALUES

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

## 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 9001 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*.

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 15,000 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 10A switch to be tested to 20,000 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.
*See individual ranges for exceptions


## MK Electric's range of



LOGIC PLUS


ELEMENTS


ASPECT


EDGE


MASTERSEAL PLUS

CONTOURED TO BLEND


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

OPTIONAL NEON INDICATOR ILLUMINATES WHEN SWITCH IS ON

3 mm MINIMUM SWITCH CONTACT GAP

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

## wiring devices



ECHO


ALBANY PLUS


METALCLAD PLUS
$\checkmark$ Quality - Manufactured to ISO 9001 certification, using superior manufacturing techniques
$\checkmark$ Reliability-Comprehensive 20 year product guarantee, 10 years for Electronic Devices, Circuit Protection and Cable Management*
$\checkmark$ Safety - 100\% factory tested, each product undergoes up to 200 individual tests, for a 'fit and forget' installation every time
$\checkmark$ Responsibility-Our solutions and technologies expand sustainable capacity and improve the efficiency of products and processes, fostering sustainability.


## 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 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 used with a British plug.

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

[^1]
# MK ELECTRIC BRAND VALUES 

## 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.

Percentage kill rates after 24-hour period


[^2]

## 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 AntiMicrobial products at killing MRSA organisms and contributes beneficially to any hygiene regime.



MK SENSORS: ENERGY SAVING SOLUTIONS FOR LIGHTING CONTROL

## 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 efficient technologies help our

 global customers better meet the growing demand for electricity while curbing fossil fuel emissions. $50 \%$ of Honeywell's $\$ 38.6$ 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'



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

## JUST PRODUCTS THE WAY YOU WANT THEM

The MK Design Service offers customers bespoke products, perfect for when only a customised solution can meet your requirements. Whether you want to highlight furnishings, accentuate lighting or simply blend in with the overall décor, our dedicated team can help to put the accent on style and creativity - from concept to completion.

Sometimes though it's about more than just aesthetics. The MK Design Service Team have created additional tamper proof features on products destined for prisons or schools, unique combination plates hosting a range of European or worldwide sockets for global hotel chains along with many other custom solutions, in order to satisfy specific project requirements.

## The Right Tools

The MK Design Service Team spent six months interviewing architects and interior designers to assess how technology could help them do a better job of delivering bespoke light switches and electric sockets for their clients and the results were fascinating. The designers interviewed all stressed the importance of instantaneous samples in order to effectively source materials for a room or space. Paired with this, the ability to change that sample graphically in real time was also a key priority.

For example, if a designer is with a client or customer and there are 5-6 different finishes that may work for a room - they may be looking for the perfect front plate to match a black granite countertop or a metallic finish to blend with stainless steel appliances.

The tool allows designers to work with their clients to narrow that selection down to 2-3 just by having the ability to show the selected background or surroundings.

The MK Electric Design Tool is optimised to work with MK Elements Collection on a tablet or laptop*.


Ultimately ensuring designers are equipped with a tool where they can produce, store and manage their own wiring accessory designs - with the ability to generate thousands of new design combinations with different colours, textures and materials - will result in satisfied clients, quicker turnaround for room completion and further differentiation from competitors.



## Function

In addition to the aesthetics of the product, the MK Design Service Team can work with you to create bespoke functionality into your creation.


Giving you total control at your fingertips. Such functionality could include enhanced security features, providing you with a product suitable for the most demanding environments.

## Figure

The devil is in the detail, you can add a level of detail that identifies key functions or adds that personal or corporate touch with discreet logos, symbols or text.


## Form

If square and rectangle do not suit, then that's not a problem. Together with MK, design unique shapes to suit your aspirations.

Good design however, is nothing without delivery. The MK Design Service is totally focused on achieving the perfect result, utilising its technical, manufacturing and supply expertise to ensure your vision is realised.


> Tum an idea into reality, a desire into a finished design, an inspiration into a statement. MK's Design Service Team can help you achieve your design goals.

> Email: design.service@honeywell.com Telephone: 01268563720

## HONEYWELL'S SUSTAINABLE OPPORTUNITY POLICY



Based on the principle that by integrating health, safety, and environmental considerations into all aspects of its business, Honeywell protects its people, its communities, and the environment; achieves sustainable growth and accelerated productivity; drives compliance with all applicable regulations; and develops technologies that expand the sustainable capacity of our world.

## Greenhouse Gas and Energy Efficiency

Our commitment to be more efficient and responsible is reflected in the extensive work we do to make our businesses more environmentally friendly, safer, and more sustainable. By 2019 Honeywell will reduce our global greenhouse gas emissions by an additional 10 percent per dollar of revenue from our 2013 levels.

We exceeded our first public goal to reduce global greenhouse gases by more than 30 percent and improve energy efficiency by more than 20 percent between 2004 and 2011.

A second five-year goal, set to reduce greenhouse gas emissions by an additional 15 percent per dollar of revenue from 2011 levels, was met three years early.

Since 2010, our facilities have implemented more than 2,100 efficiency projects including building automation/controls, lighting, and mechanical upgrades.

## We exceeded our first public goal to reduce global greenhouse gases

 by more than 30 percent and improve energy efficiency by more than 20 percent between 2004 and 2011.

## Safety

A sustainable environment is also a safe environment. Our corporate-wide core processes identify and address risks and promote a culture of safety excellence. In fact, we have achieved a safety record that is more than two times better than the average of the industries in which we do business.

Nearly 50 percent of our portfolio is dedicated to energy efficient products and services. From programmable thermostats and energy management systems to turbochargers and green fuels to industrial controls and lighter aircraft components, our technologies are building a world that is safer and more secure, more comfortable and energy efficient, and more innovative and productive... right now.

In fact, the use of Honeywell technologies could reduce energy demand in the United States and Europe by 20 to 25 percent if they were immediately and comprehensively adopted across the residential, commercial, industrial, and transportation sectors.

# GETTING READY FOR LEVEL 2 BIM COMPLIANCE 

## Building Information Modeling (BIM), the generation and management of digital representations of physical and functional characteristics, has been around for over 20 years and has gained steady traction in the construction industry.



BIM , and the coordination, efficiency, cost and planning benefits it provides has been championed by the UK government. They have introduced legislation requiring all manufacturers to become Level 2 BIM compliant by 1st April 2016, ensuring they provide the minimum amount of data regarding products now being required for all UK Government projects.

Manufacturers already have the required information to become compliant, but a simple and industry-wide approach to product data parameters and templates has until now been a challenge.

The industry must come together to create a single and unified approach to product data. Without this, the cost and time savings released by BIM will not be achieved, as key functions such as clash detection and product compatibility issues will be missed. Environmental benefits from product re-use and recycling will also likely be overlooked.

MK Electric, alongside Honeywell, is leading the way in BIM standardisation for the industry working with BEAMA, CIBSE, the UK government, and several other manufacturers to ensure that the industry collaborates and defines a consistent way forward.

MK Electric is committed to supporting the evolving needs of the digital construction industry, by providing contractors, architects and consultants access to the accurate and reliable data they need to comply with relevant European and international standards.

Visit mkelectric.co.uk for more information.


## ECHOTM

RANGE INTRODUCTION

Imagine switch technology and automated systems that need no wiring, use no batteries and are effortless to install and commission. Echo ${ }^{\text {rm }}$ 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 ${ }^{\text {Tm }}$ 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 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 ${ }^{\text {TM }}$ 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.

## FEATURES \& BENEFITS

## WIRELESS

Instant installation and location flexibility, reducing disruption and cost, as there is no need to run switching cables.

## SELF-POWERED

Innovative patented technology to 'harvest' energy means zero maintenance as there are no batteries to change.

ULTIMATE FLEXIBILITY
Each receiver can be controlled by up to 32 switches/ transmitters.

## ENERGY SAVINGS

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

## HOW TO SPECIFY

A range of switches and controls which are self powered and to be enabled by EnOcean technology. Transmitters to be totally wireless and batteryless, with no direct connection to the final circuit. All transmitter modules to be available in a range of aesthetics and finishes which match to other required wiring accessories. Receivers to have the ability to be controlled by up to 32 switches/transmitters. All products to be manufactured in Europe.

## Echo ${ }^{\text {TM }}$

## APPLICATION EXAMPLE: HOTEL BEDROOM

In this example the installer is able to create an automated system ensuring 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 the bedroom and living area lighting 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. 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.


## 4 CHANNEL TRANSMITTER

1 - Living area lights
2 - Bedroom lights
3 - Plug-through light
4 - All off

CHANNEL TRANSMITTER


SWITCH RECEIVER


2 CHANNEL TRANSMITTER
1-Bedroom Lights
2 - Living area



## Modular <br> Transmitters

| 1 CHANNEL | 2 CHANNEL | MODULAR |
| :--- | :--- | :--- |
| MODULAR | MODULAR | CARD SWITCH |
| TRANSMITTER | TRANSMITTER | TRANSMITTER |



## Modular Frames

| 1G FRAME | 2G FRAME | 1G FRAME | 2G FRAME |
| :--- | :--- | :--- | :--- |
| GLOSSY FINISH | GLOSSY FINISH | GLOSSY FINISH | GLOSSY FINISH |


|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| WINISHES |  |  |  |  |
| WHITE | K5776WHI | 1 | K5779WHI | 1 |
| BLACK | K5776BLK | 1 | K5779BLK | 1 |
| ALUMINIUM | K5776ALU | 1 | K5779ALU | 1 |


|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

For use with K5412 K5789, K5744, K5744 transmitters.
Surface mount installation only.

## DIMENSIONS

$83 \times 83 \mathrm{~mm}$

For use with K5412 locator and K5786, K5789, K5744, K5744C Surface mount installation only.

## DIMENSIONS

$83 \times 154 \mathrm{~mm}$
or use with K5412 locator and K5786, K5789, K5744, K5744C transmitters.
Surface mount installation only.
DIMENSIONS
$85 \times 85 \mathrm{~mm}$

For use with K5412 locator and K5786, K5789, K5744, K5744C transmitters. Surface mount installation only.

DIMENSIONS
$85 \times 157 \mathrm{~mm}$

## Transmitters



Edge＂${ }^{\text {m }}$

1 CHANNEL
TRANSMITTER

2 CHANNEL
TRANSMITTER

## Albany Plus ${ }^{\text {Tw }}$

| 1 CHANNEL | 2 CHANNEL |
| :--- | :--- |
| TRANSMITTER | TRANSMITTER |

TRANSMITTER

| K13476BSS＊ | 1 | K13477BSS＊ | 1 | K4766BSS | 1 | K4767BSS |
| :--- | ---: | :--- | ---: | :--- | :--- | :--- |
| K13476LBS＊ | 1 | K13477LBS＊ | 1 |  |  |  |
| K13476BRC＊$^{*}$ | 1 | K13477BRC＊ | 1 | K4766BRC | 1 | K4767BRC |
| K13476POC＊$^{*}$ | 1 | K13477POC＊$^{*}$ | 1 | K4766PCR | 1 | K4767PCR |
| K13476SAG＊$^{*}$ | 1 | K13477SAG＊ | 1 | K4766SAG | 1 | K4767SAG |
| K13476WHIW | 1 | K13477WHIW | 1 |  |  |  |
| K13476LIVW | 1 | K13477LIVW | 1 |  | 1 |  |
| K13476LBKB | 1 | K13477LBKB | 1 |  |  |  |
| K13476PBR＊ | 1 | K13477PBR＊ | 1 |  |  |  |
| K13476TIRB | 1 | K13477TIRB | 1 |  |  |  |
| K13476DBZB | 1 | K13477DBZB | 1 |  |  |  |
| K13476ABSB | 1 | K13477ABSB | 1 |  |  |  |
| K13476TCOB | 1 | K13477TCOB | 1 |  |  |  |

[^3]
## operating frequency

 868.3 Mhz IP RATING1 P2 $\times$ D
dimensions
$86 \times 86 \mathrm{~mm}$
ETSI EN 301 489－1＋－3
ESTI EN 300 220－3

OPERATING FREQUENCY
868．3Mhz
IP Rating
IP2 x D
dimensions
$86 \times 86 \mathrm{~mm}$
ETSI EN 301 489－1＋－3
ESTI EN 300 220－3

OPERATING FREQUENCY 868．3Mhz
IP Rating
P2 $\times$ D
dimensions
$86 \times 86 \mathrm{~mm}$
ETSI EN 301 489－1＋－3
ESTI EN 300 220－3

OPERATING FREQUENCY
868.3 Mhz

IP RATING
IP2 $\times$ D
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
ETSI EN 301 489－1＋－3：
ESTI EN 300 220－3

Transmitters


## Receivers

## 1 Channel Switch <br> Receivers

## 2 Channel <br> Switch Receivers

1 Channel
Dimmer
Receiver

K5432R
1 CHANNEL MULTI－FUNCTION SWITCH RECEIVER

Multi－functional device with repeater functionality 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
ELECTRONIC BALLASTS
3 units
OPERATING FREQUENCY
868.3 MHz

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

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

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

## SUPPLY

$230 \mathrm{~V} / 50 \mathrm{~Hz}$ LOAD RATINGS GLS／Incandescent： 1200W＠230Va
50W＠30Vd
Halogen：600W＠230Vac OPERATING FREQUENCY 868．3MHz
DIMENSIONS：
Depth： 27 mm
BS EN 60669－2－1
BS EN 301489－1／3

## 1 K5437R

1 CHANNEL
MULTI－FUNCTIONAL SWITCH RECEIVER LEADED

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

## SUPPLY

$230 \mathrm{~V} / 50 \mathrm{~Hz}$
LOAD RATINGS
GLS／Incandescent：2500W
Halogen：1200W
nductive：600VA
ELECTRONIC BALLASTS
3 units
OPERATING FREQUENCY 368．3MHz
DIMENSIONS
Depth： 27 mm
BS EN 60669－2－1
BS EN 301489－1／3
BS EN 300220－1／2

K5433R
2 CHANNEL
MULTI－FUNCTION SWITCH RECEIVER

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

## SUPPLY

$230 \mathrm{~V} / 50 \mathrm{~Hz}$
LOAD RATINGS
（per channel）
GLS／incandescent：500W
Halogen：100W
Electronic Ballasts： 1 unit OPERATING FREQUENCY 868.3 MHz DIMENSIONS Depth： 27 mm
BS EN 60669－2－1
BS EN 301489－1／3
BS EN 300220－1／2

1 K5436R
1 CHANNEL MULTI－FUNCTIONAL DIMMER RECEIVER LEADED

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

## SUPPLY

$230 \mathrm{~V} / 50 \mathrm{~Hz}$
LOAD RATINGS
60－210W
Suitable for use with GLS／ Incandescent／Halogen lamps and 12 V low voltage lighting powered by dimmable electronic transformers only OPERATING FREQUENCY
868．3MHz
DIMENSIONS
Depth： 27 mm
BS EN 60669－2－1
BS EN 301489－1／3
BS EN 300220－1／2

## Receivers

Plug-Through Receiver

## Alternative Receiver



SOLAR－PRESENCE
DETECTOR


TO POWER THE S NSOR
WITH OPTIONAL BACKUP BATTERY．

OPERATING FREQUENCY
868．3Mhz
IP RATING
IP50
DIMENSIONS
$160 \times 60 \times 37 \mathrm{~mm}$
EN301489－1／3
EN300220－1／2


## LOGIC PLUS ${ }^{\text {TM }}$

## RANGE INTRODUCTION

Logic Plus ${ }^{T M}$ 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 ${ }^{T M}$ products are made from a high grade thermoset material which has an inherent antimicrobial property. In independent tests, the Logic Plus ${ }^{\text {TM }}$ 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.

## HOW TO SPECIFY

A Urea moulded Anti-Bacterial range of wiring accessories, designed with a soft curved edge and a chamfered top edge that prevents dust collection, whilst offering a slim unobtrusive appearance. Cable connections must be upward facing, with easy to identify white markings on a dark background and grouped in a straight line with captive terminals screws for ease of installation. All sockets to have a 3 pin operated shutter safety mechanism and double pole switching, with the contacts arranged such that the neutral pole makes before and breaks after the live pole to improve safety.

## FEATURES \& 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 ${ }^{\text {TM }}$ 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.

## EXTENSIVE RANGE

Outstanding selection of wiring devices providing a total solution.

## 20 YEAR GUARANTEE

Gives total peace of mind to you and your customers. (Up to 10 year guarantee on electronic products)

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

HIGH GLOSS，HIGH QUALITY THERMOSET MATERIAL
Inherent antimicrobial properties，resists
scratching，maintains appearance

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

Logic Plus ${ }^{\text {TM }}$

## Specification Notes



The 3 pin operated safety shutter makes Logic Plus ${ }^{\text {TM }}$ 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

 OutletsFLUSH
13 AMP


## K2757WHI <br> 10 <br> 10

K2757GRA
1 GANG DP
WITH DUAL EARTH TERMINALS
K2757D1RED
1 GANG DP
WITH RED FRONTPLATE, RED ROCKER AND DUAL EARTH TERMINALS

## K2747WHI <br> 2 GANG DP

K2657WHI
K2657GRA 10
1 GANG DP WITH NEON
AND DUAL EARTH TERMINALS

## K2657D1RED

1 GANG DP
WITH RED FRONTPLATE, RED ROCKER,
NEON AND DUAL EARTH TERMINALS

## K2647WHI

2 GANG DP WITH NEONS
MOUNTING BOXES
FLLUSH 25MM
1 GANG: 861ZIC
2 GANG: 862ZIC
FLUSH 35MM
(for extra wiring space)
1 GANG: 866ZIC
2 GANG: 886ZIC
3 GANG: K863
SURFACE
1 GANG: K2140WHI
2 GANG: K2142WHI

FLUSH 25MM
1 GANG: $8612 I C$
FLUSH 35MM
(for extra wiring space) 2 GANG: 866zIC 3 GANG: K863
SURFACE GANG: K2142WH

3 GANG: K2153WHI
DIMENSIONS
1 GANG: $86 \times 86 \mathrm{~mm}$ 1 GANG: $86 \times 86 \mathrm{~mm}$ 2 GANG: $86 \times 146 \mathrm{~mm}$ FIXING CENTRES FIXING CENTRES
1 GANG: 60.3 mm 1 GANG: 60.3 mm 2 GANG: 120.6 mm 3 GANG: 180.9 mm BS 1363 Pt 2:1995

K2757D1WHI 10

## 1 GANG DP

AND DUAL EARTH TERMINALS

## K2757D2WHI

1 GANG DP
WITH GREEN ROCKER AND DUAL
EARTH TERMINALS

## K2747D1WHI

2 GANG DP
WITH RED ROCKERS
K2747D1RED
2 GANG DP
WITH RED FRONTPLATE AND
RED ROCKERS
K2737WHI
3 GANG DP
WITH DUAL EARTH TERMINALS
5 HIGH INTEGRITY EARTHING
K2757, K2657, K2743 and K2737
Fitted earth terminals to provide a double earth facility for use when installations require a high integrity protective connection as specified within BS 7671 IET Wiring

## K2737

13A fuse protects all three outlets

K2743WH
K2743GRA
2 GANG DP WITH 2 X
CHARGING PORTS
AND DUAL EARTH
TERMINALS
K1000WHI
2 GANG 10MM
WHITE PATRESS
K1000BLK
2 GANG 10MM
BLACK PATRESS
K1000CLR
2 GANG 10MM
CLEAR PATRESS
mounting boxes
FLUSH 35MM
886Z1C
FLUSH 47MM
(for extra wiring space)
887ZIC
BS 5733:2010

## K2743WHI

Features 2 USB charging sockets, each
capable of supporting 2 A charge
(total of 2A)
K1000WHI, K1000BLK, K1000CLR
Pattresses for use where existing back box
is too shallow

WITH OUTBOARD
ROCKERS
FLUSH
13 AMP


K2746WHI


K2746GRA


K2476WHI


K2476GRA


K2746D1WHI


K2746D1RED


K2746D2WHI


## K2746WHI 10

K2746GRA 10
2 GANG DP
WITH OUTBOARD ROCKERS AND DUAL EARTH TERMINALS

## K2746CEWHI

102 GANG DP
WITH OUTBOARD ROCKERS
AND ‘CLEAN EARTH’ FACILITY

## K2476WHI

## K2476GRA

2 GANG DP
WITH OUTBOARD ROCKERS
DUAL EARTH AND NEONS
K2476CEWHI
2 GANG DP
WITH OUTBOARD ROCKERS，
NEONS AND＇CLEAN EARTH＇
FACILITY
K2746CEWHI \＆K2476CEWHI
Provided with facility for＇clean earth＇connection DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 1363 Pt 2：1995
HIGH INTEGRITY EARTHING
Fitted earth terminals to provide a double earth
facility for use when installations require a high integrity protective connection as specified within BS 7671 IET Wiring Regulations

K2746D1WHI 10 K2746D1RED 10
2 GANG DP
WITH RED OUTBOARD
ROCKERSAND DUAL
EARTH TERMINALS
K2746CED1RED
2 GANG DP WITH RED
OUTBOARD ROCKERS
WITH CLEAN EARTH
FACILITY

## K2476D1WHI 10

K2476D1RED 10
2 GANG DP
WITH RED OUTBOARD
ROCKERS，NEONS AND
DUAL EARTH TERMINALS

## K2746D2WHI <br> 10

2 GANG DP
WITH GREEN OUTBOARD
ROCKERS AND DUAL
EARTH TERMINALS
dIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 1363 Pt 2：1995

## Logic Plus ${ }^{\text {™ }}$

RCD PROTECTED
FLUSH
13 AMP

FILTERED
FLUSH
13 AMP


K6231 WHI


K6233WHI

## K6231WHI

2 GANG SP
30mA RATED TRIPPING
CURRENT
ACTIVE CONTROL CIRCUIT

## K6233WHI <br> 1

2 GANG SP
30mA RATED TRIPPING
CURRENT
PASSIVE CONTROL CIRCUIT

## ELUSH

FLUSH
886ZIC - 35 mm deep
SURFACE
K2140WHI - 30 mm deep
EARTH PIN OPERATED SHUTTER
These a.c. and pulsating d.c. fault current sensitive products have up to 15 mm thick frontplates and are suitable for boxes with 30 mm min. depth and supply voltages of 240 V 50 Hz .
A 25 mm deep box (862ZIC) can be used but conduit entry
is restricted.
Refer to Sentrysocket section, page 288, for more information on active and passive control circuits.
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 7288:1990
All units are a.c. and pulsating d.c. fault current
sensitive devices.
Maximum total load 13A


K6300WH


K6303WHI

## K6300WHI <br> 1

1 GANG DP
30mA RATED TRIPPING
CURRENT ACTIVE
CONTROL CIRCUIT

## K6303WHI

1 GANG DP
30mA RATED TRIPPING
CURRENT PASSIVE
CONTROL CIRCUIT

## MOUNTING BOXES

FLUSH
B86ZIC - 35 mm deep

## SURFACE

K2140WHI - 30 mm deep
EARTH PIN OPERATED SHUTTER
These a.c. and pulsating d.c. fault current sensitive products have up to 15 mm thick frontplates and are suitable for boxes with 30 mm min. depth and supply voltages of 240 V 50 Hz .
A 25 mm deep box (862ZIC) can be used but conduit entry is restricted.
Refer to Sentrysocket section, page 288, for more information on active and passive control circuits.
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
fixing Centres
120.6 mm

BS 7288:1990
All units are a.c. and pulsating d.c. fault current
sensitive devices.
Maximum total load 13 A


K1826WHI


K1800WH

## K1816WHI

1
2 GANG DP
SPIKE
K1826WHI
1
2 GANG DP
SPIKE AND RFI
K1800WHI 5
REPLACEMENT FILTER
5
CASSETTE
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

## Multimedia

Plates

FLUSH
13 AMP

Switchsocket
Outlets
NON STANDARD
FLUSH
13 AMP

ROUND PIN
FLUSH


K2893WHI


K2493WHI


## Logic Plus ${ }^{\text {TM }}$

## Socket <br> Outlets

|  |  | 127V |
| :--- | :--- | :--- |
|  |  | FLUSH |
| FLUSH | ROUND PIN | 15 AMP |
| 13 AMP | FLUSH | (NON UK) |



K780WHI 10

1 GANG K781WHI

## K781RED

2 GANG
WITH DUAL EARTH
TERMINALS
MOUNTING BOXES
FLUSH 25MM
1 GANG: 861ZIC
2 GANG: 862Z
FLUSH 35MM
(for extra wiring space)
2 GANG: 866ZIC
2 GANG: 8
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 IET Wiring Regulations
DIMENSIONS
1 GANG: $86 \times 86 \mathrm{~mm}$
2 GANG: $86 \times 146 \mathrm{~mm}$
FIXING CENTRES
1 GANG: 60.3 mm
1 GANG: 60.3 mm
BS 1363: Pt2:1995

| 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 |  |
| DIIENSIONS |  |
| 86 x 86mm |  |
| FIXING CENTRES |  |
| 60.3mm |  |
| BS $546: 1950$ |  |

K2251WHI
1 GANG
SHUTTERED
(NON UK)

## K2252WHI

5
2 GANG
SHUTTERED
(NON UK)
MOUNTING BOXES
FLUSH 25MM
1 GANG: 861 ZIC
2 GANG: 862210
FLUSH 35MM
(for extra wiring space)
1 GANG: 866ZIC
2 GANG: 886ZIC
SURFACE
1 GANG: K2140WHI
2 GANG: K2142WH
DIMENSIONS
1 GANG: $86 \times 86 \mathrm{~mm}$
2 GANG: $86 \times 146 \mathrm{~mm}$
FIXING CENTRES
1 GANG: 60.3 mm
2 GANG: 120.6 mm
SASO 2204:2003
Socket
Outlets
$2 P+E$
FLUSH
16 AMP
（NON UK）

NON UK）

## Three Pole Fan Isolator

FLUSH
10 AMP

## Shaver <br> Socket Outlet

## Shaver／Toothbrush

Supply Units


K4150WHI


K4152WHI

## K4150WHI

1 GANG
16A 250V SHUTTERED
（NON UK）
K4152WHI
2 GANG
16A 250V
SHUTTERED
（NON UK）
MOUNTING BOXES
FLUSH 35MM
1 GANG：866ZIC
2 GUANG：
1 GANG：K2031WH
2 GANG：K2172WH
These products are not suitable for instalation in 25 mm boxes． DIMENSIONS
1 GANG： $86 \times 86 \mathrm{~mm}$
2 GANG： $86 \times 146 \mathrm{~mm}$
FIXING CENTRES
1 GANG： 60.3 mm
2 GANG： 120.6 mm
IEC 60884－1：2006

K4857WHI
WITH SWITCHLOCK
AND PADLOCK
K4859WHI WITHOUT SWITCHLOCK
K4858
SWITCHLOCK
FOR FAN ISOLATOR
K2000
PADLOCK
MOUNTING BOXES
FLUSH
3995ZIC

## SURFACE

K2160WHI
For local isolation of fans with or without timers for repair or routine maintenance． DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669－2－4

K700WHI
SHAVER SOCKET OUTLET
200－250 VOLTS 50／60HZ
FUSED
INCORPORATES A SELF－RESETTING
OVERLOAD DEVICE，LIMITING
CURRENT TO 20VA．
MOUNTING BOXES
FLUSH
861ZIC
SURFACE
K2140WH
Must not be installed in a bathroom or shower room．
Designed for wiring onto lighting circuits．
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 4573：1970

K701WHI
1
SHAVER／TOOTHBRUSH
SUPPLY UNIT
DUAL VOLTAGE
115／230V OUTPUT
（220／240V 50／60HZ INPUT）
K706WHI
1
SHAVER／TOOTHBRUSH
SUPPLY UNIT
DUAL VOLTAGE
115／230V OUTPUT
（120／130V 50／60HZ INPUT）
（NON UK）
MOUNTING BOXES
FLUSH
878zIC
SURFACE
K2172WH
This design incorporates a double wound isolating transformer rated 20 VA at 230 or 115 volts it meets BS EN 61558 making
a shaver Usethbrush poms．Inserion
switches on by energising the primary
switches on by energising the primary
side orically switches oft The transforma
auto maicaly suint oserlod transforme
load by an
automatic solid state overload device with
automatic resetting．
dImensions
$146 \times 86 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS EN 61558－2－5：1998

## Features and Benefits



40


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 installation easy

## Connection Units

SWITCHED
13 AMP

UNSWITCHED
13 AMP


1 K337WHI 10
WITH FLEX OUTLET
IN BASE AND THICK
FRONTPLATE
10 K337KOWHI
WITH FLEX OUTLET
IN BASE, THICK FRONTPLATE
AND TAMPERPROOF SCREW
FOR FUSE CARIIER

## K377WHI

WITH FLEX OUTLET
in base, NEON AND
THICK FRONTPLATE
MOUNTING BOXES:
FLUSH
866ZIC ( 35 mm )
SURFACE
K2140WH
All units are fitted with a 13A fuse-link to BS 1362. See page 222 for spare fuse-links.
Base entry frontplates are 12.5 mm deep. The fuse carrier can be locked in the open position by removing the fuse and open position by removing the fuse
using K2000 fuse carrier padlock. DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363 Pt 4:1995
K1040KO AND K337KO
Key (3405ZIC) is supplied

K2140WHI
All units are fitted with a 13 A fuse-link to BS 1362. See page 222 for spare fuse-links.
The fuse carrier can be locked in the open position by removing the fuse and using K2000 fuse carrier padlock

K385WHI
13A RCD CONNECTION
UNT zomA PASSIVE AND
THICK FRONTPLATE

DP
K1040KOWHI
DP WIt TAMPERPROOF
K1060WHI
DP WITH NEON
K1060D1WHI
位THEON AND
RED ROCKER

## K1070WHI

DP WITH FRONT FLEX
DUTLET AND NEON
K1070D1WHI
DP WITH FRONT FLEX
OUTLET, NEON AND
red rocker

## K2000

 PADLOCKK1030 and K1070 front flex outlet products cannot be mounted directly onto MI Cable Box K2131WHI. A mounting frame K2134WHI will have to be used between the product and the box.
Base entry frontplates are 12.5 mm deep. DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363 Pt 4:1995

FOR CONTROLLING DUAL
IMMERSION HEATERS
mounting boxes
FLUSH
866 ZIC（ 35 mm ）
SURFACE：
K2140WH
Only mounting boxes with an earth terminal should be used
These products are marked＇on＇and ${ }^{\text {＇off＇}}$＇against the one－way DP switch and ＇sink＇and＇bath＇against the two－way SP switch．

## dIMENSIONS

$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669－1：1999

MOULDED
FLUSH
50 AMP

METAL
50 AMP

## Dual Switch

|  | $\vdots$ | DP Switches |
| :--- | :---: | :--- |
| $\vdots$ | $\vdots$ |  |
| $\vdots$ FLUSH | $\vdots$ |  |
| 20 AMP | $\vdots$ | FLUSH |
|  | 20 AMP |  | DP Switches 20 AMP



| K5208WHI | 10 |
| :--- | :--- |
| K5207WHI | 10 |
| WITH NEON |  |


| K5403WHI 10 | K5105WHI | 1 | K5205WHI |
| :---: | :---: | :---: | :---: |
| WITH FLEX OUTLET IN BASE | WITH NEON |  | K5215WHI |
| K5423WHI 10 | K5105GRA | 1 | WITH NEON |
| WITH FLEX OUTLET IN BASE AND NEON | WITH NEON |  | K5215CKWHI |
| K5423WHWHI 10 | mounting boxes： |  | WITH NEON <br> AND MARKED ‘COOKER’ |
| WITH FLEX OUTLET IN BASE， | ${ }_{866 z 1}\left(6 \mathrm{~mm}^{2}\right.$ conductors） |  | K5215SHWHI |
| NEON AND MARKED | 877 IIC（ $10 \mathrm{~mm}^{2}$ conductors） |  | WITH NEON |
| ＇WATER HEATER＇． | SURFACE |  | AND MARKED ‘SHOWER’ |
| K5423D1WHI 10 | K2140WHI（ $6 \mathrm{~mm}^{2}$ conductors） K2031WHI（ $10 \mathrm{~mm}^{2}$ conductors） |  |  |
| WITH FLEX OUTLET IN BASE， | Supplied with 8 self－adhesive plastic |  | MOUNTING BOXES： |
| NEON AND RED ROCKER | identification labels marked hob， fan，oven，water heater，shower，air |  | FLUSH <br> 886ZIC（ $6 \mathrm{~mm}^{2}$ conductors） |
| mOUNTING BOXES： | conditioner，cooker and washing |  | SUREACE |
| FLUSH | machine． |  | SURFACE |
| $866 Z 1 \mathrm{C}$（ 35 mm ） | Not recommended for switching large |  |  |
| SURFACE | banks of PCs． |  | K5205WHI and K5215WHI |
| K2140WHI | DIMENSIONS |  | identification labels marked hob， |
| K2031WHI（for extra wiring space） |  |  | fan，oven，water heater，shower，air |
| Base entry frontplates are 12.5 mm deep． | FIXING CENTRES <br> 60.3 mm |  | conditioner，cooker and washing machine． |
| All switches are complete with earth terminals． | BS EN 60669－1：1999 |  | Not recommended for switching large banks of PCs． |
| Not recommended for switching large banks of PCs． |  |  | DIMENSIONS |
| DIMENSIONS |  |  | FIXING CENTRES |
| $86 \times 86 \mathrm{~mm}$ |  |  | 120.6 mm |
| FIXING CENTRES |  |  | BS EN 60669－1：1999 |

## K5215WHI

 WITH NEON5215CKWHI
WITH NEON
AND MARKED＇COOKER
KS215SHW
AND MARKED＇SHOWER’

FLUSH
886zIC（ $6 \mathrm{~mm}^{2}$ conductors）
SURFACE
K2172WH
K5205WHI and K5215WH Supplied with 8 self－adhesive plastic
an，oven，water heater，shower，air conditioner，cooker and washing
nachine．
banks of PCs．
$86 \times 146 \mathrm{~mm}$
IXING CENTRES
BS EN 60669－1：1999

## K5230WHI <br> WITH NEON <br> SURFACE MOUNTED <br> K5012WHI <br> WITH NEON <br> FLUSH MOUNTED

1 K5230
Supplied with mounting box．
Supplied with mounting box．
Earth terminal fitted on base of box．
Earth terminal fitted on base of bo
Not recommended for switching
large banks of PCs．
dimensions
$150 \times 89 \times 50 \mathrm{~mm}$
kNOCKOUTS
$8 \times 20 \mathrm{~mm}$
K5012
Not supplied with mounting box
FLUSH
5120ALM
Supplied with earth terminals．
Not recommended for switching
large banks of PCs．
DIMENSIONS
BS EN 60669－1：1999

| Cooker | Cooker |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Connection | Controls |  |  |  |
| Unit |  |  |  |  |
|  | MOULDED | MOULDED | METAL | METAL |
|  | FLUSH | SURFACE | FLUSH | SURFACE |
| 45 AMP | 45 AMP | 45 AMP | 45 AMP | 45 AMP |



## Plateswitches

NEON LOCATOR

K3041


Neon locator on a plateswitch


FLUSH
10 AMP

FLUSH
10 AMP

FLUSH
20 AMP

FLUSH
10 AMP


K4871WHI


K4872WHI


K4872GRA


K3041
NEON PLATESWITCH
LOCATOR
200-250V. 50HZ.
TUNGSTEN GLS LAMPS ONLY
Neon Plateswitch Locator is for use
with any 1,2 and 3 GANG Logic Plus ${ }^{\text {TM }}$ plateswitches.
Used for location of switches in dark
situations
FIXING CENTRES
60.3 mm

BS 5733:2010
5

| K4870WHI | 10 |
| :--- | :--- |
| K4870GRA | 10 |
| 1 GANG SP |  |
| ONE-WAY |  |
| K4871WHI | 10 |
| K4871GRA | 10 |
| 1 GANG SP |  |
| TWO-WAY |  |
| K4872WHI | 10 |
| K4872GRA | 10 |
| 2 GANG SP |  |

2 GANG SP
mounting boxes
FLUSH
1, 2 \& 3 GANG: 861ZIC
4 \& 6 GANG: 862 IIC
SURFACE
1, 2 \& 3 GANG: K2160WH
4 \& 6 GANG: K2161WH
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.

| K4875WH 1 GANG INTERMEDIATE | 10 |
| :---: | :---: |
| K4876WHI 1 GANG DP ONE-WAY | 10 |
| K4873WHI <br> 3 GANG SP <br> TWO-WAY | 10 |
| K4874WHI <br> 4 GANG SP <br> TWO-WAY | 5 |
| K4879WHI <br> 6 GANG SP <br> TWO-WAY | 5 |
| DIMENSIONS , 2 \& 3 GANG: $86 \times 86 \mathrm{~mm}$ 4 \& 6 GANG: $86 \times 146 \mathrm{~mm}$ FIXING CENTRES $1,2 \& 3$ GANG: 60.3 mm $4 \& 6$ GANG: 120.6 mm BS EN 60669-1:1999 |  |



K4873D2WHI

## K4878BWHI

10
1 GANG SP
TWO WAY
PUSH SWITCH WITH BELL
SYMBOL
PUSH TO MAKE OR BREAK
K4878PWHI
10
1 GANG SP
TWO WAY
PUSH SWITCH MARKED
'PRESS'
PUSH TO MAKE OR BREAK
MOUNTING BOXES
FLUSH
861ZIC
SURFACE
K2160WHI
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669-1:1999

## Logic Plus ${ }^{\text {TM }}$

| Plateswitches | : Lockable Fire | : Architrave | $\vdots$ Wide Rocker |
| :--- | :--- | :--- | :--- |
|  | Alarm Isolator | Switches | Switches |
|  | Switch |  |  |
|  |  |  |  |
| DP FLUSH | DP FLUSH | FLUSH | FLUSH |
| 20 AMP | 20 AMP | 10 AMP | 10 AMP |



| K4867WHI | 10 |
| :--- | :--- |
| 1 GANG DP |  |
| K4868WHI | 10 |
| 2 GANG DP | 10 |

MOUNTING BOXES
866ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669-1:1999

K4780WHI
20A DP LOCKABLE FIRE ALARM ISOLATOR SWITCH
mounting boxes
866Z1C
DIMENSIONs
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 60669-2-4:2005

| K4841WHI | 5 | K4781WHI | 10 |
| :---: | :---: | :---: | :---: |
| 1 GANG SP |  | K4781GRA$10$ |  |
| TWO-WAY |  |  |  |
| K4842WHI | 5 | WITH WIDE ROCKER |  |
| $2 \text { GANG SP }$ |  | K4782WHI | 10 |
| K4848BWHI <br> 1 GANG SP PUSH SWITCH WITH BELL SYMBOL PUSH TO MAKE OR BREAK |  | K4782GRA2 GANG SP TWO-WAY10 |  |
|  |  |  |  |
|  |  |  |  |
|  |  | K4783WHI | 10 |
|  |  | 3 GANG SP TWO-WAY WITH WIDE ROCKERS |  |
| 1 GANG SP PUSH SWITCH MARKED 'PRESS' PUSH TO MAKE OR BREAK |  |  |  |
|  |  | K4785WHI | 10 |
|  |  | 1 K4ANGGRA |  |
|  |  |  |  |
| mounting boxes WITH WIDE ROCKER |  |  |  |
| FLUSH <br> 1 GANG: 3921zIC <br> 2 GANG: 3922ZIC <br> SURFACE |  | K4787WHI | 10 |
|  |  | 1G 20A DP ONE-WAYWITH WIDE ROCKER |  |
|  |  |  |  |
| SURFACE <br> 1 GANG: K2151WH <br> 2 GANG: k2152WH |  | WITH WIDE ROCKER | 10 |
|  |  |  |  |
| These switches do not have to be derated when used with fluorescent or inductive loads. K4841, K4842 These switches can be wired |  | $\begin{aligned} & 2 \text { GANG DP WITH } \\ & \text { WIDE ROCKER } \end{aligned}$ |  |
| K4841, K4842 These switches can be wired as either one-way or two-way. |  | mounting boxes | dimensions |
|  |  | FLUSSH86IZICSURFACE | $86 \times 86 \mathrm{~mm}$ |
|  |  |  |  |
|  |  | SURFACE $\quad 60.3 \mathrm{~mm}$ |  |
| FIXING CENTRES |  |  |  |  |
| 1 GANG: 60.3 mm ;22 |  | K2160WHI K2140WHI (for extra wiring space) |  |
| BS EN 60669-1:1999 |  |  | 1 way version of K4781. BS EN 60669-1: 1999 K4788WH is 20A DP 1 way version of K4782. |
|  |  | These switches do not have to be derated when or inductive loads. |  |
|  |  |  |  |
|  |  |  |  |

Intelligent LED
Dimmer Switch
220V TO 240V A．C．50HZ
LED，TUNGSTEN FILAMENT
AND LOW VOLTAGE
HALOGEN LIGHTING

Intelligent
Dimmer Switches
230V A．C． 50 HZ
TUNGSTEN FILAMENT
AND LOW VOLTAGE
HALOGEN LIGHTING
Standard
Dimmer Switches
230V A．C． 50 HZ
TUNGSTEN FILAMENT

Dimmer Switches
（NON UK）

200－250V A．C．
50 OR 60HZ


## K1523WHILV

1 GANG SINGLE
2 WAY
40WNA－300W／240VA
LED：4－70W

## K1524WHILV

1 GANG DOUBLE
2 WAY
40WNA－300W／240VA
LED：4－70W
mounting boxes
FLUSH
861ZIC－25mm deep min
SURFACE
K2140WHI－ 30 mm deep Micro controller based circuitry to provide electronic soft－start and overload protection．Suitable for use with most major manufacturers LED lamps or electronic／wire wound transformers．Can also be used with good quality mains voltage GU10 halogen lamps．
Do not mix load types
This dimmer offers the user the ability to adjust the minimum brightness level Max number of lamps（10） DIMENSIONS DIMENSIONS
FIXING CENTRES
60.3 mm

BS EN 60669－2－1

Wo WAY 40W／NA－300W／240 VA

## K1522WHILV

1 GANG DOUBLE
TWO WAY $2 \times 40 W N A-300 W / 240$ VA

## ELUSH

861ZIC／866ZIC
SURFACE
K2140WH
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
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

Conforms to BS EN 60669－2－1

K1511WHI
1 GANG SINGLE
ONE WAY 65－450W

## K1531WHI

1 GANG SINGLE
ONE WAY 40－250W

## K1532WHI

1 GANG DOUBLE
ONE WAY $2 \times 40-250 \mathrm{~W}$

## K1533WHI

1 GANG DOUBLE
TWO WAY $2 \times 40-250 W$

## K1534WHI

1 GANG SINGLE
TWO WAY 40－250W

## K1535WHI

1 GANG SINGLE
TWO WAY 65－450W
mounting boxes
FLUSH
861ZIC／866zIC
SURFACE
Not suitable for fluorescent lamps or Now voltage lighting．
dIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

Conforms to BS EN 60669－2－1

## 1 K1541WHI

1 GANG SINGLE
ONE WAY
1 75－500W 50HZ
K1561WHI
1 GANG SINGLE
1 TWO WAY
100－1000 W 50Hz
K1641WHI
1 GANG SINGLE
ONE WAY
75－500W 60HZ
1 K1661WHI
1 GANG SINGLE
TWO WAY
100－1000W 60HZ
MOUNTING BOXES
FLUSH
861ZIC／866ZIC
SURFACE
K2140WHI
PATTRESS
For mounting in 16 mm deep boxes
a mounting frame 40533PLWHIT9 is
available．
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

40533PLWHIT9
CAN BE USED WITH
LOGIC PLUS DIMMERS TO
STAND PRODUCT FROM
MOUNTING SURFACE
WHERE BACK BOX DEPTH IS NOT SUFFICIENT

## DIMENSIONS

$86 \times 86 \mathrm{~mm}$
Patress thickness is 5 mm
FIXING CENTRES
60.3 mm

| Blank Plates | Flex Outlet | Euro Modular | Euro Power |  |
| :--- | :--- | :--- | :--- | :--- |
|  | Frontplate | Frontplates | Modules |  |
|  |  |  |  |  |
|  |  |  |  | $\vdots$ |



K3825WH 10
1 GANG MOULDED
ARCHITRAVE
K3827WHI
K3828WHI 10

2 GaNG MOULDED

## K5033WHI

METAL

## K3825WHI

For use with 3921ZIC and K2151WHI MOUNTING BOXES.
K5033WHI
For use with 5120ALM deep metal box. DIMENSIONS
K3825WHI: $86 \times 31 \mathrm{~mm}$
K3827WHI: $86 \times 86 \mathrm{~mm}$
K5033WH: : $178 \times 165 \mathrm{~mm}$
K5033 N: $178 \times 165 \mathrm{~mm}$
FIXING CENTRES
K3825WHI: 60.3 mm
K3827WHI: 60.3 mm
K3828WHI: 120.6 mm
K5033WH: 133 mm
BS 5733:2010

| K1090WHI 10 |  |
| :---: | :---: |
| FLEX OUTLET FRONTPLATE |  |
|  |  |
| Complete with three pairs of terminals, each suitable for $2 \times 2.5 \mathrm{~mm}^{2}$ conductors and a $.5 \mathrm{~mm}^{2}$ flexible cord |  |
|  |  |
| Frontplate thickness is 12.5 mm . |  |
| Cable entry diameter is 11 mm . |  |
| DIMENSIONS |  |
| $86 \times 86 \mathrm{~mm}$ |  |
| FiXING CENTRES |  |
| 60.3 mm |  |
| 0-22:2 |  |

BS EN 60670-22:2006

K181WHI 10
1 GANG EURO FRONTPLATE ONE MODULE
APERTURE SIZE $25 \times 50 \mathrm{MM}$
K182WHI 10
K182GRA 10
1 GANG EURO FRONTPLATE
TWO MODULE
APERTURE SIZE 50 X 50MM

## K184WHI

K184GRA
2 GANG EURO FRONTPLATE
FOUR MODULE
APERTURE SIZE 100 X 50MM

## K185WHI

3 GANG EURO FRONTPLATE
SIX MODULE
APERTURE SIZE $150 \times 50 \mathrm{MM}$

## 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 35 mm VTS8035 (For use with Pinnacle and Premier cable management systems) K2153WHI 30 mm
FIXING CENTRES
1 GANG: 60.3 mm 2 GANG: 120.6 mm BS 5733:2010 where applicable Note: No grid required, modules just clip into place

| K5830WHI | 1 | K5833WHI | 10 |
| :---: | :---: | :---: | :---: |
|  |  | K5833BLK | 10 |
|  |  | UK 1 GANG EURO 2 MODULE 5A 250V SHUTTERED |  |
| K5831WHI | 10 | K5834WHI | 10 |
| K5831BLK <br> GERMAN 2P+E 16A 250V SHUTTERED EURO 2 MODULE (NON UK |  | FRENCH/BELGIAN $2 P+E$ 16A 250V SHUTTERED EURO 2 MODULE (NON UK |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| K5832WHI | 10 | K5837WHI | 1 |
| K5832BLK | 10 | K5837BLK | 1 |
| AMERICAN 2P+E |  | USB CHARGING |  |
| 15A 127V SHUTTERED |  | EURO 2 MODU |  |
| EURO 2 MODULE (NON UK) |  |  |  |
|  |  |  |  |
| ${ }_{\text {K58330 }}$ |  | mounting box |  |
| 35 mm minimum |  | 46 mm (for extra wiring space) |  |
| 46 mm (for extra wiring space) |  | DIMENSIONS |  |
| DIMENSIONS |  |  |  |
| 50 ${ }^{\text {c } 50 \mathrm{~mm}}$ |  | BS 546:1950 |  |
|  |  |  |  |
| ${ }_{\text {K5831 }}$ S 1363 P2: 1995 |  | ${ }_{\text {K5034 }}^{\text {MOUNTING }}$ Box |  |
| K5831Mounting box |  | ${ }^{\text {4 }}$ Limm ${ }^{\text {dinensions }}$ |  |
| 46 mm |  | DIMENSIONS$50 \times 50 \mathrm{~mm}$ |  |
| DIMENSIONS |  | $50 \times 50 \mathrm{~mm}$NF C66-314 |  |
| S0 $\times$ 50mmIEC $60884-1: 2006 ~$ |  |  |  |
|  |  | ${ }_{\text {KF5837 }}$ |  |
| K5832 |  | mounting box |  |
| mounting box |  | $35 \mathrm{~mm}, 46 \mathrm{~mm}$ (for extra wiring spaceDIMENSIONS |  |
|  |  |  |  |
| 46 mm (for extra wiring space) |  | $50 \times 50 \mathrm{~mm}$ |  |
| DIMENSIONS |  | USB charging sockets, each capabl.supporting 2 A charge (total of 2 A ). |  |
| SASO 2004:20 |  | (ECC 60950-1 ${ }_{\text {IEC } 61000-6-1 / 3}$ |  |
|  |  |  |  |

## Euro Datacom

Modules

RJ11/12
RJ45 CAT 6
RJ45 CAT 5e
TELEPHONE

## Logic Plus ${ }^{\text {TM }}$

## Euro Multimedia

## Modules

TV CO-AXIAL OUTLETS FOR DIGITAL TV SCREENED

## NON ISOLATED

HDMI
AUDIO




K5805WHI K5806WHI

| K5850WHI | K5852WHI | 5 | K5853DABWHI | 5 |
| :---: | :---: | :---: | :---: | :---: |
| K5850BLK 5 | K5852BLK | 5 | K5853DABBLK | 5 |
| SINGLE OUTLET (IEC MALE) | TWIN OUTLET |  | TRIPLE OUTLET |  |
| ONE MODULE $25 \times 50 \mathrm{MM}$ | TV/FM DIPLEXER |  | TV-FM/DAB-SAT TRIPLEXER |  |
| K5851WHI | TWO MODULE $50 \times$ X 0 MM(IRELAND ONLY) |  | TWO MODULE 50 X 50MM |  |
| K5851BLK 5 |  |  | K5854DABWHI | 5 |
| SINGLE OUTLET | K5852DABWHI | 5 | K5854DABBLK | 5 |
| (IEC FEMALE) | K5852DABBLK DIPLEXER |  | QUAD OUTLET | 5 |
| ONE MODULE $25 \times 50 \mathrm{MM}$ |  |  | TV-FM/DAB-2XSAT <br> TWO MODULE 50 X 50MM |  |
| K5855WHI | TWO MODULE $50 \times$ 50MM |  |  |  |
| K5855BLK 5 |  |  |  |  |
| SINGLE F-TYPE SATELLITE | K5853WHI | 5 |  |  |
| SOCKET | K5853BLK | 5 |  |  |
| ONE MODULE 25 X 50MM | TRIPLE OUTLET |  |  |  |
| Fully screened non isolated TV outlets containing a combination of single, TV/ EM Diplexer and TV/FM/SAT Tripexer | TV/FM/SATELLITE TRIPLEX TWO MODULE 50 X 50MM (IRELAND ONLY) |  |  |  |
| for use within digital TV systems and interactive TV services. Single outtets for connection to a single TV, FM or Satellite co-axial aerial lead. | TV/FM diplexer units for connectio TV and FM signals. combined TV, EM and units for con combined TV, FM and Satelite si |  | le co-axial aerial lead with <br> single co-axial aerial lead |  |


| MOUNTING BOXES <br> Min box depth 32 mm DIMENSIONS <br> 1 Module $25 \times 50 \mathrm{~mm}$ <br> 2 Module $50 \times 50 \mathrm{~mm}$ <br> BS 3041:1997 <br> IEC 169-2:1965 <br> BS EN 50083 \& BS 5733:2010 where applicable | PERFORMANCE <br> SINGLE OUTLETS <br> TV/FM Iec Male Or Female DC-950MHz <br> SAT F-TYPE <br> DC-1.75GHz | TV/FM/SAT PRODUCTS |  | TV/FM/DAB/SAT PRODUCTS FOR DIGITAL RADIO |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Outlet: <br> TV: | Diplexer $5-65 \mathrm{MHz}$ |  |  |
|  |  |  |  | Outlet: | Diplexer |
|  |  |  | $470-862 \mathrm{MHz}$ | TV: | $5-65 \mathrm{MHz}$ |
|  |  | FM/DAB: | $87.5-108 \mathrm{MHz}$ |  | $470-862 \mathrm{MHz}$ |
|  |  | SAT: | N/A | FM/DAB | $87.5-230 \mathrm{MHz}$ |
|  |  |  |  | SAT OR | N/A |
|  |  | Outlet: TV: | Triplexer $5-65 \mathrm{MHz}$ | SAT2: |  |
|  |  |  | $470-862 \mathrm{MHz}$ | Outlet: | Triplexer |
|  |  | FM: | $87.5-108 \mathrm{MHz}$ | TV: | $5-65 \mathrm{MHz}$ |
|  |  | SAT1: | $950-2300 \mathrm{MHz}$ |  | $470-862 \mathrm{MHz}$ |
| 48 mkelectr | c.co.uk |  |  | FM: | $87.5-230 \mathrm{MHz}$ |
|  |  |  |  | SAT1: | $950-2300 \mathrm{MHz}$ |
|  |  |  |  | SAT2: | $5-2300 \mathrm{MHz}$ |


| K5807WHI | K5805WHI | 5 |
| :---: | :---: | :---: |
| K5807BLK | K5805BLK | 5 |
| FEMALE HDMI OUTLET | AUDIO BINDING POST SET FOR SINGLE LOUD |  |
| K5807 Female HDMI Outtet is HDMI | SPEAKER |  |
| 1.1, 1.2, 1.3 | K5806WHI | 5 |
| data rate | K5806BLK | 5 |
| Up to 2.25 Gbps | RCA TO SCREW |  |
|  | termination SET |  |
| INPUT CONNECTOR | 1 RED AND 1 BLACK |  |
| $1 \times$ HDMI Female (Type A) |  |  |
| OUTPUT CONNECTOR | $50 \times 25 \times 28 \mathrm{~mm}$ |  |
| $1 \times$ HDMI Female (Type A) |  |  |
| ${ }_{\text {PC }}$ Supports high resolution input |  |  |
| VGA, SVGA, SXVGA (1280x1024) |  |  |
| and UXGA (1600x $1200,1920 \times 1200$ ) |  |  |
| HDTV |  |  |
| 480p, 720p, 1080i and 1080p |  |  |
| HDMM Input cable should be no arger |  |  |
| tran 2om. |  |  |
| DIMENSIONS |  |  |
|  |  |  |


| LJU6C | LJU6C |
| :--- | :---: |
| Datacom | Datacom |
| Frontplates | Modules |

BLANKS


RJ11/12
RJ45 CAT 6
RJ45 CAT 5e
BLANKS


Telephone
Socket
Outlets

FLUSH

TV/FM and Satellite
Co-Axial Socket Outlets
FOR DIGITAL AND INTERACTIVE SERVICES
SCREENED, NON ISOLATED
FLUSH


K422WHI 10
1 GANG
TELEPHONE MASTER

## K427WHI

1 GANG
TELEPHONE SECONDARY
K4817WHI 10
1 GANG
RJ11 TELEPHONE SOCKET

## K3540WHI

3 PIN WITH
TELEPHONE SYMBOL
(NON UK)
400NAT 10
IDC INSERTION TOOL
BS 6312 Pt 2
K4817 FCC 68
K3540
Accepts standard BS 546
2 A 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 applicable
 use within digital TV systems and
interactive TV services.

K3552DABWHI 1
TWIN TV/FM
K3553WHI 5
TRIPLE TV/FM/SA

K3553DABWHI

TRIPLEXER
K3554DABWHI 1
QUAD TV/FM DAB/SATX2
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.

| MOUNTING BOXES |  | PERFORMANCE <br> Refer to page 474 for technical specification. |
| :---: | :---: | :---: |
| Minimum box depth 32 mm | $\begin{aligned} & 866 Z 1 C \\ & \text { K2181WHI } \\ & 886 Z 1 C \\ & \text { K2183WHI } \end{aligned}$ |  |
| 1 GANG: $\begin{aligned} & \text { Flush: } \\ & \text { Surface: }\end{aligned}$ |  |  |
| 2 GANG: Flush: |  |  |
| DIMENSIONS |  |  |
| 1GANG: $86 \times 86 \mathrm{~mm}$ |  |  |
| 2 GANG: $86 \times 146 \mathrm{~mm}$ |  |  |
| FIXING CENTRES |  |  |
| 1GANG: 60.3 mm |  |  |
| 2 GANG: $\quad 120.6 \mathrm{~mm}$ |  |  |

## TV／FM and Satellite

Co－Axial Socket Outlets
with Telephone Outlet

FOR DIGITAL AND INTERACTIVE TV SERVICES
FLUSH


| K3557WHI 1 | K3560DABWHI | 1 | K3563DABWHI | 1 |
| :---: | :---: | :---: | :---: | :---: |
| SINGLE OUTLET | TWIN TV／FM DAB DIPLEXER |  | TRIPLE TV／FM／DAB／SAT TRIPLEXER |  |
| （IEC MALE） | WITH TELEPHONE SECONDARY |  | WITH SINGLE TV（IEC MALE） |  |
| WITH TELEPHONE | K3561DABWHI | 1 | AND TELEPHONE SECONDARY |  |
| SECONDARY | TRIPLE TV／FM DAB／SAT TRIPLEXER |  | K3564DABWHI | 1 |
| K3561WHI 5 | WITH TELEPHONE SECONDARY |  | QUAD TV／FM DAB／SATX2 QUADPLEXER |  |
| TRIPLE TV／FM／SAT | K3562WHI | 5 | WITH TELEPHONE SECONDARY |  |
| TRIPLEXER | TWIN TV／FM DIPLEXER |  | K3565DABWHI | 1 |
| WITH TELEPHONE | WITH SINGLE TV（IEC MALE） |  | QUADPLEXER＋RJ45 |  |
| SECONDARY | AND TELEPHONE SECONDARY |  | AND TELEPHONE SECONDARY |  |
| Single outlets for connection to a single TV，FM or Satellite | K3563WHI | 5 | K3566DABWHI | 1 |
| co－axial aerial lead． | TRIPLE TV／FM／SAT TRIPLEXER |  | QUADPLEXER |  |
| TV／FM diplexer units for connection to a single co－axial aerial | WITH SINGLE TV（IEC MALE） |  | WITH TELEPHONE SECONDARY |  |
| lead with combined TV and FM signals． | AND TELEPHONE SECONDARY |  | AND SINGLE TV（IEC MALE） |  |
|  | Telephone Secondary outlet for use with int digital services． <br> K3562 and K3563 outlets with additional sin outlet for secondary distribution of TV signa | TV <br> （male） |  |  |

## Logic Plus ${ }^{\text {TM }}$

## TV/FM and Satellite <br> Co-Axial Socket Outlets

| NON ISOLATED | ISOLATED |
| :--- | :--- |
| FLUSH | FLUSH |

Grid Plus Frontplates


K3639WHI

K3639WHI
12 MODULE



## CEILING ACCESSORIES

## RANGE INTRODUCTION

## 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 Shockguard Plus 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, eliminating danger of electrocution.

## FEATURES \& BENEFITS

## EASE OF INSTALLATION

Pendant sets incorporate a heat resistant lampholder, 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.

## 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 Accessories

## Ceiling Switches

6 AMP
SURFACE


## K3191WHI

6A SP ONE-WAY 1.5M WHITE CORD WITH WHITE ACORN

## K3191D1WHI

6A SP ONE-WAY
2M WHITE CORD
AND 1X GRAPHITE BANGLE

## K3192WHI

6A SP TWO-WAY
1.5M WHITE CORD

AND WHITE ACORN
K3192D1WHI
6A SP TWO-WAY
2M WHITE CORD
AND 1X GRAPHITE BANGLE
Supplied with mounting blocks.
Earth terminal is riveted in base of
mounting blocks.
BANGLE DIAMETER
50 mm
These switches do not have to be
derated when used with fluorescent or
inductive loads.
FIXING CENTRES
50.8 mm

BS EN 60669-1:1999

6A SP TWO WAY 2M RED CORD WITH RED ACORN
PULL TO MAKE OR PULL TO 5 BREAK (MOMENTARY SWITCH ACTION)

## 3190RCD1WHI

6A SP TWO-WAY
5 3M RED CORD
AND 2X RED BANGLE
Supplied with mounting blocks. BANGLE DIAMETER
$5 \quad 50 \mathrm{~mm}$
BS EN 60669-1:1999

5 K3131WHI
6A SP TWO-WAY
3151WHI
16A DP ONE-WAY
Mounting blocks are not supplied. Use K2051WHI or K2056WHI.
Suitable for installation in small circular conduit boxes to BS EN 61386-1:2008 See page 354.
Ceiling switch cords are 1.5 m minimum length.
These switches do not have to be
derated when used with fluorescent or inductive loads.
FIXING CENTRES
50.8 mm

BS EN 60669-1:1999

5 3164WHI
50A DP ONE-WAY
WITH NEON
1.5M WHITE

8329SSWHID1T9
2M WHITE CORD WITH JOINT UNION AND GRAPHITE BANGLE

## 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
Fitted with a mechanical 'OFF' indica
The switch fully complies with the
The switch fully complies with the
requirements within BS 7671 IET Wiring
regulations with respect to safety
Regulations with respect to safety
and provides a full 3 mm contact gap
and provide
when ' $O F F$ '.
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
BANGLE DIAMETER
50 mm
FIXING CENTRES
60.3 mm

BS EN 60669-1:1999

5 K2051WHI
MOUNTING BLOCK
FOR 6A OR 16A
SWITCHES
5 K2056WHI 5
MOUNTING BLOCK
WITH NEON
FOR 6A OR 16A
SWITCHES

## 8329SSWHIT9

1.5M WHITE CEILING

SWITCH CORD COMPLETE
WITH ACORN AND ONE PIECE

## JOINT UNION

## 9420SST9

2M RED CEILING SWITCH
CORD COMPLETE WITH TWO
RED ACORNS AND ONE PIECE

## JOINT UNION

## 9420SSD1

3M RED CEILING SWITCH CORD
COMPLETE WITH 2 X RED BANGLES AND JOINT UNION

K2051WHI and K2056WHI
Earth terminal riveted in base
DIAMETER
76 mm not including Neon Lens
FIXING CENTRES
50.8 mm

BS EN 60669-1:1999



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.



## K1161WHI

FOUR TERMINALS
LINE, NEUTRAL
LOOP-IN AND EARTH

## K1163WH

CEILING ROSE HALO
Incorporate tunnel type terminals
which accommodate $3 \times 2.5 \mathrm{~mm}^{2}$ cables and allow for off centre cable entries ransparent terminal block and equa ength wire stripping.
Suitable for fittings of up to 5 kgs . Heavier fittings must be installed using independent support eg. ceiling hook. The ceiling roses are suitable for mounting over BS EN 61386-1:2008 circular conduit boxes
DIAMETER
(Cover) 86 mm
DEPTH
(Cover) 34mm3
BS 67:1987
The Ceiling Rose Halo gives a neat finish should the ceiling be damaged

10 K1170WHI 10
BC PENDANT LAMPHOLDER
WITH AUTOMATIC CORDGRIP AND STRAIGHT SKIRT
10 K1171WH 10
BC PENDANT LAMPHOLDER
WITH AUTOMATIC CORDGRIP and protective skirt
K1180WHI
STRAIGHT SKIRT FOR
MK LAMPHOLDERS
K1181WHI
PROTECTIVE SKIRT FOR MK LAMPHOLDERS

All MK lampholders are heat resistant
to category T2 of BS EN 61184 and are
therefore capable of operation with lam
cap temperatures up to $210^{\circ} \mathrm{C}$.
BS EN 61184:1997 T2 Rated.

## Lampholders

Pendant Sets

## Batten Lampholders

SG TYPE

SG TYPE

SG TYPE



## CASE STUDY

THE MALTHOUSE, OXFORD UNIVERSITY - MK PORTFOLIO

Oxford University Estates Services, who are responsible for managing over 350 buildings and properties for the university, have their offices located at
 The Malthouse in central Oxford.

Their fully functional office space has been refurbished utilising a variety of MK products including Prestige 3D Compact and Integrated USB sockets, which were selected due to their superior manufacturing quality, reliability and functionality.



## LINK

## 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

Wired products incorporate either heat resisting flex or low smoke zero halogen (LSF) insulated and sheathed flexible 0.75 mm four core circular cable.

## FEATURES \& BENEFITS

- Live contacts are inaccessible
- Earth contact - first to make, last to break
- Mechanical and electrical connection in one 'click-in’ action
- $\quad$ Strong load grips support up to 5 kg


## HOW TO SPECIFY

A secure lighting connection and control system, which is modular in design to enable electrical connection in one easy action. Live contacts to be inaccessible to enable luminaires to be plugged in and removed without circuit isolation. Static suspension load for plugs, sockets and pre-wired assemblies, must be able to support up to 5 kg weight.

Technical Hotline ＋44（0）1268563720

## 3 Pin <br> Accessories

3 PIN PLUG
6 AMP

3 PIN CEILING ROSES
6 AMP

## 3 Pin

Pre－wired

3 PIN PLUGS
6 AMP

3 PIN CEILING ROSES
6 AMP


## general specification

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

## WIRING DEVICES <br> ■

## 4 Pin

Accessories

4 PIN PLUGS
6 AMP

4 PIN SOCKETS
6 AMP
$\vdots$ Pin
Pre-wired

4 PIN CEILING ROSES
6 AMP

PREWIRED
4 PIN CEILING ROSES
6 AMP




## Mounting

Boxes

| ARCHITRAVE |  | SQUARE |  |  |
| :--- | :--- | :--- | :--- | :--- |
| MOULDED | STEEL | MOULDED | STEEL | CIRCULAR |
| FLUSH | FLUSH | FLUSH | FLUSH | SURFACE |



K2151WHI

FLUSH

MOULDED
FLUSH


QFB1WHI


QFB/IG1


K2160WHI

## K2151WHI

1 GANG
ARCHITRAVE BOX
K2151WHI
Earth terminal fitted in base. DIMENSIONS
$87 \times 33 \times 16 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 5733:1995

10 3921ZIC
1 GANG
ARCHITRAVE BOX
With earth terminal DIMENSIONS
$75 \times 27 \times 27 \mathrm{~mm}$
FIXING CENTRES
60.3 mm
kNOCKOUTS
$3 \times 16 \mathrm{~mm}$
BS 4662:1970

## QFB1WHI <br> 1 GANG <br> DRY LINING BOX

## QFB/IG1

1 GANG
DRY LINING BOX
WITH INTUMESCENT GASKET

## K2160WHI <br> 1 GANG 16MM

MOULDED BOX

## 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 6 mm and 16 mm . Earth terminal facility.
K2160WHI
Earth terminal fitted in base of boxes.
DIMENSIONS
K2160: $87 \times 87 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

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.

20

20

10
KNOCK
$12 \times 20 \mathrm{~mm}$
BS 4662:1970

| 2ECR13WHI | 25 |
| :--- | :--- |
| 2ECR13BLK | 25 |
| 20MM L00P-IN |  |
| 2ECR1WHI | 25 |
| 2ECR1BLK | 25 |
| 20MM BACK OUTLET |  |
| 2ECR3WHI | 25 |
| 2ECR3BLK | 25 |
| 20MM TWO WAY |  |
| 2ECR8WHI | 10 |
| 2ECR8BLK | 10 |
| 20MM TWO WAY AND |  |

BACK OUTLET
CONDUIT BOXES
20mm Loop-in boxes have $4 \times 20 \mathrm{~mm}$
knockouts on underside
MATERIAL
PVC-U
LID FIXING CENTRES
50.8 mm

PILLAR THREAD SIZE
M4 (Brass inserts) All boxes contain a
moulded recess for earth termina
See pages 354 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 <br> 4 GANG 6A

4 PIN SOCKET
LIGHTING DISTRIBUTION BOX

## K4206

6 GANG 6A
4 PIN SOCKET
LIGHTING DISTRIBUTION BOX

## DIMENSIONS

K4204: $80 \times 222 \times 237 \mathrm{~mm}$
K4204: $80 \times 222 \times 237 \mathrm{~mm}$
K4206: $80 \times 222 \times 290 \mathrm{~mm}$
K4208: $80 \times 222 \times 400 \mathrm{~mm}$
K4210. $80 \times 222 \times 465 \mathrm{~mm}$
MOUNTINGS
MOUNTINGS
Provision for screw (No. 8) fix to walls
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; $20 \& 25 \mathrm{~mm}$ in top, bottom and back faces. Outlets can be wired as 1 or 2 banks.
TERMINAL CAPACITY
$3 \times 6 \mathrm{~mm}$ rated at 16A.
Each socket is rated at 6A.
Extruded aluminium body with V0
rated plastic terminal housing. Both 3 \& 4 pin plugs can be used with the distribution box 4 pin socket outlets. BS 5733

K4208
8 GANG 6A
4 PIN SOCKET
LIGHTING DISTRIBUTION BOX

## K4210

10 GANG 6A
4 PIN SOCKET
LIGHTING DISTRIBUTION BOX
*Caddy Clip is a registered trade mark of
Erico Europa (UK) Ltd. Reading.


## SENSORS

## RANGE INTRODUCTION

MK Sensors are designed to deliver energy savings and lighting control in a range of commercial and domestic applications. Lighting represents 19\% of a building's total energy consumption* lighting controls can help you cut that by up to $70 \%$.

The MK Sensor range deploys PIR and ultrasonic sensing technology to provide effective presence detection.

All products in the MK sensors range have a built in photocell, providing accurate light level detection. This allows sensors to harness natural daylight, delivering further energy savings by either holding off, switching lights off or regulating to maintain a constant light level.

## FEATURES \& BENEFITS

- Built in photocell provides light level detection
- Sensors can be installed for absence detection
- 2A, 6A and 10A products
- Easy to install and program
- Flush and surface mounted variants available
- Ideal for most interior environments
- Switching and digital dimming detectors Ideal for retrofit and new build installations
*Source: Department of Energy and Climate change (July 2012)


## Sensors



[^4]
## Sensors

| SimpleFit | SimpleFit | Superior PIRs | Superior PIRs | BattenFit |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Sensors | Sensors |  |  | Sensor |
|  |  |  |  |  |
| DUAL MOUNT | DEDICATED SURFACE |  |  |  |
| 6A | AND FLUSH MOUNT | SWITCHING | DIMMING | IP65 |



## Sensors





## DECORATIVE

## RANGE INTRODUCTION

MK's decorative wiring device portfolio now includes the MK Elements range which stylishly showcases new colours, materials and finishes for greater choice and flexibility.

With 29 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 \& BENEFITS

- 29 stunning finishes across 5 different material types including metal, glass effect and wood
- 4 Individual range options
- Choices of a screwed or screwless aesthetic
- Choice of frontplate depth - modern 1.5 mm , contemporary 4 mm , distinctive 7.5 mm or traditional 9 mm
- Compliment any interior design scheme
- Flexibility and custom options with MK's Design Service


## Decorative

## RANGE INTRODUCTION

Aspect, Edge and Albany Plus Finish Options"


TEXTURED COPPER
(TCO)

[^5]
## RANGE INTRODUCTION

Elements Finish Options


METALLIC SATIN PLATINUM
（MSP）


METALLIC BRUSHED STEEL
（MBS）


## ELEMENTS

## RANGE INTRODUCTION


#### Abstract

The MK Elements collection is a revolutionary range of stylish wiring devices. Innovative, iconic and inspiring, the Elements collection is the perfect fusion of distinctive design and unparalleled quality. Inspired by materials such as wood, leather and stone, and with electronic touch control switches and dimmers, the MK Elements collection offers the perfect companion for any interior.

With Elements comes the ultimate fusion of distinctive design and unparalleled quality. The range provides slim, screwless profiles and silent operation, alongside a diverse range of colours, styles and textures, providing the ultimate choice for any interior.


## HOW TO SPECIFY

A modern square edged range of wiring devices with metal, glass effect, natural \& synthetic finished front plates designed to be fixed within and flush to the colour co-ordinated moulded trim. Moulded Frontplates to be polycarbonate and constructed of two colour matched sections, with an overall profile depth of 7.5 mm . Frontplates to be screwless, removable by flat blade screwdriver through discreet bottom access apertures. There shall be no plastic bezel/ surround to switch rockers and socket inserts are to be designed with clean, crisp edges. Plug pins shall insert into separate individual socket apertures. Switch rockers and socket inserts to be colour matched to moulded trim. Cable connections must be upward facing with easy to identify white markings on a dark background, grouped in a straight line with captive terminal screws for ease of installation. All sockets to have a 3 pin operated shutter safety mechanism and double pole switching, with the contacts designed such that the neutral makes before and breaks after the live pole for improved safety. Switches to be large with a minimum 3mm contact gap with a positive 'click' to denote successful operation.

## FEATURES \& BENEFITS

## 16 STANDARD HIGH QUALITY FINISHES WITH ULTIMATE FLEXIBILITY

16 standard finishes across 4 material groups allow designers to easily complement any interior design. The design service offering also means we can create tailor-made products to suit individual needs.

## 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.

## UNRIVALLED QUALITY AND RELIABILITY

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

## COMPREHENSIVE RANGE OF SOCKETS,

 SWITCHES AND MODULAR ANCILLARY PRODUCTSWhatever the application, the Elements range has a wiring device to suit.

## 20 YEAR GUARANTEE

Gives total peace of mind to you and your customers. (5 year guarantee for electronic devices)

OPTIONAL INSERT COLOUR
Choice of chalk white，black，
beach pebble and natural
stone

SLIM，SCREWLESS DESIGN
Frontplate profile 7.5 mm

3－PIN＂CHILD RESISTANT SHUTTER SYSTEM＂
Designed to inhibit access to the electricity supply， unless all 3 pins of a standard 13A plug are in position


## Switchsocket Outlets

1 GANG DP DUAL EARTH 13 AMP

1 GANG DP
WITH LED
INDICATOR/
LOCATOR DUAL
EARTH
13 AMP

2 GANG DP
13 AMP

2 GANG DP
WITH LED

| INDICATOR/ | 2 GANG DP |
| :--- | :--- |
| LOCATOR | DUAL EARTH |
| 13 AMP | 13 AMP |

SYNTHETIC FINISHES

| CHALK WHITE - SCW | K34357SCW | 1 | K34357NSCW | 1 | K34347SCW | 1 | K34347NSCW | 1 | K34547SCW | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NATURAL STONE - SNS | K34357SNS | 1 | K34357NSNS | 1 | K34347SNS | 1 | K34347NSNS | 1 | K34547SNS | 1 |
| BEACH PEBBLE - SBP | K34357SBP | 1 | K34357NSBP | 1 | K34347SBP | 1 | K34347NSBP | 1 | K34547SBP | 1 |

GLASS EFFECT FINISHES

| ICE WHITE - GIW | K34357GIW | 1 | K34357NGIW | 1 | K34347GIW | 1 | K34347NGIW | 1 | K34547GIW | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| POLISHED JADE - GPJ | K34357GPJ | 1 | K34357NGPJ | 1 | K34347GPJ | 1 | K34347NGPJ | 1 | K34547GPJ | 1 |
| POLISHED ONYX - GPO | K34357GPO | 1 | K34357NGPO | 1 | K34347GPO | 1 | K34347NGPO | 1 | K34547GPO | 1 |
| POLISHED STONE - GPS | K34357GPS | 1 | K34357NGPS | 1 | K34347GPS | 1 | K34347NGPS | 1 | K34547GPS | 1 |
| METALLIC FINISHES |  |  |  |  |  |  |  |  |  |  |
| brushed steel - mbs | K34357MBS | 1 | K34357NMBS | 1 | K34347MBS | 1 | K34347NMBS | 1 | K34547MBS | 1 |
| BRUSHED BRONZE - MBB | K34357MBB | 1 | K34357NMBB | 1 | K34347MBB | 1 | K34347NMBB | 1 | K34547MBB | 1 |
| CAST IRON - MCI | K34357MCI | 1 | K34357NMCI | 1 | K34347MCI | 1 | K34347NMCI | 1 | K34547MCI | 1 |
| SATIN PLATINUM - MSP | K34357MSP | 1 | K34357NMSP | 1 | K34347MSP | 1 | K34347NMSP | 1 | K34547MSP | 1 |
| SATIN TITANIUM - MSt | K34357MST | 1 | K34357NMST | 1 | K34347MST | 1 | K34347NMST | 1 | K34547MST | 1 |
| NATURAL FINISHES |  |  |  |  |  |  |  |  |  |  |
| BRITISH OAK - NBO | K34357NBO | 1 | K34357NNBO | 1 | K34347NBO | 1 | K34347NNBO | 1 | K34547NBO | 1 |
| CREAM HIDE - NCH | K34357NCH | 1 | K34357NNCH | 1 | K34347NCH | 1 | K34347NNCH | 1 | K34547NCH | 1 |
| DARK HIDE - NDH | K34357NDH | 1 | K34357NNDH | 1 | K34347NDH | 1 | K34347NNDH | 1 | K34547NDH | 1 |
| DARK WENGE - NDW | K34357NDW | 1 | K34357NNDW | 1 | K34347NDW | 1 | K34347NNDW | 1 | K34547NDW | 1 |

LEAD TIMES
Please contact our Customer
Services Department on
01268563404
MOUNTING BOXES
35 mm
866 ZIC
$\mathbf{4 6 m m}$
877ZIC (for extra wiring space)
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm
BS 1363-2:1995

| MOUNTING BOXES | MOUNTING BOXES |
| :--- | :--- |
| 35 mm | 35 mm |
| 866ZIC | 886 ZIC |
| 46mm | 47mm |
| 877ZIC (for extra wiring space) | 878ZIC (for extra wiring space) |
| DIMENSIONS | DIMENSIONS |
| $86 \times 86 \mathrm{~mm}$ | $86 \times 146 \mathrm{~mm}$ |
| FIXING CENTRES | FIXING CENTRES |
| 60.3 mm | 120.6 mm |
| BS 1363-2:1995 | BS $1363-2: 1995$ |


| MOUNTING BOXES | MOUNTING BOXES |
| :--- | :--- |
| 35 mm | 35 mm |
| 886ZIC | 886 ZIC |
| 47mm | 47 mm |
| 878ZIC (for extra wiring space) | 878ZIC (for extra wiring space) |
| DIMENSIONS | DIMENSIONS |
| $86 \times 146 \mathrm{~mm}$ | $86 \times 146 \mathrm{~mm}$ |
| FIXING CENTRES | FIXING CENTRES |
| 120.6 mm | 120.6 mm |
| BS $1363-2: 1995$ | BS $1363-2: 1995$ |

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.

2 GANG DP
DUAL EARTH
WITH LED
INDICATOR／
LOCATOR
13 AMP

2 GANG DP
WITH 2 X USB
CHARGING PORTS
DUAL EARTH
13 AMP

1 GANG SP
ROUND PIN
5 AMP

Socket
Outlets

1 GANG
UNSWITCHED
13 AMP

| K34547NSCW | 1 | K34343SCW | 1 | K34382SCW | 1 | K34780SCW | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K34547NSNS | 1 | K34343SNS | 1 | K34382SNS | 1 | K34780SNS | 1 |
| K34547NSBP | 1 | K34343SBP | 1 | K34382SBP | 1 | K34780SBP | 1 |
| K34547NGIW | 1 | K34343GIW | 1 | K34382GIW | 1 | K34780GIW | 1 |
| K34547NGPJ | 1 | K34343GPJ | 1 | K34382GPJ | 1 | K34780GPJ | 1 |
| K34547NGPO | 1 | K34343GPO | 1 | K34382GPO | 1 | K34780GPO | 1 |
| K34547NGPS | 1 | K34343GPS | 1 | K34382GPS | 1 | K34780GPS | 1 |
| K34547NMBS | 1 | K34343MBS | 1 | K34382MBS | 1 | K34780MBS | 1 |
| K34547NMBB | 1 | K34343MBB | 1 | K34382MBS | 1 | K34780MBB | 1 |
| K34547NMCI | 1 | K34343MCI | 1 | K34382MCI | 1 | K34780MCI | 1 |
| K34547NMSP | 1 | K34343MSP | 1 | K34382MSP | 1 | K34780MSP | 1 |
| K34547NMST | 1 | K34343MST | 1 | K34382MST | 1 | K34780MST | 1 |
| K34547NNBO | 1 | K34343NBO | 1 | K34382NBO | 1 | K34780NBO | 1 |
| K34547NNCH | 1 | K34343NCH | 1 | K34382NCH | 1 | K34780NCH | 1 |
| K34547NNDH | 1 | K34343NDH | 1 | K34382NDH | 1 | K34780NDH | 1 |
| K34547NNDW | 1 | K34343NDW | 1 | K34382NDW | 1 | K34780NDW | 1 |

MOUNTING BOXES
35 mm
886 ZIC
47 mm
878ZIC（for extra wiring space）
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm
BS $1363-2: 1995$

USB charging sockets，each capable of supporting 2A charge（total of 2A）
Pattress available for use where existing back box is too shallow，see page 34
mounting boxes
35 mm
886Z1C
47 Mmm
878ZIC（for extra wiring space）
dimensions
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
${ }^{120.6 m m}$
MOUNTING BOXES
35 mm
866ZIC
46MIMmm
877ZIC
（for extra wiring space）
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm
BS $546: 1950$

MOUNTING BOXES
35 mm
866ZIC
46 mm
877ZIC（for extra wiring space）
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363－2：1995

Elements

Multimedia Plates

| 2 GANG DP | 2 GANG DP | 2 GANG DP |
| :--- | :--- | :--- |
| SWITCHSOCKET, | SWITCHSOCKET, | SWITCHSOCKET, |
| EURO 2 MODULE | EURO 2 MODULE | EURO 4 MODULE |
| $50 \times 50 M M$ (RIGHT SIDE) | $50 \times 50 M M$ (LEFT SIDE) | $50 \times 50 M M$ (X2) |
| 13 AMP | 13 AMP | 13 AMP |

SYNTHETIC FINISHES

| CHALK WHITE - SCW | K34206SCW | 1 | K34207SCW | 1 | K34208SCW | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NATURAL STONE - SNS | K34206SNS | 1 | K34207SNS | 1 | K34208SNS | 1 |
| BEACH PEBBLE - SBP | K34206SBP | 1 | K34207SBP | 1 | K34208SBP | 1 |

GLASS EFFECT FINISHES

| ICE White - GIw | K34206GIW | 1 | K34207GIW | 1 | K34208GIW | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| POLISHED JADE - GPJ | K34206GPJ | 1 | K34207GPJ | 1 | K34208GPJ | 1 |
| POLISHED ONYX - GPO | K34206GPO | 1 | K34207GPO | 1 | K34208GPO | 1 |
| POLISHED STONE - GPS | K34206GPS | 1 | K34207GPS | 1 | K34208GPS | 1 |
| METALLIC FINISHES |  |  |  |  |  |  |
| brushed steel - Mbs | K34206MBS | 1 | K34207MBS | 1 | K34208MBS | 1 |
| brushed bronze - MBb | K34206MBB | 1 | K34207MBB | 1 | K34208MBB | 1 |
| CAST IRON - MCI | K34206MCI | 1 | K34207MCI | 1 | K34208MCI | 1 |
| SATIN PLATINUM - MSP | K34206MSP | 1 | K34207MSP | 1 | K34208MSP | 1 |
| SATIN TITANIUM - MSt | K34206MST | 1 | K34207MST | 1 | K34208MST | 1 |
| NATURAL FINISHES |  |  |  |  |  |  |
| BRITISH OAK - NBO | K34206NBO | 1 | K34207NBO | 1 | K34208NBO | 1 |
| CREAM HIDE - NCH | K34206NCH | 1 | K34207NCH | 1 | K34208NCH | 1 |
| DARK HIDE - NDH | K34206NDH | 1 | K34207NDH | 1 | K34208NDH | 1 |
| dark wenge - NDW | K34206NDW | 1 | K34207NDW | 1 | K34208NDW | 1 |

## LEAD TIMES

Prease contact our Custome Services Department on
01268563404

MOUNTING BOXES
47 mm
DIMENSIONS
$90.5 \times 238 \mathrm{~mm}$
BS 1363-2: 1995

MOUNTING BOXES
47 mm
DIMENSIONS
$90.5 \times 238 \mathrm{~mm}$
BS 1363-2. 1995

MOUNTING BOXES
47mm
DIMENSIONS
$90.5 \times 325.3 \mathrm{~mm}$
BS 1363-2: 1995

## Shaver／Toothbrush

Supply Units
DUAL VOLTAGE
OUTPUT 115／230V
INPUT 220／240V
50／60HZ

EURO 8 MODULE 100 X 50MM（X2）

EURO 12 MODULE
150 X 50MM（X2）


| K34209SCW | 1 | K34210SCW | 1 | K34709SCW | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| K34209SNS | 1 | K34210SNS | 1 | K34709SNS | 1 |
| K34209SBP | 1 | K34210SBP | 1 | K34709SBP | 1 |
|  |  |  |  |  |  |
| K34209GIW | 1 | K34210GIW | 1 | K34709GIW | 1 |
| K34209GPJ | 1 | K34210GPJ | 1 | K34709GPJ | 1 |
| K34209GPO | 1 | K34210GPO | 1 | K34709GPO | 1 |
| K34209GPS | 1 | K34210GPS | 1 | K34709GPS | 1 |
|  |  |  | 1 |  |  |
| K34209MBS | 1 | K34210MBS | 1 | K34709MBB | 1 |
| K34209MBB | 1 | K34210MBB | 1 | K34709MCI | 1 |
| K34209MCI | 1 | K34210MCI | 1 | K34709MSP | 1 |
| K34209MSP | 1 | K34210MSP | 1 | K34709MST | 1 |
| K34209MST | 1 | K34210MST |  |  | 1 |
|  |  |  | 1 | K34709NBO | 1 |
| K34209NBO | 1 | K34210NBO | 1 | K34709NCH | 1 |
| K34209NCH | 1 | K34210NCH | 1 | K34709NDH | 1 |
| K34209NDH | 1 | K34210NDH | 1 | K34709NDW | 1 |
| K34209NDW | 1 | K34210NDW |  |  | 1 |

MOUNTING BOXES
47 mm
DIMENSIONS
$177.8 \times 150.5 \mathrm{~mm}$
BS 5733：2010

MOUNTING BOXES
47mm
DIMENSIONS
$177.8 \times 210.8 \mathrm{~mm}$
BS $5733: 2010$

MOUNTING BOXES
47 mm
DIMENSIONS
$146 \times 86 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS EN 61558－2－5：1998

Elements

| Connection Units |  |  | High Current |
| :---: | :---: | :---: | :---: |
|  |  |  | Switches |
|  | SWITCHED | UNSWITCHED |  |
|  | WITH FLEX OUTLET | WITH FLEX OUTLET | 1 GANG DP |
| SWITCHED | \& NEON | \& NEON | WITH NEON |
| 13 AMP | 13 AMP | 13 AMP | 32 AMP |

SYNTHETIC FINISHES

| CHALK WHITE - SCW | K34941SCW | 1 | K34971SCW | 1 | K34978SCW | 1 | K34305SCW | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NATURAL STONE - SNS | K34941SNS | 1 | K34971SNS | 1 | K34978SNS | 1 | K34305SNS | 1 |
| BEACH PEBBLE - SBP | K34941SBP | 1 | K34971SBP | 1 | K34978SBP | 1 | K34305SBP | 1 |


| CHALK WHITE - SCW |
| :--- |
| NATURAL STONE - SNS |
| BEACH PEBBLE - SBP |
| GLASS EFFECT FINISHES |


| ICE WHITE - GIW | K34941GIW | 1 | K34971GIW | 1 | K34978GIW | 1 | K34305GIW | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| POLISHED JADE - GPJ | K34941GPJ | 1 | K34971GPJ | 1 | K34978GPJ | 1 | K34305GPJ | 1 |
| POLISHED ONYX - GPO | K34941GPO | 1 | K34971GPO | 1 | K34978GPO | 1 | K34305GPO | 1 |
| POLISHED STONE - GPS | K34941GPS | 1 | K34971GPS | 1 | K34978GPS | 1 | K34305GPS | 1 |
| METALLIC FINISHES |  |  |  |  |  |  |  |  |
| brushed steel - Mbs | K34941MBS | 1 | K34971MBS | 1 | K34978MBS | 1 | K34305MBS | 1 |
| brushed bronze - MBb | K34941MBB | 1 | K34971MBB | 1 | K34978MBB | 1 | K34305MBB | 1 |
| CAST IRON - MCI | K34941MCI | 1 | K34971MCI | 1 | K34978MCI | 1 | K34305MCI | 1 |
| SATIN PLATINUM - MSP | K34941MSP | 1 | K34971MSP | 1 | K34978MSP | 1 | K34305MSP | 1 |
| SATIN TITANIUM - MST | K34941MST | 1 | K34971MST | 1 | K34978MST | 1 | K34305MST | 1 |
| NATURAL FINISHES |  |  |  |  |  |  |  |  |
| BRITISH OAK - NBO | K34941NBO | 1 | K34971NBO | 1 | K34978NBO | 1 | K34305NBO | 1 |
| CREAM HIDE - NCH | K34941NCH | 1 | K34971NCH | 1 | K34978NCH | 1 | K34305NCH | 1 |
| DARK HIDE - NDH | K34941NDH | 1 | K34971NDH | 1 | K34978NDH | 1 | K34305NDH | 1 |
| dark wence - NDW | K34941NDW | 1 | K34971NDW | 1 | K34978NDW | 1 | K34305NDW | 1 |

## LEAD TIMES

Aease contact our Customer services Department on-
01268563404
MOUNTING BOXES
35 mm
$866 Z I C$
46mm
877ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3mm
BS1363-4:1995

35 mm
46 mm
DIMENSIONS
FIXING CENTRES
BS1363-4:1995


SWITCHED WITH FLEX OUTLET

13 AMP

UNSWITCHED
WITH FLEX OUTLET

13 AMP

High Current
Switches

1 GANG DP
WITH NEON
32 AMP


1 GANG DP 50 AMP

1 GANG DP MARKED "COOKER" 50 AMP

1 GANG DP WITH NEON 50 AMP

3 Pole Fan Isolator<br>10 AMP

1 GANG DP
WITH NEON
MARKED "COOKER" 50 AMP
1 GANG DP
WITH NEON
MARKED "COOKER"
50 AMP
$\left.\begin{array}{|ll|ll|ll|l|l|l|}\hline \text { K34337SCW } & 1 & \text { K34337CKSCW } & 1 & \text { K34337NSCW } & 1 & \text { K34337NCKSCW } & 1 & \text { K34859SCW }\end{array}\right] 19$ 1

| K34337GIW | 1 | K34337CKGIW | 1 | K34337NGIW | 1 | K34337NCKGIW | 1 | K34859GIW | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| K34337GPJ | 1 | K34337CKGPJ | 1 | K34337NGPJ | 1 | K34337NCKGPJ | 1 | K34859GPJ | 1 |
| K34337GPO | 1 | K34337CKGPO | 1 | K34337NGPO | 1 | K34337NCKGPO | 1 | K34859GPO | 1 |
| K34337GPS | 1 | K34337CKGPS | 1 | K34337NGPS | 1 | K34337NCKGPS | 1 | K34859GPS | 1 |


| K34337MBS | 1 | K34337CKMBS | 1 | K34337NMBS | 1 | K34337NCKMBS | 1 | K34859MBS | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K34337MBB | 1 | K34337CKMBB | 1 | K34337NMBB | 1 | K34337NCKMBB | 1 | K34859MBB | 1 |
| K34337MCI | 1 | K34337CKMCI | 1 | K34337NMCI | 1 | K34337NCKMCI | 1 | K34859MCI | 1 |
| K34337MSP | 1 | K34337CKMSP | 1 | K34337NMSP | 1 | K34337NCKMSP | 1 | K34859MSP | 1 |
| K34337MST | 1 | K34337CKMST | 1 | K34337NMST | 1 | K34337NCKMST | 1 | K34859MST | 1 |
|  |  |  |  |  |  |  |  |  |  |
| K34337NBO | 1 | K34337CKNBO | 1 | K34337NNBO | 1 | K34337NCKNBO | 1 | K34859NBO | 1 |
| K34337NCH | 1 | K34337CKNCH | 1 | K34337NNCH | 1 | K34337NCKNCH | 1 | K34859NCH | 1 |
| K34337NDH | 1 | K34337CKNDH | 1 | K34337NNDH | 1 | K34337NCKNDH | 1 | K34859NDH | 1 |
| K34337NDW | 1 | K34337CKNDW | 1 | K34337NNDW | 1 | K34337NCKNDW | 1 | K34859NDW | 1 |

MOUNTING BOXES
46mm
$877 Z I C$
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm
BS EN 60669-1:1999
MOUNTING BOXES
46 mm
$877 Z I C$
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3mm
BS EN 60669-1:1999

MOUNTING BOXES
46 mm
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669-1:1999
MOUNTING BOXES
46 mm
$877 Z I C$
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm
BS EN 60669-1:1999

[^6]Elements

Electronic Switches

1 GANG SINGLE
2 WAY SP
400W

1 GANG DOUBLE
2 WAY SP
$2 \times 400 \mathrm{~W}$

1 GANG SINGLE
1 WAY SP 10AX

## Electronic Dimmers

2 WAY SINGLE 60-500W/400VA
6-150W LED LEADING EDGE

SYNTHETIC FINISHES

| CHALK WHITE - SCW | K34371SCW | $\mathbf{1}$ | K34372SCW | 1 | K34370SCW | $\mathbf{1}$ | K34100SCW | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NATURAL STONE - SNS | K34371SNS | 1 | K34372SNS | 1 | K34370SNS | 1 | K34100SNS | 1 |
| BEACH PEBBLE - SBP | K34371SBP | 1 | K34372SBP | 1 | K34370SBP | 1 | K34100SBP | 1 |

GLASS EFFECT FINISHES

| ICE WHITE - GIW | K34371GIW | 1 | K34372GIW | 1 | K34370GIW | 1 | K34100GIW | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| POLISHED JADE - GPJ | K34371GPJ | 1 | K34372GPJ | 1 | K34370GPJ | 1 | K34100GPJ | 1 |
| POLISHED ONYX - GPO | K34371GPO | 1 | K34372GPO | 1 | K34370GPO | 1 | K34100GPO | 1 |
| POLISHED STONE - GPS | K34371GPS | 1 | K34372GPS | 1 | K34370GPS | 1 | K34100GPS | 1 |
| METALLIC FINISHES |  |  |  |  |  |  |  |  |
| brushed steel - mbs | K34371MBS | 1 | K34372MBS | 1 | K34370MBS | 1 | K34100MBS | 1 |
| BRUSHED BRONZE - MBb | K34371MBB | 1 | K34372MBB | 1 | K34370MBB | 1 | K34100MBB | 1 |
| CAST IRON - MCI | K34371MCI | 1 | K34372MCI | 1 | K34370MCI | 1 | K34100MCI | 1 |
| SATIN PLATINUM - MSP | K34371MSP | 1 | K34372MSP | 1 | K34370MSP | 1 | K34100MSP | 1 |
| SATIN TITANIUM - MSt | K34371MST | 1 | K34372MST | 1 | K34370MST | 1 | K34100MST | 1 |
| NATURAL FINISHES |  |  |  |  |  |  |  |  |
| BRITISH OAK - NBO | K34371NBO | 1 | K34372NBO | 1 | K34370NBO | 1 | K34100NBO | 1 |
| CREAM HIDE - NCH | K34371NCH | 1 | K34372NCH | 1 | K34370NCH | 1 | K34100NCH | 1 |
| DARK HIDE - NDH | K34371NDH | 1 | K34372NDH | 1 | K34370NDH | 1 | K34100NDH | 1 |
| DARK WENGE - NDW | K34371NDW | 1 | K34372NDW | 1 | K34370NDW | 1 | K34100NDW | 1 |

```
LEAD TIMES
Please contact our Customer
Services Department on
01268563404
```

| MOUNTING BOXES | MOUNTING BOXES |
| :--- | :--- |
| 35 mm | 35 mm |
| 866 ZIC | 866 ZIC |
| $\mathbf{4 6 m m}$ | $\mathbf{4 6 m m}$ |
| 877ZIC | 877 ZIC |
| DIMENSIONS | DIMENSIONS |
| $86 \times 86 \mathrm{~mm}$ | $86 \times 86 \mathrm{~mm}$ |
| FIXING CENTRES | FIXING CENTRES |
| 60.3 mm | 60.3 mm |
| BS EN 60669-2-1:2004 | BS EN 60669-2-1:2004 |

MOUNTING BOXES
35 mm
866 ZIC
46mm
877ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm
BS EN 60669-2-1:2004

MOUNTING BOXES
35 mm
866 ZIC
46 mm
DIMENSIONS
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669-2-1:2004

2 WAY DOUBLE
2 WAY SINGLE 40-300W/240VA 6-120W LED LEADING EDGE

40-300W/240VA
$\begin{array}{lll}\text { 6-120W LED FOR EACH } & 2 \text { WAY SINGLE } & 2 \text { WAY SINGLE } \\ \text { DIMMER } & 25-500 \text { W/400VA } & 25-300 W / 240 V A \\ \text { LEADING EDGE } & \text { TRAILING EDGE } & \text { TRAILING EDGE }\end{array}$

| K34101SCW | 1 | K34102SCW | 1 | K34103SCW | 1 | K34104SCW | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K34101SNS | 1 | K34102SNS | 1 | K34103SNS | 1 | K34104SNS | 1 |
| K34101SBP | 1 | K34102SBP | 1 | K34103SBP | 1 | K34104SBP | 1 |
|  |  |  |  |  |  |  |  |
| K34101GIW | 1 | K34102GIW | 1 | K34103GIW | 1 | K34104GIW | 1 |
| K34101GPJ | 1 | K34102GPJ | 1 | K34103GPJ | 1 | K34104GPJ | 1 |
| K34101GPO | 1 | K34102GPO | 1 | K34103GPO | 1 | K34104GPO | 1 |
| K34101GPS | 1 | K34102GPS | 1 | K34103GPS | 1 | K34104GPS | 1 |
|  |  |  |  |  |  |  |  |
| K34101MBS | 1 | K34102MBS | 1 | K34103MBS | 1 | K34104MBS | 1 |
| K34101MBB | 1 | K34102MBB | 1 | K34103MBB | 1 | K34104MBB | 1 |
| K34101MCI | 1 | K34102MCI | 1 | K34103MCI | 1 | K34104MCI | 1 |
| K34101MSP | 1 | K34102MSP | 1 | K34103MSP | 1 | K34104MSP | 1 |
| K34101MST | 1 | K34102MST | 1 | K34103MST | 1 | K34104MST | 1 |
|  |  |  |  |  |  |  |  |
| K34101NBO | 1 | K34102NBO | 1 | K34103NBO | 1 | K34104NBO | 1 |
| K34101NCH | 1 | K34102NCH | 1 | K34103NCH | 1 | K34104NCH | 1 |
| K34101NDH | 1 | K34102NDH | 1 | K34103NDH | 1 | K34104NDH | 1 |
| K34101NDW | 1 | K34102NDW | 1 | K34103NDW | 1 | K34104NDW | 1 |


| MOUNTING BOXES | MOUNTING BOXES |
| :--- | :--- |
| 35 mm | 35 mm |
| 866 ZIC | 866 ZIC |
| $\mathbf{4 6 \mathrm { mm }}$ | $\mathbf{4 6 \mathrm { mm }}$ |
| 877ZIC | 877 ZIC |
| DIMENSIONS | DIMENSIONS |
| $86 \times 86 \mathrm{~mm}$ | $86 \times 86 \mathrm{~mm}$ |
| FIXING CENTRES | FIXING CENTRES |
| 60.3 mm | 60.3 mm |
| BS EN 60669-2-1:2004 | BS EN 60669-2-1:2004 |

MOUNTING BOXES
35 mm
866 ZIC
46 mm
877ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm
BS EN 60669-2-1:2004
MOUNTING BOXES
35 mm
866 ZIC
46 mm
877ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3mm
BS EN 60669-2-1:2004

Elements

Electronic Dimmers

2 WAY DOUBLE
25-300W/240VA
TRAILING EDGE

1 WAY 6AX 1-10V

## Rotary Dimmers

2 WAY SINGLE 230V A.C. 50 HZ 60W/VA MIN. 500W/400VA MAX

2 WAY DOUBLE 230V A.C. 50HZ 40W/VA MIN. 300W/240VA MAX. FOR EACH DIMMER

## Grid Modular Frontplates

1 MODULE

SYNTHETIC FINISHES

| CHALK WHITE - SCW | K34105SCW | 1 | K34499SCW | 1 | K34301SCW | 1 | K34522SCW | 1 | K35131SCW | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NATURAL STONE - SNS | K34105SNS | 1 | K34499SNS | 1 | K34301SNS | 1 | K34522SNS | 1 | K35131SNS | 1 |
| BEACH PEBBLE - SBP | K34105SBP | 1 | K34499SBP | 1 | K34301SBP | 1 | K34522SBP | 1 | K35131SBP | 1 |

GLASS EFFEGT FINISHES

| ICE WHITE - GIW | K34105GIW | 1 | K34499GIW | 1 | K34301GIW | 1 | K34522GIW | 1 | K35131GIW | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| POLISHED JADE - GPJ | K34105GPJ | 1 | K34499GPJ | 1 | K34301GPJ | 1 | K34522GPJ | 1 | K35131GPJ | 1 |
| POLISHED ONYX - GPO | K34105GPO | 1 | K34499GPO | 1 | K34301GP0 | 1 | K34522GPO | 1 | K35131GP0 | 1 |
| POLISHED STONE - GPS | K34105GPS | 1 | K34499GPS | 1 | K34301GPS | 1 | K34522GPS | 1 | K35131GPS | 1 |
| METALLIC FINISHES |  |  |  |  |  |  |  |  |  |  |
| BRUSHED STEEL - MBS | K34105MBS | 1 | K34499MBS | 1 | K34301MBS | 1 | K34522MBS | 1 | K35131MBS | 1 |
| BRUSHED BRONZE - MBB | K34105MBB | 1 | K34499MBB | 1 | K34301MBB | 1 | K34522MBB | 1 | K35131MBB | 1 |
| CAST IRON - MCI | K34105MCI | 1 | K34499MCI | 1 | K34301MCI | 1 | K34522MCI | 1 | K35131MCI | 1 |
| SATIN PLATINUM - MSP | K34105MSP | 1 | K34499MSP | 1 | K34301MSP | 1 | K34522MSP | 1 | K35131MSP | 1 |
| SATIN TITANIUM - MST | K34105MST | 1 | K34499MST | 1 | K34301MST | 1 | K34522MST | 1 | K35131MST | 1 |
| NATURAL FINISHES |  |  |  |  |  |  |  |  |  |  |
| BRITISH OAK - NBO | K34105NBO | 1 | K34499NBO | 1 | K34301NBO | 1 | K34522NBO | 1 | K35131NBO | 1 |
| CREAM HIDE - NCH | K34105NCH | 1 | K34499NCH | 1 | K34301NCH | 1 | K34522NCH | 1 | K35131NCH | 1 |
| DARK HIDE - NDH | K34105NDH | 1 | K34499NDH | 1 | K34301NDH | 1 | K34522NDH | 1 | K35131NDH | 1 |
| DARK WENGE - NDW | K34105NDW | 1 | K34499NDW | 1 | K34301NDW | 1 | K34522NDW | 1 | K35131NDW | 1 |
| LEAD TIMES <br> Please contact our Customer Services Department on 01268563404 | MOUNTING BOXES <br> 35 mm <br> 866zIC <br> 46 mm <br> 877ZIC <br> DIMENSIONS <br> $86 \times 86 \mathrm{~mm}$ <br> FIXING CENTRES <br> 60.3 mm <br> BS EN 60669-2-1:2004 |  | MOUNTING BOXES <br> 35 mm <br> 866ZIC <br> 46 mm <br> 877ZIC <br> DIMENSIONS <br> $86 \times 86 \mathrm{~mm}$ <br> FIXING CENTRES <br> 60.3 mm <br> BS EN 60669-2-1:2004 |  | MOUNTING BOXES <br> 35 mm <br> 866ZIC <br> 46 mm <br> 877ZIC <br> DIMENSIONS <br> $86 \times 86 \mathrm{~mm}$ <br> FIXING CENTRES <br> 60.3 mm <br> BS EN 60669-2-1:2004 |  | mOUNTING BOXES <br> 35 mm <br> 866ZIC <br> 46 mm <br> 877ZIC <br> DIMENSIONS <br> $86 \times 86 \mathrm{~mm}$ <br> FIXING CENTRES <br> 60.3 mm <br> BS EN 60669-2-1:2004 |  | MOUNTING BOXES <br> 35 mm <br> 866ZIC <br> dimensions <br> $86 \times 86 \mathrm{~mm}$ <br> FIXING CENTRES <br> 60.3 mm <br> BS5733:2010 |  |

## Grid Modules

1 WAY SP
LED LOCATOR
10 AMP

| K35132SCW | 1 | K35133SCW | 1 | K35134SCW | 1 | K34881SCW 1 <br> K34881SNS 1 <br> K34881SBP 1 <br> K34881BLK 1 |  | K34881NSCW K34881NSNS K34881NSBP K34881NBLK |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K35132SNS | 1 | K35133SNS | 1 | K35134SNS | 1 |  |  |  |
| K35132SBP | 1 | K35133SBP | 1 | K35134SBP | 1 |  |  |  |
|  |  |  |  |  |  |  |  |  |
| K35132GIW | 1 | K35133GIW | 1 | K35134GIW | 1 |  |  |  |
| K35132GPJ | 1 | K35133GPJ | 1 | K35134GPJ | 1 |  |  |  |
| K35132GPO | 1 | K35133GPO | 1 | K35134GPO | 1 |  |  |  |
| K35132GPS | 1 | K35133GPS | 1 | K35134GPS | 1 |  |  |  |
|  |  |  |  |  |  |  |  | 1 |
| K35132MBS | 1 | K35133MBS | 1 | K35134MBS | 1 |  |  | 1 |
| K35132MBB | 1 | K35133MBB | 1 | K35134MBB | 1 |  |  | 1 |
| K35132MCI | 1 | K35133MCI | 1 | K35134MCI | 1 |  |  |  |
| K35132MSP | 1 | K35133MSP | 1 | K35134MSP | 1 |  |  |  |
| K35132MST | 1 | K35133MST | 1 | K35134MST | 1 |  |  |  |
|  |  |  |  |  |  |  |  |  |
| K35132NBO | 1 | K35133NBO | 1 | K35134NBO | 1 |  |  |  |
| K35132NCH | 1 | K35133NCH | 1 | K35134NCH | 1 |  |  |  |
| K35132NDH | 1 | K35133NDH | 1 | K35134NDH | 1 |  |  |  |
| K35132NDW | 1 | K35133NDW | 1 | K35134NDW | 1 |  |  |  |

MOUNTING BOXES
35 mm
866710
DIMENSIONS
$86 \times 86 \mathrm{~mm}$ FIXING CENTRES
60.3 mm

BS5733：2010

MOUNTING BOXES
35 mm
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS5733：2010

MOUNTING BOXES
35 mm
886ZIC
DIMENSIO
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
FIXING CEN
120.6 mm
120．6mm
BS5733：2010

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

Grid Modules

|  | 1 WAY SP |  |  |
| :--- | :--- | :--- | :--- |
| 1 WAY SP | WIDE ROCKER |  | 2 WAY SP |
| WIDE ROCKER | LED LOCATOR | 2 WAY SP | LED LOCATOR |
| 10 AMP | 10 AMP | 10 AMP | 10 AMP |


| SYNTHETIC FINISHES |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CHALK WHITE - SCW | K34981SCW | 1 | K34981NSCW | 1 | K34882SCW | 1 | K34882NSCW | 1 |
| NATURAL STONE - SNS | K34981SNS | 1 | K34981NSNS | 1 | K34882SNS | 1 | K34882NSNS | 1 |
| BEACH PEBBLE - SBP | K34981SBP | 1 | K34981NSBP | 1 | K34882SBP | 1 | K34882NSBP | 1 |
| BLACK - blk | K34981BLK | 1 | K34981NBLK | 1 | K34882BLK | 1 | K34882NBLK | 1 |

LEAD TIMES
Please contact our Customer Services Department on 01268563404

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

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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

|  |  |  | 2 WAY SP |
| :--- | :--- | :--- | :--- |
|  | 2 WAY SP | 2 WAY SP | WIDE ROCKER |
| 2 WAY SP | WIDE ROCKER | RETRACTIVE | RETRACTIVE |
| WIDE ROCKER | LED LOCATOR | MARKED 'PRESS' | MARKED 'PRESS' |
| 10 AMP | 10 AMP | 10 AMP | 10 AMP |


| K34982SCW | 1 | K34982NSCW | 1 | K34910SCW | 1 | K34911SCW |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

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
flourescent loads.
BS EN 60669-1:1999

NOTE
Push switches are not designed for
flourescent loads.
BS EN 60669-1:1999

## Elements

## Grid Modules

2 WAY SP RETRACTIVE MARKED WITH BELL SYMBOL 10 AMP

2 WAY SP WIDE ROCKER RETRACTIVE MARKED WITH BELL SYMBOL 10 AMP

2 WAY SP RETRACTIVE PUSH 10 AMP

2 WAY SP
WIDE ROCKER
RETRACTIVE PUSH
10 AMP

SYNTHETIC FINISHES

| CHALK WHITE - SCW | K34885BSCW | 1 | K34985BSCW | 1 | K34885SCW | 1 | K34985SCW | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NATURAL STONE - SNS | K34885BSNS | 1 | K34985BSNS | 1 | K34885SNS | 1 | K34985SNS | 1 |
| BEACH PEBBLE - SBP | K34885BSBP | 1 | K34985BSBP | 1 | K34885SBP | 1 | K34985SBP | 1 |
| BLACK - BLK | K34885BBLK | 1 | K34985BBLK | 1 | K34885BLK | 1 | K34985BLK | 1 |

LEAD TIMES
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loads.
BS EN 60669-1:1999

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NOTE
Push switches are not
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loads.
BS EN 60669-1:1999

2 WAY CENTRE OFF RETRACTIVE 10 AMP

2 WAY
WIDE ROCKER
CENTRE OFF
RETRACTIVE
10 AMP

WIDE ROCKER
INTERMEDIATE 10 AMP

1 WAY SP
20 AMP

1 WAY SP
LED LOCATOR
20 AMP

| K34900SCW | 1 | K34901SCW | 1 | K34993SCW | 1 | K34891SCW | 1 | K34891NSCW |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| K34900SNS | 1 | K34901SNS | 1 | K34993SNS | 1 | K34891SNS | 1 | K34891NSNS |
| K34900SBP | 1 | K34901SBP | 1 | K34993SBP | 1 | K34891SBP | 1 | K34891NSBP |
| K34900BLK | 1 | K34901BLK | 1 | K34993BLK | 1 | K34891BLK | 1 | K34891NBLK |

NOTE
Push switches are not
designed for flourescent
loads.
BS EN 60669-1:1999

NOTE
Push switches are not
designed for flourescen loads.
BS EN 60669-1:1999

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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

Grid Modules

|  | 1 WAY SP |  |  |
| :--- | :--- | :--- | :--- |
| 1 WAY SP | WIDE ROCKER |  | 2 WAY SP |
| WIDE ROCKER | LED LOCATOR | 2 WAY SP | LED LOCATOR |
| 20 AMP | 20 AMP | 20 AMP | 20 AMP |


| SYNTHETIC FINISHES |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CHALK WHITE - SCW | K34991SCW | 1 | K34991NSCW | 1 | K34892SCW | 1 | K34892NSCW | 1 |
| NATURAL STONE - SNS | K34991SNS | 1 | K34991NSNS | 1 | K34892SNS | 1 | K34892NSNS | 1 |
| BEACH PEBBLE - SBP | K34991SBP | 1 | K34991NSBP | 1 | K34892SBP | 1 | K34892NSBP | 1 |
| BLack - blk | K34991BLK | 1 | K34991NBLK | 1 | K34892BLK | 1 | K34892NBLK | 1 |

LEAD TIMES
Please contact our Customer Services Department on 01268563404

These switches do NOT have to be derated when used with fluorescent o 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

2 WAY SP WIDE ROCKER 20 AMP

2 WAY SP
WIDE ROCKER LED LOCATOR
20 AMP


| K34992SCW | 1 | K34992NSCW | 1 | K34894SCW | 1 | K34894NSCW |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

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

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These switches do NOT
have to be derated when
used with fluorescent or
inductive loads
BS EN 60669-1:1999

## Grid Modules

| WIDE ROCKER |  |  |  |
| :--- | :--- | :--- | :--- |
| INTERMEDIATE |  | 1 WAY DP | 1 WAY DP |
| LED LOCATOR | 1 WAY DP | LED LOCATOR | WIDE ROCKER |
| 20 AMP | 20 AMP | 20 AMP | 20 AMP |



| CHALK WHITE - SCW | K34994NSCW | 1 | K34896SCW | 1 | K34896NSCW | 1 | K34996SCW | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NATURAL STONE - SNS | K34994NSNS | 1 | K34896SNS | 1 | K34896NSNS | 1 | K34996SNS | 1 |
| BEACH PEBBLE - SBP | K34994NSBP | 1 | K34896SBP | 1 | K34896NSBP | 1 | K34996SBP | 1 |
| BLACK - BLK | K34994NBLK | 1 | K34896BLK | 1 | K34896NBLK | 1 | K34996BLK | 1 |

LEAD TIMES
Please contact our Customer Services Department on 01268563404

These switches do NOT have to be derated when used with fluorescent o 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

2 WAY
WIDE ROCKER LED LOCATOR
20 AMP

FUSE UNIT
13 AMP
bLankinsert

| K34992NSCW | 1 | K34890SCW | 1 | K34880SCW | 1 |
| :--- | :--- | :--- | :--- | :--- | ---: |
| K34992NSNS | 1 | K34890SNS | 1 | K34880SNS | 1 |
| K34992NSBP | 1 | K34890SBP | 1 | K34880SBP | 1 |
| K34992NBLK | 1 | K34890BLK | 1 | K34880BLK | 1 |

These switches do NOT<br>have to be derated when<br>used with fluorescent or<br>inductive loads

BS5733：2010

Elements

Euro Modular
Frontplates

1 MODULE 25 X 50MM

2 MODULE
50 X 50MM

4 MODULE 100 X 50MM

Wireless Transmitters for Echo ${ }^{\text {TM }}$

1 CHANNEL

SYNTHETIC FINISHES

| CHALK WHITE - SCW | K35111SCW | 1 | K35112SCW | 1 | K35114SCW | 1 | K35208SCW | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NATUPAL STONE - SNS | K35111SNS | 1 | K35112SNS | 1 | K35114SNS | 1 | K35208SNS | 1 |
| BEACH PEBBLE - SBP | K35111SBP | 1 | K35112SBP | 1 | K35114SBP | 1 | K35208SBP | 1 |

GLASS EFFECT FINISHES

| ICE WHITE - GIW | K35111GIW | 1 | K35112GIW | 1 | K35114GIW | 1 | K35208GIW | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| POLISHED JADE - GPJ | K35111GPJ | 1 | K35112GPJ | 1 | K35114GPJ | 1 | K35208GPJ | 1 |
| POLISHED ONYX - GPO | K35111GPO | 1 | K35112GPO | 1 | K35114GPO | 1 | K35208GPO | 1 |
| POLISHED STONE - GPS | K35111GPS | 1 | K35112GPS | 1 | K35114GPS | 1 | K35208GPS | 1 |
| METALLIC FINISHES |  |  |  |  |  |  |  |  |
| brushed steel - mbs | K35111MBS | 1 | K35112MBS | 1 | K35114MBS | 1 | K35208MBS | 1 |
| BRUSHED BRONZE - MBB | K35111MBB | 1 | K35112MBB | 1 | K35114MBB | 1 | K35208MBB | 1 |
| CAST IRON - MCI | K35111MCI | 1 | K35112MCI | 1 | K35114MCI | 1 | K35208MCI | 1 |
| SATIN PLATINUM - MSP | K35111MSP | 1 | K35112MSP | 1 | K35114MSP | 1 | K35208MSP | 1 |
| SATIN TITANIUM - MSt | K35111MST | 1 | K35112MST | 1 | K35114MST | 1 | K35208MST | 1 |
| NATURAL FINISHES |  |  |  |  |  |  |  |  |
| BRITISH OAK - NBO | K35111NBO | 1 | K35112NBO | 1 | K35114NBO | 1 | K35208NBO | 1 |
| CREAM HIDE - NCH | K35111NCH | 1 | K35112NCH | 1 | K35114NCH | 1 | K35208NCH | 1 |
| DARK HIDE - NDH | K35111NDH | 1 | K35112NDH | 1 | K35114NDH | 1 | K35208NDH | 1 |
| DARK WENGE - NDW | K35111NDW | 1 | K35112NDW | 1 | K35114NDW | 1 | K35208NDW | 1 |

LeAd times
Please contact our Customer
Services Department on
01268563404

MOUNTING BOXES
BS 4662:2006 and surface boxes to
BS 5733:2010
Refer to appropriate module for
minimum box depth.
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

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.
DIMENSIONS
FIXING CENTRES
FIXING C
60.3 mm
BS 5733:2010 where applicable.

MOUNTING BOXES
Suitable for flush boxes to
BS 4662:2006 and surface boxes to
BS 5733:2010 minimum box depth.
DIMENSIONS
FIXING CENTRES
FIXING CENTRE
20.6 mm

BS 5733:2010 where applicable.

MOUNTING BOXES
35 mm
866ZIC
46 mm
87771 c
DIMENSIONS
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

OPERATING FREQUENCY
868.3Mhz

ETSI EN 301 489-1 + -3
ETSI EN 300 220-3

1 CHANNEL 2 CHANNEL WITH SYMBOLS WITH SYMBOLS

## 2 CHANNEL



| K35209SCW | 1 | K35206SCW | 1 | K35207SCW | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| K35209SNS | 1 | K35206SNS | 1 | K35207SNS | 1 |
| K35209SBP | 1 | K35206SBP | 1 | K35207SBP | 1 |


| K35209GIW | 1 | K35206GIW | 1 | K35207GIW | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| K35209GPJ | 1 | K35206GPJ | 1 | K35207GPJ | 1 |
| K35209GPO | 1 | K35206GPO | 1 | K35207GPO | 1 |
| K35209GPS | 1 | K35206GPS | 1 | K35207GPS | 1 |


| K35209MBS | 1 | K35206MBS | 1 | K35207MBS | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| K35209MBB | 1 | K35206MBB | 1 | K35207MBB | 1 |
| K35209MCI | 1 | K35206MCI | 1 | K35207MCI | 1 |
| K35209MSP | 1 | K35206MSP | 1 | K35207MSP | 1 |
| K35209MST | 1 | K35206MST | 1 | K35207MST | 1 |
| K35209NBO | 1 | K35206NBO | 1 | K35207NBO | 1 |
| K35209NCH | 1 | K35206NCH | 1 | K35207NCH | 1 |
| K35209NDH | 1 | K35206NDH | 1 | K35207NDH | 1 |
| K35209NDW | 1 | K35206NDW | 1 | K35207NDW | 1 |


| MOUNTING BOXES | MOUNTING BOXES |
| :--- | :--- |
| $\mathbf{3 5 m m}$ | 35 mm |
| $866 Z I C$ | 866 ZIC |
| $\mathbf{4 6 m m}$ | $\mathbf{4 6 m m}$ |
| $877 Z I C$ | $877 Z$ IC |
| DIMENSIONS | DIMENSIONS |
| $86 \times 86 \mathrm{~mm}$ | $86 \times 86 \mathrm{~mm}$ |
| FIXING CENTRES | FIXING CENTRES |
| 60.3 mm | 60.3 mm |
| ETSI EN 301489－1／3 | ETSI EN 301489－1／3 |
| ETSI EN 300220－1／2 | ETSI EN $300220-1 / 2$ |

ING BOXES

46 mm
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
60.3 mm

ETSI EN 300220－1／2

MOUNTING BOXES
35 mm
46 mm
46 mm
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

ETSI EN 301489－1／3
ETSI EN 300220－1／2

Elements

Other Switch Products

SYNTHETIC FINISHES

| CHALK WHITE - SCW |
| :--- |
| NATURAL STONE - SNS |
| BEACH PEBBLE - SBP |
| GLASS EFFECT FINISHES |


| ICE WHITE - GIW |
| :--- |
| POLISHED JADE - GPJ |
| POLISHED ONYX - GPO |
| POLISHED STONE - GPS |
| METALLIC FINISHES |


| BRUSHED STEEL - MBS | K35203MBS | 1 | K34373MBS | 1 | K33900DNDMBS | 1 | K33885DNDMBS | 1 | K35202MBS | 1 | K35201MBS | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BRUSHED BRONZE - MBB | K35203MBB | 1 | K34373MBB | 1 | K33900DNDMBB | 1 | K33885DNDMBB | 1 | K35202MBB | 1 | K35201MBB | 1 |
| CAST IRON - MCI | K35203MCI | 1 | K34373MCI | 1 | K33900DNDMCI | 1 | K33885DNDMCI | 1 | K35202MCI | 1 | K35201MCI | 1 |
| SATIN PLATINUM - MSP | K35203MSP | 1 | K34373MSP | 1 | K33900DNDMSP | 1 | K33885DNDMSP | 1 | K35202MSP | 1 | K35201MSP | 1 |
| SATIN TITANIUM - MST | K35203MST | 1 | K34373MST | 1 | K33900DNDMST | 1 | K33885DNDMST | 1 | K35202MST | 1 | K35201MST | 1 |
| NATURAL FINISHES |  |  |  |  |  |  |  |  |  |  |  |  |
| BRITISH OAK - NBO | K35203NBO | 1 | K34373NBO | 1 | K33900DNDNBO | 1 | K33885DNDNBO | 1 | K35202NBO | 1 | K35201NBO | 1 |
| CREAM HIDE - NCH | K35203NCH | 1 | K34373NCH | 1 | K33900DNDNCH | 1 | K33885DNDNCH | 1 | K35202NCH | 1 | K35201NCH | 1 |
| DARK HIDE - NDH | K35203NDH | 1 | K34373NDH | 1 | K33900DNDNDH | 1 | K33885DNDNDH | 1 | K35202NDH | 1 | K35201NDH | 1 |
| DARK WENGE - NDW | K35203NDW | 1 | K34373NDW | 1 | K33900DNDNDW | 1 | K33885DNDNDW | 1 | K35202NDW | 1 | K35201NDW | 1 |

LEAD times
Please contact our Customer services Department on
01268563404
MOUNTING BOXES
35 mm
866 ZIC
47 mm
877 ZIC
IEC 60669-1

| MOUNTING BOXES | MOUNTING BOXES |
| :--- | :--- |
| $\mathbf{3 5 m m}$ | 35 mm |
| 866 ZIC | 866 ZIC |
| $\mathbf{4 6 m m}$ | $\mathbf{4 6 m m}$ |
| 877 ZIC | 877 ZIC |
| DIMENSIONS | DIMENSIONS |
| $86 \times 86 \mathrm{~mm}$ | $86 \times 86 \mathrm{~mm}$ |
| FIXING CENTRES | FIXING CENTRES |
| 60.3 mm | 60.3 mm |
| These switches do NOT | BS EN 60669-1:1999 |

have to be derated when used with fluorescent or
inductive loads
BS EN 60669-1:1999
MOUNTING BOXES
35 mm
$866 Z I C$
46 mm
877ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm
BS EN 60669-1:1999
MOUNTING BOXES
35 mm
866 ZIC
46 mm
877ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm
IEC $60669-2-1$

## Euro Modules

SINGLE TV
CO－AXIAL

|  |  | MASTER | SECONDARY |
| :--- | :--- | :--- | :--- |
| RJ11／12 | RJ45 CAT 6 | TELEPHONE | TELEPHONE |
| 1 MODULE | 1 MODULE | 1 MODULE | 1 MODULE |
| $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ |

NON－ISOLATED
（IEC MALE）
1 MODULE
$25 \times 50 \mathrm{MM}$

|  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CHALK WHITE－SCW | K5887SCW | 5 | K5846SCW | 5 | K5820SCW | 5 | K5821SCW | 5 | K5850SCW | 5 |
| NATURAL STONE－SNS | K5887SNS | 5 | K5846SNS | 5 | K5820SNS | 5 | K5821SNS | 5 | K5850SNS | 5 |
| BEACH PEBBLE－SBP | K5887SBP | 5 | K5846SBP | 5 | K5820SBP | 5 | K5821SBP | 5 | K5850SBP | 5 |
| BLACK－BLK | K5887BLK | 5 | K5846BLK | 5 | K5820BLK | 5 | K5821BLK | 5 | K5850BLK | 5 |

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

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

MOUNTING BOXES Minimum depth 25 mm BS 6312 Pt 2

MOUNTING BOXES Minimum depth 25 mm BS 6312 Pt 2

Fully screened non isolated single TV outlets for connection to a single TV axial lead MOUNTING BOXES Min box depth 32 mm BS 3041：1997
IEC 169－2：1965
BS EN 50083 \＆
BS 5733：2010
where applicable

Euro Modules

SYNTHETIC FINISHES
SINGLE OUTLET
(IEC FEMALE)
1 MODULE
$25 \times 50 M M$

| SINGLE F-TYPE | TWIN OUTLET |
| :--- | :--- |
| SATELLITE SOCKET | TV/FM DIPLEXER |
| 1 MODULE | 2 MODULE |
| $25 \times 50 \mathrm{MM}$ | $50 \times 50 \mathrm{MM}$ |

TRIPLE OUTLET
TV/FM/SATELLITE QUAD OUTLET TRIPLEXER
2 MODULE
50 X 50MM

TV-FM/DAB-2XSAT
2 MODULE
50 X 50MM

| CHALK WHITE - SCW | K5851SCW | 5 | K5855SCW | 5 | K5852DABSCW | 5 | K5853DABSCW | 5 | K5854DABSCW | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NATURAL STONE - SNS | K5851SNS | 5 | K5855SNS | 5 | K5852DABSNS | 5 | K5853DABSNS | 5 | K5854DABSNS | 5 |
| BEACH PEBBLE - SBP | K5851SBP | 5 | K5855SBP | 5 | K5852DABSBP | 5 | K5853DABSBP | 5 | K5854DABSBP | 5 |
| BLACK - BLK | K5851BLK | 5 | K5855BLK | 5 | K5852DABBLK | 5 | K5853DABBLK | 5 | K5854DABBLK | 5 |

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.

PERFORMANCE
SINGLE OUTLETS
TV/FM lec Male Or Female
DC-950MHz
SAT F-TYPE
DC-1.75GHz

MOUNTING BOXES Min box depth 32 mm BS 3041:1997 IEC 169-2:1965 BS EN 50083 \& BS 5733:2010 where applicable

## Euro Power Modules

| AMERICAN | UK | UK |
| :--- | :--- | :--- |
| $127 V$ SHUTTERED | $250 V$ SHUTTERED | 250 V |
| 2 MODULE $50 \times 50 \mathrm{MM}$ | 2 MODULE | 2 MODULE |
| （NON UK） | $50 \times 50 \mathrm{MM}$ | $50 \times 50 \mathrm{MM}$ |
| 15 AMP | 5 AMP | 13 AMP |

FRENCH／BELGIAN
2P＋E
250V SHUTTERED

| 2 MODULE | FEMALE HDMI |
| :--- | :--- |
| $50 \times 50 M M$ | OUTLET |
| （NON UK） | 2 MODULE |
| 16 AMP | $50 \times 50 \mathrm{MM}$ |




| K5832SCW | 10 | K5833SCW | 10 | K5830SCW | 10 | K5831SCW | 10 | K5807SCW | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| K5832SNS | 10 | K5833SNS | 10 | K5830SNS | 10 | K5831SNS | 10 | K5807SNS | 5 |
| K5832SBP | 10 | K5833SBP | 10 | K5830SBP | 10 | K5831SBP | 10 | K5807SBP | 5 |
| K5832BLK | 10 | K5833BLK | 10 | K5830BLK | 10 | K5831BLK | 10 | K5807BLK | 5 |

MOUNTING BOX
35 mm minimum
46 mm （for extra wiring space） SASO 2204：2003

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

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

MOUNTING BOX
46 mm
IEC 60884－1： 2006

K5807 Female HDMI Outlet is HDMI 1．1，1．2， 1.3 and 1.4
is HDMI 1．1，1．2， 1.3 and 1.4 compa Rate
DATA RATE
Up to 2.25 Gbps
SCAN
Up to 1080p／1920×1200
INPUT CONNECTOR
$1 \times$ HDMI Female（Type A） OUTPUT CONNECTOR
$1 \times$ HDMI Female（Type A）
Supports high resolution input PC
VGA，SVGA，SXVGA（1280x1024）
and UXGA（1600×1200，
1920×1200）
HDTV
480p，720p，1080i and 1080p
HDMI input cable should be no
larger than 20 m ．
MOUNTING BOX

|  | Euro Modules |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | RCA TO SCREW | TERMINATION | AUDIO |  |  |
|  | TERMINATION | SET | BINDING |  |  |
|  | SET | 1 YELLOW, | POST FOR |  |  |
|  | 1 RED AND | 1 WHITE AND | SINGLE |  |  |
| USB CHARGING | 1 BLACK | 1 RED | LOUD SPEAKER | BLANK | BLANK |
| 2 MODULE | 1 MODULE | 1 MODULE | 1 MODULE | 1 MODULE | 2 MODULE |
| $50 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ | $50 \times 50 M M$ |


| SYNTHETIC FINISHES |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CHALK WHITE - SCW | K5837SCW 1 | K5806SCW | 5 | K5809SCW | 5 | K5805SCW | 5 | K188SCW 10 | K180SCW 10 |
| NATURAL STONE - SNS | K5837SNS 1 | K5806SNS | 5 | K5809SNS | 5 | K5805SNS | 5 | K188SNS 10 | K180SNS 10 |
| BEACH PEBBLE - SBP | K5837SBP 1 | K5806SBP | 5 | K5809SBP | 5 | K5805SBP | 5 | K188SBP 10 | K180SBP 10 |
| BLACK - BLK | K5837BLK 1 | K5806BLK | 5 | K5809BLK | 5 | K5805BLK | 5 | K188BLK 10 | K180BLK 10 |
|  | USB charging sockets, each capable of supporting 2A charge (total of 2A). <br> K5837 MOUNTING BOX <br> Minimum Box depth <br> 35 mm <br> 46 mm for extra wiring space <br> IEC 60950-1 <br> IEC 61000-6-1/3 | MOUNTING BOX <br> 35 mm minimum |  | MOUNTING BOX <br> 35 mm minimum |  | mOUNTING BOX <br> 35 mm minimum |  | BS 5733: 2010 where applicable | BS 5733: 2010 where applicable |

## Blank Plates

1 GANG
2 GANG


MOUNTING BOXES
FLUSH
8667IC
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 5733:2010
MOUNTING BOXES
FLUSH
866ZIC
DIMENSIONS:
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm
BS $5733: 2010$
60.3 mm

BS 5733:2010



## ASPECT

## 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 ${ }^{\text {TM }}$ 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 21 for details.

## HOW TO SPECIFY

A slimline metal, flush mounting range of wiring devices with screwless frontplates. Snap-on frontplates with a 4 mm profile easily removable with a flat blade screwdriver through discreet bottom access apertures. Cable connections must be upward facing with easy to identify white markings on a dark background, grouped in a straight line with captive terminal screws for ease of installation. All sockets to have a 3 pin operated shutter safety mechanism and double pole switching, with the contacts designed such that the neutral makes before and breaks after the live pole for improved safety. Switches to be large and concave with a minimum 3 mm contact gap with a positive 'click' to denote successful operation.

## FEATURES \& 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.

COMPREHENSIVE RANGE OF SOCKETS, SWITCHES AND MODULAR ANCILLARY PRODUCTS
Mean that whatever the application, the Aspect range has a wiring device to suit.

## 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.

DOUBLE POLE
SWITCHING


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．


Aspect

Switchsocket
Outlets

|  | 1 GANG DP |  |
| :--- | :--- | :--- |
| 1 GANG DP | WITH NEON | 2 GANG DP |
| DUAL EARTH | DUAL EARTH | DUAL EARTH |
| 13 AMP | 13 AMP | 13 AMP |

2 GANG DP

| WITH $2 \times$ USB | 2 GANG DP |
| :--- | :--- |
| CHARGING PORTS | WITH NEON |
| DUAL EARTH | DUAL EARTH |
| 13 AMP | 13 AMP |

## FINISHES

| BRUSHED STAINLESS STEEL | K24357BSS* | 1 | K24657BSS* | 1 | K24347BSS* | 1 | K24343BSS* | 1 | K24647BSS* | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LACQUERED BRUSHED STEEL | K24357LBS* | 1 | K24657LBS* | 1 | K24347LBS* | 1 | K24343LBS* | 1 | K24647LBS* | 1 |
| BRUSHED CHROME | K24357BRC* | 1 | K24657BRC* | 1 | K24347BRC* | 1 | K24343BRC* | 1 | K24647BRC* | 1 |
| POLISHED CHROME | K24357POC* | 1 | K24657POC* | 1 | K24347POC* | 1 | K24343POC* | 1 | K24647POC* | 1 |
| SATIN GOLD | K24357SAG* | 1 | K24657SAG* | 1 | K24347SAG* | 1 | K24343SAG* | 1 | K24647SAG* | 1 |
| PORCELAIN WHITE | K24357WHIW | 1 | K24657WHIW | 1 | K24347WHIW | 1 | K24343WHIW | 1 | K24647WHIW | 1 |
| LUSTROUS IVORY | K24357LIVW | 1 | K24657LIVW | 1 | K24347LIVW | 1 | K24343LIVW | 1 | K24647LIVW | 1 |
| LUSTROUS BLACK | K24357LBKB | 1 | K24657LBKB | 1 | K24347LBKB | 1 | K24343LBKB | 1 | K24647LBKB | 1 |
| POLISHED BRASS | K24357PBR* | 1 | K24657PBR* | 1 | K24347PBR* | 1 | K24343PBR* | 1 | K24647PBR* | 1 |
| TEXTURED IRON | K24357TIRB | 1 | K24657TIRB | 1 | K24347TIRB | 1 | K24343TIRB | 1 | K24647TIRB | 1 |
| DESERT BRONZE | K24357DBZB | 1 | K24657DBZB | 1 | K24347DBZB | 1 | K24343DBZB | 1 | K24647DBZB | 1 |
| ANTIQUE BRASS | K24357ABSB | 1 | K24657ABSB | 1 | K24347ABSB | 1 | K24343ABSB | 1 | K24647ABSB | 1 |
| TEXTURED COPPER | K24357TCOB | 1 | K24657TCOB | 1 | K24347TCOB | 1 | K24343TCOB | 1 | K24647TCOB | 1 |

LEAD TIMES

## Please contact our Customer Services Department on <br> Services Department on

01268563404
> * 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 $\mathrm{W}=$ White Insert, $\mathrm{B}=$ Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts
USB charging sockets, each capable of supporting 2A charg (total of 2A)
Pattress available for use where Pattress available for use where existing back box is too shallow see page 34
MOUNTING BOXES
FLUSH 35MM
886ZIC
FLUSH 47MM
878ZIC (for extra wiring space)
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm
BS 5733:2010

MOUNTING BOXES
FLUSH 35MM
886ZIC
FLUSH 47MM
878ZIC (for extra wiring space)
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 1363-2:1995
Neon is only available in white or
black insulated rocker.

## Multimedia Plates

1 GANG DP ROUND PIN 5 AMP

1 GANG DP ROUND PIN 15 AMP

2 GANG DP DUAL EARTH SWITCHSOCKET，EURO 2 MODULE 50 X 50MM（RIGHT SIDE） 13 AMP

2 GANG DP DUAL EARTH SWITCHSOCKET，EURO 2 MODULE 50 X 50MM（LEFT SIDE）
13 AMP

|  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |

＊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
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm
BS $546: 1950$

MOUNTING BOXES FLUSH 35MM 866ZIC
FLUSH 46MM
877ZIC（for extra wiring space）
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 546：1950

MOUNTING BOXES FLUSH 47MM
870ZIC
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.

[^7] frontplate aperture．Refer to BS 7671： 2008 for details．

Aspect

2 GANG DP DUAL EARTH SWITCHSOCKET, EURO 4 MODULE 50 X 50MM (X2) 13 AMP

| EURO 8 MODULE | EURO 12 MODULE |
| :--- | :--- |
| $100 \times 50 M M(X 2)$ | $150 \times 50 M M(X 2)$ |

150 X 50MM (X2)

FINISHES

| BRUSHED STAINLESS STEEL | K24208BSS* | 1 | K24209BSS | 1 | K24210BSS |
| :--- | :--- | :--- | :--- | :--- | :--- |
| LACQUERED BRUSHED STEEL | K24208LBS* | 1 | K24209LBS | 1 | K24210LBS |
| BRUSHED CHROME | K24208BRC* | 1 | K24209BRC | 1 | K24210BRC |
| POLISHED CHROME | K24208P0C* | 1 | K24209POC | 1 | K24210POC |
| SATIN GOLD | K24208SAG* | 1 | K24209SAG | 1 | K24210SAG |
| PORCELAIN WHITE | K24208WHIW | 1 | K24209WHI | 1 | K24210WHI |
| LUSTROUS IVORY | K24208LIVW | 1 | K24209LIV | 1 | K24210LIV |
| LUSTROUS BLACK | K24208LBKB | 1 | K24209LBK | 1 | K24210LBK |
| POLISHED BRASS | K24208PBR* | 1 | K24209PBR | 1 | K24210PBR |
| TEXTURED IRON | K24208TIRB | 1 | K24209DBZ | 1 | K24210TIR |
| DESERT BRONZE | K24208DBZB | 1 | K24209ABS | 1 | K24210DBZ |
| ANTIQUE BRASS | K24208ABSB | 1 | K24209TCO | 1 | K24210ABS |
| TEXTURED COPPER | K24208TCOB |  |  | 1 | K24210TCO |

LEAD TIMES
Please contact our Customer Services Department on
01268563404

* 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 47MM
858Z1C
BS 5733:2010

MOUNTING BOXES
FLUSH 47MM
869ZIC
BS 5733:2010

MOUNTING BOXES
FLUSH 47MM
868Z1C
BS 1363 Pt 2:1995

[^8]
## Socket Outlets

1 GANG
DUAL EARTH
13 AMP
2 GANG
DUAL EARTH
13 AMP
1 GANG
ROUND PIN
5 AMP
Shaver／Toothbrush
Supply Outlet
DUAL VOLTAGE OUTPUT 115／230V INPUT 220／240V 50／60HZ

| K24780BSS＊ | 1 | K24781BSS＊ | 1 | K24381BSS＊ | 1 | K24709BSS＊ | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K24780LBS＊ | 1 | K24781LBS＊ | 1 | K24381LBS＊ | 1 | K24709LBS＊ | 1 |
| K24780BRC＊ | 1 | K24781BRC＊ | 1 | K24381BRC＊ | 1 | K24709BRC＊ | 1 |
| K24780POC＊ | 1 | K24781POC＊ | 1 | K24381POC＊ | 1 | K24709POC＊ | 1 |
| K24780SAG＊ | 1 | K24781SAG＊ | 1 | K24381SAG＊ | 1 | K24709SAG＊ | 1 |
| K24780WHIW | 1 | K24781WHIW | 1 | K24381WHIW | 1 | K24709WHIW | 1 |
| K24780LIVW | 1 | K24781LIVW | 1 | K24381LIVW | 1 | K24709LIVW | 1 |
| K24780LBKB | 1 | K24781LBKB | 1 | K24381LBKB | 1 | K24709LBKB | 1 |
| K24780PBR＊ | 1 | K24781PBR＊ | 1 | K24381PBR＊ | 1 | K24709PBR＊ | 1 |
| K24780TIRB | 1 | K24781TIRB | 1 | K24381TIRB | 1 | K24709TIRB | 1 |
| K24780DBZB | 1 | K24781DBZB | 1 | K24381DBZB | 1 | K24709DBZB | 1 |
| K24780ABSB | 1 | K24781ABSB | 1 | K24381ABSB | 1 | K24709ABSB | 1 |
| K24780TCOB | 1 | K24781TCOB | 1 | K24381TCOB | 1 | K24709TCOB | 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
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363－2：1995

## MOUNTING BOXES

FLUSH 35MM
886ZIC
FLUSH 47MM
878ZIC（for extra wiring space）
DIMENSIONS
FIXING CENTRES
FIXING CENTRES
120．6mm
BS 1363－2：1995

## MOUNTING BOXES

FLUSH 35MM
866ZIC
FLUSH 46MM
877ZIC（for extra wiring space）
DIMENSIONS
$86 \times 86 \mathrm{~mm}$ FIXING CENTRES
60.3 mm

BS 546：1950

MOUNTING BOXES
FLUSH
878ZIC
This design incorporates a double wound isolating transformer rated 20 VA 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
$146 \times 86 \mathrm{~mm}$
FIXING CENTRES
FIXING
BS EN 61558－2－5．1998

Aspect

Connection Units
Switched

DP WITH
NEON \& FLEX OUTLET
13 AMP

Connection Units Unswitched

WITH NEON
13 AMP

| FINISHES |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| brushed stainless steel | K24941BSS* | 1 | K24961BSS* | 1 | K24971BSS* | 1 | K24958BSS* | 1 |
| LacQuered brushed steel | K24941LBS* | 1 | K24961LBS* | 1 | K24971LBS* | 1 | K24958LBS* | 1 |
| bRUSHED CHROME | K24941BRC* | 1 | K24961BRC* | 1 | K24971BRC* | 1 | K24958BRC* | 1 |
| POLISHED CHROME | K24941POC* | 1 | K24961POC* | 1 | K24971POC* | 1 | K24958POC* | 1 |
| SATIN GOLD | K24941SAG* | 1 | K24961SAG* | 1 | K24971SAG* | 1 | K24958SAG* | 1 |
| PORCELAIN WHITE | K24941WHIW | 1 | K24961WHIW | 1 | K24971WHIW | 1 | K24958WHIW | 1 |
| LUSTROUS IVORY | K24941LIVW | 1 | K24961LIVW | 1 | K24971LIVW | 1 | K24958LIVW | 1 |
| Lustrous black | K24941LBKB | 1 | K24961LBKB | 1 | K24971LBKB | 1 | K24958LBKB | 1 |
| POLISHED BRASS | K24941PBR* | 1 | K24961PBR* | 1 | K24971PBR* | 1 | K24958PBR* | 1 |
| TEXTURED IRON | K24941TIRB | 1 | K24961TIRB | 1 | K24971TIRB | 1 | K24958TIRB | 1 |
| DESERT BRONZE | K24941DBZB | 1 | K24961DBZB | 1 | K24971DBZB | 1 | K24958DBZB | 1 |
| antiaue brass | K24941ABSB | 1 | K24961ABSB | 1 | K24971ABSB | 1 | K24958ABSB | 1 |
| TEXTURED COPPER | K24941TCOB | 1 | K24961TCOB | 1 | K24971TCOB | 1 | K24958TCOB | 1 |

LEAD TIMES
Please contact our Customer Services Department on
01268563404
> * 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. KxxxxLIVW = Lustrous Ivory Finish with White inserts

MOUNTING BOXES
FLUSH 47MM
877ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363-4:1995
Neon is only available in white or black
insulated rocker.

MOUNTING BOXES FLUSH 47MM
877ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363-4:1995
Neon is only available in white or black
insulated rocker.

## Switches

WITH NEON \& FLEX OUTLET 13 AMP

1 GANG SP
2 WAY
20 AMP

2 GANG SP
3 GANG SP
2 WAY
10 AMP

| K24978BSS* | 1 | K24371BSS* | 1 | K24372BSS* | 1 | K24373BSS* | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K24978LBS* | 1 | K24371LBS* | 1 | K24372LBS* | 1 | K24373LBS* | 1 |
| K24978BRC* | 1 | K24371BRC* | 1 | K24372BRC* | 1 | K24373BRC* | 1 |
| K24978POC* | 1 | K24371POC* | 1 | K24372POC* | 1 | K24373POC* | 1 |
| K24978SAG* | 1 | K24371SAG* | 1 | K24372SAG* | 1 | K24373SAG* | 1 |
| K24978WHIW | 1 | K24371WHIW | 1 | K24372WHIW | 1 | K24373WHIW | 1 |
| K24978LIVW | 1 | K24371LIVW | 1 | K24372LIVW | 1 | K24373LIVW | 1 |
| K24978LBKB | 1 | K24371LBKB | 1 | K24372LBKB | 1 | K24373LBKB | 1 |
| K24978PBR* | 1 | K24371PBR* | 1 | K24372PBR* | 1 | K24373PBR* | 1 |
| K24978TIRB | 1 | K24371TIRB | 1 | K24372TIRB | 1 | K24373TIRB | 1 |
| K24978DBZB | 1 | K24371DBZB | 1 | K24372DBZB | 1 | K24373DBZB | 1 |
| K24978ABSB | 1 | K24371ABSB | 1 | K24372ABSB | 1 | K24373ABSB | 1 |
| K24978TCOB | 1 | K24371TCOB | 1 | K24372TCOB | 1 | K24373TCOB | 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. KxxxxLIVW = Lustrous Ivory Finish with White inserts

MOUNTING BOXES
FLUSH 47MM
877716
dIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363-4:1995

MOUNTING BOXES FLUSH 25MM
861ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669-1:1999

## MOUNTING BOXES

 FLUSH 25MM861ZIC
dImensions
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669-1:1999

MOUNTING BOXES
FLUSH 25MM
861 ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669-1:1999

Aspect

Switches

FINISHES

| BRUSHED STAINLESS STEEL | K23471BSS* | 1 | K23472BSS* | 1 | K23473BSS* | 1 | K24305BSS* |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| LACQUERED BRUSHED STEEL | K23471LBS* | 1 | K23472LBS* | 1 | K23473LBS* | 1 | K24305LBS* |
| BRUSHED CHROME | K23471BRC* | 1 | K23472BRC* | 1 | K23473BRC* | 1 | K24305BRC* |
| POLISHED CHROME | K23471POC* | 1 | K23472POC* | 1 | K23473POC* | 1 | K24305POC* |
| SATIN GOLD | K23471SAG* | 1 | K23472SAG* | 1 | K23473SAG* | 1 | K24305SAG* |
| PORCELAIN WHITE | K23471WHIW | 1 | K23472WHIW | 1 | K23473WHIW | 1 | K24305WHIW |
| LUSTROUS IVORY | K23471LIVW | 1 | K23472LIVW | 1 | K23473LIVW | 1 |  |
| LUSTROUS BLACK | K23471LBKB | 1 | K23472LBKB | 1 | K23473LBKB | 1 |  |
| POLISHED BRASS | K23471PBR* | 1 | K23472PBR* | 1 | K23473PBR* | 1 | K24305LBKB |
| TEXTURED IRON | K23471TIRB | 1 | K23472TIRB | 1 | K23473TIRB | K24305PBR* |  |
| DESERT BRONZE | K23471DBZB | 1 | K23472DBZB | 1 | K23473DBZB | 1 | K24305TIRB |
| ANTIQUE BRASS | K23471ABSB | 1 | K23472ABSB | 1 | K23473ABSB | 1 | K24305DBZB |
| TEXTURED COPPER | K23471TCOB | 1 | K23472TCOB | 1 | K23473TCOB | 1 | K24305ABSB |

LEAD TIMES
Please contact our Customer Services Department on
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FLUSH 25MM
861ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
ROCKER DIMENSIONS
$22 \times 40 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669-1:1999
 FLUSH 25MM
861ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
Rocker dimensions
$22 \times 40 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669-1:1999

MOUNTING BOXES FLUSH 25MM
861 ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
ROCKER DIMENSIONS
$50 \times 40 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669-1:1999

MOUNTING BOXES
FLUSH 35MM
866ZIC
dimensions
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669-1:1999

1 GANG DP WITH NEON 50 AMP

Three Pole Fan Isolator

10 AMP

## Intelligent

Dimmers
2 WAY SINGLE
230V A．C． 50 HZ
60W／VA MIN－500W／400VA MAX


[^9]| MOUNTING BOXES | MOUNTING BOXES |
| :--- | :--- |
| FLUSH 47MM | FLUSH 25MM |
| 878ZIC | $861 Z I C$ |
| DIMENSIONS | DIMENSIONS |
| $86 \times 146 m m$ | $86 \times 86 m m$ |
| FIXING CENTRES | FIXING CENTRES |
| 120.6 mm | 60.3 mm |
| BS EN 60669－1：1999 | BS EN $60669-2-4$ |

MOUNTING BOXES
FLUSH 35MM
866ZIC
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

[^10]Aspect

## Intelligent Dimmers

2 WAY SINGLE 230V A.C. 50 HZ 40W/VA MIN. 300W/240VA MAX.

2 WAY DOUBLE 230V
A.C. 50 HZ 40W/VA MIN. 300W/240VA MAX. FOR EACH DIMMER

Grid Plus Modular Frontplates
SUPPLIED WITH MOUNTING FRAME

1 MODULE
2 MODULE

FINISHES

| BRUSHED STAINLESS STEEL | K24521BSS | 1 | K24522BSS | 1 | K24331BSS | 1 | K24332BSS |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| LACQUERED BRUSHED STEEL | K24521LBS | 1 | K24522LBS | 1 | K24331LBS | 1 | K24332LBS |
| BRUSHED CHROME | K24521BRC | 1 | K24522BRC | 1 | K24331BRC | 1 | K24332BRC |
| POLISHED CHROME | K24521POC | 1 | K24522POC | 1 | K24331POC | 1 | K24332POC |
| SATIN GOLD | K24521SAG | 1 | K24522SAG | 1 | K24331SAG | 1 | K24332SAG |
| PORCELAIN WHITE | K24521WHI | 1 | K24522WHI | 1 | K24331WHI | 1 | K24332WHI |
| LUSTROUS IVORY | K24521LIV | 1 | K24522LIV | 1 | K24331LIV | 1 |  |
| LUSTROUS BLACK | K24521LBK | 1 | K24522LBK | 1 | K24331LBK | 1 |  |
| POLISHED BRASS | K24521PBR | 1 | K24522PBR | 1 | K24331PBR | 1 | K24332LBK |
| TEXTURED IRON | K24521TIR | 1 | K24522TIR | 1 | K24331TIR | 1 | K24332PBR |
| DESERT BRONZE | K24521DBZ | 1 | K24522DBZ | 1 | K24331DBZ | 1 | K24332TIR |
| ANTIQUE BRASS | K24521ABS | 1 | K24522ABS | 1 | K24331ABS | 1 | K24332DBZ |
| TEXTURED COPPER | K24521TCO | 1 | K24522TCO | 1 | K24331TCO | 1 | K24332ABS |

Lead times
Please contact our Customer Services Department on 01268563404
mounting boxes
FLUSH 35MM
866ZIC
dIMENSIONS
$86 \times 86 \mathrm{~mm}$
fixing centres
60.3 mm
mounting boxes
FLUSH 35MM
866Z1C
DIMENSIONS
$36 \times 86 \mathrm{~mm}$
FIXING CE
60.3 mm
mounting box
FLUSH
991ALM
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
BS 5733:2010

MOUNTING BOX
FLUSH
891ALM
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
BS 5733:2010

[^11]| K24333BSS | 1 | K24334BSS | 1 | K24346BSS | 1 | K24348BSS | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K24333LBS | 1 | K24334LBS | 1 | K24346LBS | 1 | K24348LBS | 1 |
| K24333BRC | 1 | K24334BRC | 1 | K24346BRC | 1 | K24348BRC | 1 |
| K24333POC | 1 | K24334POC | 1 | K24346POC | 1 | K24348POC | 1 |
| K24333SAG | 1 | K24334SAG | 1 | K24346SAG | 1 | K24348SAG | 1 |
| K24333WHI | 1 | K24334WHI | 1 | K24346WHI | 1 | K24348WHI | 1 |
| K24333LIV | 1 | K24334LIV | 1 | K24346LIV | 1 | K24348LIV | 1 |
| K24333LBK | 1 | K24334LBK | 1 | K24346LBK | 1 | K24348LBK | 1 |
| K24333PBR | 1 | K24334PBR | 1 | K24346PBR | 1 | K24348PBR | 1 |
| K24333TIR | 1 | K24334TIR | 1 | K24346TIR | 1 | K24348TIR | 1 |
| K24333DBZ | 1 | K24334DBZ | 1 | K24346DBZ | 1 | K24348DBZ | 1 |
| K24333ABS | 1 | K24334ABS | 1 | K24346ABS | 1 | K24348ABS | 1 |
| K24333TCO | 1 | K24334TCO | 1 | K24346TCO | 1 | K24348TCO | 1 |

MOUNTING BOX
FLUSH
892ALM
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
BS 5733:2010

MOUNTING BOX
FLUSH
892ALM DIMENSIONS
$86 \times 146 \mathrm{~mm}$ BS 5733:2010

MOUNTING BOX
FLUSH: 893ALM
DIMENSIONS
$146 \times 146 \mathrm{~mm}$
BS 5733:2010

MOUNTING BOX
FLUSH: 893ALM
DIMENSIONS
$146 \times 146 \mathrm{~mm}$
BS 5733:2010

Aspect

| Grid | Switch Modules | Switch Modules |  |
| :--- | :--- | :--- | :--- |
| Mlodules | 10 Amp | 10 Amp |  |
|  |  |  |  |
|  |  | SP 1 WAY | DP 1 WAY |
| BLANK INSERT | 10 AMP | 10 AMP | SP 2 WAY |
|  |  | 10 AMP |  |


| FINISHES |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BRUSHED STAINLESS STEEL | K4880BSS* | 1 | K4881BSS* | 1 | K4981BSS* | 1 | K4882BSS* | 1 |
| LacQuered brushed steel | K4880LBS* | 1 | K4881LBS* | 1 | K4981LBS* | 1 | K4882LBS* | 1 |
| BRUSHED CHROME | K4880BRC* | 1 | K4881BRC* | 1 | K4981BRC* | 1 | K4882BRC* | 1 |
| POLISHED CHROME | K4880POC* | 1 | K4881POC* | 1 | K4981POC* | 1 | K4882POC* | 1 |
| SATIN GOLD | K4880SAG* | 1 | K4881SAG* | 1 | K4981SAG* | 1 | K4882SAG* | 1 |
| PORCELAIN WHITE | K4880WHI | 10 | K4881WHI | 10 | K4981WHI | 10 | K4882WHI | 10 |
| LUSTROUS IVORY | K4880LIVW | 1 | K4881LIVW | 1 | K4981LIVW | 1 | K4882LIVW | 1 |
| LUSTROUS BLACK | K4880LBKB | 1 | K4881LBKB | 1 | K4981LBKB | 1 | K4882LBKB | 1 |
| POLISHED BRASS | K4880PBR* | 1 | K4881PBR* | 1 | K4981PBR* | 1 | K4882PBR* | 1 |
| textured iron | K4880TIRB | 1 | K4881TIRB | 1 | K4981TIRB | 1 | K4882TIRB | 1 |
| DESERT BRONZE | K4880DBZB | 1 | K4881DBZB | 1 | K4981DBZB | 1 | K4882DBZB | 1 |
| antique brass | K4880ABSB | 1 | K4881ABSB | 1 | K4981ABSB | 1 | K4882ABSB | 1 |
| TEXTURED COPPER | K4880TCOB | 1 | K4881TCOB | 1 | K4981TCOB | 1 | K4882TCOB | 1 |

LEAD TIMES
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SP 2 WAY
RED RETRACTIVE
10 AMP

SP 2 WAY
RETRACTIVE MARKED BELL SYMBOL 10 AMP

|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| K4885BSS＊ | 1 | K4885RED <br> K4885REDB | 11 | K4885BWHI K4885BBLK |  |
| K4885LBS＊ | 1 |  |  |  |  |
| K4885BRC＊ | 1 |  |  |  |  |
| K4885POC＊ | 1 |  |  |  |  |
| K4885SAG＊ | 1 |  |  |  |  |
| K4885WHI | 10 |  |  |  | 1 |
| K4885LIVW | 1 |  |  |  | 1 |
| K4885LBKB | 1 |  |  |  |  |
| K4885PBR＊ | 1 |  |  |  |  |
| K4885TIRB | 1 |  |  |  |  |
| K4885DBZB | 1 |  |  |  |  |
| K4885ABSB | 1 |  |  |  |  |
| K4885TCOB | 1 |  |  |  |  |

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


Aspect

| Switch Modules 10 Amp | Switch Modules 20 Amp |  |  |  |
| :--- | :--- | :---: | :--- | :--- |
|  |  |  | DP | DP |
| SP 2 WAY | 2 WAY |  | WAY |  |
| RETRACTIVE | CENTRE OFF |  | WAY | RED ROCKER |
| MARKED 'PRESS' | RETRACTIVE | SP 1 WAY | PUSH TO MAKE | PUSH TO MAKE |
| 10 AMP | 10 AMP | 20 AMP | 20 AMP | 20 AMP |


| FINISHES |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BRUSHED STAINLESS STEEL | K4885PWHI K4885PBLK | $\begin{array}{r} 10 \\ 1 \end{array}$ | K4900BSS* | 1 | K4891BSS* | 1 | K4910BSS* | 1 | K4910RED K4910REDB | 101 |
| Lacauered brushed steel |  |  | K4900LBS* | 1 | K4891LBS* | 1 | K4910LBS* | 1 |  |  |
| BRUSHED CHROME |  |  | K4900BRC* | 1 | K4891BRC* | 1 | K4910BRC* | 1 |  |  |
| POLISHED CHROME |  |  | K4900POC* | 1 | K4891POC* | 1 | K4910POC* | 1 |  |  |
| SATIN GOLD |  |  | K4900SAG* | 1 | K4891SAG* | 1 | K4910SAG* | 1 |  |  |
| MK WHITE (PLASTIC ROCKER) |  |  | K4900WHI | 10 | K4891WHI | 10 | K4910WHI | 10 |  |  |
| LUSTROUS IVORY |  |  | K4900LIVW | 1 | K4891LIVW | 1 | K4910LIVW | 1 |  |  |
| LUSTROUS BLACK |  |  | K4900LBKB | 1 | K4891LBKB | 1 | K4910LBKB | 1 |  |  |
| POLISHED BRASS |  |  | K4900PBR* | 1 | K4891PBR* | 1 | K4910PBR* | 1 |  |  |
| textured iron |  |  | K4900TIRB | 1 | K4891TIRB | 1 | K4910TIRB | 1 |  |  |
| DESERT BRONZE |  |  | K4900DBZB | 1 | K4891DBZB | 1 | K4910DBZB | 1 |  |  |
| ANTILUE BRASS |  |  | K4900ABSB | 1 | K4891ABSB | 1 | K4910ABSB | 1 |  |  |
| TEXTURED COPPER |  |  | K4900TCOB | 1 | K4891TCOB | 1 | K4910TCOB | 1 |  |  |

LEAD TIMES
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NOTE
Push switches are not designed or fluorescent loads
BS EN 60669-1.1999

NOTE
Push switches are not designed for fluorescent loads.
BS EN 60669-1:1999

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

Switch Modules 20 Amp

|  | DP 1 WAY |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| DP 1 WAY | RED ROCKER |  |  | SP 2 WAY WITH |  |
| PUSH TO BREAK | PUSH TO BREAK |  | SP 2 WAY | INTEGRAL NEON | SP 2 WAY |
| RETRACTIVE | RETRACTIVE | SP 2 WAY | RED ROCKER | LOCATOR | \& CENTRE OFF |
| 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP |



[^12]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 fuorescent 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

These switches do NOT
nave to
used with fluorescent or
inductive loads.
BS EN 60669-1:1999

Aspect

Switch Modules

| SP 2 WAY |  |  | DP |  |
| :--- | :--- | :--- | :--- | :--- |
| \& CENTRE OFF |  | INTERMEDIATE | DP | 1 WAY |
| RED ROCKER | INTERMEDIATE | RED ROCKER | 1 WAY | WITH NEON |
| 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP |



LEAD TIMES
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Matching metal capped
rockers available as
standard (excluding

Switch Modules

| DP | DP |
| :--- | :--- |
| 1 WAY | 1 WAY |
| WITH WINDOW | RED ROCKER |
| 20 AMP | 20 AMP |

Printed Modules with and without Neon


BS EN 60669－1：1999
BS EN 60669－1：1999

| K4896 PRINTED MODULE |  |  |
| :---: | :---: | :---: |
| FOR WHITE ROCKERS，USE THE SUFFIX＇WHI＇．FOR BLACK ROCKERS，USE THE SUFFIX＇BLK＇．FOR EXAMPLE：K4896BRWHI OR K4896BRBLK |  |  |
| BOILER K4896BR | WASTE DISPOSAL K4896WD | HOB <br> K4896HB |
| DISHWASHER <br> K4896DW | WASHING MACHINE K4896WM | IMMERSION HEATER K4896IH |
| COOKER HOOD K4896CH | TUMBLE DRYER K4896TD | PLINTH HEATER K4896PH |
| FAN <br> K4896FN | WASHER DRYER K4896WDR | WORKTOP LIGHTING K4896WL |
| FRIDGE <br> K4896Fg | MICROWAVE <br> K4896MW | WINE COOLER K4896WC |
| FREEZER K4896FZ | HEATER <br> K4896HR | WARMING DRAWER K4896WDA |
| FRIDGE FREEZER K4896FF | OVEN <br> K48960V | COFFEE MACHINE K4896CM |


| K4896N PRINTED MODULE WITH NEON |  |  |
| :--- | :--- | :--- |
| FOR WHITE ROCKERS，USE THE SUFFIX＇WHI＇．FOR BLACK ROCKERS，USE <br> THE SUFFIX＇BLK＇．FOR EXAMPLE：K4896NBRWHI OR K4896NBRBLK |  |  |
| BOILER <br> K4896NBR | WASTE DISPOSAL <br> K4896NWD | HOB <br> K4896NHB |
| DISHWASHER <br> K4896NDW | WASHING MACHINE <br> K4896NWM | IMMERSION HEATER <br> K4896NIH |
| CO0KER H00D <br> K4896NCH | TUMBLE DRYER <br> K4896NTD | PLINTH HEATER <br> K4896NPH |
| FAN <br> K4896NFN | WASHER DRYER <br> K4896NWDR | WORKTOP LIGHTING <br> K4896NWL |
| FRIDGE <br> K4896NFg | MICROWAVE <br> K4896NMW | WINE COOLER <br> K4896NWC |
| FREEZER <br> K4896NFZ | K4896NHR | WARMING DRAWER <br> K48996NWDA |
| FRIDGE FREEZER <br> K4896NFF | KOFFEE MACHINE <br> K4896NCM |  |

NOTE
K4896NIH（Immersion Heater with Neon）is not available with black rockers．

## Aspect

|  |  | SP 2 WAY |  | DP | SP |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | SP | EMERGENCY | DP | EMERGENCY | 2 WAY |
| INTERMEDIATE | 2 WAY | LIGHTING | 1 WAY | LIGHTING | RETRACTIVE |
| 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP |

## FINISHES

| WHITE | K4894WHI | 10 | K4898WHI | 10 | K4898ELWHI 10 | K4917WHI | 10 | K4917ELWHI 10 | K4918WHI |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BLACK | K4894BLK | 1 | K4898BLK | 1 | K4898ELBLK | 1 | K4917BLK | 1 |  |

LEAD TIMES
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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 Key (3405ZIC) is supplied. Key (3405ZIC) is supplied. Key (3405ZIC) is supplied. Key (3405ZIC) is supplied. Key (3405ZIC) is supplied. Key (3405ZIC) is supplied.

## Indicator Modules

| $200-250 \mathrm{~V}$ | $200-250 \mathrm{~V}$ | $200-250 \mathrm{~V}$ | $21-36 \mathrm{~V}$ | $21-36 \mathrm{~V}$ | $21-36 \mathrm{~V}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| NEON | NEON | FLUORESCENT | FILAMENT | FILAMENT | FILAMENT |



Aspect

## Dimmer Switch Modules

| 1 GANG 40W/ | 1 GANG 60W/ | 1 GANG |  |
| :--- | :--- | :--- | :--- |
| VA-220W/180VA, | VA-400W/320VA, | $40-220 \mathrm{~W} / 180 \mathrm{VA} /$ | $0-10 \mathrm{~V} / 1-10 \mathrm{~V}$ |
| 230 VA.C, 50 HZ | 230 VA.C, 50 HZ | $4-70 \mathrm{~W}$ LED DIMMER | FLUORESCENT |
| 2 WAY | 2 WAY | 2 WAY | CONTROLLER |
| 1 MODULE | 2 MODULE | 1 MODULE | 1 MODULE |

## FINISHES

| BRUSHED STAINLESS STEEL | K4501BSS*LV | 1 | K4500BSS*LV | 1 | K4511BSS*LV | 1 | K4499BSS* | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lacouered brushed steel | K4501LBS*LV | 1 | K4500LBS*LV | 1 | K4511LBS*LV | 1 | K4499LBS* | 1 |
| BRUSHED CHROME | K4501BRC*LV | 1 | K4500BRC*LV | 1 | K4511BRC*LV | 1 | K4499BRC* | 1 |
| POLISHED CHROME | K4501POC*LV | 1 | K4500POC*LV | 1 | K4511POC*LV | 1 | K4499POC* | 1 |
| SATIN GOLD | K4501SAG*LV | 1 | K4500SAG*LV | 1 | K4511SAG*LV | 1 | K4499SAG* | 1 |
| PORCELAIN WHITE | K4501WHIWLV | 1 | K4500WHIWLV | 1 | K4511WHIWLV | 1 | K4499WHI | 1 |
| LUSTROUS IVORY | K4501LIVWLV | 1 | K4500LIVWLV | 1 | K4511LIVWLV | 1 | K4499LIVW | 1 |
| LUSTROUS BLACK | K4501LBKBLV | 1 | K4500LBKBLV | 1 | K4511LBKBLV | 1 | K4499LBKB | 1 |
| POLISHED BRASS | K4501PBR*LV | 1 | K4500PBR*LV | 1 | K4511PBR*LV | 1 | K4499PBR* | 1 |
| textured iron | K4501TIRBLV | 1 | K4500tiRBLV | 1 | K4511TIRBLV | 1 | K4499TIRB | 1 |
| DESERT BRONZE | K4501DBZBLV | 1 | K4500DBZBLV | 1 | K4511DBZBLV | 1 | K4499DBZB | 1 |
| antique brass | K4501ABSBLV | 1 | K4500ABSBLV | 1 | K4511ABSBLV | 1 | K4499ABSB | 1 |
| TEXTURED COPPER | K4501TCOBLV | 1 | K4500TCOBLV | 1 | K4511TCOBLV | 1 | K4499TCOB | 1 |

LEAD TIMES
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These dimmers incorporate the latest in 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.
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
BS EN 60669-2-1.

MK Fluorescent Grid Dimmers are low

* 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


## Accessory Modules

|  | SINGLE TV |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| SINGLE TV | CO-AXIAL |  |  |  |
| CO-AXIAL OUTLET | OUTLET | BUZZER UNIT | BUZZER UNIT | CORD OUTLET |
| NON-ISOLATED | ISOLATED | $200-250 V$ | $21-36 V$ | 16 AMP |



For direct connection to TV or
FM aerial co-axial downlead. NO
to be used in same enclosure as
mains exceeding 50 V .
BS 3041:1977
IEC 169-2:1965
BS 5733:2010 where applicable

IEC 169-2:1965
BS 5733:2010 where applicable.

## 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 $2 \times 2.5 \mathrm{~mm}^{2}$
or $1 \times 4 \mathrm{~mm}^{2}$ solid conductors
The load terminals are suitable
for one $1.5 \mathrm{~mm}^{2}$ flexible cord.
A cord grip is also fitted.
BS 5733:2010

Aspect

Accessory Modules

|  | FUSE UNIT WITH <br> TAMPERPROOF |
| :--- | :--- |
| FUSE UNIT | SCREW |
| 13 AMP | 13 AMP |

## Euro Modular Frontplates

| EURO | EURO | EURO |
| :--- | :--- | :--- |
| 1 MODULE | 2 MODULE | 4 MODULE |
| $25 \times 50 M M$ | $50 \times 50 M M$ | $100 \times 50 M M$ |

FINISHES

| BRUSHED STAINLESS STEEL | K4890WHI 10 <br> K4890BLK 10 |  | $\begin{array}{ll} \text { K4890KOWHI } & 10 \\ \text { K4890KOBLK } & 10 \end{array}$ |  | K24181BSS | 1 | K24182BSS | 1 | K24184BSS | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LACQUERED BRUSHED STEEL |  |  | K24181LBS | 1 | K24182LBS | 1 | K24184LBS | 1 |
| BRUSHED CHROME |  |  | K24181BRC | 1 | K24182BRC | 1 | K24184BRC | 1 |
| POLISHED CHROME |  |  | K24181POC | 1 | K24182POC | 1 | K24184POC | 1 |
| SATIN GOLD |  |  | K24181SAG | 1 | K24182SAG | 1 | K24184SAG | 1 |
| PORCELAIN WHITE |  |  | K24181WHI | 1 | K24182WHI | 1 | K24184WHI | 1 |
| LUSTROUS IVORY |  |  | K24181LIV | 1 | K24182LIV | 1 | K24184LIV | 1 |
| LUSTROUS BLACK |  |  | K24181LBK | 1 | K24182LBK | 1 | K24184LBK | 1 |
| POLISHED BRASS |  |  | K24181PBR | 1 | K24182PBR | 1 | K24184PBR | 1 |
| TEXTURED IRON |  |  | K24181TIR | 1 | K24182TIR | 1 | K24184TIR | 1 |
| DESERT BRONZE |  |  | K24181DBZ | 1 | K24182DBZ | 1 | K24184DBZ | 1 |
| ANTIQUE BRASS |  |  | K24181ABS | 1 | K24182ABS | 1 | K24184ABS | 1 |
| TEXTURED COPPER |  |  | K24181TCO | 1 | K24182TCO | 1 | K24184TCO | 1 |

LEAD TIMES
Please contact our Customer
Services Department on
01268563404

Fuse carrier comes with 13A cartridge fuse link to BS 1362 BS 5733:2010

Key 3405ZIC supplied Fuse carrier comes with 13A cartridge fuse link to BS 1362. BS 5733:2010
MOUNTING BOXES
Suitable for flush boxes to
BS 4662:2000 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 60.3 mm 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
120.6 mm

BS 5733:2010 where applicable. Note: No grid required, modules just clip into place.

## Euro Power Modules

| $:$ | GERMAN | AMERICAN | UK | 250V SHUTTERED |
| :--- | :--- | :--- | :--- | :--- |
| $:$ UK | 2P＋E 250V | 127V SHUTTERED | 250V SHUTTERED | 2 MODULE |
| 250 V | 2 MODULE | 2 MODULE | $50 \times 50 M M$ |  |
| 2 MODULE | SHUTTERED | 2 MODULE（NON UK） | $50 \times 50 M M$（NON UK） | $50 \times 50 M M$ |

MOUNTING BOX
35 mm minimum
46 mm （for extra wiring space）． DIMENSIONS
$50 \times 50 \mathrm{~mm}$
BS 1363 Part 2：1995

MOUNTING BOX
46 mm
DIMENSIONS
$50 \times 50 \mathrm{~mm}$ IEC 60884－1：2006

MOUNTING BOX
35 mm
46 mm （for extra wiring space） DIMENSIONS
$50 \times 50 \mathrm{~mm}$
SASO 2204：2003

## MOUNTING BOX

35 mm minimum
46 mm （for extra wiring space） DIMENSIONS
$50 \times 50 \mathrm{~mm}$ BS 546：1950

MOUNTING BOX
46 mm
DIMENSIONS
$50 \times 50 \mathrm{~mm}$
NF C61－314

| Euro Power | $\vdots$ Euro Datacom |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Modules | Modules |  | RJ45 | RJ45 |
|  |  | RJ45 | CAT 6 | CAT 6 |
| USB CHARGING | RJ11/12 | CAT 6 | SCREENED | ANGLED |
| 2 MODULE | 1 MODULE | 1 MODULE | 1 MODULE | 1 MODULE |
| $50 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ |


| FINISHES |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WHITE | K5837WHI | 1 | K5887WHI | 5 | K5846WHI | 5 | K5846SWHI | 5 | K5864WHI | 5 |
| BLACK | K5837BLK | 1 | K5887BLK | 5 | K5846BLK | 5 | K5846SBLK | 5 |  |  |

LEAD TIMES
Please contact our Customer Services Department on 01268563404

USB charging sockets, each capable of supporting 2A charge (total of 2A) K5837 MOUNTING BOX 35 mm minimum 46 mm for extra wiring space IEC 60950-1 IEC 60950-1

Suitable for both RJ11 and
RJ12 jacks
RJ11; 4 wire
RJ12; 6 wire
MOUNTING BOXES
Minimum box depth 35 mm
FCC68
EN 41003

Cat 6 performance.
Suitable for both 568A and 568 B wiring schemes.
mounting boxes Minimum Box Depth 35 mm


EN 50173
EN 41003

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

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

| RJ45 |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| CAT 5e | RJ45 | TELEPHONE | TELEPHONE |  |
| ANGLED | CAT 5e | MASTER | SECONDARY | BNC 50』 |
| 1 MODULE | 1 MODULE | 1 MODULE | 1 MODULE | 1 MODULE |
| $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ |


|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K5844WHI 5 | K5845WHI 5 | K5820WHI | 5 | K5821WHI | 5 | K5801WHI |
|  | K5845BLK 5 | K5820BLK | 5 | K5821BLK | 5 |  |
| Enhanced Cat 5 performance． <br> Suitable for both 568A and 568B wiring schemes． <br> MOUNTING BOXES <br> Minimum box depth <br> 35 mm standard <br> ISO／IEC 11801 <br> EN 50173 <br> TIA 568 <br> EN 41003 | Enhanced Cat 5 performance Suitable for both 568A and 568B wiring schemes． <br> MOUNTING BOXES <br> Minimum box depth 35 mm standard <br> ISO／IEC 11801 <br> EN 50173 <br> TIA 568 <br> EN 41003 | mounting boXes <br> Minimum depth 35 mm BS 6312－2 |  | mounting boxes <br> Minimum depth 35 mm <br> BS 6312－2 |  | 50 Ohm crimp connector suitable for use with RG58，URM43， URM76 and Beldon 9907 type Co－axial cables MOUNTING BOXES <br> Minimum box depth 35 mm |

## Aspect

## Euro Multimedia Modules

|  |  | SINGLE F-TYPE | TWIN OUTLET |
| :--- | :--- | :--- | :--- |
| SINGLE OUTLET | SINGLE OUTLET | SATELLITE | TV/FM DIPLEXER |
| (IEC MALE) | (IEC FEMALE) | SOCKET | 2 MODULE |
| 1 MODULE | 1 MODULE | 1 MODULE | $50 \times 50 M M$ |
| $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ | (IRELAND ONLY) |


| FINISHES |  |  |  |  |  |  |  |  |
| :--- | :--- | :---: | :--- | :---: | :--- | :---: | :--- | :--- |
| WHITE | K5850WHI | 5 | K5851WHI | 5 | K5855WHI | 5 | K5852WHI | 5 |
| BLACK | K5850BLK | 5 | K5851BLK | 5 | K5855BLK | 5 | K5852BLK | 5 |

LEAD TIMES
Please contact our Customer Services Department on 01268563404

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 47 mm
DIMENSIONS
ONE MODULE $25 \times 50 \mathrm{~mm}$
TWO MODULE $50 \times 50 \mathrm{~mm}$
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 950 MHz
Sat: DC -1.75 GHz
Diplexer TV: $5-65 \mathrm{MHz}$
$470-862 \mathrm{MHz}$
$87.5-108 \mathrm{MHZ}$
TV/FM/DAB FOR DIGITAL RADIO PERFORMANCE
Diplexer
$70-862 \mathrm{MHz}$ 470-862MHz
$87.5-230 \mathrm{MHz}$

[^13]

to a single co－axial aerial lead with combined TV and FM signals． PERFORMANCE
Single TV：DC． 950 MHz

|  | Sat： | DC－ |
| :--- | :--- | :--- |
| 1.75 GHz <br> Diplexer | TV： | $5-65 \mathrm{MHz}$ <br> $470-$ |
| 862 MHz |  | $87.5-108$ |

MHz $\quad$ 8M： 0 －108

TV／FM／DAB FOR DIGITAL RADIO PERFORMANCE
Diplexer TV：$\quad 5-65 \mathrm{MHz}$
862 MHz FM／DAB． 87.5

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 | TV／FM／SAT PRODUCTS |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| SINGLE OUTLETS | OUTLET | DIPLEXER | OUTLET | TRIPLEXER |
| TV／FM IEC MALE OR FEMALE DC－950MHz | TV | $\begin{aligned} & 5-65 \mathrm{MHz} \\ & 470-862 \mathrm{MHz} \end{aligned}$ | TV | $\begin{aligned} & 5-65 \mathrm{MHZ} \\ & 470-862 \mathrm{MHz} \end{aligned}$ |
| SAT F－TYPE <br> DC－1．75GHz | FM／DAB SAT | $\begin{aligned} & 87.5-108 \mathrm{MHz} \\ & \mathrm{~N} / \mathrm{A} \end{aligned}$ |  | $\begin{aligned} & 87.5-108 \mathrm{MHz} \\ & 950-2300 \mathrm{MHz} \end{aligned}$ |
|  | TV／FM／DAB／SAT PRODUCTS FOR DIGITAL RADIO |  |  |  |
|  | $\begin{aligned} & \text { OUTLET } \\ & \text { TV } \end{aligned}$ | DIPLEXER $5-65 \mathrm{MHz}$ $470-862 \mathrm{MHz}$ | $\begin{aligned} & \text { OUTLET } \\ & \text { TV } \end{aligned}$ | TRIPLEXER $5-65 \mathrm{MHz}$ $470-862 \mathrm{MHz}$ |
|  | FM／DAB <br> SAT OR SAT 1 <br> SAT2 | $\begin{aligned} & 87.5-230 \mathrm{MHz} \\ & \mathrm{~N} / \mathrm{A} \end{aligned}$ | FM SAT1 SAT2 | $\begin{aligned} & 87.5-230 \mathrm{MHz} \\ & 950-2300 \mathrm{MHz} \\ & 5-2300 \mathrm{MHz} \end{aligned}$ |

K5807 Female HDMI Outlet is HDM 1．1．1．2．1．3 and 1.4 b compatible， HDCP compliant． DATA RATE Up to 2．25 Gbps SCAN
Up to 1080p／1920×1200 INPUT CONNECTOR $1 \times$ HDMI Female（Type A） OUTPUT CONNECTOR $1 \times$ HDMI Female（Type A） Supports high resolution input： PC：VGA，SVGA， SXVGA（1280x1024）and UXGA （1600x1200，1920×1200）
HDTV：480p，720p，1080i and 1080p HDMI input cable should be no larger than 20 m ．
DIMENSIONS
$50 \times 50 \times 20 \mathrm{~mm}$

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

## Aspect

Euro Blank
Modules

| Modules |  | AUDIO BINDING | RCA TO SCREW |
| :--- | :--- | :--- | :--- |
|  |  |  | POST FOR SINGLE | TERMINATION SET

## FINISHES

| BRUSHED STAINLESS STEEL | $\begin{array}{ll} \text { K180WHI } & 10 \\ \text { K180BLK } & 10 \end{array}$ | K188WHI 10 <br> K188BLK 10 | K186WHI 10 <br> K186BLK 10 | K5805WHI K5805BLK | $\begin{aligned} & 5 \\ & 5 \end{aligned}$ | K5806WHI K5806BLK |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LACQUERED BRUSHED STEEL |  |  |  |  |  |  |  |
| BRUSHED CHROME |  |  |  |  |  |  |  |
| POLISHED CHROME |  |  |  |  |  |  |  |
| SATIN GOLD |  |  |  |  |  |  |  |
| PORCELAIN WHITE |  |  |  |  |  |  |  |
| LUSTROUS IVORY |  |  |  |  |  |  | 5 |
| LUSTROUS BLACK |  |  |  |  |  |  |  |
| POLISHED BRASS |  |  |  |  |  |  |  |
| TEXTURED IRON |  |  |  |  |  |  |  |
| DESERT BRONZE |  |  |  |  |  |  |  |
| ANTIQUE BRASS |  |  |  |  |  |  |  |
| TEXTURED COPPER |  |  |  |  |  |  |  |
| LeAd times <br> Please contact our Customer Services Department on | BS 5733:2010 where applicable | BS 5733:2010 where applicable | BS 5733:2010 where applicable | DIMENSIONS <br> $50 \times 25 \times 28 \mathrm{~mm}$ |  | DIMENSIONS $50 \times 25 \text { x 28mm }$ |  |

01268563404

| LJU6C Datacom Frontplate | LJU6C |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | datacom |  |  |  |
|  | modules |  | RJ45 |  |
| 1 GANG |  |  | CAT 6 | RJ45 |
| 2 MODULE | RJ11/12 | RJ45 CAT 6 | SCREENED | CAT 5 e |
| $22 \times 37 \mathrm{MM}$ | 1 MODULE | 1 MODULE | 1 MODULE | 1 MODULE |


| K14172BSS* | 1 | K5787WHI 5 |  | $\begin{array}{ll} \text { K5746WHI } & 5 \\ \text { K5746BLK } & 5 \end{array}$ |  | $\begin{array}{ll} \text { K5746SWHI } & 5 \\ \text { K5746SBLK } & 5 \end{array}$ |  | K5745WHI K5745BLK |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K14172LBS* | 1 |  |  |  |  |  |  |
| K14172BRC* | 1 |  |  |  |  |  |  |
| K14172POC* | 1 |  |  |  |  |  |  |
| K14172SAG* | 1 |  |  |  |  |  |  |
| K14172WHIW | 1 |  |  |  |  |  |  |
| K14172LIVW | 1 |  |  | 5 |  |  |  |
| K14172LBK | 1 |  |  |  |  |  |  |
| K14172PBRB | 1 |  |  |  |  |  |  |
| K14172TIRB | 1 |  |  |  |  |  |  |
| K14172DBZB | 1 |  |  |  |  |  |  |
| K14172ABSB | 1 |  |  |  |  |  |  |
| K14172TCOB | 1 |  |  |  |  |  |  |

MOUNTING BOXES
Suitable for flush boxes to BS 4662:1970 and surface boxes to BS 5733:2010 for minimum box do module FIXING CENTRES 1 gang: 60.3 mm
2 gang: 120.6 mm
BS 5733:2010 where applicable NOTE
No grid required, modules just clip into place

Suitable for both RJ11 and RJ12 jacks.
RJ11: 4 wire
MOUNTING BOXES
Minimum box depth 35 mm
FCC68
EN41003
at 6 performance.
Suitable for both 568A and 568B
wiring schemes.
MOUNTING BOXES
Minimum Box Depth 35 mm
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
SO/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 25 mm Minimum box d
ISO/IEC 1180
EN 50173
TIA 568
EN 41003 Black inserts.


FINISHES

| BRUSHED STAINLESS STEEL | K170WHI 10 <br> K170BLK 10 |  | K24330BSS | 1 | K24329BSS | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LACQUERED BRUSHED STEEL |  |  | K24330LBS | 1 | K24329LBS | 1 |
| BRUSHED CHROME |  |  | K24330BRC | 1 | K24329BRC | 1 |
| POLISHED CHROME |  |  | K24330POC | 1 | K24329POC | 1 |
| SATIN GOLD |  |  | K24330SAG | 1 | K24329SAG | 1 |
| PORCELAIN WHITE |  |  | K24330WHI | 1 | K24329WHI | 1 |
| LUSTROUS IVORY |  |  | K24330LIV | 1 | K24329LIV | 1 |
| LUSTROUS BLACK |  |  | K24330LBK | 1 | K24329LBK | 1 |
| POLISHED BRASS |  |  | K24330PBR | 1 | K24329PBR | 1 |
| TEXTURED IRON |  |  | K24330TIR | 1 | K24329TIR | 1 |
| DESERT BRONZE |  |  | K24330DBZ | 1 | K24329DBZ | 1 |
| ANTIQUE BRASS |  |  | K24330ABS | 1 | K24329ABS | 1 |
| TEXTURED COPPER |  |  | K24330TCO | 1 | K24329TCO | 1 |

## LEAD TIMES

Please contact our Customer
Services Department on
01268563404

MOUNTING BOXES
BS 5733:2010

MOUNTING BOXES
FLUSH
866ZIC
DIMENSIONS:
$86 \times 86 \mathrm{~mm}$ FIXING CENTRES
60.3 mm

BS 5733:2010

MOUNTING BOXES
FLUSH
866ZIC
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 5733:2010


## CASE STUDY

## ST GEORGE BATTERSEA REACH DEVELOPMENT, LONDON

The new MK Elements range was specified extensively at the St George Battersea Reach development in London. This ongoing residential development from the Berkeley Group, is situated in the bustling vicinity of England's capital and offers a wide range of high end
 apartments.

The Client, St George favoured the glass effect finish and touch controlled dimmers for their elegant styling, which perfectly complements the superior character of such a prestigious development.


## Edge ${ }^{\text {TM }}$

## RANGE INTRODUCTION

Edge ${ }^{T M}$ 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 1.5 mm . Edge $^{\text {rm }}$ is the choice in modern, contemporary or traditional interiors where style and detail are the desired effect.

With Edge ${ }^{\text {Tm }}$ comes unrivalled safety. Utilising MK's 3-pin operated safety shutter, that prevents misuse and unsafe access to live circuitry, Edge ${ }^{\text {tm }}$ offers the user the peace of mind and comfort that they have the safest range of wiring devices available installed in their surroundings.

## HOW TO SPECIFY

A metal flatplate flush mounting range of wiring accessories, to be made in the UK. Frontplate to have a maximum 1.5 mm profile and subtle 5 mm radius rounded corners. Fixing screws to be flathead design, flush fitting \& coloured to match the frontplate. Cable connections must be upward facing with easy to identify white markings on a dark background, grouped in a straight line with captive terminal screws for ease of installation. All sockets to have a 3 pin operated shutter safety mechanism and double pole switching, with the contacts designed such that the neutral makes before and breaks after the live pole for improved safety. Switches to be large and concave with a minimum 3 mm contact gap with a positive 'click' to denote successful operation.

## FEATURES \& 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 ${ }^{\text {tm }}$ range has a wiring device to suit.

## 13 STANDARD HIGH QUALITY FINISHES WITH A MADE-TO-ORDER SERVICE

Allows designers the flexibility to provide the finish of their choice.

In addition to the wide choice of standard fifnishes, a made-to-order service gives designers the ability to match almost any RAL colour required.


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 ${ }^{\text {tw }} 13$ A Key Operated 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 a neat solution to all power，data，TV and satellite outlet requirements．


## Switchsocket Outlets

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  | 1 GANG DP | NON STANDARD | WITH 2 X USB |  |
| 1 GANG DP | WITH NEON | 1 GANG DP | CHARGING PORTS | 2 GANG DP |
| DUAL EARTH | DUAL EARTH | CLEAN EARTH | DUAL EARTH | DUAL EARTH |
| 13 AMP | 13 AMP | 13 AMP | 13 AMP | 13 AMP |

FINISHES

| BRUSHED STAINLESS STEEL | K14357BSS* | 1 | K14657BSS* | 1 | K14268BSS* | 1 | K14343BSS* | 1 | K14347BSS* | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LACQUERED BRUSHED STEEL | K14357LBS* | 1 | K14657LBS* | 1 | K14268LBS* | 1 | K14343LBS* | 1 | K14347LBS* | 1 |
| BRUSHED CHROME | K14357BRC* | 1 | K14657BRC* | 1 | K14268BRC* | 1 | K14343BRC* | 1 | K14347BRC* | 1 |
| POLISHED CHROME | K14357POC* | 1 | K14657POC* | 1 | K14268POC* | 1 | K14343POC* | 1 | K14347POC* | 1 |
| SATIN GOLD | K14357SAG* | 1 | K14657SAG* | 1 | K14268SAG* | 1 | K14343SAG* | 1 | K14347SAG* | 1 |
| PORCELAIN WHITE | K14357WHIW | 1 | K14657WHIW | 1 | K14268WHIW | 1 | K14343WHIW | 1 | K14347WHIW | 1 |
| LUSTROUS IVORY | K14357LIVW | 1 | K14657LIVW | 1 | K14268LIVW | 1 | K14343LIVW | 1 | K14347LIVW | 1 |
| LUSTROUS BLACK | K14357LBKB | 1 | K14657LBKB | 1 | K14268LBKB | 1 | K14343LBKB | 1 | K14347LBKB | 1 |
| POLISHED BRASS | K14357PBR* | 1 | K14657PBR* | 1 | K14268PBR* | 1 | K14343PBR* | 1 | K14347PBR* | 1 |
| TEXTURED IRON | K14357TIRB | 1 | K14657TIRB | 1 | K14268TIRB | 1 | K14343TIRB | 1 | K14347TIRB | 1 |
| DESERT BRONZE | K14357DBZB | 1 | K14657DBZB | 1 | K14268DBZB | 1 | K14343DBZB | 1 | K14347DBZB | 1 |
| ANTIQUE BRASS | K14357ABSB | 1 | K14657ABSB | 1 | K14268ABSB | 1 | K14343ABSB | 1 | K14347ABSB | 1 |
| TEXTURED COPPER | K14357TCOB | 1 | K14657TCOB | 1 | K14268TCOB | 1 | K14343TCOB | 1 | K14347TCOB | 1 |

LEAD TIMES
Please contact our Customer Services Department on
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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, $B=B l a c k ~ I n s e r t, ~ E . g . ~ K x x x x W H I W ~=~ P o r c e l a i n ~ W h i t e ~ f i n i s h ~ w i t h ~ W h i t e ~ i n s e r t s ~$


| USB charging sockets, each | MOUNTING BOXES |
| :--- | :--- |
| capabbe of supporting 2A | FLUSH 35m |
| charge (total of 2A) | 886ZIC |
| Pattress available for use | FLUSH 47mm |
| where existing back box is too | $878 Z 1 \mathrm{~m}$ (for extra wiring |
| shallow, see page 34 | space) |
|  | DIMENSIONS |
| MOUNTING BOXES | $86 \times 146 \mathrm{~mm}$ |
| FLUSH 35 mm | FIXING CENTRES |
| 886ZIC | 120.6mm |
| FLUSH 47mm |  |
| 878ZIC (for extra wiring space) | BS 1363-2:1995 |
| DIMENSIONS |  |
| 86 x 146mm |  |
| FIXING CENTRES |  |
| 120.6mm |  |
| BS $5733: 2010$ |  |

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.

|  | 2 GANG DP |
| :--- | :--- |
| 2 GANG DP | WITH NEON |
| CLEAN EARTH | DUAL EARTH |
| 13 AMP | 13 AMP |


| NON STANDARD |  |
| :--- | :--- |
| 2 GANG DP | 1 GANG DP |
| CLEAN EARTH | ROUND PIN |
| 13 AMP | 15 AMP |

1 GANG DP
5 AMP

＊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，$B=B$ Black Insert，E．g．KxxxxWHIW $=$ Porcelain White finish with White inserts

## mounting boxes <br> FLUSH 35 mm

886Z1C
FLUSH 47 mm
8782IC（for extra wiring space） dimensions $86 \times 146 \mathrm{~mm}$ FIXING CENTRES
120.6 mm

BS 1363－2：1995

## mOUNTING BOXES

FLUSH 35 mm
886Z1C
FLUSH 47 mm
878ZIC（for extra wiring space）
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 1363－2：1995
Neon is only available in white or black
insulated rocker．

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.

## mounting boxes

FLUSH 35mm
886ZIC
FLUSH 47 mm
8782IC（for extra wiring space） DIMENSIONS
$86 \times 146 \mathrm{~mm}$ FIXING CENTRES
120.6 mm

BS 1363－2：1995（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 240 ．

## mounting boxes

FLUSH 35 mm
866ZIC
FLUSH 46 mm
877ZIC（for extra wiring space）
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 546：1950

MOUNTING BOXES
FLUSH 35 mm
866ZIC
FLUSH 46 mm
877ZIC（for extra wiring space）
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 546：1950

[^14]Multimedia Plates

| 4 GANG DP DUAL EARTH | 2 GANG DP DUAL EARTH | 4 GANG DP DUAL EARTH |
| :--- | :--- | :--- |
| SWITCHSOCKET, | SWITCHSOCKET, | SWITCHSOCKET, |
| EURO 4 MODULE | EURO 6 MODULE | EURO 8 MODULE |
| $100 \times 50 M M$ | $50 \times 50 M M(X 3)$ | $100 \times 50 M M$ (X2) |
| 13 AMP | 13 AMP | 13 AMP |

FINISHES

| BRUSHED STAINLESS STEEL | K14200BSS* | 1 | K14205BSS* | 1 | K14100BSS* | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LacQuered brushed steel | K14200LBS* | 1 | K14205LBS* | 1 | K14100LBS* | 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
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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.



## MOUNTING BOXES

FLUSH 35 mm
K14201
FLUSH 47 mm
K14202
DIMENSIONS
$86 \times 442.8 \mathrm{~mm}$
BS 1363-2:1995

> MOUNTING BOXES
> FLUSH 35mm
> FLUSH 47 mm
> K14207
> DIMENSIONS
> $86 \times 407.9 \mathrm{~mm}$
> BS 1363-2:1995

## MOUNTING BOXES

FLUSH 35 mm
K14101
FLUSH 47mm
K14102
DIMENSIONS
$173 \times 293.6 \mathrm{~mm}$
$173 \times 293.6 \mathrm{~mm}$

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.

## Multimedia Plates

| 2 GANG DP DUAL EARTH | 2 GANG DP DUAL EARTH | 2 GANG DP DUAL EARTH |
| :--- | :--- | :--- |
| SWITCHSOCKET， | SWITCHSOCKET， | SWITCHSOCKET， |
| EURO 2 MODULE | EURO 2 MODULE | EURO 4 MODULE |
| $50 \times 50 M M$（RIGHT SIDE） | $50 \times 50 M M$（LEFT SIDE） | $50 \times 50 M M$（X2） |
| 13 AMP | 13 AMP | 13 AMP |

EURO 8 MODULE EURO 12 MODULE 100 X 50MM（X2）$\quad 150$ X 50MM（X2）

＊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

867ZIC
dImensions
$233.3 \times 86 \mathrm{~mm}$
BS 1363－2：1995

## mounting boxes

867ZIC
dimensions
$233.3 \times 86 \mathrm{~mm}$
BS 1363－2：1995

## MOUNTING BOXES

868ZIC
DIMENSIONS
$320.6 \times 86 \mathrm{~mm}$
BS 1363－2：1995
mounting boxes
858ZIC
DIMENSIONS
$146.4 \times 173.3 \mathrm{~mm}$
BS 5733：2010
mOUNTING BOXES
869Z1C
DIMENSIONS
$206.3 \times 173.3 \mathrm{~mm}$
$E d g e^{T M}$

## Socket Outlets

1 GANG
2 GANG
DUAL EARTH
13 AMP
DUAL EARTH
13 AMP

$$
1 \text { GANG }
$$

1 GANG
5 AMP

| FINISHES |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BRUSHED STAINLESS STEEL | K14780BSS* | 1 | K14781BSS* | 1 | K14380BSS* | 1 | K14381BSS* | 1 |
| Lacauered brushed steel | K14780LBS* | 1 | K14781LBS* | 1 | K14380LBS* | 1 | K14381LBS* | 1 |
| BRUSHED CHROME | K14780BRC* | 1 | K14781BRC* | 1 | K14380BRC* | 1 | K14381BRC* | 1 |
| POLISHED CHROME | K14780POC* | 1 | K14781POC* | 1 | K14380POC* | 1 | K14381P0C* | 1 |
| SATIN GOLD | K14780SAG* | 1 | K14781SAG* | 1 | K14380SAG* | 1 | K14381SAG* | 1 |
| Porcelain white | K14780WHIW | 1 | K14781WHIW | 1 | K14380WHIW | 1 | K14381WHIW | 1 |
| LUSTROUS IVORY | K14780LIVW | 1 | K14781LIVW | 1 | K14380LIVW | 1 | K14381LIVW | 1 |
| LUSTROUS BLACK | K14780LBKB | 1 | K14781LBKB | 1 | K14380LBKB | 1 | K14381LBKB | 1 |
| POLISHED BRASS | K14780PBR* | 1 | K14781PBR* | 1 | K14380PBR* | 1 | K14381PBR* | 1 |
| TEXTURED IRON | K14780TIRB | 1 | K14781TIRB | 1 | K14380TIRB | 1 | K14381TIRB | 1 |
| desert bronze | K14780DBZB | 1 | K14781DBZB | 1 | K14380DBZB | 1 | K14381DBZB | 1 |
| ANTIQUE BRASS | K14780ABSB | 1 | K14781ABSB | 1 | K14380ABSB | 1 | K14381ABSB | 1 |
| TEXTURED COPPER | K14780TCOB | 1 | K14781TCOB | 1 | K14380TCOB | 1 | K14381TCOB | 1 |

## LEAD TIMES

Please contact our Customer Services Department on
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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 35mm
866ZIC
FLUSH 46mm
877ZIC (for extra wiring space)
DIMENSIONS
86 x 86mm
FIXING CENTRES
60.3mm
BS 1363-2:1995
```

MOUNTING BOXES
FLUSH 35 mm
886ZIC
FLUSH 47 mm
878ZIC (for extra wiring space)
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 1363-2:1995

MOUNTING BOXES
FLUSH 25 mm
861ZIC
FLUSH 35 mm
866ZIC (for extra wiring space)
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

Earth pin linear operated shutter
BS 546:1950

MOUNTING BOXES
FLUSH 35 mm
866ZIC
FLUSH 46 mm
877ZIC (for extra wiring space)
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

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.

Floor Mounted
Euro Frames

| 1 GANG | 2 GANG |
| :--- | :--- |
| EURO 2 MODULE | EURO 4 MODULE |
| $50 \times 50 \mathrm{MM}$ | $100 \times 50 \mathrm{MM}$ |

$50 \times 50 \mathrm{MM}$
100 X 50MM



MOUNTING BOXES
FLUSH 2 GANG
886ZIC
DIMENSIONS
$102 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

Boxes must have a minimum
depth of 35 mm
BS 5733:2010

## Key Operated Socket Outlet and Switch

## 1 GANG DP <br> DUAL EARTH 13 AMP

1 GANG
DP SWITCH 20 AMP

1 GANG DP
FIRE ALARM
ISOLATOR SWITCH
20 AMP

## Shaver/Toothbrush <br> Supply Units

DUAL VOLTAGE OUTPUT 115/230V INPUT 220/240V 50/60HZ

120/130 V INPUT
(NON UK)

FINISHES

| BRUSHED STAINLESS STEEL | K14355BSS* | 1 | K14378BSS | 1 | K14379BSS | 1 | K14709BSS* | 1 | K14710BSS* | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lacauered brushed steel | K14355LBS* | 1 |  |  |  |  | K14709LBS* | 1 | K14710LBS* | 1 |
| BRUSHED CHROME | K14355BRC* | 1 |  |  |  |  | K14709BRC* | 1 | K14710BRC* | 1 |
| POLISHED CHROME | K14355POC* | 1 |  |  |  |  | K14709POC* | 1 | K14710POC* | 1 |
| SATIN GOLD | K14355SAG* | 1 |  |  |  |  | K14709SAG* | 1 | K14710SAG* | 1 |
| PORCELAIN WHITE | K14355WHIW | 1 |  |  |  |  | K14709WHIW | 1 | K14710WHIW | 1 |
| LUSTROUS IVORY | K14355LIVW | 1 |  |  |  |  | K14709LIVW | 1 | K14710LIVW | 1 |
| LUSTROUS BLACK | K14355LBKB | 1 |  |  |  |  | K14709LBKB | 1 | K14710LBKB | 1 |
| POLISHED BRASS | K14355PBR* | 1 |  |  |  |  | K14709PBR* | 1 | K14710PBR* | 1 |
| TEXTURED IRON | K14355TIRB | 1 |  |  |  |  | K14709TIRB | 1 | K14710TIRB | 1 |
| DESERT BRONZE | K14355DBZB | 1 |  |  |  |  | K14709DBZB | 1 | K14710DBZB | 1 |
| ANTIQUE BRASS | K14355ABSB | 1 |  |  |  |  | K14709ABSB | 1 | K14710ABSB | 1 |
| TEXTURED COPPER | K14355TCOB | 1 |  |  |  |  | K14709TCOB | 1 | K14710TCOB | 1 |

LEAD TIMES
Please contact our Custome Services Department on 01268563404
*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 $\mathrm{W}=$ White Insert, B = Black Insert, E.g. KxxxxWHIW = Porcelain White finish with White inserts.

## mounting boxes

FLUSH 47 mm 87821C dimensions $86 \times 146 \mathrm{~mm}$ FIXING CENTRES
120.6 mm

BS 1363-2:1995

MOUNTING BOXES FLUSH 46 mm 877ZIC DIMENSIONS $86 \times 86 \mathrm{~mm}$ FIXING CENTRES
60.3 mm BS EN 60669-1:1999
mounting box
FLUSH 46 mm 877Z1C dimensions
$86 \times 86 \mathrm{~mm}$ FIXING CENTRES
60.3 mm

BS 60669-2-4 2005
The isolator has primarily been introduced for use in alarm systems that must comply with
mounting boxes
FLUSH
878710
This design incorporates a double wound isolating transformer rated 20 VA 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
$146 \times 86 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS EN 61558-2-5:1998

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.

## Connection Units

Switched

DP
WITH NEON＊＊
\＆FLEX OUTLET
13 AMP

| K14941BSS＊ | 1 | K14961BSS＊ | 1 | K14931BSS＊ | 1 | K14971BSS＊ | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K14941LBS＊ | 1 | K14961LBS＊ | 1 | K14931LBS＊ | 1 | K14971LBS＊ | 1 |
| K14941BRC＊ | 1 | K14961BRC＊ | 1 | K14931BRC＊ | 1 | K14971BRC＊ | 1 |
| K14941POC＊ | 1 | K14961POC＊ | 1 | K14931POC＊ | 1 | K14971POC＊ | 1 |
| K14941SAG＊ | 1 | K14961SAG＊ | 1 | K14931SAG＊ | 1 | K14971SAG＊ | 1 |
| K14941WHIW | 1 | K14961WHIW | 1 | K14931WHIW | 1 | K14971WHIW | 1 |
| K14941LIVW | 1 | K14961LIVW | 1 | K14931LIVW | 1 | K14971LIVW | 1 |
| K14941LBKB | 1 | K14961LBKB | 1 | K14931LBKB | 1 | K14971LBKB | 1 |
| K14941PBR＊ | 1 | K14961PBR＊ | 1 | K14931PBR＊ | 1 | K14971PBR＊ | 1 |
| K14941TIRB | 1 | K14961TIRB | 1 | K14931TIRB | 1 | K14971TIRB | 1 |
| K14941DBZB | 1 | K14961DBZB | 1 | K14931DBZB | 1 | K14971DBZB | 1 |
| K14941ABSB | 1 | K14961ABSB | 1 | K14931ABSB | 1 | K14971ABSB | 1 |
| K14941TCOB | 1 | K14961TCOB | 1 | K14931TCOB | 1 | K14971TCOB | 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 35 mm
866ZIC
FLUSH 46 mm
877ZIC（for extra wiring space）
dIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363－4：1995

MOUNTING BOXES
FLUSH 35 mm
866ZIC
FLUSH 46 mm
877ZIC（for extra wiring space）
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363－4：1995
＊＊NOTE
Neon is only available in white or black
insulated rocker．

MOUNTING BOXES
FLUSH 35 mm
866ZIC
FLUSH 46 mm
877ZIC（for extra wiring space）
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363－4：1995
mounting boxes
FLUSH 35 mm
866ZIC
FLUSH 46 mm
877ZIC（for extra wiring space）
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363－4：1995
＊＊NOTE
Neon is only available in white or black
insulated rocker．
$E d g e^{T M}$

## Connection Units

Unswitched


LEAD TIMES
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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 $\mathrm{W}=$ White Insert, $\mathrm{B}=$ Black Insert, E.g. KxxxxWHIW $=$ Porcelain White finish with White inserts.
MOUNTING BOXES
FLUSH 35mm
866ZIC
FLUSH 46 mm
877ZIC (for extra wiring space)
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3mm
BS 1363-4:1995
MOUNTING BOXES
FLUSH 35 mm
866ZIC
FLUSH 46 mm
877ZZIC (for extra wiring space)
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3mm
BS 1363-4:1995


## MOUNTING BOXES

FLUSH 35 mm
FLUSH 46 mm
877ZIC (for extra wiring space) DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363-4:1995

[^15]
## Switches

|  |  |  | 2 GANG SP |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  | 2 GANG SP | 2 WAY |
| 1 GANG SP | 2 GANG SP | 3 GANG SP | 2 WAY | WITH LARGE |
| 2 WAY | 2 WAY | 2 WAY | WITH LARGE ROCKER | ROCKERS |
| 20 AMP | 20 AMP | 10 AMP | 20 AMP | 20 AMP |

$E d g e^{T M}$

High Current Switches

1 GANG DP
WITH NEON 32 AMP

1 GANG DP
WITH NEON
50 AMP

Cooker
Control Unit DP SWITCH AND 13 AMP
SWITCHSOCKET
OUTLET WITH NEONS :
45 AMP

3 Pole Fan Isolator

10 AMP

Triple Pole \& Neutral Switch

32 AMP

## FINISHES

| brushed Stainless steel | K14305BSS* | 1 | K14336BSS* | 1 | K14361BSS* | 1 | K14859BSS* | 1 | K14114BSS* | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LacQuered brushed steel | K14305LBS* | 1 |  |  | K14361LBS* | 1 | K14859LBS* | 1 | K14114LBS* | 1 |
| BRUSHED CHROME | K14305BRC* | 1 |  |  | K14361BRC* | 1 | K14859BRC* | 1 | K14114BRC* | 1 |
| POLISHED CHROME | K14305POC* | 1 |  |  | K14361POC* | 1 | K14859POC* | 1 | K14114POC* | 1 |
| SATIN GOLD | K14305SAG* | 1 |  |  | K14361SAG* | 1 | K14859SAG* | 1 | K14114SAG* | 1 |
| PORCELAIN WHITE | K14305WHIW | 1 |  |  | K14361WHIW | 1 | K14859WHIW | 1 | K14114WHIW | 1 |
| LuStRous ivory | K14305LIVW | 1 |  |  | K14361LIVW | 1 | K14859LIVW | 1 | K14114LIVW | 1 |
| LuStRous black | K14305LBKB | 1 |  |  | K14361LBKB | 1 | K14859LBKB | 1 | K14114LBKB | 1 |
| POLISHED BRASS | K14305PBR* | 1 |  |  | K14361PBR* | 1 | K14859PBR* | 1 | K14114PBR* | 1 |
| TEXTURED IRON | K14305TIRB | 1 |  |  | K14361TIRB | 1 | K14859TIRB | 1 | K14114TIRB | 1 |
| desert bronze | K14305DBZB | 1 |  |  | K14361DBZB | 1 | K14859DBZB | 1 | K14114DBZB | 1 |
| antique brass | K14305ABSB | 1 |  |  | K14361ABSB | 1 | K14859ABSB | 1 | K14114ABSB | 1 |
| textured copper | K14305TCOB | 1 |  |  | K14361TCOB | 1 | K14859TCOB | 1 | K14114TCOB | 1 |

LEAD TIMES

Please contact our Custome services Department on
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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 $\mathrm{W}=$ White Insert, $\mathrm{B}=$ Black Insert, E.g. KxxxxWHIW $=$ Porcelain White finish with White inserts

MOUNTING BOXES
FLUSH 35 mm
866ZIC
877ZIC (for extra wiring space) DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669-1:1999

## MOUNTING BOXES

 FLUSH 47mm 878ZICDIMENSIONS
$86 \times 86 \mathrm{~mm}$ FIXING CENTRES FIXING
60.3 mm
BS EN 60669-1:1999

## MOUNTING BOXES

FLUSH 47 mm
878ZIC
45A DP Main Switch and 13A
Switchsocket outlet (Up to
$10 \mathrm{~mm}^{2}$ conductor).
Rotary operated shutter DIMENSIONS
$86 \times 146 \mathrm{~mm}$
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 4177:1992
To allow adequate wiring
space, mounting box must be
installed 6 mm to 10 mm sub
flush to the wall surface.

## MOUNTING BOXES

FLUSH 46 mm
877ZIC
DIMENSIONS
$86 \times 186 \mathrm{~mm}$ FIXING CENTRES FIXING C
60.3mm
BS EN 60947-3:1999

To allow adequate wiring
space, mounting box must be
installed 6 mm to 10 mm sub
flush to the wall surface.

MOUNTING BOXES
FLUSH
5268ALM (Mounting box
should be mounted 6 to 10 mm
sub-flush to the wall)
DIMENSIONS
TERMINAL CAPACITY
$16 \mathrm{~mm}^{2}$ conductors
$16 \mathrm{~mm}^{2}$ conductors
BS EN 60947-3:1999

## Intelligent Dimmers

|  | 2 WAY DOUBLE |  | 2 WAY DOUBLE |
| :--- | :--- | :--- | :--- |
| 2 WAY SINGLE | 230V A．C． $50 H Z$ | 2 WAY SINGLE | $230 V$ A．C． $50 H Z$ |
| 230V A．C． $50 H Z$ | 60W／VA MIN． | 230V A．C． 50 HZ | 40 W／VA MIN． |
| 60W／VA MIN． | 450W／360VA MAX． | 40W／VA MIN． | 300 W／240VA MAX． |
| 500W／400VA MAX． | FOR EACH DIMMER | 300W／240VA MAX． | FOR EACH DIMMER |


| K14301BSS | 1 | K14302BSS | 1 | K14521BSS | 1 | K14522BSS | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K14301LBS | 1 | K14302LBS | 1 | K14521LBS | 1 | K14522LBS | 1 |
| K14301BRC | 1 | K14302BRC | 1 | K14521BRC | 1 | K14522BRC | 1 |
| K14301POC | 1 | K14302POC | 1 | K14521POC | 1 | K14522POC | 1 |
| K14301SAG | 1 | K14302SAG | 1 | K14521SAG | 1 | K14522SAG | 1 |
| K14301WHI | 1 | K14302WHI | 1 | K14521WHI | 1 | K14522WHI | 1 |
| K14301LIV | 1 | K14302LIV | 1 | K14521LIV | 1 | K14522LIV | 1 |
| K14301LBK | 1 | K14302LBK | 1 | K14521LBK | 1 | K14522LBK | 1 |
| K14301PBR | 1 | K14302PBR | 1 | K14521PBR | 1 | K14522PBR | 1 |
| K14301TIR | 1 | K14302TIR | 1 | K14521TIR | 1 | K14522TIR | 1 |
| K14301DBZ | 1 | K14302DBZ | 1 | K14521DBZ | 1 | K14522DBZ | 1 |
| K14301ABS | 1 | K14302ABS | 1 | K14521ABS | 1 | K14522ABS | 1 |
| K14301TCO | 1 | K14302TCO | 1 | K14521TCO | 1 | K14522TCO | 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 $\mathrm{W}=$ White Insert， $\mathrm{B}=$ Black Insert，E．g．KxxxxWHIW＝Porcelain White finish with White inserts

| MOUNTING BOXES | MOUNTING BOXES | MOUNTING BOXES | MOUNTING BOXES |
| :---: | :---: | :---: | :---: |
| FLUSH | FLUSH | FLUSH | FLUSH |
| 866ZIC－35mm deep min | 886ZIC－35mm deep min | 866ZIC－35mm deep min | 866ZIC－35mm de |
| DIMENSIONS | DIMENSIONS | DIMENSIONS | DIMENSIONS |
| $86 \times 86 \mathrm{~mm}$ | $86 \times 146 \mathrm{~mm}$ | $86 \times 86 \mathrm{~mm}$ | $86 \times 86 \mathrm{~mm}$ |
| FIXING CENTRES | FIXING CENTRES | FIXING CENTRES | FIXING CENTRES |
| 60.3 mm | 120.6 mm | 60.3 mm | 60.3 mm |
| 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． <br> NOT SUITABLE FOR FLUORESCENT LOADS． <br> Conform to latest standards BS EN 60669－2－1． <br> All intelligent dimmers have a combined push－on／push－off switch and rotary dimmer control，and are suitable for one or two－way switching． |  |  |  |
|  |  |  |  |
|  |  |  |  |

## Toggle Switch

Frontplates
SUPPLIED WITH GRIDS

1 MODULE
2 MODULE
3 MODULE
4 MODULE

## FINISHES

| BRUSHED STAINLESS STEEL | K14431BSS | 1 | K14432BSS | 1 | K14433BSS | 1 | K14434BSS | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LacQuered brushed steel | K14431LBS | 1 | K14432LBS | 1 | K14433LBS | 1 | K14434LBS | 1 |
| BRUSHED CHROME | K14431BRC | 1 | K14432BRC | 1 | K14433BRC | 1 | K14434BRC | 1 |
| POLISHED CHROME | K14431POC | 1 | K14432POC | 1 | K14433POC | 1 | K14434POC | 1 |
| SATIN GOLD | K14431SAG | 1 | K14432SAG | 1 | K14433SAG | 1 | K14434SAG | 1 |
| PORCELAIN WHITE | K14431WHI | 1 | K14432WHI | 1 | K14433WHI | 1 | K14434WHI | 1 |
| LUSTROUS IVORY | K14431LIV | 1 | K14432LIV | 1 | K14433LIV | 1 | K14434LIV | 1 |
| LUSTROUS BLACK | K14431LBK | 1 | K14432LBK | 1 | K14433LBK | 1 | K14434LBK | 1 |
| POLISHED BRASS | K14431PBR | 1 | K14432PBR | 1 | K14433PBR | 1 | K14434PBR | 1 |
| TEXTURED IRON | K14431TIR | 1 | K14432TIR | 1 | K14433TIR | 1 | K14434TIR | 1 |
| DESERT BRONZE | K14431DBZ | 1 | K14432DBZ | 1 | K14433DBZ | 1 | K14434DBZ | 1 |
| ANTIQUE BRASS | K14431ABS | 1 | K14432ABS | 1 | K14433ABS | 1 | K14434ABS | 1 |
| TEXTURED COPPER | K14431TCO | 1 | K14432TCO | 1 | K14433TCO | 1 | K14434TCO | 1 |

LEAD TIMES
Please contact our Custome Services Department on
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MOUNTING BOX
FLUSH
s9taLM
DIMENSIONS
BS 5733:2010

MOUNTING BOX FLUSH
891ALM DIMENSIONS
$86 \times 86 \mathrm{~mm}$
BS 5733:2010

MOUNTING BOX
FLUSH
892ALM
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
BS 5733:2010

MOUNTING BOX
FLUSH
892ALM
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
BS 5733:2010

Toggle Switch
Modules

## Grid Plus

Modular Frontplates
SUPPLIED WITH GRIDS

1 MODULE 2 MODULE

SP 1 WAY
20 AMP

SP 2 WAY
20 AMP

DP 1 WAY
20 AMP

INTERMEDIATE
20 AMP

| K14891BSS | 1 | K14892BSS | 1 | K14896BSS | 1 | K14893BSS | 1 | K14331BSS | 1 | K14332BSS | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| K14891LBS | 1 | K14892LBS | 1 | K14896LBS | 1 | K14893LBS | 1 | K14331LBS | 1 | K14332LBS | 1 |
| K14891BRC | 1 | K14892BRC | 1 | K14896BRC | 1 | K14893BRC | 1 | K14331BRC | 1 | K14332BRC | 1 |
| K14891POC | 1 | K14892POC | 1 | K14896POC | 1 | K14893POC | 1 | K14331POC | 1 | K14332POC | 1 |
| K14891SAG | 1 | K14892SAG | 1 | K14896SAG | 1 | K14893SAG | 1 | K14331SAG | 1 | K14332SAG | 1 |
| K14891WHI | 1 | K14892WHI | 1 | K14896WHI | 1 | K14893WHI | 1 | K14331WHI | 1 | K14332WH | 1 |
| K14891LIV | 1 | K14892LIV | 1 | K14896LIV | 1 | K14893LIV | 1 | K14331LIV | 1 | K14332LIV | 1 |
| K14891LBK | 1 | K14892LBK | 1 | K14896LBK | 1 | K14893LBK | 1 | K14331LBK | 1 | K14332LBK | 1 |
| K14891PBR | 1 | K14892PBR | 1 | K14896PBR | 1 | K14893PBR | 1 | K14331PBR | 1 | K14332PBR | 1 |
| K14891TIR | 1 | K14892TIR | 1 | K14896TIR | 1 | K14893TIR | 1 | K14331TIR | 1 | K14332TIR | 1 |
| K14891DBZ | 1 | K14892DBZ | 1 | K14896DBZ | 1 | K14893DBZ | 1 | K14331DBZ | 1 | K14332DBZ | 1 |
| K14891ABS | 1 | K14892ABS | 1 | K14896ABS | 1 | K14893ABS | 1 | K14331ABS | 1 | K14332ABS | 1 |
| K14891TC0 | 1 | K14892TC0 | 1 | K14896TC0 | 1 | K14893TC0 | 1 | K14331TC0 | 1 | K14332TC0 | 1 |


| MOUNTING BOX | MOUNTING BOX |
| :--- | :--- |
| FLUSH | FLUSH |
| 891ALM | 891ALM |
| DIMENSIONS | DIMENSIONS |
| $86 \times 86 \mathrm{~mm}$ | $86 \times 86 \mathrm{~mm}$ |
| BS $5733: 2010$ | BS $5733: 2010$ |

$E d g e^{T M}$

## Grid Plus

Modular Frontplates
SUPPLIED WITH GRIDS

3 MODULE 4 MODULE 6 MODULE 8 MODULE 9 MODULE

## FINISHES

| BRUSHED STAINLESS STEEL | K14333BSS | 1 | K14334BSS | 1 | K14346BSS | 1 | K14348BSS | 1 | K14349BSS | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| LACQUERED BRUSHED STEEL | K14333LBS | 1 | K14334LBS | 1 | K14346LBS | 1 | K14348LBS | 1 | K14349LBS | 1 |
| BRUSHED CHROME | K14333BRC | 1 | K14334BRC | 1 | K14346BRC | 1 | K14348BRC | 1 | K14349BRC | 1 |
| POLISHED CHROME | K14333POC | 1 | K14334POC | 1 | K14346POC | 1 | K14348POC | 1 | K14349POC | 1 |
| SATIN GOLD | K14333SAG | 1 | K14334SAG | 1 | K14346SAG | 1 | K14348SAG | 1 | K14349SAG | 1 |
| PORCELAIN WHITE | K14333WHI | 1 | K14334WHI | 1 | K14346WHI | 1 | K14348WHI | 1 | K14349WHI | 1 |
| LUSTROUS IVORY | K14333LIV | 1 | K14334LIV | 1 | K14346LIV | 1 | K14348LIV | 1 | K14349LIV | 1 |
| LUSTROUS BLACK | K14333LBK | 1 | K14334LBK | 1 | K14346LBK | 1 | K14348LBK | 1 | K14349LBK | 1 |
| POLISHED BRASS | K14333PBR | 1 | K14334PBR | 1 | K14346PBR | 1 | K14348PBR | 1 | K14349PBR | 1 |
| TEXTURED IRON | K14333TIR | 1 | K14334TIR | 1 | K14346TIR | 1 | K14348TIR | 1 | K14349TIR | 1 |
| DESERT BRONZE | K14333DBZ | 1 | K14334DBZ | 1 | K14346DBZ | 1 | K14348DBZ | 1 | K14349DBZ | 1 |
| ANTIQUE BRASS | K14333ABS | 1 | K14334ABS | 1 | K14346ABS | 1 | K14348ABS | 1 | K14349ABS | 1 |
| TEXTURED COPPER | K14333TCO | 1 | K14334TCO | 1 | K14346TCO | 1 | K14348TCO | 1 | K14349TC0 | 1 |

LEAD TIMES
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## MOUNTING BOX

FLUSH
dIMENSIONS
$86 \times 146 \mathrm{~mm}$
BS 5733:2010

MOUNTING BOX
FLUSH
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
$86 \times 146 \mathrm{~mm}$
BS 5733:2010

MOUNTING BOX
FLUSH
DIMENSION
DIMENSIONS
BS 5733:2010

MOUNTING BOX
FLUSH
893ALM
DIMENSIONS
$146 \times 146 \mathrm{~mm}$
BS 5733:2010

MOUNTING BOX
FLUSH
895ALM
DIMENSIONS
$206 \times 146 \mathrm{~mm}$
BS 5733:2010

Grid Plus
Modular Frontplates
SUPPLIED WITH GRIDS

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | MODULE | 2 MODULE |
| 12 MODULE | 18 MODULE | 24 MODULE | ARCHITRAVE | FRAME |



FLUS
895ALM
DIMENSIONS
$206 \times 146 \mathrm{~mm}$
BS 5733：2010

MOUNTING BOX FLUSH
98ALM
DIMENSIONS
$206 \times 206 \mathrm{~mm}$
BS 5733：2010

MOUNTING BOX
FLUSH
900ALM DIMENSIONS
$207 \times 267 \mathrm{~mm}$
BS 5733：2010

MOUNTING BOX
FLUSH
$389171 C$
DIMENSIONS
$38.8 \times 91.75$
BS 5733：2010

Grid Plus
Switch
Spare Mounting Frames
Modules


LEAD TIMES
Please contact our Customer
Services Department on
01268563404

Will only fit MK Mounting Box 3891ZIC

* 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 $\mathrm{W}=$ White Insert, B = Black Insert, E.g. KxxxxLIVW Lustrous Ivory finish with white inserts


## Switch Modules

| 10 Amp |  |  |  |  | SP 2 WAY |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | SP 2 WAY | RETRACTIVE |
|  |  |  | SP 2 WAY | RED | marked bell |
|  | DP 1 WAY | SP 2 WAY | RETRACTIVE | RETRACTIVE | SYMBOL |
| 10 AMP | 10 AMP | 10 AMP | 10 AMP | 10 AMP | 10 AMP |


| K4881BSS＊ | 1 | K4981BSS＊ | 1 | K4882BSS＊ | 1 | K4885BSS＊ | 1 | $\begin{array}{ll} \text { K4885RED } & 1 \\ \text { K4885REDB } & 1 \end{array}$ | $\begin{aligned} & \text { K4885BWHI } \\ & \text { K4885BBLK } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K4881LBS＊ | 1 | K4981LBS＊ | 1 | K4882LBS＊ | 1 | K4885LBS＊ | 1 |  |  |
| K4881BRC＊ | 1 | K4981BRC＊ | 1 | K4882BRC＊ | 1 | K4885BRC＊ | 1 |  |  |
| K4881POC＊ | 1 | K4981POC＊ | 1 | K4882POC＊ | 1 | K4885POC＊ | 1 |  |  |
| K4881SAG＊ | 1 | K4981SAG＊ | 1 | K4882SAG＊ | 1 | K4885SAG＊ | 1 |  |  |
| K4881WHI | 10 | K4981WHI | 10 | K4882WHI | 10 | K4885WHI | 10 |  |  |
| K4881LIVW | 1 | K4981LIVW | 1 | K4882LIVW | 1 | K4885LIVW | 1 |  |  |
| K4881LBKB | 1 | K4981LBKB | 1 | K4882LBKB | 1 | K4885LBKB | 1 |  |  |
| K4881PBR＊ | 1 | K4981PBR＊ | 1 | K4882PBR＊ | 1 | K4885PBR＊ | 1 |  |  |
| K4881TIRB | 1 | K4981TIRB | 1 | K4882TIRB | 1 | K4885TIRB | 1 |  |  |
| K4881DBZB | 1 | K4981DBZB | 1 | K4882DBZB | 1 | K4885DBZB | 1 |  |  |
| K4881ABSB | 1 | K4981ABSB | 1 | K4882ABSB | 1 | K4885ABSB | 1 |  |  |
| K4881TCOB | 1 | K4981TCOB | 1 | K4882TCOB | 1 | K4885TCOB | 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 $\mathrm{W}=$ White Insert， $\mathrm{B}=\mathrm{Black}$ Insert，
E．g．KxxxxLIVW Lustrous Ivory finish with white inserts

## NOTE

Push switches are not designed for fluorescen loads．
BS EN 60669－1：1999

NOTE
Push switches are not
designed for fluorescent
loads．
BS EN 60669－1：1999

[^16]| Switch Modules 10 Amp | $\vdots$ Switch Modules 20 Amp |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  | DP | DP |
| SP 2 WAY | 2 WAY |  |  | 1 WAY |
| RETRACTIVE | CENTRE OFF |  | WAY | RED ROCKER |
| MARKED 'PRESS' | RETRACTIVE | SP 1 WAY | PUSH TO MAKE | PUSH TO MAKE |
| 10 AMP | 10 AMP | 20 AMP | 20 AMP | 20 AMP |

## FINISHES

| BRUSHED STAINLESS STEEL | $\begin{array}{lr} \text { K4885PWHI } & 10 \\ \text { K4885PBLK } & 1 \end{array}$ |  | K4900BSS* | 1 | K4891BSS* | 1 | K4910BSS* | 1 | $\begin{array}{lr} \text { K4910RED } & 10 \\ \text { K4910REDB } & 1 \end{array}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LACQUERED BRUSHED STEEL |  |  | K4900LBS* | 1 | K4891LBS* | 1 | K4910LBS* | 1 |  |  |
| BRUSHED CHROME |  |  | K4900BRC* | 1 | K4891BRC* | 1 | K4910BRC* | 1 |  |  |
| POLISHED CHROME |  |  | K4900POC* | 1 | K4891POC* | 1 | K4910POC* | 1 |  |  |
| SATIN GOLD |  |  | K4900SAG* | 1 | K4891SAG* | 1 | K4910SAG* | 1 |  |  |
| MK WHITE (PLASTIC ROCKER) |  |  | K4900WHI | 10 | K4891WHI | 10 | K4910WHI | 10 |  |  |
| LUSTROUS IVORY |  |  | K4900LIVW | 1 | K4891LIVW | 1 | K4910LIVW | 1 |  |  |
| LUSTROUS BLACK |  |  | K4900LBKB | 1 | K4891LBKB | 1 | K4910LBKB | 1 |  |  |
| POLISHED BRASS |  |  | K4900PBR* | 1 | K4891PBR* | 1 | K4910PBR* | 1 |  |  |
| TEXTURED IRON |  |  | K4900TIRB | 1 | K4891TIRB | 1 | K4910TIRB | 1 |  |  |
| DESERT BRONZE |  |  | K4900DBZB | 1 | K4891DBZB | 1 | K4910DBZB | 1 |  |  |
| ANTIQUE BRASS |  |  | K4900ABSB | 1 | K4891ABSB | 1 | K4910ABSB | 1 |  |  |
| TEXTURED COPPER |  |  | K4900TCOB | 1 | K4891TCOB | 1 | K4910TCOB | 1 |  |  |

LEAD TIMES
Please contact our Customer
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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.
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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

BS EN 60669-1:1999
re is no asterix, the final suffix W = White Insert, B = Black Insert,
E.g. KxxxxLIVW Lustrous Ivory finish with white inserts

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

Switch Modules 20 Amp

|  | DP 1 WAY |  |  | SP 2 WAY |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| DP 1 WAY | RED ROCKER |  |  | SWITCH WITH | SP 2 WAY |
| PUSH TO BREAK | PUSH TO BREAK |  | SP 2 WAY | INTEGRAL NEON | AND CENTRE |
| RETRACTIVE | RETRACTIVE | SP 2 WAY | RED ROCKER | LOCATOR | OFF |
| 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP |

Switch Modules

| SP 2 WAY |  |  | DP |  |
| :--- | :--- | :--- | :--- | :--- |
| AND CENTRE |  | INTERMEDIATE | DP | 1 WAY |
| OFF, RED ROCKER | INTERMEDIATE | RED ROCKER | 1 WAY | WITH NEON |
| 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP |


| FINISHES |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| brushed stainless steel | K4899RED <br> K4899REDB | $\begin{aligned} & 10 \\ & 10 \end{aligned}$ | K4893BSS* | 1 | $\begin{aligned} & \text { K4893RED } \\ & \text { K4893REDB } \end{aligned}$ | $\begin{aligned} & 10 \\ & 10 \end{aligned}$ | K4896BSS* | 1 | K4896NWHI K4896NBLK |  |
| Lacauered brushed steel |  |  | K4893LBS* | 1 |  |  | K4896LBS* | 1 |  |  |
| BRUSHED CHROME |  |  | K4893BRC* | 1 |  |  | K4896BRC* | 1 |  |  |
| POLISHED CHROME |  |  | K4893POC* | 1 |  |  | K4896POC* | 1 |  |  |
| SATIN GOLD |  |  | K4893SAG* | 1 |  |  | K4896SAG* | 1 |  |  |
| MK WHITE (PLASTIC ROCKER) |  |  | K4893WHI | 1 |  |  | K4896WHI | 1 |  | 1 |
| LUSTROUS IVORY |  |  | K4893LIVW | 1 |  |  | K4896LIVW | 1 |  | 1 |
| LUSTROUS BLACK |  |  | K4893LBKB | 1 |  |  | K4896LBKB | 1 |  |  |
| POLISHED BRASS |  |  | K4893PBR* | 1 |  |  | K4896PBR* | 1 |  |  |
| TEXTURED IRON |  |  | K4893TIRB | 1 |  |  | K4896TIRB | 1 |  |  |
| DESERT BRONZE |  |  | K4893DBZB | 1 |  |  | K4896DBZB | 1 |  |  |
| antioue brass |  |  | K4893ABSB | 1 |  |  | K4896ABSB | 1 |  |  |
| TEXTURED COPPER |  |  | K4893TCOB | 1 |  |  | K4896TCOB | 1 |  |  |

LEAD TIMES
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BS EN 60669-1:1999

Switch Modules

| DP | DP |
| :--- | :--- |
| 1 WAY | 1 WAY |
| WITH WINDOW | RED ROCKER |
| 20 AMP | 20 AMP |

## Printed Modules

 with and without Neon

BS EN 60669-1:1999
BS EN 60669-1:1999

| K4896 PRINTED MODULE |  |  |
| :--- | :--- | :--- |
| FOR WHITE ROCKERS, USE THE SUFFIX 'WHI'. FOR BLACK ROCKERS, USE <br> THE SUFFIX 'BLK'. FOR EXAMPLE: K4896BRWHI OR K4896BRBLK |  |  |
| BOILER <br> K4896BR | WASTE DISP0SAL <br> K4896WD | HOB <br> K4896HB |
| DISHWASHER <br> K4896DW | WASHING MACHINE <br> K4896WM | IIMMERSION HEATER <br> K4896IH |
| CO0KER H00D <br> K4896CH | TUMBLE DRYER <br> K4896TD | PLINTH HEATER <br> K4896PH |
| FAN <br> K4896FN | WASHER DRYER <br> K4896WDR | WORKTOP LIGHTING <br> K4896WL |
| FRIDGE <br> K4896Fg | MICROWAVE <br> K4896MW | WINE COOLER <br> K48996WC |
| FREEZER <br> K4896FZ | K4896HR | WARMING DRAWER <br> K4896WDA |
| FRIDGE FREEZER <br> K4896FF | K48960V | K48FEE MACHINE |


| K4896N PRINTED MODULE WITH NEON |  |  |
| :--- | :--- | :--- |
| FOR WHITE ROCKERS, USE THE SUFFIX 'WHI'. FOR BLACK ROCKERS, USE <br> THE SUFFIX 'BLK'. FOR EXAMPLE: K4896NBRWHI OR K4896NBRBLK |  |  |
| BOILER <br> K4896NBR | WASTE DISPOSAL <br> K4896NWD | HOB <br> K4896NHB |
| DISHWASHER <br> K4896NDW | WASHING MACHINE <br> K4896NWM | IMMEERION HEATER <br> K4896NIH |
| CO0KER H00D <br> K4896NCH | TUMBLE DRYER <br> K4896NTD | PLINTH HEATER <br> K4896NPH |
| FAN <br> K4896NFN | WASHER DRYER <br> K4896NWDR | WORKTOP LIGHTING <br> K4896NWL |
| FRIDGE <br> K4896NFg | MICROWAVE <br> K4896NMW | WINE COOLER <br> K4896NWC |
| FREEZER <br> K4896NFZ | HEATER <br> K4896NHR | WARMING DRAWER <br> K4896NWDA |
| FRIDGE FREEZER <br> K4896NFF | OVEN <br> K4896NOV | COFFEE MACHINE <br> K4896NCM |

NOTE
K4896NIH (Immersion Heater with Neon) is not available with black rockers.

Key Switch Modules

|  |  |
| :--- | :--- |
|  | SP |
| INTERMEDIATE | KEY SWITCH |
| KEY SWITCH | 2 WAY |
| 20 AMP | 20 AMP |


| SP KEY SWITCH |  |  | SP |
| :--- | :--- | :--- | :--- |
| 2 WAY | DP | DP | KEY SWITCH |
| EMERGENCY | KEY SWITCH | EMERGENCY | 2 WAY |
| LIGHTING | 1 WAY | LIGHTING | RETRACTIVE |
| 20 AMP | 20 AMP | 20 AMP | 20 AMP |

FINISHES

| WHITE | K4894WHI | 10 | K4898WHI | 10 | K4898ELWHI 10 | K4917WHI | 10 | K4917ELWHI 10 | K4918WHI |
| :--- | :--- | ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BLACK | K4894BLK | 1 | K4898BLK | 1 | K4898ELBLK | 1 | K4917BLK | 1 |  |

LEAD TIMES
Please contact our Customer
Services Department on
01268563404

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 Key (3405ZIC) is supplied. Key (3405ZIC) is supplied. Key (3405ZIC) is supplied. Key (3405ZIC) is supplied. Key (3405ZIC) is supplied. Key (3405ZIC) is supplied.

Indicator Modules

| $200-250 \mathrm{~V}$ <br> NEON |  | $\begin{aligned} & 200-250 \mathrm{~V} \\ & \text { NEON } \end{aligned}$ |  | $\begin{aligned} & \text { 200-250V } \\ & \text { FLUORESCENT } \end{aligned}$ | $21-36 \mathrm{~V}$ <br> FILAMENT |  | $21-36 \mathrm{~V}$ <br> FILAMENT |  | $21-36 \mathrm{~V}$ <br> FILAMENT |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
| K4889RED <br> K4889REDB | $\begin{array}{r} 10 \\ 1 \end{array}$ | K4889AMB | 10 | K4889GRN 10 | K4836RED | 10 | K4836AMB | 10 | K4836GRN | 10 |
| BS 5733:2010 |  | BS 5733:2010 |  | BS 5733:2010 | BS 5733:2010 |  | BS 5733:2010 |  | BS 5733:2010 |  |

## Dimmer Switch Modules

| 1 GANG 40W/ | 1 GANG 60W/ | 1 GANG |  |
| :--- | :--- | :--- | :--- |
| VA-220W/180VA, | VA-400W/320VA, | $40-220 \mathrm{~W} / 180 \mathrm{VA} /$ | $0-10 \mathrm{~V} / 1-10 \mathrm{~V}$ |
| 230 VA.C, 50 HZ | 230 VA.C, 50 HZ | $4-70 \mathrm{~W}$ LED DIMMER | FLUORESCENT |
| 2 WAY | 2 WAY | 2 WAY | CONTROLLER |
| 1 MODULE | 2 MODULE | 1 MODULE | 1 MODULE |

## FINISHES

| Brushed Stainless steel | K4501BSS*LV | 1 | K4500BSS*LV | 1 | K4511BSS*LV | 1 | K4499BSS* | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LacQuered brushed steel | K4501LBS*LV | 1 | K4500LBS*LV | 1 | K4511LBS*LV | 1 | K4499LBS* | 1 |
| BRUSHED CHROME | K4501BRC*LV | 1 | K4500BRC*LV | 1 | K4511BRC*LV | 1 | K4499BRC* | 1 |
| POLISHED CHROME | K4501POC*LV | 1 | K4500POC*LV | 1 | K4511POC*LV | 1 | K4499POC* | 1 |
| SATIN GOLD | K4501SAG*LV | 1 | K4500SAG*LV | 1 | K4511SAG*LV | 1 | K4499SAG* | 1 |
| PORCELAIN WHite | K4501WHIWLV | 1 | K4500WHIWLV | 1 | K4511WHIWLV | 1 | K4499WHI | 1 |
| LUSTROUS IVORY | K4501LIVWLV | 1 | K4500LIVWLV | 1 | K4511LIVWLV | 1 | K4499LIVW | 1 |
| Lustrous black | K4501LBKBLV | 1 | K4500LBKBLV | 1 | K4511LBKBLV | 1 | K4499LBKB | 1 |
| POLISHED BRASS | K4501PBR*LV | 1 | K4500PBR*LV | 1 | K4511PBR*LV | 1 | K4499PBR* | 1 |
| TEXTURED IRON | K4501TIRBLV | 1 | K4500tiRBLV | 1 | K4511TIRBLV | 1 | K4499TIRB | 1 |
| DESERT BRONZE | K4501DBZBLV | 1 | K4500DBZBLV | 1 | K4511DBZBLV | 1 | K4499DBZB | 1 |
| ANTIQUE BRASS | K4501ABSBLV | 1 | K4500ABSBLV | 1 | K4511ABSBLV | 1 | K4499ABSB | 1 |
| TEXTURED COPPER | K4501TCOBLV | 1 | K4500TCOBLV | 1 | K4511TCOBLV | 1 | K4499TCOB | 1 |

## LEAD TIMES

Please contact our Custome
Services Department on
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These dimmers incorporate the latest in 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.
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 $1-10 \mathrm{~V}$ controllable ballasts.

* 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


## Accessory Modules

|  | SINGLE TV |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| SINGLE TV | CO-AXIAL |  |  |  |
| CO-AXIAL OUTLET | OUTLET | BUZZER UNIT | BUZZER UNIT | CORD OUTLET |
| NON-ISOLATED | ISOLATED | 200-250V | $21-36 \mathrm{~V}$ | 16 AMP |



For direct connection to TV or
FM aerial co-axial downlead. NOT
to be used in same enclosure as
mains exceeding 50 V .
BS 3041:1977
IEC 169-2:1965
BS 5733:2010 where applicabl

IEC 169-2:1965
BS 5733:2010 where applicable.

## 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 $2 \times 2.5 \mathrm{~mm}^{2}$
or $1 \times 4 \mathrm{~mm}^{2}$ solid conductors The load terminals are suitable for one $1.5 \mathrm{~mm}^{2}$ flexible cord. A cord grip is also fitted.
BS 5733:2010

## Accessory Modules

|  | FUSE UNIT WITH <br> TAMPERPROOF |
| :--- | :--- |
| FUSE UNIT | SCREW |
| 13 AMP | 13 AMP |

## Euro Modular Frontplates

| EURO | EURO | EURO |
| :--- | :--- | :--- |
| 1 MODULE | 2 MODULE | 4 MODULE |
| $25 \times 50 M M$ | $50 \times 50 M M$ | $100 \times 50 M M$ |

FINISHES

| BRUSHED STAINLESS STEEL | $\begin{array}{ll} \text { K4890WHI } & 10 \\ \text { K4890BLK } & 10 \end{array}$ |  | $\begin{array}{ll} \text { K4890KOWHI } & 10 \\ \text { K4890KOBLK } & 10 \end{array}$ |  | K14181BSS | 1 | K14182BSS | 1 | K14184BSS | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LacQuered brushed steel |  |  | K14181LBS | 1 | K14182LBS | 1 | K14184LBS | 1 |
| BRUSHED CHROME |  |  | K14181BRC | 1 | K14182BRC | 1 | K14184BRC | 1 |
| POLISHED CHROME |  |  | K14181POC | 1 | K14182POC | 1 | K14184POC | 1 |
| SATIN GOLD |  |  | K14181SAG | 1 | K14182SAG | 1 | K14184SAG | 1 |
| PORCELAIN WHITE |  |  | K14181WHI | 1 | K14182WHI | 1 | K14184WHI | 1 |
| LUSTROUS IVORY |  |  | K14181LIV | 1 | K14182LIV | 1 | K14184LIV | 1 |
| LUSTROUS BLACK |  |  | K14181LBK | 1 | K14182LBK | 1 | K14184LBK | 1 |
| POLISHED BRASS |  |  | K14181PBR | 1 | K14182PBR | 1 | K14184PBR | 1 |
| textured IRON |  |  | K14181TIR | 1 | K14182TIR | 1 | K14184TIR | 1 |
| desert bronze |  |  | K14181DBZ | 1 | K14182DBZ | 1 | K14184DBZ | 1 |
| antiaue brass |  |  | K14181ABS | 1 | K14182ABS | 1 | K14184ABS | 1 |
| TEXTURED COPPER |  |  | K14181TCO | 1 | K14182TCO | 1 | K14184TCO | 1 |

LEAD TIMES
Please contact our Customer
Services Department on
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Fuse carrier comes with 13A cartridge fuse link to BS 1362 BS 5733:2010

MOUNTING BOXES
Suitable for flush boxes to BS 4662:2006 and surface boxes o BS 5733:2010
Refer to appropriate module for minimum box depth. FIXING CENTRES
60.3 mm

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
60.3 mm

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 o BS 5733:2010 Refer to appropriate module for minimum box depth. FIXING CENTRES 120.6 mm

SS 5733:2010 where applicable. Note: No grid required, modules just clip into place.

Euro Power Modules

| UK | GERMAN | AMERICAN | UK | 250V SHUTTERED |
| :--- | :--- | :--- | :--- | :--- |
| $250 V$ | 2P＋E 250V | 127V SHUTTERED | $250 V$ SHUTTERED | 2 MODULE |
| 2 MODULE | SHUTTERED | 2 MODULE | 2 MODULE | $50 \times 50 M M$ |
| $50 \times 50 M M$ | 2 MODULE（NON UK） | $50 \times 50 M M$（NON UK） | $50 \times 50 M M$ | （NON UK） |
| 13 AMP | 16 AMP | 15 AMP | 5 AMP | 16 AMP |



MOUNTING BOX
35 mm minimum
46 mm （for extra wiring space）．
DIMENSIONS
$50 \times 50 \mathrm{~mm}$
BS 1363 Part 2：1995

MOUNTING BOX
46 mm DIMENSIONS
$50 \times 50 \mathrm{~mm}$ IEC 60884－1：2006

MOUNTING BOX
35 mm
46 mm （for extra wiring space）
DIMENSIONS
$50 \times 50 \mathrm{~mm}$
SASO 2204：2003

MOUNTING BOX
35 mm minimum 46 mm （for extra wiring space） DIMENSIONS $50 \times 50 \mathrm{~mm}$ BS 546：1950

MOUNTING BOX
46 mm
DIMENSIONS
$50 \times 50 \mathrm{~mm}$
NF C61－314

| Euro Power | $\vdots$ Euro Datacom |  |  |  |
| :--- | :---: | :--- | :--- | :--- | :--- |
| Modules | Modules |  | RJ45 | RJ45 |
|  |  | RJ45 | CAT 6 | CAT 6 |
| USB CHARGING | RJ11/12 | CAT 6 | SCREENED | ANGLED |
| 2 MODULE | 1 MODULE | 1 MODULE | 1 MODULE | 1 MODULE |
| $50 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ |


| FINISHES | $\rightleftarrows$ |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WHITE | K5837WHI | 1 | K5887WHI | 5 | K5846WHI | 5 | K5846SWHI | 5 | K5864WHI | 5 |
| BLACK | K5837BLK | 1 | K5887BLK | 5 | K5846BLK | 5 | K5846SBLK | 5 |  |  |

LEAD TIMES
Please contact our Custome Services Department on 01268563404

USB charging sockets, each capable of supporting 2 A charge (total of 2A)

K5837 MOUNTING BOX Minimum Box depth 35 mm 46 mm for extra wiring space IEC 60950-1 IEC 61000-6-1/3

Suitable for both RJ11 and
RJ12 jacks
RJI1; 4 wire
MOUNTING BOX
Minimum Box depth 35 mm
FCC68
EN 41003

Cat 6 performance.
Suitable for both 568 A and 568 B wiring schemes.
mounting boxes Minimum Box Depth 35 mm ISO/EC 11801
EN 50173
TIA 568
EN 41003

Cat 6 performance. Suitable for both 568 A and 568 B wiring schemes.
mounting boxes Minimum Box Depth 35 mm ISO/EC 11801
EN 50173
TIA 568
EN 41003

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

| RJ45 |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| CAT 5e | RJ45 | TELEPHONE | TELEPHONE |  |
| ANGLED | CAT 5e | MASTER | SECONDARY | BNC 50』 |
| 1 MODULE | 1 MODULE | 1 MODULE | 1 MODULE | 1 MODULE |
| $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ |


|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K5844WHI 5 | K5845WHI 5 | K5820WHI | 5 | K5821WHI | 5 | K5801WHI 5 |
|  | K5845BLK 5 | K5820BLK | 5 | K5821BLK | 5 |  |
| Enhanced Cat 5 performance Suitable for both 568A and 568B wiring schemes． <br> MOUNTING BOXES <br> Minimum box depth <br> 35 mm standard <br> ISO／IEC 11801 <br> EN 50173 <br> TIA 568 <br> EN 41003 | Enhanced Cat 5 performance <br> Suitable for both 568A and 568B wiring schemes <br> MOUNTING BOXES <br> Minimum box depth 35 mm <br> standard <br> ISO／IEC 11801 <br> EN 50173 <br> EN 41003 | mounting Boxes <br> Minimum depth 35 mm <br> BS 6312－2 |  | mounting boxes <br> Minimum depth 35 mm <br> BS 6312－2 |  | 50 Ohm crimp connector suitable for use with RG58，URM43， URM76 and Beldon 9907 type co－axial cables． MOUNTING BOXES Minimum box depth 35 mm |

## Euro Multimedia Modules

|  |  | SINGLE F-TYPE | TWIN OUTLET |
| :--- | :--- | :--- | :--- |
| SINGLE OUTLET | SINGLE OUTLET | SATELLITE | TV/FM DIPLEXER |
| (IEC MALE) | (IEC FEMALE) | SOCKET | 2 MODULE |
| 1 MODULE | 1 MODULE | 1 MODULE | $50 \times 50 M M$ |
| $25 \times 50 M M$ | $25 \times 50 M M$ | $25 \times 50 M M$ | (IRELAND ONLY) |


| FINISHES |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| WHITE | K5850WHI | 5 | K5851WHI | 5 | K5855WHI | 5 | K5852WHI |
| BLACK | K5850BLK | 5 | K5851BLK | 5 | K5855BLK | 5 | K5852BLK |

LEAD TIMES
Please contact our Customer Services Department on 01268563404

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
Minimum Box Depth 47mm
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 single co-axial a
and $F M$ signals. PERFORMANCE
Single TV
Diplexer Sat: DC -1.75 GHz
Diplexer TV: $\quad 5-65 \mathrm{MHz}$ $470-862 \mathrm{MHz}$

TV/FM/DAB FOR DIGITAL RADIO PERFORMANCE Diplexer $470-862 \mathrm{MHz}$
FIM/DAB: $\quad 87.5-230 \mathrm{MHz}$

[^17]
 to a single co－axial aerial lead with to a single co－axial aerial lead with combined TV and FM signals． PERFORMANCE Single TV：DC－ 950 MHz

|  | Sat： | DC - |
| :--- | :--- | :--- |
| 1.75 GHz  <br> Diplexer TV： | $5-65 \mathrm{MHz}$ <br> $470-$ |  |
| 862 MHz |  |  |

MHz
TV／FM／DAB FOR DIGITAL RADIO PERFORMANCE $\begin{array}{lll}\text { Diplexer } & \text { TV：} & \begin{array}{l}5-65 \mathrm{MHz} \\ 470-\end{array} \\ 862 \mathrm{MHz} & & \text { FM／DAB：} 87.5-\end{array}$

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 | TV／FM／SAT PRODUCTS |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| SINGLE OUTLETS | OUTLET | DIPLEXER | OUTLET | TRIPLEXER |
| TV／FM IEC MALE OR FEMALE DC－950MHz | TV | ${ }^{5} 470-862 \mathrm{MHz}$（ ${ }^{\text {a }}$ |  | $\begin{aligned} & 5-65 \mathrm{MHZ} \\ & 470-862 \mathrm{MHz} \end{aligned}$ |
|  | FM／DAB | $87.5-108 \mathrm{MHz}$ | FM | $87.5-108 \mathrm{MHz}$ |
| SAT F－TYPE DC－1．75GHz | SAT | N／A | SAT1 | $950-2300 \mathrm{MHz}$ |
|  | TV／FM／DAB／SAT PRODUCTS FOR DIGITAL RADIO |  |  |  |
|  | OUTLET | DIPLEXER | OUTLET | TRIPLEXER |
|  | TV | $\begin{aligned} & 5-65 \mathrm{MHz} \\ & 470-862 \mathrm{MHz} \end{aligned}$ | TV | $\begin{aligned} & 5-65 \mathrm{MHz} \\ & 470-862 \mathrm{MHz} \end{aligned}$ |
|  | FM／DAB | $87.5-230 \mathrm{MHz}$ | FM | $87.5-230 \mathrm{MHz}$ |
|  | SAT OR SAT1 | N／A | SAT1 | $950-2300 \mathrm{MHz}$ |

K5807 Female HDMI Outlet is HDMI 1．1，1．2．1．3 and 1．4b compatible， HDCP compliant． DATA RATE Up to 2．25 Gbps SCAN Up to 1080p／1920×1200 INPUT CONNECTOR $1 \times$ HDMI Female（Type A） $1 \times$ HDMI Female（Type A）
OUTPUT CONNECTOR OUTPUT CONNECTOR
$1 \times$ HDMI Female（Type A Supports high resolution input： PC：VGA，SVGA， SXVGA（1280x1024）and UXGA （1600x1200，1920x1200） HDTV：480p，720p，1080i and 1080p HDTV：480p，720p，1080i and 1080p
HDMI input cable should be no larger HDMI input cable should be no larger
than 20 m

230 MHz

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


| LJU6C Datacom | LJU6C Datacom |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Frontplate | Modules |  |  |  |
|  |  |  | RJ45 |  |
| 1 GANG |  |  | CAT 6 | RJ45 |
| 2 MODULE | RJ11／12 | RJ45 CAT 6 | SCREENED | CAT 5e |
| $22 \times 37$ MM | 1 MODULE | 1 MODULE | 1 MODULE | 1 MODULE |


| K14172BSS＊ | 1 | K5787WHI 5 |  | $\begin{array}{ll} \text { K5746WHI } & 5 \\ \text { K5746BLK } & 5 \end{array}$ |  | $\begin{array}{ll} \text { K5746SWHI } & 5 \\ \text { K5746SBLK } & 5 \end{array}$ |  | $\begin{aligned} & \text { K5745WHI } \\ & \text { K5745BLK } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K14172LBS＊ | 1 |  |  |  |  |  |  |
| K14172BRC＊ | 1 |  |  |  |  |  |  |
| K14172POC＊ | 1 |  |  |  |  |  |  |
| K14172SAG＊ | 1 |  |  |  |  |  |  |
| K14172WHIW | 1 |  |  |  |  |  |  |
| K14172LIVW | 1 |  |  | 5 5 |  |  |  |
| K14172LBK | 1 |  |  |  |  |  |  |
| K14172PBRB | 1 |  |  |  |  |  |  |
| K14172TIRB | 1 |  |  |  |  |  |  |
| K14172DBZB | 1 |  |  |  |  |  |  |
| K14172ABSB | 1 |  |  |  |  |  |  |
| K14172TCOB | 1 |  |  |  |  |  |  |

MOUNTING BOXES
Suitable for flush boxes to BS 4662：1970 and surfac Refer to appropriate module for minimum box depth． FIXING CENTRES
1 gang： 60.3 mm
2 gang： 120.6 mm
BS 5733：2010 where applicable 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 35 mm
FCC68
FCC68
EN41003
at 6 performance．
Suitable for both 568A and 568B
IOUNTING BOXES
Minimum Box Depth 35 mm
Minimum Box Depth 35 mm
ISO／IEC 11801
EN 50173
EN 41003

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

Enhanced Cat 5 performance． Suitable for both 568A and 568B wiring schemes．
MOUNTING BOXES
Minimum Box Depth 25 mm
ISO／IEC 11801
ISO／IEC 11801
EN 50173
EN 41003 Black inserts．

| LJU6C Datacom | Blank Plates |  |
| :--- | :---: | :--- |
| Blanks |  |  |
|  |  |  |
| LJU6C <br> 1 MODULE | 1 GANG | 2 GANG |


| FINISHES |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| brushed stainless steel | $\begin{aligned} & \text { K170WHI } \\ & \text { K170BLK } \end{aligned}$ | $\begin{aligned} & 10 \\ & 10 \end{aligned}$ | K14330BSS | 1 | K14329BSS | 1 |
| LaCQuered brushed steel |  |  | K14330LBS | 1 | K14329LBS | 1 |
| BRUSHED CHROME |  |  | K14330BRC | 1 | K14329BRC | 1 |
| POLISHED CHROME |  |  | K14330POC | 1 | K14329POC | 1 |
| SATIN GOLD |  |  | K14330SAG | 1 | K14329SAG | 1 |
| porcelain white |  |  | K14330WHI | 1 | K14329WHI | 1 |
| LUSTROUS IVORY |  |  | K14330LIV | 1 | K14329LIV | 1 |
| Lustrous black |  |  | K14330LBK | 1 | K14329LBK | 1 |
| POLISHED BRASS |  |  | K14330PBR | 1 | K14329PBR | 1 |
| textured iron |  |  | K14330TIR | 1 | K14329TIR | 1 |
| Desert bronze |  |  | K14330DBZ | 1 | K14329DBZ | 1 |
| ANTIQUE BRASS |  |  | K14330ABS | 1 | K14329ABS | 1 |
| TEXTURED COPPER |  |  | K14330TCO | 1 | K14329TCO | 1 |



LEAD TIMES
Please contact our Customer Services Department on
01268563404

BS 5733:2010 where appropriate

MOUNTING BOXES
FLUSH
DIMENSIONS:
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
1 gang: 60.3 mm
BS 5733:2010

MOUNTING BOXES
FLUSH
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
2 gang: 120.6 mm
BS 5733:2010


## ALBANY PLUSTM

## RANGE INTRODUCTION

## Available in Brushed Stainless Steel, Brushed Chrome, Satin Gold and Polished Chrome finishes, Albany Plus ${ }^{\text {Tw }}$ brings stylish yet subtle good looks to both contemporary and classical interiors.

Being manufactured from the finest materials, Albany Plus ${ }^{\text {Tw }}$ wiring devices maintain their high quality appearance for years to come.

Echo ${ }^{\text {Tm }}$ 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 ${ }^{\text {TM }}$ range. Please see page 21 for details.

## HOW TO SPECIFY

A metal, flush mounting range of wiring devices. Frontplates with a maximum 9 mm profile and subtle 7 mm radius rounded corners. Cable connections must be upward facing with easy to identify white markings on a dark background, grouped in a straight line with captive terminal screws for ease of installation. All sockets to have a 3 pin operated shutter safety mechanism and double pole switching, with the contacts designed such that the neutral makes before and breaks after the live pole for improved safety. Switches to be large and concave with a minimum 3mm contact gap with a positive 'click' to denote successful operation.

FEATURES \& BENEFITS
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 ${ }^{\text {TM }}$ 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.

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.

## Albany Plus ${ }^{\text {TM }}$



Terminal screws are backed out
and captive. Terminals are upwards
facing to make installation easier.

Funnel entrance to terminals.

Polished Chrome finish complements modern
interior design.


Brushed Chrome finish has subtle good looks to suit classic interiors.


## Switchsocket Outlets

|  |  |  |
| :--- | :--- | :--- |
| 1 GANG DP |  | GANG DP |
| DUAL EARTH TERMINALS | 2 GANG DP | GANG DP WITH | | DUAL EARTH TERMINALS |
| :--- |
| 13 AMP |

## FINISHES

| BRUSHED STAINLESS STEEL | K2958BSS | 10 | K2948BSS | 5 | K2948D6BSS | 5 | K2458BSS | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BRUSHED CHROME | K2958BRC | 1 | K2948BRC | 1 | K2948D6BRC | 1 | K2458BRC | 1 |
| SATIN GOLD | K2958SAG | 1 | K2948SAG | 1 |  |  | K2458SAG | 1 |
| POLISHED CHROME | K2958PCR | 1 | K2948PCR | 1 |  | K2458PCR | 1 |  |

LEAD TIMES
Please contact our Customer Services Department on
01268563404

MOUNTING BOXES
FLUSH 25MM
1 gang: 861ZIC
FLUSH 35MM
(for extra wiring space)
1 gang: 866ZIC
SURFACE WITH KNOCKOUTS
1 gang: K899ALM
SURFACE WITHOUT KNOCKOUTS
1 gang: K829ALM
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363-2:1995
DOUBLE POLE SWITCHING
All switchsockets have double pole switching (neutral makes first, breaks last).
HIGH INTEGRITY EARTHING
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
2 gang: 862ZIC
FLUSH 35MM
(for extra wiring space)
2 gang: 886ZIC
SURFACE WITH KNOCKOUTS
2 gang: K897ALM
SURFACE WITHOUT KNOCKOUTS
2 gang: K830ALM
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 1363-2:1995
DOUBLE POLE SWITCHING
All switchsockets have double pole switching (neutral makes first, breaks last)

MOUNTING BOXES
FLUSH 25MM
2 gang: 862ZIC
FLUSH 35MM
(for extra wiring space)
2 gang: 886ZIC
SURFACE WITH KNOCKOUTS
2 gang: K897ALM
SURFACE WITHOUT KNOCKOUTS
2 gang: K830ALM
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 1363-2:1995
DOUBLE POLE SWITCHING
All switchsockets have double pole switching (neutral makes first, breaks last)

MOUNTING BOXES
FLUSH 25MM
1 gang: 861Z1C
FLUSH 35MM
(for extra wiring space)
1 gang: 866ZIC
SURFACE WITH KNOCKOUTS
1 gang: K899ALM
SURFACE WITHOUT KNOCKOUTS
1 gang: K829ALM
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363-2:1995
DOUBLE POLE SWITCHING
All switchsockets have double pole
switching (neutral makes first, breaks
last).
HIGH INTEGRITY EARTHING
Fitted with two earth terminals to
provide a double earth facility for
use when installations require a high
use when installations require a high
integrity protective connection as
specified within BS 7671:2008

Switchsocket

Outlets

2 GANG DP WITH NEONS 13 AMP

2 GANG DP WITH 2 X USB CHARGING PORTS DUAL EARTH
13 AMP

2 GANG DP WITH OUTBOARD ROCKERS AND DUAL EARTH TERMINALS 13 AMP

2 GANG DP WITH OUTBOARD RED ROCKERS AND DUAL EARTH TERMINALS
13 AMP

## FINISHES

| BRUSHED STAINLESS STEEL | K2448BSS | 5 | K2943BSS | 1 | K2947BSS | 5 | K2947D6BSS | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BRUSHED CHROME | K2448BRC | 1 | K2943BRC | 1 | K2947BRC | 1 | K2947D6BRC | 1 |
| SATIN GOLD | K2448SAG | 1 | K2943SAG | 1 | K2947SAG | 1 |  |  |
| POLISHED CHROME | K2448PCR | 1 | K2943PCR | 1 | K2947PCR | 1 |  |  |

LEAD TIMES
Please contact our Customer Services Department on 01268563404

MOUNTING BOXES
FLUSH 25MM
2 gang: $862 Z 10$
FLUSH 35MM
(for extra wiring space)
2 gang: 886zIC
SURFACE WITH KNOCKOUTS
2 gang: K897ALM
SURFACE WITHOUT KNOCKOUTS
2 gang: K830ALM
dimensions
$86 \times 146 \mathrm{~mm}$ FIXING CENTRES
120.6 mm

BS 1363-2:1995
DOUBLE POLE SWITCHING
All switchsockets have double pole switching (neutral makes first, breaks last)

USB charging sockets, each capable of supporting 2A charge (total of 2A)

## mounting boxes

FLUSH 35MM
2 gang: 886Z1C
FLUSH 46MM
(for extra wiring space)
2 gang: 877ZIC
SURFACE WITH KNOCKOUTS
2 gang: K897ALM
SURFACE WITHOUT KNOCKOUTS
2 gang: K830ALM
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS5733: 2010
dOUBLE POLE SWITCHING
All switchsockets have double pole switching (neutral makes first, breaks last)
HIGH Integrity Earthing
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
2 gang: 862 ZIC
fLUSH 35mm
(for extra wiring space)
2 gang: 886zIC
SURFACE WITH KNOCKOUTS
2 gang: K897ALM
SURFACE WITHOUT KNOCKOUTS
2 gang: K830ALM
dimensions
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 1363-2:1995
DOUBLE POLE SWITCHING
All switchsockets have double pole switching (neutral makes first, breaks last)
HIGH INTEGRITY EARTHING Fitted with two earth terminals to provide a double earth facility for use when installations require a high specified within BS 7671:2008

MOUNTING BOXES
FLUSH 25MM
2 gang: 862Z1C
fLUSH 35MM
(for extra wiring space)
2 gang: 886ZIC
SURFACE WITH KNOCKOUTS
2 gang: K897ALM
SURFACE WITHOUT KNOCKOUTS
2 gang: K830ALM
dIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 1363-2:1995
DOUBLE POLE SWITCHING
All switchsockets have double pole switching (neutral makes first, breaks last)
high integrity earthing
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

| 2 GANG DP |  | 2 GANG DP |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| WITH OUTBOARD | 1 GANG DP NON | NON STANDARD | 2 GANG DP |  |  |
| ROCKERS AND | STANDARD WITH | WITH CLEAN | DUAL EARTH |  |  |
| 'CLEAN EARTH' | CLEAN EARTH | EARTH | FILTERED |  | 1 GANG DP |
| FACILITY | FACILITY | FACILITY | SPIKE AND RFI | REPLACEMENT | ROUND PIN |
| 13 AMP | 13 AMP | 13 AMP | 13 AMP | FILTER CASSETTE | 5 AMP |



MOUNTING BOXES
FLUSH 25MM
2 gang: 862ZIC
FLUSH 35MM
(for extra wiring space)
2 gang: 886ZIC
SURFACE WITH KNOCKOUTS
2 gang: K897ALM SURFACE WITHOUT KNOCKOUTS
2 gang: K830ALM
This product is provided with facilities for 'clean earth' connection. DIMENSIONS $86 \times 146 \mathrm{~mm}$ FIXING CENTRES
120.6 mm

BS 1363-2:1995

MOUNTING BOXES
FLUSH 25MM 861ZIC FLUSH 35MM (for extra wiring space) 866ZIC SURFACE WITH KNOCKOUTS K899ALM SURFACE WITHOUT KNOCKOUTS K829ALM

## These products are provided with facilities for 'clean earth

 connection and are suitable for non standard plugs with 'T' shaped earth pin. See page 240.
## DIMENSIONS

$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363-2:1995
where relevant

MOUNTING BOXES
FLUSH 25MM
2 gang: 862ZIC FLUSH 35MM (for extra wiring space) 2 gang: 886ZIC SURFACE WITH KNOCKOUTS 2 gang: K897ALM SURFACE WITHOUT KNOCKOUTS
2 gang: K830ALM
This product provides
facilities for 'clean earth'
connection and are suitable
for non standard plugs with
'T' shaped earth pin.
See page 240.
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 1363-2:1995
where relevant

MOUNTING BOX
886ZIC
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 $86 \times 146 \times 39 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 5733:2010

MOUNTING BOXES
FLUSH 25MM
861 ZIO
FLUSH 35MM
(for extra wiring space)
866ZIC
SURFACE WITH KNOCKOUTS
K899ALM
SURFACE WITHOUT KNOCKOUTS
K829ALM
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 546:1950

Switchsocket : Switchsocket Outlets RCD Protected : Socket Outlets

Outlets

1 GANG DP
ROUND PIN
15 AMP

| 1 GANG DP 30MA | 1 GANG DP 30MA |  |
| :--- | :--- | :--- |
| RATED TRIPPING | RATED TRIPPING |  |
| CURRENT ACTIVE | CURRENT PASSIVE |  |
| CONTROL CIRCUIT | CONTROL CIRCUIT | 1 GANG |
| 13 AMP | 13 AMP | 13 AMP |

2 GANG WITH
DUAL EARTH
TERMINALS
13 AMP

## FINISHES

| BRUSHED STAINLESS STEEL | K2883BSS | 5 | K6301BSS | 1 | K6304BSS | 1 | K732BSS | 5 | K733BSS | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BRUSHED CHROME | K2883BRC | 1 | K6301BRC | 1 | K6304BRC | 1 | K732BRC | 1 | K733BRC | 1 |
| SATIN GOLD | K2883SAG | 1 | K6301SAG | 1 |  |  |  |  |  |  |
| POLISHED CHROME | K2883PCR | 5 | K6301PCR | 1 |  |  |  |  |  |  |

LEAD TIMES
Please contact our Customer Services Department on 01268563404

MOUNTING BOXES
FLUSH 25MM
861Z1C
FLUSH 35mm
(for extra wiring space)
866ZIC
SURFACE WITH KNOCKOUTS
K899ALM
SURFACE WITHOUT kNOCKOUTS
K829ALM
dimensions
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 546:1950

MOUNTING BOXES
FLUSH
886z1C
Boxes must have a minimum depth of 30 mm
SURFACE WITH KNOCKOUTS K897ALM
SURFACE WITHOUT
KNOCKOUTS
K830ALM
It is important to ensure that
the correct control circuit, the correct control circuit, active or passive, is selected
for each application Only suitable for supply Only suitable for supp
voltage of 240 V a.c. DIMENSIONS DIMENSIONS
$86 \times 146 \mathrm{~mm}$ FIXING CENTRES
120.6 mm

BS 7288:1990

MOUNTING BOXES FLUSH 35MM
2 gang: 886ZIC
FLUSH 46MM
(for extra wiring space) 2 gang: 877ZIC SURFACE WITH KNOCKOUTS 2 gang: K897ALM SURFACE WITHOUT KNOCKOUTS 2 gang: K830ALM DIMENSIONS DIMENSIONS
$86 \times 146 \mathrm{~mm}$ $86 \times 146 \mathrm{~mm}$
FIXING CENTRES 120.6 mm

It is important to ensure that
the correct control circuit, active or passive, is selected for each application.
Only suitable for supply voltage of 240 V a.c. BS 7288:1990

MOUNTING BOXES
FLUSH 25MM
1 gang: 861ZIC
FLUSH 35MM
(for extra wiring space) 1 gang: 866ZIC SURFACE WITH KNOCKOUTS 1 gang: K899ALM SURFACE WITHOUT kNOCKOUTS K829ALM dimensions $86 \times 86 \mathrm{~mm}$ FIXING CENTRES 60.3 mm BS 1363-2:1995

MOUNTING BOXES
FLUSH 25MM
2 gang: 862ZIC
FLUSH 35mm
(for extra wiring space) 2 gang: 886ZIC SURFACE WITH KNOCKOUTS
2 gang: K897ALM SURFACE WITHOUT KNOCKOUTS
2 gang: K830ALM dImensions $86 \times 146 \mathrm{~mm}$ FIXING CENTRES 120.6 mm

BS 1363-2:1995
HIGH INTEGRITY EARTHING
Fitted with two earth
Fltted with two earth
terminals to provide a
terminals earth facility for use
when installations require
a high integrity protective
connection as specified within
BS 7671:2008

Socket Outlets -
Medical Locations

|  |  |
| :--- | :--- |
| 1 GANG DP | 1 GANG |
| SWITCHED | UNSWITCHED |
| 13 AMP | 13 AMP |


| 2 GANG DP |  |
| :--- | :--- |
| CLEAN EARTH | 2 GANG |
| WITH OUTBOARD | CLEAN EARTH |
| ROCKERS | UNSWITCHED |
| 13 AMP | 13 AMP |

Key Operated Socket
Outlet and Switch
$\begin{array}{ll}1 \text { GANG DP } & \\ \text { DUAL EARTH } & 1 \text { GANG DP } \\ 13 \text { AMP } & 20 \text { AMP }\end{array}$

| K2958BLU | 1 | K732BLU | 1 | K2947CEBLU | 5 | K733CEBLU | 1 | K2949BSS | 1 | K2158BSS | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | K2949BRC | 1 | K2158BRC | 1 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |

MOUNTING BOXES
FLUSH 25MM
1 gang: 861Z1C
FLUSH 35MM
(for extra wiring space)
1 gang: 866ZIC
SURFACE WITH KNOCKOUTS
1 gang: K899ALM
SURFACE WITHOUT KNOCKOUTS
1 gang: K829ALM
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363-2:1995
Product helps support compliance to BS7671-710.553.1

K2947CEBLU, K733CEBLU
These product are provided with facilities for "clean earth" connection.

## MOUNTING BOXES

FLUSH 25MM
2 gang: 862ZIC
FLUSH 35MM
(for extra wiring space)
2 gang: 886ZIC
SURFACE WITH KNOCKOUTS
2 gang: K897ALM
SURFACE WITHOUT KNOCKOUTS
2 gang: K830ALM
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 1363-2:1995
Product helps support compliance to BS7671-710.553.

MOUNTING BOXES
FLUSH 35MM
2 gang: 886ZIC
SURFACE WITH KNOCKOUTS
2 gang: K897ALM
SURFACE WITHOUT KNOCKOUTS
2 gang: K830ALM
DIMENSIONS
$86 \times 146 \mathrm{~mm}$
BS 1363 Pt2:1995
HIGH INTEGRITY EARTHING
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 35MM
1 gang: 866ZIC SURFACE WITH KNOCKOUTS
1 gang: K899ALM SURFACE WITHOUT KNOCKOUTS 1 gang: K829ALM DIMENSIONS
$86 \times 86 \mathrm{~mm}$
BS EN 60669-1:1999

| Floor Mounted Socket Outlets |  | 2 GANG | Connection Units Switched |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1 GANG UNSWITCHED | UNSWITCHED |  |  |
|  | SOCKET SPRING | SOCKET SPRING |  |  |
| SPRING LOADED | LOADED HINGED | LOADED HINGED | DP WITH FLEX |  |
| HINGED COVER PLATE | COVER PLATE | COVER PLATE | OUTLET | DP |
| 13 AMP | 13 AMP | 13 AM | 13 AMP | 13 AM |

FINISHES

| BRUSHED STAINLESS STEEL | 740BSS | 10 | 741BSS | 5 | 742BSS | 1 | K931BSS | 5 | K941BSS | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BRUSHED CHROME | 740BRC | 1 | 741BRC | 1 | 742BRC | 1 | K931BRC | 1 | K941BRC | 1 |
| SATIN GOLD | 740SAG | 5 | 741SAG | 1 | 742SAG | 1 | K931SAG | 1 | K941SAG | 1 |
| POLISHED CHROME |  |  |  |  |  |  | K931PCR | 1 | K941PCR | 1 |

LEAD TIMES
Please contact our Customer Services Department on 01268563404

MOUNTING BOXES
FLUSH
1 gang: 866zIC
Boxes must have a minimum
depth of 35 mm
Rotary operated shutter. DIMENSIONS
$102 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363-2:1995

MOUNTING BOXES
FLUSH
1 gang: 866zIC
Boxes must have a minimum
depth of 35 mm
Rotary operated shutter. DIMENSIONS
$102 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363-2.1995

MOUNTING BO
ELUSH
2 gang: 886zIC
Boxes must have a minimum
depth of 35 mm
Rotary operated shutter. DIMENSIONS
$102 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 1363-2:1995

MOUNTING BOXES
FLUSH
866Z1C
SURFACE WITH KNOCKOUTS
K899ALM
SURFACE WITHOUT KNOCKOUTS
K829ALM
dIMENSIONS
$86 \times 86 \mathrm{~mm}$ FIXING CENTRES
60.3 mm

BS 1363-4:1995

MOUNTING BOXES
LUSH
06710
SURFACE WITH KNOCKOUTS
K899ALM
SURFACE WITHOUT
kNOCKOUTS
K829ALM
dIMENSIONS
$86 \times 86 \mathrm{~mm}$ FIXING CENTRES 60.3 mm

BS 1363-4:1995

| DP WITH |  |  | DP RED ROCKER |  |
| :--- | :--- | :--- | :--- | :--- |
| TAMPERPROOF FUSE |  | DP RED ROCKER | DP WITH FLEX | WITH FLEX OUTLET |
| CARRIER SCREW | DP WITH NEON | WITH NEON | OUTLET AND NEON | AND NEON |
| 13 AMP | 13 AMP | 13 AMP | 13 AMP | 13 AMP |



| K941K0BSS | 1 | K961BSS | 1 | K961D6BSS | 1 | K971BSS | 5 | K971D6BSS | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| K941K0BRC | 1 | K961BRC | 1 | K961D6BRC | 1 | K971BRC | 1 | K971D6BRC | 5 |
|  | K961SAG | 1 | K961D6SAG | 1 | K971SAG | 1 |  |  |  |
|  | K961PCR | 1 |  |  | K971PCR | 1 |  |  |  |

MOUNTING BOXES
FLUSH
866ZIC
SURFACE
WITH KNOCKOUTS
K899ALM
SURFACE WITHOUT KNOCKOUTS K829ALM DIMENSIONS
$86 \times 86 \mathrm{~mm}$ FIXING CENTRES
60.3 mm

BS 1363－4：1995
Key（3405zIC）is
supplied．

MOUNTING BOXES
FLUSH
866ZIC
SURFACE WITH KNOCKOUTS
K899ALM
SURFACE WITHOUT KNOCKOUTS
K829ALM
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363－4：1995

MOUNTING BOXES
FLUSH
86671 C
SURFACE WITH KNOCKOUTS K899ALM
SURFACE WITHOUT KNOCKOUTS
K829ALM
DIMENSIONS
$86 \times 86 m m$
FIXING CENTRES
60.3 mm

BS 1363－4：1995

MOUNTING BOXES
FLUSH
866710
SURFACE WITH KNOCKOUTS
K899ALM
SURFACE WITHOUT KNOCKOUTS
K829ALM
DIMENSIONS
$86 \times 86 \mathrm{~mm}$ FIXING CENTRES
60.3 mm

BS 1363－4：1995

MOUNTING BOXES
FLUSH
8667IC
SURFACE WITH KNOCKOUTS K899ALM
SURFACE WITHOUT KNOCKOUTS
K829ALM
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363－4：1995

## Connection Units Unswitched

13 AMP $\quad$| WITH NEO |  |
| :--- | :--- |
|  | 13 AMP |

WITH FLEX OUTLET AND NEON
13 AMP

## FINISHES

| BRUSHED STAINLESS STEEL | K948BSS | 5 | K958BSS | 1 |
| :--- | :--- | :--- | :--- | :--- |
| K978BSS | 1 |  |  |  |
| BRUSHED CHROME | K948BRC | 1 | K958BRC | 1 |
| K9778BRC | 1 |  |  |  |
| SATIN GOLD | K948SAG | 1 |  | K978SAG |

LEAD TIMES
Please contact our Customer
Services Department on
01268563404

MOUNTING BOXES
FLUSH
866ZIC
SURFACE WITH KNOCKOUTS
K899ALM
SURFACE WITHOUT KNOCKOUTS
K829ALM
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363-4:1995

MOUNTING BOXES
FLUSH
866Z1C
SURFACE WITH KNOCKOUTS K899ALM
SURFACE WITHOUT KNOCKOUTS
K829ALM
dimensions
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363-4:1995

MOUNTING BOXES
LUSH
B6671C
SURFACE WITH KNOCKOUTS
K899ALM
SURFACE WITHOUT KNOCKOUTS
K829ALM
dIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS 1363-4:1995

## DP Switches

|  |  | WITH FLEX OUTLET, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | RED ROCKER | WITH FLEX OUTLET |  |  |
|  | WITH NEON | AND NEON | AND NEON | DP WITH NEON | DP WITH NEON |
| 20 AMP | 20 AMP | 20 AMP | 20 AMP | 32 AMP | 50 AMP |


| K5213BSS | 1 | K5233BSS | 1 | K5233D6BSS | 1 | K5250BSS | 1 | K5106BSS | 1 | K5236BSS |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| K5213BRC | 1 | K5233BRC | 1 | K5233D6BRC | 1 | K5250BRC | 1 | K5106BRC | 1 | K5236BRC |
|  |  | K5233SAG | 1 |  |  | K5250SAG | 1 | K5106SAG | 1 | K5236SAG |
|  | K5233PCR | 1 |  |  | K5250PCR | 1 | K5106PCR | 1 | K5236PCR | 1 |

MOUNTING BOXES
FLUSH
FLUSH
866ZIC
SURFACE WITH KNOCKOUTS
K899ALM
SURFACE WITHOUT KNOCKOUTS K829ALM DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669-1:1999

MOUNTING BOXES
FLUSH
866ZIC
SURFACE WITH KNOCKOUT K899ALM
SURFACE WITHOUT KNOCKOUTS K829ALM DIMENSIONS $86 \times 86 \mathrm{~mm}$ $86 \times 86 \mathrm{~mm}$
FIXING CENTRES FIXING CE
60.3 mm
BS EN 60669-1:1999

MOUNTING BOXES
FLUSH
866ZIC
SURFACE WITH KNOCKOUTS
K899ALM
SURFACE WITHOUT KNOCKOUTS K829ALM DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669-1:1999

MOUNTING BOXES
FLUSH
866ZIC
SURFACE WITH KNOCKOUTS
K899ALM
SURFACE WITHOUT KNOCKOUTS K829ALM DIMENSIONS $86 \times 86 \mathrm{~mm}$ $86 \times 86 \mathrm{~mm}$
FIXING CENTRES 60.3 mm

BS EN 60669-1:1999

MOUNTING BOXES FLUSH 866Z1C ( $6 \mathrm{~mm}^{2}$ conductors) 877ZIC ( $10 \mathrm{~mm}^{2}$ conductors) SURFACE WITH KNOCKOUTS K899ALM
SURFACE WITHOUT KNOCKOUTS K829ALM DIMENSIONS $86 \times 86 \mathrm{~mm}$ FIXING CENTRES 60.3 mm

BS EN 60669-1:1999

MOUNTING BOXES
FLUSH
886ZIC ( $6 \mathrm{~mm}^{2}$ conductors) 878ZIC ( $10 \mathrm{~mm}^{2}$ conductors) SURFACE WITH KNOCKOUTS K897ALM
SURFACE WITHOUT KNOCKOUTS K830ALM DIMENSIONS $86 \times 146 \mathrm{~mm}$ FIXING CENTRES 120.6 mm

BS EN 60669-1:1999

| Cooker Control | Triple Pole \& | Shaver/Toothbrush | Flex Outlets | Plateswitches |
| :---: | :---: | :---: | :---: | :---: |
| Unit | Neutral Switch | Supply Units | (NON UK) |  |
| DP MAIN SWITCH |  | dual voltage |  |  |
| AND 13 AMP SWITCHSOCKET |  | 115/230V OUTPUT |  | SP |
| OUTLET WITH NEONS |  | 220/240V INPUT |  | 2 WAY |
| 45 AMP | 32 AMP | 50/60Hz |  | 10 AMP |


| FINISHES |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| brushed stainless steel | K5261BSS 1 | K5114BSS 1 | K703BSS 1 | K2240BSS 1 | K4671BSS 5 |
| BRUSHED CHROME | K5261BRC 1 | K5114BRC 1 | K703BRC 1 | K2240BRC 1 | K4671BRC 1 |
| SATIN GOLD | K5261SAG 1 | K5114SAG 1 | K703SAG 1 |  | K4671SAG 1 |
| Polished Chrome | K5261PCR 1 | K5114PCR 1 | K703PCR 1 |  | K4671PCR 1 |
| LEAD TIMES <br> Please contact our Customer 01268 5f3artment on 01268563404 | MOUNTING BOXES: <br> FLUSH <br> 886ZIC <br> (Up to $6 \mathrm{~mm}^{2}$ conductor) <br> 878ZIC <br> Up to $10 \mathrm{~mm}^{2}$ conductor <br> Rotary operated shutter. <br> DIMENSIONS <br> $86 \times 146 \mathrm{~mm}$ <br> FIXING CENTRES <br> 120.6mm <br> BS 4177:1992 | mounting box <br> FLUSH <br> 878ZIC <br> This product is rated at 440 volts with a motor load ating of up to $12 \mathrm{~kW}-16 \mathrm{HP}$ at 415 V 3 phase. <br> It has a utilisation category of AC22A - switching of mixed including moderate overloads or a continuous duty of 32 amps. Making capacity is 2000 TERMINAL CAPACITY $16 \mathrm{~mm}^{2}$ conductors. DIMENSIONS $146 \times 86 \mathrm{~mm}$ <br> BS EN 60947-3:1992 | mounting boxes: <br> FLUSH <br> This design incorporates <br> a double wound isolating <br> transtormer rated 20VA a 230 <br> or 115 volts and meets <br> BS EN 6.1558-2-5:1998 <br> mathoitsa. <br> Insertion of a shaver/ <br> toothbrust plug automatically switches on by enerasising the <br> switches on by energising the <br> transtormer - removal <br> automatically switches <br> off. The transtormer is <br> by an automatic solid state <br> overload device with automatic <br> DIMENSIONS <br> $146 \times 86 \mathrm{~mm}$ FIXING CENTRES <br> 120.6 mm <br> BS EN 61558-2-5:1998 | MOUNTING BOXES <br> FLUSH <br> 866ZIC <br> SURFACE <br> WITH KNOCKOUTS <br> K899ALM <br> SURFACE WITHOUT <br> KNOCKOUTS <br> K829ALM <br> CABLE DIAMETER <br> Minimum 4mm <br> Maximum 14.5 mm <br> DIMENSIONS <br> 1 gang: $86 \times 86 \mathrm{~mm}$ <br> FIXING CENTRES <br> 1 gang: 60.3 mm <br> BS 5733:2010 | mounting boxes FLUSH <br> SURFACE <br> WITH KNockouts <br> K899ALM <br> SURFACE WITHOUT <br> kNocKOUTS <br> These switches do not have <br> to be derated when used with fluorescent or inductive loads. either one-way or two-way. DIMENSIONS$86 \times 86 \mathrm{~mm}$ <br> FIXING CENTRES 60.3 mm <br> BS EN 60669-1:1999 <br> If an intermediate switch is required, a moduluar (Grid Plus) version is available. Order frame and K4893WHH1 20A intermediate switch |

3 Pole Fan Isolator

|  |  |
| :--- | :--- |
| 2 GANG SP | 3 GANG SP |
| 2 WAY | 2 WAY |
| 10 AMP | 10 AMP |


| 1 GANG SP | 2 GANG SP |
| :--- | :--- |
| 2 WAY | 2 WAY |
| WIDE ROCKER | WIDE ROCKER |
| 10 AMP | 10 AMP |


| WITHOUT | SWITCHLOCK |
| :--- | :--- |
| SWITCHLOCK | FOR FAN |
| 10 AMP | ISOLATOR |

Standard Dimmer Switches

|  |  | 2 WAY DOUBLE | 2 WAY DOUBLE | 2 WAY TRIPLE |
| :--- | :--- | :--- | :--- | :--- |
| 2 WAY SINGLE | 2 WAY SINGLE | 230V A.C. 50 HZ | 230 V A.C. 50 HZ | 230V A.C. 50 HZ |
| 230V A.C. 50 HZ | 230V A.C. 50 HZ | 40 W MIN -250 W | 60 W MIN -450 W | 40 W MIN -250 W |
| 40W MIN - | 60W MIN - | MAX FOR EACH | MAX FOR EACH | MAX FOR EACH |
| 250W MAX | 500W MAX | DIMMER | DIMMER | DIMMER |

## FINISHES

| BRUSHED STAINLESS STEEL | K1534BSS | 1 | K1551BSS | 1 | K1532BSS | 1 | K1552BSS | 1 | K1533BSS |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BRUSHED CHROME | K1534BRC | 1 | K1551BRC | 1 | K1532BRC | 1 | K1552BRC | 1 | K1533BRC |
| SATIN GOLD | K1534SAG | 1 | K1551SAG | 1 | K1532SAG | 1 | K1552SAG | 1 | K1533SAG |
| POLISHED CHROME | K1534PCR | 1 | K1551PCR | 1 | K1532PCR | 1 | K1552PCR | 1 | K1533PCR |

LEAD TIMES
Please contact our Customer
Services Department on
01268563404

[^18]
## Intelligent Dimmer Switches

|  |  |  | 2 WAY DOUBLE |
| :--- | :--- | :--- | :--- |
| 2 WAY SINGLE | 2 WAY SINGLE | 2 WAY DOUBLE | $230 V$ A.C. $50 H Z$ |
| 230V A.C. $50 H Z$ | 230V A.C. $50 H Z$ | $230 V$ A.C. $50 H Z$ | $60 W / V A$ MIN - |
| 40W/VA MIN -300 W/240VA | 60W/VA MIN - | 40W/VA MIN - | 450W/360VA MAX |
| MAX | 500 W/400VA MAX | 300 W/240VA MAX | FOR EACH DIMMER |


| K1536BSSLV | 1 | K1551BSSLV | 1 | K1532BSSLV | 1 | K1552BSSLV | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K1536BRCLV | 1 | K1551BRCLV | 1 | K1532BRCLV | 1 | K1552BRCLV | 1 |
| K1536SAGLV | 1 | K1551SAGLV | 1 | K1532SAGLV | 1 | K1552SAGLV | 1 |
| K1536PCRLV | 1 | K1551PCRLV | 1 | K1532PCRLV | 1 | K1552PCRLV | 1 |

[^19]| Blank Plates |  |
| :---: | :--- |
| 1 GANG | 2 GANG |

TV/FM Coaxial Socket Outlets

TWIN OUTLET
WITH TV/FM
DIPLEXER

| FINISHES |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| brushed stainless steel | K3330BSS | 10 | K3329BSS | 5 | K3580BSS 5 | K3581BSS 5 | K3582BSS 5 |
| BRUSHED CHROME | K3330BRC | 1 | K3329BRC | 1 | K3580BRC 1 | K3581BRC 1 | K3582BRC 1 |
| SATIN GOLD | K3330SAG | 1 | K3329SAG | 1 | K3580SAG 1 | K3581SAG 1 | K3582SAG 1 |
| POLISHED CHROME | K3330PCR | 1 | K3329PCR | 1 | K3580PCR | K3581PCR 1 | K3582PCR 1 |
| LEAD TIMES <br> Please contact our Customer <br> Services Department on <br> 01268563404 | mounting boxes: <br> FLUSH <br> 1 gang: 866zlC <br> SURFACE <br> WITH KNOCKOUTS <br> 1 gang: K899ALM <br> SURFACE WITHOUT <br> kNOCKOUTS <br> K829ALM <br> DIMENSIONS <br> FIXING CENTRES <br> 60.3 mm <br> BS 5733:2010 |  | mounting boxes: <br> FLUSH <br> 2 gang: 886z10 <br> SURFACE <br> WITH KNOCKOUTS <br> 2 gang: K897ALM <br> SURFACE WITHOUT <br> kNoCKOUTS <br> K830ALM <br> DIMENSIONS <br> FIXING CENTRES <br> 120.6 mm <br> BS 5733:2010 |  | MOUNTING BOXES <br> FLUSH <br> 861ZIC <br> WITH KNOCKOUTS <br> K899ALM <br> SURFACE WITHOUT <br> KNOCKOUTS <br> K829ALM <br> Single outlet for connection <br> to a single TV or FM co-axial <br> aerial lead | mounting boxes <br> FLUSH <br> SURFACE <br> WITH KNOCKOuTS <br> K899ALM <br> SURFACE WITHOUT <br> kNOCKOUTS <br> K3581 <br> Provides safety isolation rated at 2000 Va.c. between aerial lead and socket. Single outlet for connection to a single TV or FM co-axial aerial lead | mounting boxes <br> FLusH <br> SURFACE <br> with knockouts <br> K899ALM <br> surface without <br> kNoCKOUTS <br> K 3582 A 2 <br> Provides safety isolation rated <br> at 2000 V .... between aerial <br> lead and socket. Single outlet for connection to a single $T V$ <br> or FM Co-axial aerial lead. Twin |

Satellite
Socket Outlets
SINGLE OUTLET
F TYPE SATELLITE SOCKET

Floor Mounted Euro Frames

1 GANG STANDARD 1 GANG RECESSED 2 GANG STANDARD 2 GANG RECESSED

| K3585BSS | 1 | 790BSS | 1 | 791BSS | 1 | 795BSS | 1 | 796BSS | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| K3585BRC | 1 | 790BRC | 1 | 791BRC | 1 | 795BRC | 1 | 796BRC | 1 |
| K3585SAG | 1 | 790SAG | 1 | 791SAG | 1 | 795SAG | 1 | 796SAG | 1 |
| K3585PCR | 1 |  |  |  |  |  |  |  |  |

DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

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

## MOUNTING BOXES

FLUSH
1 gang: 866ZIC
Boxes must have a minimum depth of 35 mm DIMENSIONS
1 gang: $102 \times 86 \mathrm{~mm}$
FIXING CENTRES
1 gang: 60.3 mm
NOTE
Use 'F' type connectors with recessed euro frame products. 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 46-48.

MOUNTING BOXES
FLUSH
1 gang: 866ZIC
Boxes must have a minimum depth of 35 mm DIMENSIONS
1 gang: $102 \times 86 \mathrm{~mm}$
FIXING CENTRES
1 gang: 60.3 mm
NOTE
Use 'F' type connectors with recessed euro frame products. This ensures full lid closure when the aerial lead is disconnected Power sockets must only be used Power sockets must only be us
with the standard Euro Frame 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 46-48.

## MOUNTING BOXES

FLUSH
2 gang: 886ZIC
Boxes must have a minimum depth of 35 mm
DIMENSIONS
2 gang: $102 \times 146 \mathrm{~mm}$
FIXING CENTRES
2 gang: 120.6 mm
NOTE
Use 'F' type connectors with recessed euro frame products. 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 46-48.

MOUNTING BOXES
FLUSH
2 gang: 886ZIC
Boxes must have a minimum depth of 35 mm DIMENSIONS
2 gang: $102 \times 146 \mathrm{~mm}$
FIXING CENTRES
2 gang: 120.6 mm
NOTE
Use 'F' type connectors with
recessed euro frame products. This ensures full lid closure when th 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 46-48.

Fully screened modular
TV/Satellite outlets are available to fit Euro frontplates. See page 48 for details.

Euro Modular Frontplates

## FINISHES

| BRUSHED STAINLESS STEEL | K181BSS | 5 | K182BSS | 5 | K184BSS | 5 | K172BSS | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BRUSHED CHROME | K181BRC | 1 | K182BRC | 1 | K184BRC | 1 | K172BRC | 1 |
| SATIN GOLD | K181SAG | 1 | K182SAG | 1 | K184SAG | 1 | K172SAG | 1 |
| POLISHED CHROME | K181PCR | 5 | K182PCR | 5 | K184PCR | 5 | K172PCR | 5 |

LEAD TIMES
Please contact our Customer
Services Department on
01268563404

DIMENSIONS
$86 \times 86 \mathrm{~mm}$
BS 5733:2010
NOTE
Euro Data Frontplates: no grid required,
modules just clip into place.

DIMENSIONS
$86 \times 86 \mathrm{~mm}$
BS 5733:2010
BS 573
Euro Data Frontplates: no grid required modules just clip into place.

EURO
2 MODULE
$50 \times 50 \mathrm{Mm}$

EURO
4 MODULE
$100 \times 50 \mathrm{MM}$

## LJU6C Datacom

Frontplate

1 GANG
2 MODULE
$22 \times 37$ MM

DIMENSIONS
$86 \times 146 \mathrm{~mm}$
BS 5733:2010
NOTE
Euro Data Frontplates: no grid required,
modules just clip into place.

DIMENSIONS
$86 \times 86 \mathrm{~mm}$
BS $5733: 2010$
BS 5733
NOTE
NOTE
LJU6C Data Frontplates: no grid
required, modules just clip into place.

| Euro Power |  |
| :--- | :--- | :--- |
| $:$ Modules | GERMAN |
| $:$ UK 250V | 2P＋E 250V |
| $: 2$ MODULE | SHUTTERED |
| $50 \times 50 M M$ | 2 MODULE |
| 13 AMP | （NON UK） |
|  | 16 AMP |

AMERICAN
127V SHUTTERED
2 MODULE
50 X 5OMM
（NON UK）
15 AMP

FRENCH／BELGIAN
$2 \mathrm{P}+\mathrm{E}$
250V SHUTTERED
2 MODULE
50 X 50MM
（NON UK）
16 AMP

| K5830WHI | 10 | K5831WHI | 10 | K5832WHI | 10 | K5833WHI | 10 | K5834WHI | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K5830BLK | 10 | K5831BLK | 10 | K5832BLK | 10 | K5833BLK | 10 | K5834BLK | 10 |


| MOUNTING BOX | MOUNTING BOX |
| :--- | :--- |
| 35mm minimum | 46 mm |
| 46mm（for extra wiring space）． | DIMENSIONS |
| DIMENSIONS | $50 \times 50 \mathrm{~mm}$ |
| $50 \times 50 \mathrm{~mm}$ | IEC $60884-1: 2006$ |

MOUNTING BOX
46 mm （for extra wiring space）．
$50 \times 50 \mathrm{~mm}$
BS 1363 Part 2：1995

46 mm
DIMENSIONS
IEC 60884－1：2006

MOUNTING BOX
35 mm
46 mm （for extra wiring space） DIMENSIONS
$50 \times 50 \mathrm{~mm}$
SASO 2204：2003

MOUNTING BOX
35 mm minimum
46 mm （for extra wiring space） DIMENSIONS
$50 \times 50 \mathrm{~mm}$
BS 546：1950

MOUNTING BOX
46 mm
DIMENSIONS
$50 \times 50 \mathrm{~mm}$
NF C61－314

| Euro Power | Grid Plus Modular Frontplates |  |  |
| :--- | :--- | :--- | :--- |
| Modules | (SUPPLIED WITH GRIDS) |  |  |
|  |  |  |  |
| USB CHARGING |  |  |  |
| 2 MODULE |  |  |  |
| $50 \times 50$ MM | 1 MODULE | 2 MODULE | 3 MODULE |


| FINISHES |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| brushed stainless steel | $\begin{aligned} & \text { K5837WHI } \\ & \text { K5837BLK } \end{aligned}$ | $\begin{aligned} & 1 \\ & 1 \end{aligned}$ | K3431BSS | 10 | K3432BSS | 10 | K3433BSS | 5 |
| BRUSHED CHROME |  |  | K3431BRC | 1 | K3432BRC | 1 | K3433BRC | 1 |
| SATIN GOLD |  |  | K3431SAG | 1 | K3432SAG | 1 | K3433SAG | 1 |
| POLISHED CHROME |  |  | K3431PCR | 1 | K3432PCR | 1 | K3433PCR | 1 |

LEAD TIMES
Please contact our Customer Services Department on 01268563404

USB charging sockets, each capable of supporting 2A charge (total of 2A)

K5837 MOUNTING BOX
Minimum Box depth 35 mm
46 mm for extra wiring space
IEC 60950-1
IEC 61000-6-1/3

DIMENSIONS
$86 \times 86 \mathrm{~mm}$
BS 5733:2010

DIMENSIONS
$86 \times 86 \mathrm{~mm}$
BS 5733:2010

DIMENSIONS
$86 \times 146 \mathrm{~mm}$
BS 5733:2010

DIMENSIONS
$86 \times 146 \mathrm{~mm}$
BS 5733：2010

DIMENSIONS
$146 \times 146 \mathrm{~mm}$
BS 5733：2010

DIMENSIONS
$146 \times 146 \mathrm{~mm}$
BS 5733：2010

Grid Plus Modular Frontplates
(SUPPLIED WITH GRIDS)

9 MODULE
12 MODULE
18 MODULE
24 MODULE

| FINISHES |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| brushed stainless steel | K3439BSS | 1 | K3442BSS | 1 | K3448BSS | 1 | K3454BSS | 1 |
| BRUSHED CHROME | K3439BRC | 1 | K3442BRC | 1 | K3448BRC | 1 | K3454BRC | 1 |
| SATIN GOLD | K3439SAG | 1 | K3442SAG | 1 | K3448SAG | 1 | K3454SAG | 1 |
| POLISHED CHROME | K3439PCR | 1 | K3442PCR | 1 | K3448PCR | 1 | K3454PCR | 1 |

LEAD TIMES
Please contact our Customer
Services Department on
01268563404

DIMENSIONS
9 module: $206 \times 146 \mathrm{~mm}$
BS 5733:2010

DIMENSIONS
$206 \times 146 \mathrm{~mm}$
BS 5733:2010

DIMENSIONS
$206 \times 206 \mathrm{~mm}$
BS 5733:2010

DIMENSIONS
$206 \times 207 \mathrm{~mm}$
BS 5733:2010


## cccce сос

## GRID PLUS

## RANGE INTRODUCTION

## Grid Plus is a modular switching and monitoring system in a choice of attractive finishes to match <br> 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.

## HOW TO SPECIFY

A modular switching and monitoring wiring device system. Modules to have a simple 'clip fit' mechanism to hold them to the mounting frame, which do not require specialist tools and are fitted in to place from the front. Accompanying front plates must be able to hold up to 24 modules in a variety of aesthetics and finishes. All products must be made in the UK and provided with a 20 year guarantee.

## FEATURES \& BENEFITS

VAST RANGE
Comprehensive range of frontplates and grid 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 and ensuring the longevity of the 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 (10 years for electronic devices).

| Blank | Switch Modules |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Inserts | 10 Amp |  |  |  | 2 WAY |
|  |  |  |  | 2 WAY | RED |
|  |  |  |  | RETRACTIVE | RETRACTIVE |
|  | 1 WAY SP | 1 WAY DP | 2 WAY SP | SWITCH SP | SWITCH SP |
| 1 MODULE | 10 AMP | 10 AMP | 10 AMP | 10 AMP | 10 AMP |


| FINISHES |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WHITE | K4880WHI | 10 | K4881WHI | 10 | K4981WHI | 10 | K4882WHI | 10 | K4885WHI | 10 | K4885RED | 1 |
| BLACK | K4880BLK | 10 | K4881BLK | 10 | K4981BLK | 10 | K4882BLK | 1 | K4885BLK | 10 | K4885REDB | 1 |
| GRAPHITE | K4880GRA | 10 | K4881GRA | 10 |  |  | K4882GRA |  |  |  |  |  |

These switches do NOT
have to be derated when
used with fluorescent or
inductive loads.
BS EN 60669-1:1999 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 flourescent loads. BS EN 60669-1:1999

NOTE
Push switches are not designed for flourescent loads. BS EN 60669-1:1999

| 2 WAY |  |  |
| :--- | :--- | :--- |
| RETRACTIVE | 2 WAY | 2 WAY |
| SWITCH | RETRACTIVE | CENTRE OFF |
| MARKED WITH | SWITCH MARKED | RETRACTIVE |
| BELL SYMBOL SP | ＇PRESS＇SP | SWITCH SP |
| 10 AMP | 10 AMP | 10 AMP |

## Switch Modules

20 Amp

|  |  | 1 WAY |
| :--- | :--- | :--- |
|  | 1 WAY PUSH TO | RED ROCKER |
| 1 WAY SP | MAKE DP | PUSH TO MAKE DP |
| 20 AMP | 20 AMP | 20 AMP |


|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| K4885BWHI 1 | K4885PWHI 10 | K4900WHI 10 | K4891WHI 10 | K4910WHI 10 | K4910RED 10 |
| K4885BBLK 1 | K4885PBLK 1 | K4900BLK 10 | K4891BLK 10 | K4910BLK 10 | K4910REDB 1 |
|  |  |  | K4891GRA 10 |  |  |
| note <br> Push switches are not designed for fluorescent loads． BS EN 60669－1：1999 | NOTE <br> Push switches are not designed for fluorescent loads． <br> BS EN 60669－1：1999 | NOTE <br> Push switches are not designed for fluorescent loads． <br> 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 <br> Push switches are not designed for fluorescent loads． <br> BS EN 60669－1：1999 | NOTE <br> Push swithes are not <br> designed for fluorescent loads <br> BS EN 60669－1：1999 |

Switch Modules 20 Amp

| 1 WAY | 1 WAY |  |
| :--- | :--- | :--- |
| PUSH TO | RED ROCKER |  |
| BREAK | PUSH TO BREAK |  |
| RETRACTIVE DP | RETRACTIVE DP | 2 WAY SP |
| 20 AMP | 20 AMP | 20 AMP |

2 WAY
RED ROCKER SP
20 AMP
2 WAY

20 AMP

## -

SWITCH WITH INTEGRAL 2 WAY
NEON
LOCATOR SP
AND CENTRE
OFF SP
20 AMP
20 AMP

| FINISHES |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WHITE | K4915WHI |  | K4915RED | 10 | K4892WHI | 10 | K4892RED | 10 | K4892LWHI | 10 | K4899WHI | 10 |
| BLACK | K4915BLK | 10 | K4915REDB | 1 | K4892BLK | 10 | K4892REDB | 1 | K4892LBLK | 1 | K4899BLK | 10 |
| GRAPHITE |  |  |  |  |  |  |  |  |  |  |  |  |

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 BS EN 60669-1:1999 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

| RED ROCKER |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2 |  | INTERMEDIATE |  | 1 WAY | 1 WAY |
| CENTRE OFF SP | INTERMEDIATE | RED ROCKER | 1 WAY DP | NEON DP | WITH WINDOW DP |
| 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP |


|  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K4899RED | 10 | K4893WHI | 10 | K4893RED | 10 | K4896WHI | 10 | K4896NWHI | 1 | K4896WWHI | 10 |
| K4899REDB | 1 | K4893BLK | 10 | K4893REDB | 10 | K4896BLK | 10 | K4896NBLK | 1 | K4896WBLK | 10 |
|  |  |  |  |  |  | K4896GRA | 10 | K4896NGRA | 1 |  |  |

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 BS EN 60669－1．1999 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 | Printed Modules with and without Neon |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1 WAY |  | 1 WAY |
| 1 WAY | 1 WAY | BOILER | 1 WAY | DISHWASHER |
| RED ROCKER DP | BOILER DP | NEON DP | DISHWASHER DP | NEON DP |
| 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP |


| FINISHES |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WHITE | K4896RED | 10 | K4896BRWHI | 1 | K4896NBRWHI | 1 | K4896DWWHI | 1 | K4896NDWWHI | 1 |
| BLACK | K4896REDB | 1 | K4896BRBLK | 1 | K4896NBRBLK | 1 | K4896DWBLK | 1 | K4896NDWBLK | 1 |

These switches do NOT have
to be derated when used with
fluorescent or inductive loads.
BS EN 60669-1:1999

|  | 1 WAY |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| 1 WAY | COOKER HOOD | 1 WAY | 1 WAY FAN | 1 WAY |
| COOKER HOOD DP | NEON DP | FAN DP | NEON DP | FRIDGE DP |
| 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP |


| K4896CHWHI | 1 | K4896NCHWHI | 1 | K4896FNWHI | 1 | K4896NFNWHI | 1 | K4896FGWHI |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 |  |  |  |  |  |  |  |  |
| K4896CHBLK | 1 | K4896NCHBLK | 1 | K4896FNBLK | 1 | K4896NFNBLK | 1 | K4896FGBLK |
| 1 |  |  |  |  |  |  |  |  |

Printed Modules with and without Neon


|  |  | 1 WAY |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 WAY | 1 WAY | 1 WAY | WASHING | 1 WAY | 1 WAY |
| WASTE | WASTE DISPOSAL | WASHING | MACHINE | TUMBLE | TUMBLE DRYER |
| DISPOSAL DP | NEON DP | MACHINE DP | NEON DP | DRYER DP | NEON DP |
| 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP |



Printed Modules with and without Neon


1 WAY

| HEATER | 1 WAY |
| :--- | :--- |
| NEON DP | OVEN DP |
| 20 AMP | 20 AMP |

20 AMP

OVEN DP
20 AMP

| 1 WAY | 1 WAY |
| :--- | :--- |
| OVEN NEON DP | HOB DP |
| 20 AMP | 20 AMP |

1 WAY HOB NEON DP
20 AMP
1 WAY
IMMERSION
HEATER DP
20 AMP

|  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K4896NHRWHI | 1 | K48960VWHI | 1 | K4896NOVWHI | 1 | K4896HBWHI | 1 | K4896NHBWHI | 1 | K4896IHWHI | 1 |
| K4896NHRBLK | 1 | K48960VBLK | 1 | K4896NOVBLK | 1 | K4896HBBLK | 1 | K4896NHBBLK | 1 | K4896IHBLK | 1 |

Printed Modules with and without Neon


1 WAY
WINE COOLER DP
20 AMP

1 WAY
WINE COOLER NEON DP 20 AMP
1 WAY
WARMING
DRAWER DP
20 AMP

| 1 WAY | 1 WAY |
| :--- | :--- |
| WARMING | COFFEE |
| DRAWER NEON DP | MACHINE DP |
| 20 AMP | 20 AMP |

1 WAY
COFFEE MACHINE
NEON DP
20 AMP

|  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K4896WCWHI | 1 | K4896NWCWHI | 1 | K4896WDAWHI | 1 | K4896NWDAWHI 1 | K4896CMWHI | 1 | K4896NCMWHI | 1 |
| K4896WCBLK | 1 | K4896NWCBLK | 1 | K4896WDABLK | 1 | K4896NWDABLK 1 | K4896CMBLK | 1 | K4896NCMBLK | 1 |

Secret Key Switch Modules

| INTERMEDIATE | 2 WAY | SECRET KEY | 1 WAY |  |
| :--- | :--- | :--- | :--- | :--- |
| SECRET KEY | SECRET KEY | SWITCH MARKED | SECRET KEY | EMERGENCY |
| SWITCH | SWITCH SP | 'EMG LTG TEST’ SP | SWITCH DP | LIGHTING DP |
| 20 AMP | 20 AMP | 20 AMP | 20 AMP | 20 AMP |


| KHITE |
| :--- |
| KINISHES |
| K4894WHI |
| BLACK |

These switches do NOT have
to be derated when used with fluorescent or inductive loads BS EN 60669-1:1999 Key ( 3405 ZIC ) is supplied

These switches do NOT have to be derated when used with fluorescent or inductive loads. BS EN 60669-1:1999 Key (3405ZIC) is supplied

These switches do NOT have to be derated when used with luorescent or inductive loads. BS EN 60669-1:1999 Key (3405ZIC) is supplied.

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| Indicator | Dimmer Switch Modules |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Unit | TUNGSTEN FILAMENT AND LOW VOLTAGE LIGHTING | $40-220 W / 180 V A /$ |  |  |
| Modules | 40W/VA-220W/ | 60W/VA-400W/ | $0-10 \mathrm{~V} / 1-10 \mathrm{~V}$ | $4-70 \mathrm{~W}$ |
|  | 180VA MAX | 320VA MAX | FLUORESCENT | LED INTELLIGENT |
| $21-36 \mathrm{~V}$ | 230V A.C., 50HZ | 230V A.C., 50HZ | CONTROLLER | DIMMER |
| FILAMENT | 1 MODULE | 2 MODULE | 1 MODULE | 1 MODULE |


| FINISHES |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WHITE | K4836GRN | 10 | K4501WHILV | 1 | K4500WHILV | 1 | K4499WHI | 1 | K4511WHILV | 1 |
| BLACK |  |  | K4501BLKLV | 1 | K4500BLKLV | 1 | K4499BLK | 1 | K4511BLKLV | 1 |

BS 5733:2010
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

## Accessory Modules

| SINGLE TV | SINGLE TV |  |  |  | 13A |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| CO-AXIAL | CO-AXIAL |  |  | 16A |  | FUSE UNIT WITH |
| OUTLET | OUTLET | 200-250V A.C. | 21-36V A.C. | CORD | 13A | TAMPERPROOF |
|  | NON-ISOLATED | ISOLATED | BUZZER UNIT | BUZZER UNIT | OUTLET | FUSE UNIT |


|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K4520WHI 10 | K4521WHI 10 | K4000WHI 10 | K4001WHI 10 | K4886WHI 10 | K4890WHI 10 | K4890KOWHI 10 |
| K4520BLK 10 | K4521BLK 10 |  |  | K4886BLK 10 | K4890BLK 10 | K4890KOBLK 10 |
| For direct connection to TV or FM aerial Co-axial downlead. NOT to be used in same enclosure as mains exceeding 50 V . BS 3041:1977 IEC 169-2:1965 BS 5733:2010 where applicable. | For direct connection to TV or FM aeria CO-axial downlead. NOT to be used in same enclosure as mains exceeding 50 V . BS 3041:1977 IEC 169-2:1965 BS 5733:2010 where applicable. | SOUND OUTPUT LEVEL <br> Av 61 db @ 15 feet. <br> BS 5733:2010 | SOUND OUTPUT Level <br> Av 61 db @ 15 teet. BS 5733:2010 | Complete with 3 pairs of terminals. The supply terminals are suitable for up to $2 \times$ $2.5 \mathrm{~mm}^{2}$ or $1 \times 4 \mathrm{~mm}^{2}$ solid conductors. The load terminals are suitable for one A cord grip is also fitted. <br> BS 5733:2010 | Fuse carrier comes with 13A cartridge fuse link to BS 1362. <br> BS 5733:2010 | Fuse carrier comes with 13A cartridge fus link to BS 1362. BS 5733:2010 Key (3405ZIC) is supplied. |



|  | BOXES |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LOGIC PLUS FLUSH | $\begin{aligned} & \text { 891ALM } \\ & 2 \times 20 \mathrm{MM} \text { KNOCKOUTS } \end{aligned}$ | $\begin{aligned} & \text { 891ALM } 10 \\ & 2 \times 20 \mathrm{MM} \text { KNOCKOUTS } \end{aligned}$ | 892ALM <br> 4 X 20MM, $4 \times 25 \mathrm{MM}$ KNOCKOUTS | 5 | 892ALM <br> 4 X 20MM, 4 X 25MM KNOCKOUTS | 5 | 893ALM <br> 4 X 20MM, 4 X 25MM KNOCKOUTS | 5 |  |
|  | $\begin{aligned} & \text { 821ALM } \\ & \text { WITHOUT KNOCKOUTS } \end{aligned}$ | $\begin{aligned} & \text { 821ALM } \\ & \text { WITHOUT KNOCKOUTS } \end{aligned}$ | 822ALM <br> WITHOUT KNOCKOUTS | 5 | 822ALM <br> WITHOUT KNOCKOUTS | 5 | 823ALM <br> WITHOUT KNOCKOUTS | 5 |  |
| LOGIC PLUS SURFACE METAL | K2213ALM 5 <br> 5 X 20MM KNOCKOUTS | $\begin{aligned} & \text { K2213ALM } \\ & 5 \times 20 \mathrm{MM} \text { KNOCKOUTS } \end{aligned}$ | K2214ALM <br> 7 X 20MM KNOCKOUTS | 5 | K2214ALM <br> 7 X 20MM KNOCKOUTS | 5 |  |  |  |
|  | $\begin{aligned} & \text { K2211ALM } \\ & \text { WITHOUT KNOCKOUTS } \end{aligned}$ | $\begin{aligned} & \text { K2211ALM } \\ & \text { WITHOUT KNOCKOUTS } \end{aligned}$ | K2212ALM <br> WITHOUT KNOCKOUTS | 5 | K2212ALM <br> WITHOUT KNOCKOUTS | 5 |  |  |  |
| LOGIC PLUS <br> SURFACE MOULDED | K2140WHI 10 <br> WITHOUT KNOCKOUTS | $\text { K2140WHI } 10$ WITHOUT KNOCKOUTS | K2142WHI <br> WITHOUT KNOCKOUTS | 5 | K2142WHI <br> WITHOUT KNOCKOUTS | 5 |  |  |  |
| LOGIC PLUS SURFACE PVC | $\begin{aligned} & \text { K2181WHI } 10 \\ & \text { WITHOUT KNOCKOUTS } \end{aligned}$ | $\begin{aligned} & \text { K2181WHI } 10 \\ & \text { WITHOUT KNOCKOUTS } \end{aligned}$ | K2183WHI <br> WITHOUT KNOCKOUTS | 5 | K2183WHI <br> WITHOUT KNOCKOUTS | 5 |  |  |  |
| METALCLAD PLUS \& ALBANY PLUS SURFACE | K8891ALM 5 X 20MM KNOCKOUTS <br> 10 | $\begin{aligned} & \text { K8891ALM } \\ & 5 \times 20 \mathrm{MM} \text { KNOCKOUTS } \end{aligned}$ | K8892ALM <br> 7 X 20MM KNOCKOUTS | 5 | K8892ALM <br> 7 X 20MM KNOCKOUTS | 5 | K8893ALM <br> 4 X 20MM, 4 X 25MM KNOCKOUTS | 5 |  |
|  | $\underset{\text { KITHOUT KNOCKOUTS }}{\text { K8821ALM }} 10$ | $\begin{aligned} & \text { K8821ALM } \\ & \text { WITHOUT KNOCKOUTS } \end{aligned}$ | K8822ALM <br> WITHOUT KNOCKOUTS | 5 | K8822ALM <br> WITHOUT KNOCKOUTS | 5 | K8823ALM <br> WITHOUT KNOCKOUTS | 1 |  |
|  | K8901ALM DEEP BOX $5 \times 20 M M$ KNOCKOUTS | K8901ALM DEEP BOX $5 \times 20 M M$ KNOCKOUTS | K8902ALM <br> DEEP BOX <br> 4 X 20MM, $4 \times 25 \mathrm{MM}$ KNOCKOUTS | 5 | K8902ALM <br> DEEP BOX <br> 4 X 20MM, $4 \times 25 \mathrm{MM}$ KNOCKOUTS | 5 |  |  |  |
| ALBANY PLUS ASPECT \& EDGE FLUSH | $\begin{aligned} & \text { 891ALM } \\ & 2 \times 20 \mathrm{MM} \text { KNOCKOUTS } \end{aligned}$ | $\begin{aligned} & \text { 891ALM } 10 \\ & 2 \times 20 M M \text { KNOCKOUTS } \end{aligned}$ | 892ALM <br> 4 X 20MM, 4 X 25MM KNOCKOUTS | 5 | 892ALM <br> 4 X 20MM, 4 X 25MM KNOCKOUTS | 5 | 893ALM <br> 4 X 20MM, 4 X 25MM KNOCKOUTS | 5 |  |
|  | $\begin{aligned} & \text { 821ALM } \\ & \text { WITHOUT KNOCKOUTS } \end{aligned}$ | 821ALM 10 <br> WITHOUT KNOCKOUTS | 822ALM <br> WITHOUT KNOCKOUTS | 5 | 822ALM <br> WITHOUT KNOCKOUTS | 5 | 823ALM <br> WITHOUT KNOCKOUTS | 5 |  |
| GRIDS |  |  |  |  |  |  |  |  |  |
| EDGE \& ASPECT COVER PLATES INCLUDE AN INTEGRAL GRID | K3701 $10$ | K3702 $10$ | K3703 | 10 | K3704 | 10 | $\text { K3703 X } 2$ | 10 |  |





## HIGH POWER DIMMER

## 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 \& BENEFITS

- Up to 1000 W dimming output per unit
- Up to 3000 W 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


## High Power Dimmer

## OPERATING MODES

| Function | Description |
| :--- | :--- |
| Push button dimmer <br> with memory | Non cyclic dimming with maximum \＆minimum brightness limit adjustment． <br> Soft start switch on at last dimming level． |
| Push button dimmer <br> without memory | Non cyclic dimming with maximum \＆minimum brightness limit adjustment． <br> Soft start switch on at maximum level． |
| Push button cyclic dimmer <br> with memory | Cyclic dimming with maximum \＆minimum brightness limit adjustment． <br> Soft start switch on at last dimming level． |
| Push button cyclic dimmer <br> without memory | Cyclic dimming with maximum \＆minimum brightness limit adjustment． <br> Soft start switch on at maximum level． |
| Stairwell lighting controller <br> with turn off warning | Time Delay Switch with 50\％brightness turn off warning．Adjustable time－on period between 1sec－2．3hrs． <br> Adjustable turn－off warning periods between 1sec－8min． |
| Stairwell lighting controller <br> 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 <br> 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 <br> Filament Lamps | 12V Wirewound <br> Transformers | 12V Electronic <br> Transformers |
| :--- | :--- | :--- | :--- | :--- |
|  | 1kW Universal Dimmer <br> －Master／Slave | Yes <br> $60-1000 \mathrm{~W}$ | Yes <br> $50-900 \mathrm{VA}$ | Yes <br> $50-900 \mathrm{VA}$ |
| K1401M | 1kW Leading Edge Dimmer <br> －Master | Yes <br> $60-1000 \mathrm{~W}$ | Yes <br> $50-900 \mathrm{VA}$ | - |
| K1401S | 1kW Leading Edge Dimmer <br> －Slave | Yes <br> $60-1000 \mathrm{~W}$ | Yes <br> $50-900 \mathrm{VA}$ | - <br> K1402M1kW Trailing Edge Dimmer <br> －Master |
| K1402S | Yes <br> $60-1000 \mathrm{~W}$ | - | Yes <br> $50-900 \mathrm{VA}$ |  |

COMPATIBLE WIRING DEVICES

| List Number | Descripton | 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
1 kW


K1400

LEADING EDGE
1kW
1kW 1kW

TRAILING EDGE
1kW


K1400
1kW UNIVERSAL
DIMMER - MASTER/SLAVE

## DIMENSIONS

$108 \times 55 \times 60 \mathrm{~mm}$
6 DIN module
MOUNTING
Suitable for mounting onto 35 mm DIN rail
TERMINALS
MAINS SUPPLY/SLAVE CONTROL
$2 \times 1.5 \mathrm{~mm}^{2}$ or $1 \times 2.5 \mathrm{~mm}^{2}$
T1/2/3 SWITCH CONTROL
$1 \times 1 \mathrm{~mm}^{2}$
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
For use with up to $2 \times$ K1400 units
configured as slaves

1 K1401M 1
1kW LEADING EDGE DIMMER - MASTER

## DIMENSIONS

$108 \times 55 \times 60 \mathrm{~mm}$
DIN module
MOUNTING
Suitable for mounting onto 35 mm DIN rail
TERMINALS
MAINS SUPPLY/SLAVE CONTROL
$2 \times 1.5 \mathrm{~mm}^{2}$ or $1 \times 2.5 \mathrm{~mm}^{2}$
T1/2/3 SWITCH CONTROL
$1 \times 1 \mathrm{~mm}^{2}$
LOADS
Resistive, Incandescent and Mains
Halogen lamps: 60-1000W
Low voltage wire-wound
ransformers: $50-900 \mathrm{VA}$
MAXIMUM CONTROL LINE LENGTH
100m
EN 60669-2-1
For use with up to $2 \times$ K1401S or
K1402S slaves

1 K1401S
1kW LEADING EDGE DIMMER - SLAVE

## DIMENSIONS

$108 \times 55 \times 60 \mathrm{~mm}$
6 DIN module
mOUNTING
Suitable for mounting onto 35 mm DIN rail
TERMINALS
MAINS SUPPLY/SLAVE CONTROL
$2 \times 1.5 \mathrm{~mm}^{2}$ or $1 \times 2.5 \mathrm{~mm}^{2}$
T1/2/3 SWITCH CONTROL
$1 \times 1 \mathrm{~mm}^{2}$
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

1 K1402M
1kW TRAILING EDGE
DIMMER - MASTER

## DIMENSIONS

$108 \times 55 \times 60 \mathrm{~mm}$
6 DIN module
MOUNTING
Suitable for mounting onto 35 mm
DIN rail
TERMINALS
MAINS SUPPLY/SLAVE CONTROL
$2 \times 1.5 \mathrm{~mm}^{2}$ or $1 \times 2.5 \mathrm{~mm}^{2}$
T1/2/3 SWITCH CONTROL
$1 \times 1 \mathrm{~mm}^{2}$
LOADS
Resistive, Incandescent and Mains
Halogen lamps: $60-1000 \mathrm{~W}$
Low voltage electronic transformers 50-900VA
MAXIMUM CONTROL LINE LENGTH 100m
EN 60669-2-1
For use with up to $2 \times$ K1401S or
K1402S slaves

1 K1402S
1
7 kW TRAILING EDGE
DIMMER - SLAVE
dIMENSIONS
$108 \times 55 \times 60 \mathrm{~mm}$
6 DIN module
MOUNTING
Suitable for mounting onto 35 mm
DIN rail
TERMINALS
MAINS SUPPLY/SLAVE CONTROL
$2 \times 1.5 \mathrm{~mm}^{2}$ or $1 \times 2.5 \mathrm{~mm}^{2}$
T1/2/3 SWITCH CONTROL
$1 \times 1 \mathrm{~mm}^{2}$
LOADS
Resistive, Incandescent and Mains
Halogen lamps: 60-1000W
Low voltage electronic transformers: 50-900VA
MAXIMUM CONTROL LINE LENGTH
100 m
EN 60669-2-1
For use with K1401M or K1402M
Master dimmers

## Boxes

Steel Boxes

## 861ZIC

1 GANG
ONE ADJUSTABLE LUG

## 862ZIC

2 GANG
ONE ADJUSTABLE LUG
With earth terminal and adjustable lug DIMENSIONS
1 gang： $75 \times 75 \mathrm{~mm}$
2 gang： $75 \times 135 \mathrm{~mm}$
FIXING CENTRES
1 gang： 60.3 mm
2 gang： 120.6 mm
KNOCKOUTS
1 gang： $10 \times 20 \mathrm{~mm}$
2 gang： $12 \times 20 \mathrm{~mm}$
BS 4662：2006

## 10 K863

3 GANG
35MM DEEP
5
FOR 3 GANG K2737 LOGIC PLUSTM SWITCHSOCKET

Fitted with two earth terminals．
Two adjustable lugs
DIMENSIONS
$203 \times 75 \mathrm{~mm}$
180.9 mm

KNOCKOUTS
3 gang： $14 \times 20 \mathrm{~mm}, 6 \times 25 \mathrm{~mm}$
BS 4662：2006

|  | $46 M M$ |
| :--- | :--- |
| 35MM | $47 M M$ |
| FLUSH | FLUSH |

46MM
47MM
FLUSH

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 FOR USE WITH
LOGIC PLUS ${ }^{\text {TM }}$
SURFACE

41MM
SQUARE CORNERS
SURFACE


Boxes

## Steel Boxes

35MM / 47MM
FLUSH


K14101
35MM FOR EDGETM
COMBINATION PLATE K14100

## K14102

47MM FOR EDGETM
COMBINATION PLATE K14100
Fitted with two earth terminals.
Two adjustable lugs.
dimensions
$279.6 \times 159.5 \mathrm{~mm}$
FIXING CENTRES
$268.2 \mathrm{~mm} / 87.3 \mathrm{~mm}$
knockouts
$35 \mathrm{~mm} 18 \times 20 \mathrm{~mm}, 6 \times 25 \mathrm{~mm}$
$47 \mathrm{~mm} 12 \times 20 \mathrm{~mm}, 12 \times 25 \mathrm{~mm}$
BS 5733:2010

1 K14201
35MM FOR EDGETM IN-LINE COMBINATION PLATE K14200

## 1 K14202

47MM FOR EDGETM IN-LINE COMBINATION PLATE K14200

Fitted with two earth terminals.
Two adjustable lugs.
DIMENSIONS
$430 \times 75 \mathrm{~mm}$
FIXING CENTRES
417.4 mm
kNOCKOUTS
35mm Middle Box: $6 \times 20 \mathrm{~mm}, 2 \times 25 \mathrm{~mm}$ 35 mm End Boxes: $15 \times 20 \mathrm{~mm}, 5 \times 25 \mathrm{~mm}$ 47 mm Middle Box: $4 \times 20 \mathrm{~mm}, 4 \times 25 \mathrm{~mm}$ 47 mm End Boxes: $10 \times 20 \mathrm{~mm}, 10 \times 25 \mathrm{~mm}$ BS 5733:2010

1 K14206
35MM FOR EDGETM IN-LINE
COMBINATION PLATE K14205
1 K14207
1
47MM FOR EDGETM IN-LINE
COMBINATION PLATE K14205
Fitted with two earth terminals.
Two adjustable lugs.
DIMENSIONS
$392 \times 75 \mathrm{~mm}$
FIXING CENTRES
382.5 mm
knockouts
35 mm Left 2 G Box: $7 \times 20 \mathrm{~mm}, 3 \times 25 \mathrm{~mm}$
35 mm Middle Boxes: $4 \times 20 \mathrm{~mm}$
35 mm Right Box: $6 \times 20 \mathrm{~mm}$
47 mm Left 2G Box: $4 \times 20 \mathrm{~mm}, 6 \times 25 \mathrm{~mm}$
47 mm Middle Boxes: $2 \times 20 \mathrm{~mm}, 1 \times 25 \mathrm{~mm}$
47 mm Right Box: $4 \times 20 \mathrm{~mm}, 1 \times 25 \mathrm{~mm}$
BS 5733:2010

## Steel Boxes

| 35MM / 47MM |  |
| :--- | :--- |
| FLUSH | 47MM |
| FLUSH |  |

$853 z 1 \mathrm{C}$


FLUSH


853ZIC
35MM FOR LOGIC PLUS ${ }^{\text {m }}$
4 GANG COMBINATION PLATE K2740WHI

## 854ZIC

47MM FOR LOGIC PLUS ${ }^{m \times}$
4 GANG COMBINATION PLATE K2740WHI
BS 5733:2010
dimensions
$279.6 \times 159.5 \mathrm{~mm}$

1 857ZIC
35MM FOR LOGIC PLUS ${ }^{m}$
2 GANG COMBINATION PLATE K2741WHI
1 858ZIC
47MM FOR LOGIC PLUS"
2 GANG COMBINATION PLATE K2741WHI AND 4+4 MODULE COMBINATION PLATES (EDGE ${ }^{\text {TM/ASPECT/ELEMENTS) }}$
BS 5733:2010
DIMENSIONS
$135 \times 159.5 \mathrm{~mm}$

BS EN 60670-1:2005
DIMENSIONS
$220 \times 75 \mathrm{~mm}$

## Steel Boxes

47MM
FLUSH


## 868ZIC

1
47MM BOX FOR
1G＋2G＋1G COMBINATION PLATE （EDGETM／ASPECT／ELEMENTS）

BS EN 60670－1：2005
DIMENSIONS
$305 \times 75 \mathrm{~mm}$

## 869ZIC

47MM BOX FOR
6＋6 MODULE COMBINATION PLATE
（EDGETM／ASPECT／ELEMENTS）
BS EN 60670－1：2005
DIMENSIONS
$203 \times 159.5 \mathrm{~mm}$

## 47MM

FLUSH

41MM
SURFACE

870ZIC
47MM BOX FOR
2＋1 COMBINATION PLATE
（ASPECT／ELEMENTS）
BS EN 60670－1：2005
DIMENSIONS
220x75mm


Boxes

## Steel Boxes

48MM 55MM 65MM

FLUSH
40MM
SURFACE
ARCHITRAVE
FLUSH
FLUSH

## Metal Frames <br> For Panel <br> Mounting

Blank Plates

METALCLAD PLUS ${ }^{\text {TM }}$ METALCLAD

DUAL
FLUSH



$\square$
（s）

PVC Boxes

| 19MM | 32MM |
| :--- | :--- |
| SURFACE | SURFACE |



Moulded Boxes

| ARCHITRAVE | 16MM | 30MM |
| :--- | :--- | :--- |
| SURFACE | SURFACE | SURFACE |




| K2151WHI | 10 |
| :--- | :--- |
| 1GANG | 10 |
| ARCHITRAVE BOX |  |
| K2152WHI | 5 |
| 2 GANG |  |

ARCHITRAVE BOX
Earth terminal fitted in base of boxes．
DIMENSIONS
1 gang： $87 \times 33 \times 16 \mathrm{~mm}$
2 gang： $148 \times 33 \times 16 \mathrm{~mm}$
FIXING CENTRES
1 gang： 60.3 mm
2 gang： 120.6 mm
BS 5733：2010

K2160WHI
FOR 1,2 AND
3 GANG LOGIC PLUS＂＇PLATESWITCHES
K2161WHI
FOR 4 AND 6 GANG
LOGIC PLUS＇${ }^{\prime}$
PLATESWITCHES
Earth terminal fitted in base of boxes．
Knockouts provided in sides and bases． DIMENSIONS
1 gang： $87 \times 87 \mathrm{~mm}$
2 gang： $87 \times 148 \mathrm{~mm}$
FIXING CENTRES
1 gang： 60.3 mm
2 gang： 120.6 mm
BS 5733：2010

30MM
SURFACE

Boxes

| Moulded Boxes |  | DRY LIINING | MI CABLE BOXES |
| :--- | :--- | :--- | :--- |
| 32MM | 44MM | 35MM | 37MM |
| SURFACE | SURFACE | FLUSH | SURFACE |


|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 2140WHI <br> FOR 1 GANG POWER ACCESSORIES SQUARE CORNERS <br> Knockouts are provided in base and sides for cable entry DIMENSIONS <br> 1 gang: $87 \times 87 \mathrm{~mm}$ <br> 2 gang: $87 \times 148 \mathrm{~mm}$ <br> FIXING CENTRES <br> 1 gang: 60.3 mm <br> 2 gang: 120.6 mm <br> BS 5733:2010 | 2031WHI <br> FOR 1 GANG <br> POWER ACCESSORIES <br> SQUARE CORNERS <br> Knockouts in base and sides for cable entry. <br> DIMENSIONS <br> $87 \times 87 \mathrm{~mm}$ <br> FIXING CENTRES <br> 60.3 mm <br> BS 5733:2010 | QFB1WHI  <br> 1 GANG  <br> QFB2WHI  <br> 2 GANG  <br> All round flange for a flush fitit One  <br> piece moulded lug automatically  <br> snaps int place. No rear  <br> propections. Camp device on cable  <br> entry. Will accommodate partition  <br> thickness between 6 mm and 16 mm .  <br> Earth terminal facility.  <br> BS 4662:2006  | QFB/IG1 <br> 1 GANG WITH <br> INTUMESCENT GASKET <br> QFB/IG2 <br> 2 GANG WITH <br> INTUMESCENT GASKET <br> QFB/IG1 \& QFB/IG2 <br> Pre-fitted with intumescent gaskets to give fire protection, in accordance with BS 476-2:1987. 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. <br> BS 4662:2006 | K2131WHI <br> 1 GANG <br> 10 CLAMPS <br> K2132WHI <br> 2 GANG <br> 12 CLAMPS <br> Clamps accept 20 mm sealing pots. <br> DIMENSIONS <br> 1 gang: $92 \times 92 \mathrm{~mm}$ <br> 2 gang: $92 \times 152 \mathrm{~mm}$ FIXING CENTRES <br> 1 gang: 60.3 mm <br> 2 gang: 120.6mm <br> BS 5733:2010 |


| DUAL BOX |  | FLANGE BOXES |
| :--- | :--- | :--- |
| 38MM | 40MM | $45 M M$ |
| SURFACE | SURFACE | FLUSH |

Mounting
Pattresses
SURFACE


K2025WHI
FOR MOUNTING
TWO 1 GANG
LOGIC PLUS ${ }^{m m}$ ACCESSORIES

This box has two slots in base with 60.3 mm and 120.6 fixing centres for fitting over BS 4226 flush boxes. Knockouts provided for cable entry.
Includes integral dividing fillet. DIMENSIONS
$86 \times 172 \mathrm{~mm}$ BS 5733:2010

## LOGIC PLUS ${ }^{\text {Tm }}$ ACCESSORIES／BOX COMPATIBILITY CHART

SURFACE MOUNTING DEPTH：（MM）$^{\text {（MM }}$

| MOULDED | 16 <br> MOULDED | $\begin{aligned} & 30 \\ & \text { MOULDED } \end{aligned}$ | $\left\lvert\, \begin{aligned} & 32^{*} \\ & \text { PVC } \end{aligned}\right.$ | $\begin{aligned} & 38 \\ & \text { MOULDED } \end{aligned}$ | $\begin{aligned} & 40 \\ & \text { MOULDED } \end{aligned}$ | $\begin{array}{\|l\|} 41 \\ \text { STEEL } \end{array}$ | $\begin{array}{\|l\|} 41^{*} \\ \text { STEEL } \end{array}$ | $\begin{array}{\|l\|} \text { 48* } \\ \text { STEEL } \end{array}$ | 55 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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 |  |  |
| DATA／TELECOM PLATES | K2160 | K2140 | K2181 | K2025 |  | K2211ALM | K2213ALM |  |  |


| FLUSH MOUNTING <br> （STEEL \＆DRY LINING） |  | 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 |  |  |  |  |  |  | 5120ALM |
| K5045 |  |  |  |  | K2061 | 877ZIC |  |
| K5060，K5061 |  |  |  | 886ZIC | K2061 | 878ZIC |  |
| K5011 |  |  |  |  |  |  | 5120ALM |
| K700 |  | 861ZIC |  | 866ZIC | K2061 | 877ZIC |  |
| K701 |  |  |  |  |  | 878ZIC |  |
| 1， 2 \＆ 3 GANG SWITCHES |  | 8612IC |  | 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 |  |
| DATA／TELECOM PLATES |  | 861ZIC |  | 866ZIC | K2061 | 877ZIC |  |

[^20][^21]
## Ancillary Products

| Switchsocket | Socket |  |
| :--- | :--- | :--- |
| Outlets |  | Outlets |
|  |  |  |
| MINI LOGIC | PANEL MOUNTING | PANEL MOUNTING |
| SURFACE | 13 AMP | 13 AMP |



## Ancillary Products

Triple Pole \＆ Neutral Switches

METAL FLUSH 32 AMP

SURFACE

## Energy Saving Switch

FLUSH

## Clock

Connectors

FUSED


5114WHI

5114WHI
fLUSH MOUNTED
WITH NEON

15115 WH
SURFACE MOUNTED
WITH NEON
5116WHI
SURFACE MOUNTED
WITH NEON

## MOUNTING BOX

FLUSH
5268ALM
These products have a utilisation category of AC22－rated operational current（le），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 178）．
All switches may be locked in the＇ON＇or＇OFF＇position with 1 the use of the MK Padlock K2000
5116 is available in Metalclad Plus version（page 230）．
TERMINAL CAPACITY
$16 \mathrm{~mm}^{2}$ conductors．On surface mounted versions the earth terminal is fitted on base of box．
DIMENSIONS
$5114203 \times 140 \mathrm{~mm}$
$5115182 \times 118 \times 82 \mathrm{~mm}$
$5116137 \times 76 \times 53 \mathrm{~mm}$
KNOCKOUTS
$51155 \times 25 \mathrm{~mm}$ ．Two top and bottom，one in back
$51166 \times 20 \mathrm{~mm}$ ．Wiring space limits recommended cable size to $6 \mathrm{~mm}^{2}$
BS EN 60947－3：1999

4724WHI
20A DP SWITCH
WITH KEYTAG
14700 WH SPARE KEYTAG

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
ight or appliance．A neon locator light on the
switch unit makes it easy to locate when entering
darkened rooms．
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
FIXING CENTRES
60.3 mm

BS EN 60669－1：1999

## 995WHI <br> ELUSH MOUNTING

Fitted with 2 amp fuse－link to BS 1362．Terminals will accommodate $2.5 \mathrm{~mm}^{2}$ conductors 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 4.2 mm ．A knockout on the undersid s provided so an M3．5 screw or hook engages with a tapped lug on the box（for hanging a wal ock
DIMENSIONS
95WHI $86 \times 86 \mathrm{~mm}$
FIXING CENTRES
995WHI 60.3 mm
BS 5733：2010

Ancillary Products

## Junction Boxes



## Ancillary Products

Terminal Blocks

## Service Connector Boxes

## Accessories <br> For Boxes

Neon Lamp
Assemblies

| 913WHI <br> 914WHI <br> 913WHI <br> 4 WAY <br> TERMINAL CAPACITY <br> 913 <br> Each terminal accepts up to $3 \times 2.5 \mathrm{~mm}^{2}$（solid conductors）or $3 \times 4 \mathrm{~mm}^{2}$（stranded conductors）． <br> 914 <br> Each terminal accepts up to $4 \times 1.5 \mathrm{~mm}^{2}$ conductors． <br> FIXING CENTRES <br> 60.3 mm for mounting on＇spare＇lugs of 4 or 6 lug BS 4662 boxes． | 1100BLK <br> 1101BLK <br> 1100BLK <br> 5 WAY DOUBLE POLE 100A <br> 1101BLK <br> 5 WAY SINGLE POLE <br> 100A <br> TERMINAL CAPACITY All $35 \mathrm{~m}^{2}$ <br> Where it is necessary to take the outer sheath of a double insulated cable into the box，the cable sizes are restricted to $16 \mathrm{~mm}^{2}$ ． <br> DIMENSIONS（OVERALL） <br> 1100BLK $110 \times 70 \times 60 \mathrm{~mm}$ <br> 1101BLK $65 \times 50 \times 38 \mathrm{~mm}$ <br> BS 7657：2010 | 3710 <br> 800zic <br> 3840ZIC <br> 3714 <br> BRASS EARTH TERMINAL WITH BRACKET <br> K3716 <br> BRASS EARTH TERMINAL <br> 3710 <br> EXTENSION STUD <br> M3．5 <br> ZINC－PLATED STEEL <br> OVERALL LENGTH 34MM <br> 800ZIC <br> BOX FIXING FLANGE <br> USE TWO TO MOUNT ANY FLUSH MK BOX IN A DRY－PARTITION WALL <br> 3840ZIC | 5144SS000T9 <br> 5144SSO00T9 <br> LAMP LEAD AND RESISTOR ASSEMBLY FOR CEILING SWITCH BLOCKS AND 32A DP SWITCHES <br> 17270SS <br> LAMP LEAD AND RESISTOR ASSEMBLY TAG ENDED NEON FOR USE WITH 45A，50A SWITCHES AND COOKER CONTROL UNITS <br> 7179PS <br> LAMP LEAD AND RESISTOR ASSEMBLY，MALE CONNECTOR FOR SWITCHSOCKETS | 1 10 10 |
| :---: | :---: | :---: | :---: | :---: |

## Fuse-Links

BS 646:1958
250V 50-60 HZ

BS HD 60269-3:2010
250V 50-60HZ

BS 1362:1973
250V 50-60HZ

Extra Screws

## USE WITH <br> EDGE ${ }^{\text {TM }} /$ ASPECT ${ }^{\text {TM }}$ <br> FRONTPLATES


KGO

5A RED
K630
3A BLACK
K602
2A YELLOW
K601
1A GREEN
dimensions
OVERALL LENGTH
$19.1 \mathrm{~mm}+0.8 \mathrm{~mm}-0.4 \mathrm{~mm}$
END-CAP DIAMETER
$5.3 \mathrm{~mm}+0.1 \mathrm{~mm}-0.1 \mathrm{~mm}$
END-CAP LENGTH
$4.0 \mathrm{~mm}+0.8 \mathrm{~mm}-0.8 \mathrm{~mm}$



| 43066SSABST9 <br> SCREW M3.5 22MM <br> (2 SCREWS/PKT) | 100 | 4352SSTIRT9 <br> SCREW M3.5 28MM <br> (2 SCREWS/PKT) | 100 |
| :---: | :---: | :---: | :---: |
| 43066SSNIPT9 <br> SCREW M3.5 22MM <br> (2 SCREWS/PKT) | 100 | 4352SSWHIT9 <br> SCREW M3.5 28MM <br> (2 SCREWS/PKT) | 100 |
| 43066SSDBZT9 <br> SCREW M3.5 22MM <br> (2 SCREWS/PKT) | 100 | 4352SSNIPT9 <br> SCREW M3.5 28MM <br> (2 SCREWS/PKT) | 100 |
| 43066SSLBKT9 <br> SCREW M3.5 22MM <br> (2 SCREWS/PKT) | 100 | 4352SSPBRT9 <br> SCREW M3.5 28MM <br> (2 SCREWS/PKT) | 100 |
| 43066SSLIVT9 <br> SCREW M3.5 22MM <br> (2 SCREWS/PKT) | 100 | K14S42506ABST9 SCREW M3.5 47MM (2 SCREWS/PKT) | 100 |
| 43066SSPBRT9 <br> SCREW M3.5 22MM <br> (2 SCREWS/PKT) | 100 | K14S42506DBZT9 SCREW M3.5 47MM (2 SCREWS/PKT) | 100 |
| 43066SSBRST9 <br> SCREW M3.5 22MM <br> (2 SCREWS/PKT) | 100 | K14S42506LBKT9 SCREW M3.5 47MM <br> (2 SCREWS/PKT) | 100 |
| 43066SSWHIT9 SCREW M3.5 22MM (2 SCREWS/PKT) | 100 | K14S42506BRST9 SCREW M3.5 47MM (2 SCREWS/PKT) | 100 |
| 43066SSTCOT9 SCREW M3.5 22MM (2 SCREWS/PKT) | 100 | K14S42506TCOT9 SCREW M3.5 47MM (2 SCREWS/PKT) | 100 |
| 43066SSTIRT9 <br> SCREW M3.5 22MM <br> (2 SCREWS/PKT) | 100 | K14S42506TIRT9 <br> SCREW M3.5 47MM <br> (2 SCREWS/PKT) | 100 |
| 4352SSABST9 <br> SCREW M3.5 28MM <br> (2 SCREWS/PKT) | 100 | K14S42506NIPT9 SCREW M3.5 47MM (2 SCREWS/PKT) | 100 |
| 4352SSDBZT9 <br> SCREW M3.5 28MM <br> (2 SCREWS/PKT) | 100 | K14S42506LIVT9 SCREW M3.5 47MM (2 SCREWS/PKT) | 100 |
| 4352SSLBKT9 <br> SCREW M3.5 28MM <br> (2 SCREWS/PKT) | 100 | K14S42506PBRT9 SCREW M3.5 47MM (2 SCREWS/PKT) | 100 |
| 4352SSLIVT9 <br> SCREW M3.5 28MM <br> (2 SCREWS/PKT) | 100 | K14S42506WHIT9 SCREW M3.5 47MM (2 SCREWS/PKT) | 100 |
| 4352SSBRST9 <br> SCREW M3.5 28MM <br> (2 SCREWS/PKT) | 100 | BRS finish for use with SAG accessories. <br> NIP finish for use with BSS, BRC, ALM, PCR/POC and Logic Plus ${ }^{\text {TM }}$ accessories. <br> Tamperproof screws include one key per pack. |  |
| 4352SSTCOT9 <br> SCREW M3.5 28MM <br> (2 SCREWS/PKT) | 100 |  |  |

USE WITH
EDGETM／ASPECT ${ }^{T M}$
GRID PLUSTM
FRONTPLATES

USE WITH
LOGIC PLUS ${ }^{\text {TM }} /$ ALBANY PLUS ${ }^{\text {TM }}$
GRID PLUS ${ }^{\text {TM }}$
FRONTPLATES

USE WITH
LOGIC PLUSTM／ALBANY PLUSTM
FRONTPLATES

Replacement
Components


## 48370SSABST9

SCREW M3．0 12MM
（2 SCREWS／PKT）

## 48370SSDBZT9

SCREW M3．0 12MM
（2 SCREWS／PKT）
48370SSLBKT9
SCREW M3．0 12MM
（2 SCREWS／PKT）
48370SSLIVT9
SCREW M3．0 12MM
（2 SCREWS／PKT）
$48370 S S B R S T 9$
SCREW M3．0 12MM
（2 SCREWS／PKT）
48370SSTCOT9
SCREW M3．0 12MM
（2 SCREWS／PKT）
48370SSTIRT9
SCREW M3．0 12MM
SCREW M3．0 12MM
（2 SCREWS／PKT）
48370SSPBRT9 100
SCREW M3．0 12MM
（2 SCREWS／PKT）
48370SSNIPT9 100
SCREW M3．0 12MM
（2 SCREWS／PKT）
48370SSWHIT9 100
SCREW M3．0 12MM
（2 SCREWS／PKT）
BRS finish for use with SAG accessories．
NIP finish for use with BSS，BRC，ALM，PCR／POC
and Logic Plus ${ }^{T \mathrm{M}}$ accessories．
Tamperproof screws include one key per pack．

11130BRSMA SCREW M3．0 12MM 11130NIPMA SCREW M3．0 12MM 11430BRSMA
SCREW M3．0 12MM
TAMPERPROOF
11430NIPMA
SCREW M3．0 12MM
TAMPERPROOF
BRS finish for use with SAG accessories．
NIP finish for use with BSS，BRC，ALM，PCR／POC
and Logic Plus ${ }^{\text {TM }}$ accessories．
Tamperproof screws include one key per pack．

## 100

11
S
1
S
11
S
11
S

## SCREW M3．5 14MM <br> 11135BRSMA <br> SCREW M3． 5 14MM

11135NIPMB
SCREW M3．5 22MM
11135BRSMB
SCREW M3．5 22MM
11135NIPMN
11135BRSMN 100
SCREW M3．5 25 MM
11135BRSME

11135NIPME 100
SCREW M3．5 32MM
11135BRSMG
SCREW M3．5 48MM
11135NIPMG 100

SCREW M3．5 48MM
11435BRSMJ 100

CREW M3．5 29MM
RPROOF
11435NIPMJ 100
SCREW M3．5 29MM
MPERPROOF
11435BRSME 100
CREW M3．5 35MM
TAMPERPROOF
11435NIPME
SCREW M3．5 35MM
TAMPERPROOF
BRS finish for use with SAG accessories
NIP finish for use with BSS，BRC，ALM，PCR／POC
and Logic Plus ${ }^{\text {TM }}$ accessories．
Tamperproof screws include one key per pack．

| 645NIP | 100 |
| :--- | :---: |
| SECRET SCREW |  |
| FOR USE WITH 646， $655 \& 647$ |  |
| 644ZIC |  |
| KEY FOR 645NIP | 10 |
| 3400ZIC |  |
| TAMPERPROOF KEY | 10 |
| 3405ZIC | 10 |

3405ZIC
PROOF KEY SWITCH AND SECRET SCREW CONNECTION UNITS


## METALCLAD PLUS™

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 ${ }^{\text {™ }}$ 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 ${ }^{T w}$ is an innovative range of entirely wireless, batteryless and self powered switches and in finishes to complement the Metalclad Plus ${ }^{\text {TM }}$ range. Please see page 21 for details.

## HOW TO SPECIFY

A metal, surface and flush mounting range of wiring devices. Frontplates to have a maximum 9 mm profile and subtle 7 mm radius rounded corners. Cable connections must be upward facing with easy to identify white markings on a dark background, grouped in a straight line with captive terminal screws for ease of installation. All sockets to have a 3 pin operated shutter safety mechanism and double pole switching, with the contacts designed such that the neutral makes before and breaks after the live pole for improved safety. Switches to have a minimum 3 mm contact gap with a positive 'click' to denote successful operation.

## FEATURES \& BENEFITS

TOUGH AND IMPACT RESISTANT
Metalclad Plus ${ }^{\text {TM }}$ is ideal for factories, workshops, garages and sheds. White Metalclad Plus ${ }^{\text {TM }}$ is ideal 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.

All products are Surface mounted (supplied with box) with exception of White and D5 variants. Boxes can be obtained separately if needed.
See page 211.

## Metalclad Plus ${ }^{\text {TM }}$



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

Funnel entrance to terminals enables positive cable connection.


Outboard rocker sockets are ideal for gloved hands.


Terminal screws are backed out and captive terminals are upwards facing to make installation easier.

Clear terminal markings for easy identification.


## Switchsocket

Outlets

DP
13 AMP

2 GANG DP
WITH 2 X USB
CHARGING PORTS
DUAL EARTH
13 AMP
WITH OUTBOARD ROCKERS
13 AMP
WITH NEONS
13 AMP
1 GANG DP


K2435ALM


Earth terminal fitted in boxes. DIMENSIONS
1 gang $86 \times 86 \times 51 \mathrm{~mm}$
2 gang $86 \times 146 \times 51 \mathrm{~mm}$
KNOCKOUTS
1 gang $6 \times 20 \mathrm{~mm}-$ Two in one side and one in each of the other three sides. One in base.
2 gang $8 \times 20 \mathrm{~mm}$ - Three in top two in bottom sides and one in each end. One in base. SPARE BOXES
SPARE BOXES
1 gang K829ALM* K899ALM
1 gang K829ALM* K899ALM
2 gang K830ALM
(*without side knockouts)
All boxes have a base knockout. BOXES
BS 5733:2010
SOCKET
BS 1363-2:1995
HIGH INTEGRITY EARTHING
One gang switchsockets, two gang outboard One gang switchsockets, two gang outboar
switchsockets, two gang integrated USB switchsockets, two gang integrated USB
switchsockets and two gang unswitched sockets are fitted with two earth terminals to provide a are fitted with two earth terminals to provide a
double earth facility for use when installations double earth facility for use when installations
require a high integrity protective connection as require a high integrity protectiver
specified within BS 7671:2008 DOUBLE POLE SWITCHING All switchsockets have double pole switching (neutral makes first, breaks last).

## K2945ALM

2 GANG DP
WITH OUTBOARD
ROCKERS AND DUAL
EARTH TERMINALS
K2945D5ALM
2 GANG DP
WITH OUTBOARD
ROCKERS AND DUAL
EARTH TERMINALS
WITHOUT BOX
K2945D6ALM
2 GANG DP
WITH RED OUTBOARD
ROCKERS AND DUAL
EARTH TERMINALS

## K3045WHI

2 GANG DP
WITHOUT BOX
WITH OUTBOARD ROCKERS AND DUAL EARTH TERMINALS

Technical Hotline ＋44（0）1268563720

## Metalclad Plus ${ }^{\text {™ }}$

## Socket Outlets

RCD PROTECTED
13 AMP

NON STANDARD
13 AMP

ROUND PIN


K6102ALM


K6302ALM


K6231ALM


K2871ALM


K2873ALM


K1247ALM


K1247D6ALM


K1248ALM


K1248D6ALM


K848ALM



K841ALM


K842ALM


K843ALM

K6102ALM
1 GANG DP
10mA ACTIVE CIRCUIT
K6302ALM
1 GANG DP
30mA ACTIVE CIRCUIT
K6305ALM
1 GANG DP
30mA PASSIVE CIRCUIT

## K6231ALM

2 GANG SP
30 mA ACTIVE CIRCUIT

## K6233ALM

2 GANG SP
30mA PASSIVE CIRCUIT
It is important to ensure that the correct control circuit，active or passive，is selected for each application．See page 288 for definition．
Only suitable for supply voltage of
240 V a．c．
dimensions
$86 \times 147 \times 54 \mathrm{~mm}$
KNOCKOUTS
$8 \times 20 \mathrm{~mm}$－Three in top side，two in bottom side，one in base and one in each end．
SPARE BOX
K897ALM
BS 7288：1990

1 K2871ALM
1 GANG
5A DP
1 SHUTTERED
K2873ALM
1 GANG
1．15A DP
SHUTTERED
1 Earth terminal fitted in boxes．
1 DIMENSIONS
$86 \times 86 \times 51 \mathrm{~mm}$
KNOCKOUTS
$16 \times 20 \mathrm{~mm}-$ 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

1
K1247ALM
1 GANG DP WITH
CLEAN EARTH FACILITY

## K1247D6ALM

51 GANG DP
WITH RED ROCKER AND
CLEAN EARTH FACILITY

## K1248ALM

2 GANG DP WITH
CLEAN EARTH FACILITY
K1248D6ALM
2 GANG DP
WITH RED ROCKERS AND CLEAN EARTH FACILITY

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． NOTE
A suitable plug for these non standard A suitable plug for these non stand
sockets is 647 WHI ，see page 240 ． DIMENSIONS
1 gang $86 \times 86 \times 51 \mathrm{~mm}$
2 gang $86 \times 146 \times 51 \mathrm{~mm}$
KNOCKOUTS
1 gang $6 \times 20 \mathrm{~mm}$－Two in one side and one in each of other three sides． One in base．
2 gang $8 \times 20 \mathrm{~mm}$－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 1363－2：1995 where relevant

5 K848ALM
1 GANG
K850ALM
12 Gang
WITH DUAL EARTH
TERMINALS
1
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 $86 \times 86 \times 47 \mathrm{~mm}$
2 gang $86 \times 146 \times 47 \mathrm{~mm}$
KNOCKOUTS
1 gang $6 \times 20 \mathrm{~mm}-$ Two in one side
and one in each of other three sides， One in base．
2 gang $8 \times 20 \mathrm{~mm}$－Three in top，two 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 1363－2：1995

5 K841ALM
1 GANG
5 2A
SHUTTERED
K842ALM
5A
SHUTTERED
K843ALM

SHUTTERED
Earth terminal fitted in box．
dimensions
$86 \times 86 \times 47 \mathrm{~mm}$
KNOCKOUTS
$6 \times 20 \mathrm{~mm}$－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

## Metalclad Plus ${ }^{\text {TM }}$

## 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


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 | Connection |
| :--- | :--- |
|  | $:$ Units |
|  |  |
| 127 V | SWITCHED |
| (NON UK) | FUSED |
| 15 AMP | 13 AMP |



## K2271ALM

## Earth terminal fitted in box.

 DIMENSIONS1 gang $86 \times 86 \times 47 \mathrm{~mm}$
2 gang $86 \times 146 \times 47 \mathrm{~mm}$
KNOCKOUTS
1 gang $6 \times 20 \mathrm{~mm}$.
Two in one side and one in each of other three sides. One in base
2 gang $8 \times 20 \mathrm{~mm}$.
2 gang $8 \times 20 \mathrm{~mm}$. one in each end. One in base
one in each end. One in base
Spares with and without
Spare Boxes with and with
knockouts are available.
All boxes have a base knockout. SASO 2204:2003

5

## K963KOALM <br> DP WITH SECRET KEY

OPERATED SWITCH,
NEON AND TAMPERPROOF
5 FUSE CARRIER SCREW*

## K942ALM

DP SWITCHED

## K942D5ALM

DP SWITCHED WITHOUT
BOX

## K962ALM

DP SWITCHED WITH NEON

## K962D6ALM

DP SWITCHED WITH NEON AND RED ROCKER

Earth terminal fitted in base of the box.

## DIMENSIONS

$86 \times 86 \times 47 \mathrm{~mm}$
KNOCKOUTS
$6 \times 20 \mathrm{~mm}$.
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 1363-4:1995

* Secret Key - 3405ZIC found on page 223.

Technical Hotline +44 (0)1268563720

UNSWITCHED
FUSED
13 AMP

## Switches

10 AMP


K932ALM


K972ALM


K972D6ALM


K3072WHI


K954ALM


K983ALM


K989ALM


K986ALM


K3591ALM


K3593ALM


K5252ALM

K932ALM
DP SWITCHED
WITH FLEX OUTLET

## K972ALM

DP SWITCHED
WITH FLEX OUTLET
AND NEON
K972D6ALM
DP SWITCHED
WITH FLEX OUTLET
NEON AND RED ROCKER
K3072WHI
DP SWITCHED
WITH FLEX OUTLET
AND NEON
WITHOUT BOX

5 K954ALM
K954ALM
K093
UNSWITCHED WITH NEON
K989ALM
UNSWITCHED
WITH FLEX OUTLET
1 K986ALM
UNSWITCHED
WITH FLEX OUTLET AND NEON
10 DIMENSIONS
$86 \times 86 \times 47 \mathrm{~mm}$
KNOCKOUTS
$6 \times 20 \mathrm{~mm}$.
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 1363-4:1995

## 5 K3054WHI <br> 10

UNSWITCHED
WITHOUT BOX
K3086WHI
UNSWITCHED WITH
FLEX OUTLET AND NEON WITHOUT BOX

5 mounting box
1 gang K829ALM* K899ALM
(*without side knockouts)
All boxes have a base knockout

K3591ALM
1 GANG SP
TWO WAY
K3592ALM
2 GANG SP
TWO WAY
K3593ALM
3 GANG SP
TWO WAY
K5252ALM
20AX DP KEY
OPERATED SWITCH

## dimensions

Key Operated: $86 \times 86 \times 51 \mathrm{~mm}$
Switch: $86 \times 86 \times 47 \mathrm{~mm}$
SPARE BOXES
1 gang K829ALM* K899ALM
(*without side knockouts)
All boxes have a base knockout.
BS 5733:2010
SOCKET
BS 1363-2:1995
SWITCH
BS EN 60669-1:1999
These switches do NOT have to be
derated when used with fluorescent or inductive loads.
An earth terminal is fitted in each box. KNOCKOUTS
$6 \times 20 \mathrm{~mm}$
Two in one side and one in each of
Two in one side and one in each
other three sides, one in base.
BS EN 60669-1:1999

5 K3091WHI
10
1 GANG SP
TWO WAY
5 WITHOUT BOX
K3092WHI
10
2 GANG SP
5 TWO WAY
WITHOUT BOX
mounting box
11 gang K829ALM* K899ALM
(*without side knockouts)
All boxes have a base knockout

| Switches | DP Switches |  | Triple Pole | Euro Data Frontplates |
| :---: | :---: | :---: | :---: | :---: |
| WIDE ROCKERS |  | 32 Amp And | 32 AMP And |  |
| 10 AMP | 20 AMP | 50 AMP | 10 AMP |  |



K3781ALM
1 GANG SP
TWO WAY
WITH WIDE ROCKER

## K3782ALM

2 GANG SP
TWO WAY
WITH WIDE ROCKERS
These switches do NOT have to be
derated when used with fluorescent or inductive loads.
An earth terminal is fitted in each box. DIMENSIONS
$86 \times 86 \times 47 \mathrm{~mm}$
knockouts
$6 \times 20 \mathrm{~mm}$.
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

5 K5212ALM
DP SWITCH
K5232ALM
DP SWITCH
5 WITH NEON
K5242ALM
DP SWITCH
WITH FLEX OUTLET
AND NEON

## K3012WHI

DP SWITCH
WITHOUT BOX
Earth terminal fitted in base of box. DIMENSIONS
$86 \times 86 \times 47 \mathrm{~mm}$
kNOCKOUTS
$6 \times 20 \mathrm{~mm}$.
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.
All boxes have a base
BS EN $60669-1: 1999$
DP Switches are not recommended for switching large banks of PCs.

5 K5240ALM
32A DP SWITCH
1 WITH NEON
K5230ALM
50A DP SWITCH
5 WITH NEON
Earth terminal fitted in base of box. DIMENSIONS
K5240 $86 \times 86 \times 65 \mathrm{~mm}$
K5230 $147 \times 86 \times 65 \mathrm{~mm}$ KNOCKOUTS
K5240 $6 \times 20 \mathrm{~mm}$. Two in one side and one in each of other three sides, one in base.
K5230 $4 \times 20 \mathrm{~mm}, 4 \times 25 \mathrm{~mm}$
SPARE BOX
K5240 K8901ALM
All boxes have a base knockout. BS EN 60669-1:1999

1 K5116ALM 1
32A THREE POLE AND N SWITCH
WITH NEON AND
1 EARTH TERMINAL
K2857ALM 1
10A THREE POLE FAN ISOLATOR WITH SWITCHLOCK
AND PADLOCK

## K181ALM

5
1 GANG EURO FRONTPLATE ONE MODULE
APERTURE SIZE 25 X 50MM
K182ALM
1 GANG EURO FRONTPLATE
TWO MODULE
APERTURE SIZE $50 \times 50 \mathrm{MM}$

## K2859ALM <br> 20A THREE POLE FAN ISOLATOR

 WITHOUT SWITCHLOCK
## K4858

SWITCHLOCK
FOR FAN ISOLATOR

## K5116

440 V max. AC22, 12 kW (16HP) \& $415 \mathrm{~V}, 3$ phase 32A continuous duty.
Making capacity is 2000 A peak.
Lockable 'ON' or 'OFF' with MK padlock no K2000.
K2857
For local isolation of fans with or without timers for repair or routine. DIMENSIONS
K5116 $147 \times 86 \times 65 \mathrm{~mm}$
K2857 $86 \times 86 \times 47 \mathrm{~mm}$ kNOCKOUTS
$\mathrm{K} 51164 \times 20 \mathrm{~mm}^{2}, 4 \times 25 \mathrm{~mm}^{2}$
K2857 $6 \times 20 \mathrm{~mm}^{2}$
SPARE BOXES
SPARE BOXES
K2857 K8999ALM, K829ALM
ES EN 60947-1.1999
SS EN 60947-3:1999
BS EN 60669-2-4 (K2857)

Technical Hotline +44 (0)1268563720

## Euro Power Modules

RJ11/12
Euro Datacom
Modules

RJ45 CAT 6
RJ45 CAT 5e


K3184WHI


K5832WHI


K5833WHI


K5834WHI


K5837WHI


K5887WHI


K5887BLK


K5846WHI


K5864WHI


K3182WHI 1
1 GANG EURO
FRONTPLATE
TWO MODULE
APERTURE SIZE
$50 \times 50 \mathrm{MM}$
K3184WHI
2 GANG EURO
FRONTPLATE
FOUR MODULE
APERTURE SIZE
$100 \times 50 \mathrm{MM}$
mounting boxes
Mounting Box is not supplied
with frontplate.
Suitable for flush boxes to BS 4662:2006 and surface boxes to BS 5733:2010 Refe
to appropriate module for
minimum box depth
FIXING CENTRES
1 gang 60.3 mm
2 gang ${ }^{\text {STANDARDS }}$
BS 5733:2010 where
applicable
NOTE
No grid required, modules just clip into place.

K5830WHI 10


| K5887WHI | 5 |
| :--- | ---: |
| K5887BLK | 5 |
| RJ11/12 |  |
| ONE MODULE $25 \times 50 \mathrm{MM}$ |  |
|  |  |
| Suitable for both RJ11 and |  |
| RJ12 jacks |  |
| RJ11 |  |
| 4 wire |  |
| RJ12 |  |
| 6 wire |  |
| MOUNTING BoxEs |  |
| Minimum box depth 25mm |  |
| FCC68 |  |
| EN 41003 |  |

K5846WH
K5846BLK 5

RJ45 CAT 6
ONE MODULE 25 X 50MM
K5846SWHI
K5846SBLK
ONE MODULE $25 \times 50 \mathrm{MM}$
K5864WHI 5
RJ45 CAT 6 ANGLED
ONE MODULE 25 X 50MM


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

K5844WHI
RJ45 CAT 5e ANGLED ONE MODULE $25 \times 50 \mathrm{MM}$
K5845WHI 5
K5845BLK 5
RJ45 CAT 5e
ONE MODULE $25 \times 50 \mathrm{MM}$
Enhanced Cat 5 performance
Suitable for both 568A and
568B wiring schemes
MOUNTING BOXES
Minimum box depth 25 mm
standard
ISO/IEC 11801
EN 50173
TIA 568
EN 41003

K5833
MOUNTING BOX
35 mm
(for extra wiring space)
DIMENSIONS
$50 \times 50 \mathrm{~mm}$
BS 546:1950
K5834
MOUNTING BOX
46 mm
DIMENSIONS
$50 \times 50 \mathrm{~mm}$
NF C61-314
K5837
MOUNTING BOX
35 mm
46 mm
(for extra wiring space)

DIMENSIONS
$50 \times 50 \mathrm{~mm}$
Features 2 charging sockets each delivering 1A charging current at 5 Vdc (total 2A max) Allows charging of portable devices via USB 2.0 type A plug.
IEC 60950-1
IEC 61000-6-1/3

For the full range of euro modules see Logic Plus pages 46-48

MOUNTING BOX:
35 mm

SASO 2204:2003

## Euro Datacom

Modules

TELEPHONE
BNC
-


BLANKS

LJU6C Data
Frontplates

FRONTPLATES

## K5820WHI

## K5820BLK

TELEPHONE MASTER
ONE MODULE 25 X 5OMM

## K5821WHI

K5821BLK
TELEPHONE SECONDARY ONE MODULE 25 X 50MM

MOUNTING BOXES
Minimum depth 25 mm
BS 6312-2

## 5 K5801WHI <br> 5 BNC $50 \Omega$ <br> ONE MODULE 25 X 50MM

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

5 K180WHI
TWO MODULE
BLANK 50 X 50 Mm
K188WHI
K188BLK
ONE MODULE
BLANK 25 X 50 MM
K186WHI
K186BLK
HALF MODULE
BLANK $12.5 \times 50 \mathrm{MM}$
BS 5733:2010 where applicable

## LJU6C Datacom

Modules

RJ11/12
RJ45 CAT 6
RJ45 CAT 5e
BLANKS

| K5787WHI |  | K5746WHI <br> K5746BLK <br> K5746SWHI <br> K5746SBLK | K5745WHI <br> K5745BLK | K170WHI <br> K170BLK |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| K5787WHI <br> RJ11/12 <br> ONE MODULE <br> Suitable for both RJ11 and RJ12 jacks. <br> RJ11 <br> 4 wire <br> RJ12 <br> 6 wire <br> MOUNTING BOXES <br> Minimum box depth 25 mm <br> FCC68 <br> EN41003 | 5 | K5746WHI 5 <br> K5746BLK 5 <br> RJ45 CAT 6  <br> ONE MODULE  <br> K5746SWHI 5 <br> K5746SBLK 5 <br> RJ45 CAT 6  <br> SCREENED  <br> ONE MODULE  <br> Cat 6 performance.  <br> Suitable for both 568A and 568B wiring schemes.  <br> MOUNTING BOXES  <br> Minimum Box Depth 35 mm  <br> ISO/IEC 11801  <br> EN 50173  <br> TIA 568  <br> EN 41003  | K5745WHI 5 <br> K5745BLK 5 <br> RJ45 CAT 5e  <br> ONE MODULE  <br> Enhanced Cat 5 performance.  <br> Suitable for both 5688A and 568B wiring schemes.  <br> MOUNTING BOXES  <br> Minimum box depth 25mm  <br> ISO/IEC 11801  <br> EN 50173  <br> TII 568  <br> EN 41003  | K170WHI <br> K170BLK <br> ONE MODULE BLANK <br> BS 5733:2010 where appropriate | 10 10 |

## Metalclad Plus ${ }^{\text {™ }}$

Boxes
Blank Plates

## Grid Plus

 Frontplates


Echo ${ }^{T M}$ is an innovative range of entirely wireless, batteryless and self-powered switches, only available from MK Electric.

## Echo ${ }^{\text {TM }}$ <br> Transmitters <br> 1 AND 2 CHANNEL <br> TRANSMITTERS FOR ECHO ${ }^{\text {m }}$



## 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 permittable 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 ${ }^{\text {TTM }}$ 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.

K3786ALM
K3786WH
1 CHANNEL SWITCH
tRANSMITTER
FOR ECHO"'
K3787ALM
K3787WHI
2 CHANNEL SWITCH tRANSMITTER
FOR ECHO"'
OPERATING FREQUENCY
868.3 Mhz

IP RATING
IP2 x D
DIMENSIONS
$86 \times 86 \mathrm{~mm}$
BS EN 60669-1
BS EN 60669-2-1
ETSI EN 301 489-1+-3
ETSI EN 300 220-3

For more information on Echo ${ }^{\text {Tm }}$, please see the Echo ${ }^{\text {TMM }}$ section page 21.


## DURAPLUG®

## RANGE INTRODUCTION

The Duraplug ${ }^{\circledR}$ range of heavy duty products has become a virtual byword for durability, strength and reliability.

Duraplug ${ }^{\oplus}$ 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 ${ }^{\circledR}$ products are made from top quality, high impact resistant materials such as ABS/polycarbonate and rubber.

## FEATURES \& BENEFITS

- Produced with top quality, high impact resistant materials such as $A B S /$ 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
Heavy Duty
Extension Leads

Heavy Duty
Portable Socket

4 WAY
FILTERED
13 AMP


EXL135WHI

13 AMP


13 AMP


744WHI

EXL135WHI
EXL135BLK
13A WITH FUSE，NEON AND 2 METRE CABLE

Fitted with approved PVC insulated cable of appropriate core size for maximum 13A rating and a Duraplug ${ }^{\oplus}$ rubber plug
The sockets are manufactured in high impact ABS／Polycarbonate．
Fitted with a fuse carrier and 13A fuse to BS 1362
BS 1363／A－2：1995
BS EN 50525－2－11－Cable


744WHI
1
IJA WTH SWITCH，NEON AND FUSE
tted with a fuse carrier and 13A fuse to
BS 1362.
Manufactured in high impact ABS／Polycarbonate．
Can also be wall mounted
Fitted with a fuse carrier and 13A fuse to BS 1362 DIMENSIONS
$317 \times 68 \times 31 \mathrm{~mm}$
SPECIFICATION
Max．Power 3.14 kW
Response time（Varistor）better than 20ns
BS 1363／A－2：1995

Heavy Duty
Portable Socket

4 WAY
13 AMP


FC4134WHI FC4134BLK


Heavy Duty
Trailing Sockets

13 AMP
13 AMP
13 AMP
$-$

$\begin{array}{ll}\text { FC4134WHI } & 1 \\ \text { FC4134BLK } & 1\end{array}$
13A WITH FUSE AND NEON
Manufactured in high impact ABS/ Polycarbonate incorporating optional wall mounting holes and equal length wire stripping. DIMENSIONS
$317 \times 68 \times 31 \mathrm{~mm}$
BS 1363/A-2:1995

-
Manufactured in high impact ABS/ Polycarbonate incorporating optional wall mounting holes and equal length wire stripping. DIMENSIONS
$317 \times 68 \times 31 \mathrm{~mm}$
BS 1363/A-2:1995

## FC4136WHI 1

## 13A WITH SWITCH, FUSE 13A WITH S AND NEON

Manufactured in high impact ABS/ Polycarbonate incorporating optional wall mounting holes and equal length wire stripping.
DIMENSIONS
$317 \times 68 \times 31 \mathrm{~mm}$

| FC133WHI <br> FC133BLK <br> FC1330RG <br> 13A SINGLE OU <br> Manufactured fro <br> Polypropylene wi <br> in the base for <br> $79 \times 62 \times 29 \mathrm{~mm}$ <br> BS 1363/A-2:199 |  |
| :---: | :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## Lead <br> Connectors

TWO \＆THREE PIN
10 AMP

SPARES
10 AMP

| Rubber Plugs | Cable <br> Couplers |
| :--- | :--- |
|  |  |



| LCP102BLK | 10 |
| :--- | :--- |
| LCP1020RG | 10 |
| TWO PIN 10A PLUG |  |
| AND SOCKET |  |
| LCP103WHI | 10 |
| LCP103BLK | 10 |
| THRE PIN 10A PLUG |  |
| AND SOCKET |  |

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 integra 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
$40 \times 25 \times 80 \mathrm{~mm}$
BS 5733： 2010
Comply with IP44 Ingress Protection rating to BS EN 60529：1992

| LCP102PBLK | 10 | LCP103PWHI | 10 |
| :---: | :---: | :---: | :---: |
| LCP102PORG 10A PLUG TWO PIN | 10 | LCP103PBLK <br> 10A PLUG THREE PIN | 10 |
| LCP102SBLK | 10 | LCP103SWHI | 10 |
| LCP102SORG <br> 10A SOCKET TWO PIN | 10 | LCP103SBLK <br> 10A SOCKET THREE PIN | 10 |
| BS 5733：2010 Comply with IP44 Ingress P rating to BS EN 60529：1992 |  | BS 5733：2010 Comply with IP44 Ingress Pr rating to BS EN 60529：1992 |  |


| P53BLK <br> 5A ROUND PIN | 10 | CCP53BLK <br> 5A PLUG \＆SOCKET |
| :---: | :---: | :---: |
| PF133WHI | 10 | CCP153BLK |
| PF1330RG | 10 | 15A PLUG \＆SOCKET |
| $\begin{aligned} & \text { PF133BLK } \\ & \text { FITTED WITH 13A FUSE } \end{aligned}$ | 10 | CCP133PBLK <br> SPARE 13A PLUG |
| P153BLK <br> 15A ROUND PIN | 10 | These splashproof couplers are a rugged means of connecting cables in industrial and commercia environments．Fitted with heavy dut |
| PF133 |  |  |
| Available with alternative fuse ratings to special order only． |  | and ${ }^{\text {and }}$ atise（13A version only）． |
|  |  | DIMENSIONS |
| Approved by ASTA Licence no． 470 |  | Diameter $\times$ Lenoth CCF53 co |
| BS 1363／A－1：1995 |  | CCP133 $65 \times 182 \mathrm{~mm}$ |
|  |  | BS 5733：2010（BS 1363 Pin centres |
| Manufactured in rubber |  | for 13 A versions） <br> BS 5733：2010（BS 546 Pin centres for |
| P153BLK |  | 5 A and 15A versions） |

P153BLK
With rubber cover and ABS／
Polycarbonate base．
BS 546：1950

Round Pin ：Plug Adaptors

| $\mathbf{5 0 2 W H I}$ | 10 |
| :--- | ---: |
| 2A |  |
| 505WHI | 10 |
| 5A |  |
| $\mathbf{5 1 5 W H I}$ | 10 |
| 15A RESILIENT COVER |  |
| $\mathbf{6 4 1 W H I}$ 10 <br> 5A FUSED  <br> $\mathbf{6 4 3 W H I}$ 10 <br> 15A FITTED WITH 5A FUSE  |  |

See page 222 for spare fuse links to BS 646
BS 546：1950


BS 1363－3：1995（where relevant）


## MASTERSEAL PLUSTM

## RANGE INTRODUCTION


#### Abstract

Masterseal Plus ${ }^{\text {TM }}$ 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 ${ }^{\text {™ }}$ offers total protection against dust, and is protected against high pressure jets of water from any direction. Masterseal Plus ${ }^{\text {TM }}$ sockets can seal around virtually any standard 13A plug - including moulded on 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 gasket 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 ${ }^{\text {Tm }}$ range extends to over 90 product variations as the enclosures house selected products from the Logic Plus ${ }^{\text {TM }}$ portfolio - thus offering all the benefits of the Logic Plus ${ }^{\text {tm }}$ range within the Masterseal Plus ${ }^{\text {tm }}$ enclosures.

## FEATURES \& BENEFITS

## IP66*

Masterseal Plus ${ }^{\text {Tm }}$ offers total dust ingress protection, and is protected against high-pressure water jets from any direction, when in use.

ROBUST CONSTRUCTION AND TEMPERATURE TOLERANT
Masterseal Plus ${ }^{\text {TM }}$ will not discolour, crack or fade in UV light (unlike many other plastics), and will maintain operation in extremes of heat and cold.

## IMPACT PROTECTION

Masterseal Plus ${ }^{\text {Tm }}$ enclosures are made from polycarbonate, one of the toughest thermoplastics available - incidentally also used in products such as motorcycle helmets.

## WIDEST RANGE

The Masterseal Plus ${ }^{\text {TM }}$ range extends to over 90 product variants. The enclosures house products from the Logic Plus ${ }^{\text {TM }}$ range, all enclosures and switches are available in Grey, White and Black.

## 20 YEAR GUARANTEE

Masterseal Plus ${ }^{\text {TM }}$ is guaranteed for an industry-leading 20 years. (10 years for electronic products)

100
MILLION
SOCKETS
by Honeywell

## sterseal Plus ${ }^{\text {TM }}$

## ULTIMATE PROTECTION

For the Great Brtitish Weather

# MK Electric has always been at the forefront of technical innovation, not least in the IP environment. 

Masterseal Plus ${ }^{\text {TM }}$ has been tested to levels well in excess of British Standards. Masterseal Plus ${ }^{\text {TM }}$ safeguards users in the harshest of environments, employing a gel seal for improved protection.

With a superb rating of IP66, Masterseal Plus ${ }^{\text {TM }}$ is dust-tight to any ingress, and water-tight against high-pressure water jets from any direction.

## HOW TO SPECIFY

A range of water and dust tight enclosures, rated at IP66 when in use, manufactured from UV stable thermoplastic material and utilising a gel gasket seal and easy to open catch mechanism.

To enable quick and easy installation the seal will be fixed to the mounting frame of the unit.

Containing a urea moulded anti-bacterial range of wiring accessories, designed with soft curves and chamfered top edges that offer a slim unobtrusive appearance.

Cable connections must be upward facing with easy to identify white markings on a dark background, grouped in a straight line with captive terminal screws for ease of installation.

All standard BS sockets to have a 3 pin operated "child Resistant" shutter system and double pole switching, with the contacts designed such that the neutral makes before and breaks after the live pole for improved safety.

All products to be made in the UK.

## Masterseal Plus ${ }^{\text {TM }}$

 for improved protection
Masterseal Plus ${ }^{\text {TM }}$
To view the video visit the MK Electric by Honeywell YouTube channel


by Honeywell

Switchsocket Outlets，
Timer Socket Outlets，and
Key Operated Socket Outlets
13 AMP
IP66

|  | $\vdots$ |  |
| :--- | :--- | :--- |
|  | Socket Outlets |  |
|  |  |  |
| RCD PROTECTED |  | 16 AMP |
| 13 AMP | 13 AMP | IP66 |
| IP66 | IP66 | （NON UK） |

P66
（NON UK）


K56486GRY 1
K56486WHI
K56486BLK
13A DP
1 GANG SWITCHED
K56482GRY
K56482WHI
K56482BLK
13A DP
2 GANG SWITCHED
K56488GRY
K56488WH
K56488BLK
13A DP SWITCHED
2 GANG
NEON
CLEAR COVER

## Fixing holes are for No． 8 woodscrews

（not supplied）
K56486 has $4 \times 20 \mathrm{~mm}$ entries，
1 on top，bottom and each side and is supplied with an earth terminal in the
2 gang backbox has 5 cable entries
2 on top 1 centrally on other 3 sides．Supplied with earth terminals DIMENSIONS
1 gang $157 \times 110 \times 89 \mathrm{~mm}$
1 gang $157 \times 110 \times 89 \mathrm{~mm}$
BS 1363－2：1995
IP66 BS EN 60529：1992

1 K56301GRY 1
K56480GRY
K56480WHI
K56480BLK
13A 1 GANG
UNSWITCHED
K56481GRY
K56481WHI
K56481BLK
13A 2 GANG
UNSWITCHED

Fixing holes are for No． 8 woodscrews （not supplied）．
K56480 has $4 \times 20 \mathrm{~mm}$ entries， 1 on top，bottom and each side and is supplied with an earth terminal in the back box．
BS 1363－2：1995
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 $157 \times 110 \times 89 \mathrm{~mm}$
2 gang $157 \times 175 \times 89 \mathrm{~mm}$
BS 1363－2：1995
P66 BS EN 60529：1992

K56301WHI 1
K6301BLK
GANG DP
30mA RATED TRIPPING
CURRENT ACTIVE
CONTROL CIRCUIT
K56231GRY
K56231WHI
K56231BLK
2 GANG SP
30mA RATED TRIPPING
CURRENT ACTIVE
CONTROL CIRCUIT
K56233GRY
K56233WHI
K56233BLK
2 GANG SP
30mA 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 240 V a．c．
Standard Shutters．
DIMENSIONS
$157 \times 175 \times 89 \mathrm{~mm}$
BS 7288：1990
P66 BS EN 60529：1992

Fixing holes are for No． 8 woodscrews （not supplied）．
K56483 is for use with plugs having right angled cable exit
DIMENSIONS
$157 \times 110 \times 89 \mathrm{~mm}$
EC 60884－1：2006
IP66 BS EN 60529：1992

Masterseal Plus＂＇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 chemical resistance table on page 553.

K56483GRY
K56483WHI

## K56483BLK

1
16A
1 GANG
$2 \mathrm{P}+\mathrm{E}$
UNSWITCHED
（NON UK）


## Masterseal Plus ${ }^{\text {TM }}$

Key Operated
Switches
20 AMP
IP66

IP66
Connection
Units

13 amp
IP66

IP66
0 AMP
IP66


20 AMP
IP66

## Grid Plus

Enclosures


K56425GRY


K56425WH



K56410WHI


K56410BLK


10 AMP
IP66


K56414GRY


K56414WHI


K56414BLK

Switch

K56421 WHI

K56422BLK


K56422GRY


## Switch <br> Modules

10 AMP


56881BLK


56882BLK


Neon
Modules


Data／Telecom Enclosures Euro Format

Euro Data Modules

IP66

TELECOM

| 56889RED | 10 | K |
| :--- | :--- | :--- | :--- |
| 200－250V NEON <br> RED |  | K |
| K |  |  |


| K56423GRY | 1 |
| :--- | :--- |
| K56423WHI | 1 |
| K56423BLK | 1 |

1 GANG
DATA ENCLOSURE
FOR 2 MODULE EURO
OUTLET
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
Fixing holes are for No．
woodscrews（not supplied）．
Backbox has $4 \times 20 \mathrm{~mm}$ entries，
1 on each edge．Supplied with
an earth terminal and a loop
terminal in the backbox．
DIMENSIONS
$160 \times 117 \times 89 \mathrm{~mm}$
IP66 to BS EN 60529：1992




ONE－WAY

For use only with
Masterseal Plus ${ }^{\text {™ }}$ switch
enclosures．
These switches do NOT have
to be derated when used with
fluorescent or inductive loads．
BS EN 60669－1：1999

Fixing holes are for №． 8 woodscrews（not supplied）． Each enclosure is fitted with a a locator．The enclosure has $4 \times 20 \mathrm{~mm}$ 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 DIMENSIONS
$95 \times 95 \times 57 \mathrm{~mm}$
IP66 to BS EN 60529：1992

See Logic Plus
page 46－48 for a
full range of
Euro modules


| Euro Data | Junction <br> Modules |
| :--- | :--- |
| Boxes |  |
|  |  |
| DATA | 30 AMP |
|  | IP66 |


| Flush | Flush |
| :--- | :--- |
| Mounting | Mounting |
| Frames | Bezels |
|  |  |

## Conduit

Entries

Accessories


K5887WHI K5887BLK


56890GRN


## Masterseal Plus™

Echo ${ }^{\text {TM }}$ is an innovative range of entirely wireless，batteryless and self－powered switches， only available from MK Electric

1 and 2
Channel Transmitter For Echo ${ }^{\text {TM }}$

IP66

Enclosure
（K55000GRY

## 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 permittable 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 ${ }^{\text {Tw }}$ 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．

| K55400GRY | 1 | K55000GRY | 1 |
| :--- | :--- | :--- | :--- |
| K55400WHI | 1 | K55000WHI | 1 |
| K55400BLK | 1 | K55000BLK | 1 |

K55400BLK
1 CHANNEL
TRANSMITTER
FOR ECHOTM

K55406GRY 1
K55406WHI 1
K55406BLK
See page 29 for a full range of Echow receivers and accessories
2 CHANNEL
TRANSMITTER
FOR ECHO ${ }^{\text {TM }}$
No wires
Instant switch installation
Location／relocation flexibility
－Simplifies office＇churn＇－less disruption
No batteries
Low maintentance
－Low running costs
－Less waste，a more sustainable option
－No nuisance factor
－Instant switch instalation
－Simplifies office＇churn＇－less disruption

## No batteries

－Low runing 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

## COMMANDO SAFETYSWITCH

## 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 \& 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

## HOW TO SPECIFY

A range of industrial "Commando" triple pole and neutral Safety Switches designed to provide IP65 ingress protection. Product case must be interlocked to ensure that the case cannot be opened while the switch is in the "ON" position. All switches are to have Neutral and earth terminals fitted as standard and have I.S.O. metric conduit entries for ease of installation.

## Commando Safetyswitch

## Commando <br> Safetyswitches

 I．S．O．metricconduite 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


## Switch

Disconnectors

| 16 AMP（lth） | 25 AMP（Ith） |
| :--- | :--- |
| 3 POLE | 3 POLE |
| IP65 | IP65 |




## Commando Safetyswitch

## Switch

 Disconnectors25 AMP (Ith)

6 POLE
IP65

40 AMP (Ith)
3 POLE
IP65

63 AMP (Ith)
3 POLE
IP54 and IP65


| K6725 | 1 | K6840 | 1 | K6863 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| K6725YEL | 1 | K6840YEL | 1 | K6863YEL | 1 |
| UTILISATION CATEGORY |  | UTILISATION CATEGORY |  | UTILISATION CATEGORY |  |
| AC23A RATED OPERATIONAL: |  | AC23A RATED OPERATIONAL: |  | AC23A RATED OPERATIONAL: |  |
| CURRENT (le) 20A |  | CURRENT (le) 25A |  | CURRENT (le) 45A |  |
| VOLTAGE (Ue) 415V 50/60 HZ |  | VOLTAGE (Ue) 415V 50/60 HZ |  | VOLTAGE (Ue) 415V 50/60 HZ |  |
| POWER 11 KW |  | POWER 15 KW |  | POWER 22 KW |  |
| IP RATING |  | IP RATING |  | IP RATING |  |
| K6725 IP65 |  | K6840 IP65 |  | 6863 IP54 |  |
| K6725YEL IP65 |  | K6840YEL IP65 |  | 6863YEL IP65 |  |
| Supplied with blanking plugs and neutral terminals |  | Supplied with blanking plugs and neutral terminals |  | Supplied with blanking plugs and neutral terminals |  |
| TERMINAL CAPACITY |  | TERMINAL CAPACITY |  | TERMINAL CAPACITY |  |
| $1.5-4 \mathrm{~mm}^{2}$ |  | $1.5-10 \mathrm{~mm}^{2}$ |  | $1.5-16 \mathrm{~mm}^{2}$ |  |
| CONDUIT ENTRY $4 \times \mathrm{M} 20$ |  | CONDUIT ENTRY $4 \times \mathrm{M} 25$ |  | CONDUIT ENTRY |  |
| $2 \times 18 \mathrm{~mm}$ knockouts |  | K6840 |  | $4 \times$ M 32 $2 \times \mathrm{M} 16$ |  |
| K6725 |  | Auxiliary contacts |  | 6863 |  |
| Auxiliary contacts |  | List No: 6818 and 6819 |  | Auxiliary contacts |  |
| List No: 6818 and 6819 |  | Will accept one auxiliary contact. |  | List No: 6813 or 6814 |  |
| Will accept one auxiliary contact. |  | K6840YEL |  | 6863YEL |  |
| K6725YEL |  | Auxiliary contact included. |  | Auxiliary contact included. |  |
| Auxiliary contact included. BS EN 60947-3.2009 |  | BS EN 60947-3:2009 |  | BS EN 60947-3:2009 |  |

# Commando Safetyswitch 

Triple Pole
And Neutral Switches

| 4 POLE | 2 POLE |
| :--- | :--- |
| IP66 | IP66 |

## Auxiliary <br> Contacts

## Accessories



6813


6818


6819

M4413
4 POLE
UTILISATION CATEGORY AC23A RATED OPERATIONAL:
CURRENT (le) 32A
VOLTAGE (Ue) 240/415V 50/60 HZ
POWER 11 KW

## M4414

4 POLE
UTILISATION CATEGORY AC23A RATED OPERATIONAL:
CURRENT (le) 20A
VOLTAGE (Ue) 240/415V 50/60 HZ POWER 7.5 KW

TERMINAL CAPACITY
$16 \mathrm{~mm}^{2}$ (Rigid stranded cable)
CONDUIT ENTRY
$2 \times 25 \mathrm{~mm}$ cable entry top and bottom. Supplied
with $2 \times 25 \mathrm{~mm}$ conduit adaptors.
$4 \times 20 \mathrm{~mm}, 2 \times 25 \mathrm{~mm}$ knockouts for rear cable entry.
BS EN 60947-3:2009

1 M4417
2 POLE
UTILISATION CATEGORY AC23A RATED OPERATIONAL:
CURRENT (le) 32A
VOLTAGE (Ue) 240V $50 / 60 \mathrm{HZ}$ POWER 5.5 KW

## 1 M4418

2 POLE
UTILISATION CATEGORY AC23A RATED OPERATIONAL:
CURRENT (le) 20A
VOLTAGE (Ue) 240V $50 / 60 \mathrm{HZ}$ POWER 3.75 KW

16813
16A (Ith) SINGLE POLE
NORMALLY OPEN
4A OPERATIONAL CURRENT (le)

## 6814

16A (Ith) SINGLE POLE
NORMALLY CLOSED
1 4A OPERATIONAL CURRENT (le)

## 6817

10
10A (Ith) SINGLE POLE
normally open
1.5A OPERATIONAL CURRENT (le)

## 6818

10
10A (Ith) SINGLE POLE
NORMALLY OPEN,
6A OPERATIONAL CURRENT (le)
AC15 @ 230 V
6819
10 A (Ith) SINGLE POLE
NORMALLY CLOSED, 6A
NORMALLY CLOSED, 6A
OPERATIONAL CURRENT (le)
AC15 @ 230V


## COMMANDO

## 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 remarkable impact strength and an excellent choice of ingress protection ratings. Outstanding temperature performance and good resistance to 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.

## HOW TO SPECIFY

A range of industrial "Commando" industrial plugs, connectors, sockets and switches designed to provide IP44 \& IP67 ingress protection. Products to have outstanding temperature performance and resistance to chemicals to ensure operation in arduous applications. All sockets to have self cleaning contacts and nickel plated pins to provide resistance to humidity and wear. Cable entry must be secured via a cable clamp that applies pressure to the cable for the lifetime of the product. Products must have prolonged earth pole connections to ensure that earth terminals are last to disconnect. Terminals to be clearly identified and have terminal screws backed out to provide fast and easy installation.

## FEATURES \& 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 GLAND
Every product across the range has a new cable clamp with an improved locking mechanism that will apply pressure to the cable for the lifetime of the product.

## EASY WIRING

All screws are backed out and retained. Twin contact earth screws.

OUTSTANDING TEMPERATURE PERFORMANCE
Successful operation guaranteed between $-25^{\circ} \mathrm{C}$ and $55^{\circ} \mathrm{C}$.

Technical Hotline +44 (0)1268 563720


## 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.

|  | Plugs | Connectors | Socket Outlets |
| :--- | :---: | :---: | :---: |
| IP44 |  |  |  |
| SPLASHPROOF |  |  |  |
| 100-130V |  |  |  |
| 50-60 HZ |  |  | ANGLED |
|  |  |  | SURFACE |

STRAIGHT
PANEL MOUNTING SURFACE - LOOP IN


Fitted with cable entry seal. BS EN 60309

Fitted with cable entry seal. 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

|  | $\vdots$ | Plugs | $\vdots$ | Connectors | $\vdots$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| IP67 | Socket Outlets |  |  |  |  |
| WATERTIGHT |  | $\vdots$ |  |  |  |
| 100-130V |  | $\vdots$ |  |  |  |
| $50-60 \mathrm{HZ}$ |  |  |  | ANGLED |  |
|  |  |  | SURFACE | PANEL MOUNTING | SURFACE - LOOP IN |

## Switchsocket

Outlets

ANGLED
INTERLOCKED
SURFACE


Switch can be locked in open or closed position． Suitable for top entry $1 \times \mathrm{M} 20$ and $1 \times \mathrm{M} 25$ or bottom entry $1 \times \mathrm{M} 20$ and $1 \times \mathrm{M} 25$ BS EN 60309

Switchsocket
Outlets

ANGLED
INTERLOCKED
SURFACE


Switch can be locked in open or closed position．
Suitable for top entry $1 \times$ M20 and $1 \times$ M25 or bottom entry $1 \times \mathrm{M} 20$ and $1 \times \mathrm{M} 25$ BS EN 60309


IP44
SPLASHPROOF
200-250V
50 - 60 HZ
Plugs
Connectors
Socket Outlets

ANGLED
SURFACE

SURFACE-LOOP IN

STRAIGHT
PANEL MOUNTING


| 16 | $2 P+E$ | 6 | K9001BLU | K9101BLU | K |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 16 | $3 P+E$ | 9 | K9006BLU | K9106BLU | K |
| 16 | $3 P+N+E$ | 9 | K9014BLU | K9114BLU | K |
| 32 | $2 P+E$ | 6 | K9033BLU | K9133BLU | K |
| 32 | $3 P+E$ | 9 | K9036BLU | K9136BLU | K |
| 32 | $3 P+N+E$ | 9 | K9044BLU | K9143BLU | K |
| 63 | $2 P+E$ | 6 | K9063BLU | K9172BLU | K |

16A/32A
Fitted with cable entry gland. 63A
Fitted with cable entry gland BS EN 60309

16A/32A
Fitted with cable entry gland
63A
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.
63A Top conduit (M32) or rear
cable entry, complete with
blanking plug
BS EN 60309

Suitable for top entry $1 \times$ M20 and $1 \times$ M25 or bottom entry XM20 and $1 \times \mathrm{M} 25$ BS EN 60309

16/32A
All flanges have the same fixing centres and outside dimensions to assist panel builders BS EN 60309
$\qquad$
Plugs : Connectors

Socket Outlets

ANGLED
SURFACE SURFACE - LOOP IN

| Amps | Pin. Configuration | Earth |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 16 | $2 \mathrm{P}+\mathrm{E}$ | 6 | K9024BLU | K9124BLU | K9194BLU | K13024BLU |  |
| 16 | $3 \mathrm{P}+\mathrm{E}$ | 6 | K9081BLU | K9082BLU | K9083BLU |  |  |
| 32 | $2 \mathrm{P}+\mathrm{E}$ | 6 | K9054BLU | K9156BLU | K9762BLU | K13054BLU |  |
| 32 | $3 \mathrm{P}+\mathrm{E}$ | 6 |  |  |  |  |  |
| 63 | $2 \mathrm{P}+\mathrm{E}$ | 6 | K9298BLU | K9856BLU | K9857BLU |  |  |
|  |  |  | 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 $2 \times$ M25 Will accent ELL3 13 flange at top BS EN 60309 | Suitable for top entry $1 \times$ M20 and $1 \times$ M25 or bottom entry $1 \times$ M20 and $1 \times$ M25 BS EN 60309 |  |
| 258 |  | electric | co.uk |  |  | Photographs feature the most Design changes may occur (o from one product to another. | representative products ver different current ratings) |

ANGLED
PANEL MOUNTING

| Switchsocket | Appliance |
| :--- | :--- |
| Outlets | Inlets |
| ANGLED |  |
| INTERLOCKED | ANGLED |
| SURFACE | SURFACE |

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. Suitable for top entry $2 \times$ M32 or $2 \times$ M40 or bottom entry $2 \times$ M32 or $2 \times$ M40
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
blanking plug
BS EN 60309

## Switchsocket

Outlets

ANGLED
INTERLOCKED
SURFACE

| Amps | Pin. <br> Configuration | Earth |  |
| :---: | :---: | :---: | :---: |
| 16 | $2 \mathrm{P}+\mathrm{E}$ | 6 | K73624BLU |
| 16 | 3P+E | 9 |  |
| 32 | 2P+E | 6 | K73654BLU |
| 32 | $3 \mathrm{P}+\mathrm{E}$ | 9 |  |
| 63 | $2 \mathrm{P}+\mathrm{E}$ | 6 |  |

Switch can be locked in open
or closed position.
Suitable for top entry $1 \times$ M20
and $1 \times$ M25 or bottom entry
$1 \times$ M20 and $1 \times$ M25
BS EN 6030

Commando

IP44
SPLASHPROOF
380-415V
50-60 HZ

Plugs
Connectors

ANGLED
SURFACE

STRAIGHT
PANEL MOUNTING

| Amps | Pin. Configuration | Earth |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 16 | $3 P+E$ | 6 | K9007RED | K9107RED | K9207RED | K9407RED |
| 16 | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ | 6 | K9015RED | K9115RED | K9215RED | K13315RED |
| 32 | 3P+E | 6 | K9037RED | K9137RED | K9237RED | K9437RED |
| 32 | $3 P+N+E$ | 6 | K9045RED | K9144RED | K9241RED | K9445RED |
| 63 | 3P+E | 6 | K9066RED | K9165RED | K9265RED |  |
| 63 | $3 P+N+E$ | 6 | K9071RED | K9170RED | K9269RED | K9470RED |
|  |  |  | 16A/32A <br> Fith cable entry gland 63A <br> Fitted with cable entry gland Thread size M48 <br> BS EN 60309 | 16A/32A <br> Fited with cable entry gland. 63A <br> itted with cable entry gland. Thread size M48 <br> BS EN 60309 | 16A Top conduit (M20) or rear cable entry, complete with blanking plug. entry, complete with blanking plug. 63A Top conduit (M32) or rear cable entry, complete with blanking plug. BS EN 60309 |  |
| IP67 <br> WATERTIGHT <br> 380-415V <br> 50-60 HZ |  |  | Plugs | Connectors | Socket Outlets | Switchsocket Outlets |
|  |  |  |  |  | ANGLED SURFACE | angled interlocked SURFACE |


| Amps | Pin. Configuration | Earth |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 16 | 3P+E | 6 | K9025RED | K9125RED | K9763RED | K13625RED |
| 16 | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ | 6 | K9026RED | K9126RED | K9764RED | K73626RED |
| 32 | 3P+E | 6 | K9055RED | K9157RED | K9765RED | K13655RED |
| 32 | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ | 6 | K9056RED | K9158RED | K9766RED | K73656RED |
| 63 | 3P+E | 6 | K9282RED | K9842RED | K9858RED | K9432RED |
| 63 | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ | 6 | K9292RED | K9852RED | K9859RED | K73658RED |
|  |  |  | Suitable for flexible cable only. BS EN 60309 | Suitable for flexible cable only. BS EN 60309 | $2 \times 29 / 37 \mathrm{~mm}$ knockouts <br> (top), $1 \times \emptyset 29$ and $1 \times \emptyset 23$ <br> knockout (bottom). <br> Will accept FL13 flanges top <br> and bottom <br> BS EN 60309 | Switch can be locked in open or closed position. <br> Suitable for top entry $2 \times$ M32 or <br> $2 \times$ M40 or bottom entry $2 \times$ M32 or $2 \times$ M40 <br> BS EN 60309 |

## Switchsocket

Outlets

ANGLED
INTERLOCKED
SURFACE

| Amps | Pin． Config－ uration | Earth |  |
| :---: | :---: | :---: | :---: |
| 16 | 3P＋E | 6 | K13607RED |
| 16 | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ | 6 | K73615RED |
| 32 | 3P＋E | 6 | K13637RED |
| 32 | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ | 6 | K73641RED |
| 63 | 3P＋E | 6 | K9665RED |
| 63 | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ | 6 | K73643RED |

Switch can be locked in open
or closed position．
Suitable for top entry $2 \times$ M32
or $2 \times$ M40 or bottom entry
$2 \times$ M 32 or $2 \times$ M40
BS EN 60309


Protective<br>Covers For Inlets

Earth Lead<br>Adaptors and<br>Blanking Plugs

9960BLK
FOR 2P+E, 16A
NO 125A OFFERING
9966BLK
$2 \mathrm{P}+\mathrm{E}, 3 \mathrm{P}+\mathrm{E}, 32 \mathrm{~A}$
9967BLK
FOR ALL 63A (IP44)

1 MK9933
M20 X 1.5/ M20 X 1.5 THREAD SIZE USED ON ALL 16A SOCKET OUTLETS
1 AND APPLIANCE INLETS (EXCEPT
INTERLOCKED). ALSO USED ON
16A AND 25A SAFETYSWITCHES
1 MK9934
M25 X 1.5/ M25 X 1.5 THREAD SIZE
USED ON ALL 32A SOCKET OUTLETS AND
APPLIANCE INLETS (EXCEPT INTERLOCKED)
9936
PG21/ M25 X 1.5 THREAD SIZE
USED ON 16A \& 32A INTERLOCKED
SWITCHSOCKET OUTLETS

## MK9937

M32 X 1.5/ M32 X 1.5 THREAD SIZE
USED ON ALL 63A SOCKET OUTLETS AND APPLIANCE INLETS

MK9937 must not be used on installations that are rated above 63A.


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 $50-60 \mathrm{~Hz}$.


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 $50 / 60 \mathrm{~Hz}$ ) 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, ie., a 10 o'clock will appear at 2 o'clock and other positions are relative.


## COMMANDO COMBITM

## RANGE INTRODUCTION

## Commando Combi units offer RCD protection in hazardous environments.

Enclosed in PC and ABS 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 \& BENEFITS

- High Impact Protection to IK08
- Available in either IP44 (Splashproof) or IP67 (Watertight) options
- Pre-designed, factory built option


## HOW TO SPECIFY

An industrial range of IP44 \& IP67 ingress protected "Commando" combination units designed to provide RCD protection in hazardous environments. Options must be available for a maximum of three Commando sockets. Products must have outstanding temperature performance and resistance to chemicals to ensure operation in arduous applications. All sockets to have self-cleaning contacts and nickel plated pins to provide resistance to humidity and wear. Terminals to be clearly identified and have terminal screws backed out to provide ease of installation.


CUSTOM DESIGNED, FACTORY BUILT
OPTION AVAILABLE
CONTACT TECHNICAL HOTLINE
ON +44 (0)1268 563720
SEE PAGE 268.

Socket outlet selection includes 16A, 32A and 63A angled socket outlets across all relevant voltages.

IP44 and IP67
waterproof socket and switchsocket outlets.


| IP44 |
| :--- |
| SPLASHPR00F |
| $100-130 V$ |
| $50-60 \mathrm{HZ}$ |

## Socket Outlets

SINGLE
PRE-WIRED WITH 30 mA RCD

| TWIN | ANGLED |
| :--- | :--- |
| PRE-WIRED WITH | TWIN |
| 30mA RCD | SURFACE |
| INDIVIDUALLY PROTECTED | PRE-WIRED |




IP44

Amps uration
Earth


| 16 | $2 \mathrm{P}+\mathrm{E}$ | 4 | K13413YEL |
| :--- | :--- | :--- | :--- |
| 32 | $2 \mathrm{P}+\mathrm{E}$ | 4 |  |

Suitable for top entry $2 \times 25 \mathrm{~mm}$

Socket Outlets
SINGLE ANGLED 30mA RCD

PRE-WIRED WITH
TWIN
SURFACE
PRE-WIRED


Switchsocket Outlet
INTERLOCKED
PRE-WIRED WITH
30 mA RCD

Switchsocket Outlet INTERLOCKED PRE-WIRED WITH 30 mA RCD


| K73143YEL | K13309YEL |
| :--- | :--- |
|  | K13342YEL |

Suitable for top entry $2 \times ø 25$
IP44
SPLASHPR00F
$200-250 \mathrm{~V}$
$50-60 \mathrm{HZ}$

Pin.
Config-
Amps uration
Earth


| 16 | $2 P+E$ | 6 | K73414BLU | K73174BLU | K73310BLU |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 63 | $2 P+E$ | 6 | K73463BLU |  | K13343BLU |

Suitable for top entry
$2 \times 25 \mathrm{~mm}$

Suitable for top entry
$2 \times \emptyset 25 / 2 \times \varnothing 38$
Bottom entry $3 \times 47.5 \mathrm{~mm}$


Socket Outlets
SINGLE
PRE-WIRED WITH 30 mA RCD

SINGLE
PRE-WIRED WITH SINGLE 30 mA RCD

Switchsocket Outlet
INTERLOCKED
PRE-WIRED WITH
30 mA RCD


| IP67 |
| :--- |
| WATERTIGHT |
| $100-130 \mathrm{~V}$ |
| $50-60 \mathrm{HZ}$ |

## Socket Outlet

SINGLE
PRE-WIRED WITH
30mA RCD

Switchsocket
Outlet
INTERLOCKED
PRE-WIRED WITH
30mA RCD


K13346YEL

| 16 | $2 P+E$ | 4 | K13713YEL |
| :--- | :--- | :--- | :--- |
| 32 | $2 P+E$ | 4 | K73718YEL |

Suitable for top entry
Suitable for top entry
$2 \times ø 25$
$2 \times \varnothing 25$
IP67
WATERTIGHT
$200-250 \mathrm{~V}$
$50-60 \mathrm{HZ}$

Socket Outlet
SINGLE
Switchsocket Outlet
PRE-WIRED
WITH
INTERLOCKED
PRE-WIRED WITH
30 mA RCD
30 mA RCD

IP67
SPLASHPROOF
$380-415 \mathrm{~V}$
$50-60 \mathrm{HZ}$

| Socket Outlet | Switchsocket |
| :--- | :--- |
| SINGLE | Outlet |
| PRE-WIRED WITH | INTERLOCKED |
| 30mA RCD | PRE-WIRED WITH |
|  | 30mA RCD |



Amps uration Earth


| 16 | $3 P+E$ | 6 |
| :--- | :--- | :--- |
| 16 | $3 P+N+E$ | 6 |
| 32 | $3 P+E$ | 6 |


| 162 | $3 P+E$ | 6 |
| :--- | :--- | :--- |
| 32 | $3 P+N+E$ | 6 |



# MODULAR COMBITM 

## RANGE INTRODUCTION

A custom design service for Commando Combi products offering circuit protection, control and data products for use in hazardous environments. Modular Combi units are made to order and designed for almost any application.

Enclosed in durable Polycarb and ABS boxes, these units offer protection against high impact and are available in both IP44 and IP67, making Commando Combination units some of the safest products available.

Please contact the Technical Helpline (01268 563720) for further details or email mk.technical@honeywell.com for assistance on options available to meet your application requirements

## HOW TO SPECIFY

An industrial range of IP44 \& IP67 ingress protected "Commando" combination units designed to provide RCD protection in hazardous environments. Options must be available for a maximum of three Commando sockets, Masterseal and data connections. Products must have outstanding temperature performance and resistance to chemicals to ensure operation in arduous applications. All sockets to have self-cleaning contacts and nickel plated pins to provide resistance to humidity and wear Terminals to be clearly identified and have terminal screws backed out to provide ease of installation.

## FEATURES \& BENEFITS

- Compact units replace outlets traditionally scattered around walls
- Combination of outlets with MCB and RCD protection
- High Impact Protection
- Custom design service to suit various applications


## Modular Combi™

## SUMMARY GUIDE

STEP 1 Choose your system type and number of Commando socket outlets

| SOCKET OUTLETS－STRAIGHT |  |  |  |  |  |  | SOCKET OUTLETS－INTERLOCKED |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 100－130V | $200-250 \mathrm{~V}$ | $380-415 \mathrm{~V}$ | $100-130 \mathrm{~V}$ | $200-250 \mathrm{~V}$ | $380-415 \mathrm{~V}$ |  |  |  |  |  |
| $\checkmark$ | $\checkmark$ |  | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
| $\checkmark$ | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ |  |  |  |  |  |
| $\checkmark$ | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ |  |  |  |  |  |
| $\checkmark$ | $\checkmark$ |  | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |
|  | $\checkmark$ | $\checkmark$ |  |  | $\checkmark$ |  |  |  |  |  |
|  | $\checkmark$ |  |  |  | $\checkmark$ |  |  |  |  |  |
|  |  | $\checkmark$ |  |  |  |  |  |  |  |  |
|  |  | $\checkmark$ |  |  |  |  |  |  |  |  |

STEP 2 Choose the type of circuit protection for the outlets


## STEP 3 Choose the Control Products

| Rating | CONTACTORS |  |  | TIME SWITCHES |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | SYNCHRONOUS <br> THREE MODULE | QUARTZ STABILISED THREE MODULE | SYNCHRONOUS <br> ONE MODULE | dIGITAL ONE CHANNEL |  | DIGITAL TWO CHANNEL <br> TWO <br> MODULE |
|  | ONE MODULE | TWO MODULE | THREE MODULE |  |  |  | TWO MODULE | ONE <br> MODULE |  |
| 16A |  |  |  | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| 20A | $\checkmark$ | $\checkmark$ |  | $\checkmark$ | $\checkmark$ |  |  |  |  |

## STEP 3 Choose the Control Products

MASTERSEAL

| SOCKET OUTLETS |  | SWITCH ENCLOSURES | SWITCH MODULES |  |
| :--- | :---: | :---: | :---: | :---: |
| 13AMP | 16AMP |  | 20AMP | 10AMP |
| $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

## Overall Dimensions

| DIMENSIONS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| HEIGHT |  | $\begin{array}{\|l\|} \text { WIDTH } \\ \hline \text { 252MM } \end{array}$ | DEPTH（WITH VARIOUS PRODUCTS） |  |
| 1 ROW | 228 MM |  | 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 0／T，FCU \＆DATA | 146MM |
|  |  |  | MASTERSEAL SWITCH | 135MM |

STEP 4 Email mk．technical＠honeywell．com for design and quotation prior to placing your order．


## CASE STUDY

## BROADMOOR HOSPITAL - BESPOKE PRODUCTS

The redevelopment of Broadmoor Hospital required bespoke wiring device plates that would not only be resilient, but maintain the highest
 levels of safety at all times.

The complexities of this application meant that only a specialist solution would suffice and the MK Design Service were able to provide an offering that met their requirements whilst still delivering unrivalled quality from a UK
 manufacturer.


## SENTRY

## RANGE INTRODUCTION

> 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 preassembly service for custom built boards with all devices fitted, busbars cut and fitted with devices, live and neutral cables terminated.

## SUPPORTS 17TH EDITION AMENDMENT 3 COMPLIANCE

Full range of products to support compliance with the 17th Edition Amendment 3 of the Wiring Regulations, including Full Metal non-combustible enclosures for Consumer Units.

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.

## 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

[^22]
## Sentry

## MK Sentry Consumer Unit Features and Benefits




NEW: Top Hinged Door
Prevents door being left open after use leading to a possible fire risk

Zintec Steel
Corrosion resistant material which ensures full compliance with 17th Edition Amendment 3


NEW: Multiple extra large knock outs
Aides and eases installation


## NEW: MK White Colour

Modernised aesthetics for visible installations.
Design service available for bespoke requests

## Sentry



Backed out and captive combi-head screws
Allows simple and speedy installation

Simplifying and easing first fix


Fixing holes
Tripod fixing to cope with uneven surfaces

Colour coded earth and neutral terminal locked At top of unit for ease of wiring
(
$\Lambda$

NEW: 10mm Increased Height Additional wiring space

NEW: Supporting Din Rail "T" Bar

Additional support to prevent bowing and twisting which has been raised for improved cable routing

- Floating busbar system
For maximum installation flexibility including acceptance of control modules


## CONSUMER UNIT SELECTION GUIDE

> | STEP 1 | $\begin{array}{l}\text { Standard or combination of split load / single RCD or dual RCD. For each Switch } \\ \text { Disconnector or RCD to be used allow } 2 \text { modular ways. }\end{array}$ |
| :--- | :--- |
| STEP 2 | $\begin{array}{l}\text { Determine the number of outgoing circuits required. e.g Cooker, Lighting, Ring Main } \\ \text { etc. For each circuit to be protected by an MCB or RCBO allow 1 modular way. }\end{array}$ |
| STEP 3 | $\begin{array}{l}\text { Determine what control products are required. e.g Bell Transformer, Time Delay } \\ \text { Switch, contactors, timeswitches etc. }\end{array}$ |
| STEP 4 | $\begin{array}{l}\text { Determine the number of 'spare' modular ways required for future upgrades. For } \\ \text { each 'spare' modular way select 1 Sentry blank module - 55544s or K5545sMAG } \\ \text { (cover mounted blanks supplied with consumer units. See page 286). }\end{array}$ |

STEP 5 Now add together the total number of modular ways required.
Select from our range of Insulated, Metal, Flush or stacked consumer units (using
STEP 6 standard consumer units plus stacking kits). Choose the type and size most appropriate for your requirements.

# 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. 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 project application*.
*Minimum order quantity of 20 of the same design

- Dedicated team on hand to build configuration to meet your needs
- Service is available for all MK Consumer Units
- Faster installation time on site
- Fast turnaround - 1 working day response time to initial enquiry

To find out more visit www.mkelectric.co.uk and follow the links to the Design Service.

| STEP 1 | Call the MK Electric Technical Services Team on 01268563720 or email mk.technical@honeywell.com |
| :---: | :---: |
| STEP 2 | Discuss the details of your project and circuit protection requirements with a member of the MK Technical Services Team or complete the online enquiry and click send |
| STEP 3 | Within one working day you will have a response to your initial enquiry |
| STEP 4 | Confirm the configurations and quantities |
| STEP 5 | Receive the quote for your order |
| STEP 6 | Place your order with your wholesaler |
| STEP 7 | Your order will be delivered to the wholesaler of your choice. All boards will be fully assembled and ready for installation |

## Consumer Units

METAL
ENCLOSURE ONLY
SURFACE

METAL
ENCLOSURE + SWITCH
DISCONNECTOR
SURFACE


K5604sMET
4 WAY ENCLOSURE
ACCEPTS 4 ONE MODULE PRODUCTS
( 1 INTEGRAL NEUTRAL BAR)

## K5608sMET

8 WAY ENCLOSURE
ACCEPTS 8 ONE MODULE PRODUCTS
(1 INTEGRAL NEUTRAL BAR)

## K5612sMET

12 WAY ENCLOSURE
ACCEPTS 8 ONE MODULE PRODUCTS (2 INTEGRAL NEUTRAL BARS FITTED WITH LINKS)

1 K5616sMET
16 WAY ENCLOSURE
ACCEPTS 16 ONE MODULE PRODUCTS (3 INTEGRAL NEUTRAL BARS FITTED 1 WITH LINKS)

## K5621sMET

21 WAY ENCLOSURE
ACCEPTS 21 ONE MODULE PRODUCTS
1 (3 INTEGRAL NEUTRAL BARS FITTED WITH LINKS)

| All units are white coloured. <br> All units feature a robust galvanized metal base, lid \& door. |  |  |  |  | MAIN INCOMER RATING: |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 4 way enclosures: 63A <br> $8,12,16$ \& 21 way enclosures: 100A |
| The DIN rail embodies a useful alignment and fixing mechanism that allows quick installation. Cable entry points are located on top, bottom, side and rear surfaces. |  |  |  |  | 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 61439-3 |
| DIMENSIONS: | Width |  | Height | Depth |  |
| 4 WAY | 144 | x | 244 | x 116mm |  |
| 8 WAY | 238 | x | 244 | x 116mm |  |
| 12 WAY | 310 | x | 244 | x 116mm |  |
| 16 WAY | 382 | $x$ | 244 | x 116 mm |  |
| 21 WAY | 472 | x | 244 | x 116mm |  |

1 K5704sMET
4 WAY ENCLOSURE
100A SWITCH DISCONNECTOR ACCEPTS A FURTHER 2 ONE MODULE PRODUCTS

## 1 K5708sMET

8 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
ACCEPTS A FURTHER 6 ONE MODULE PRODUCTS

## K5712sMET

1 K5716sMET
16 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
ACCEPTS A FURTHER 14 ONE MODULE PRODUCTS
1 K5721sMET
21 WAY ENCLOSURE
100A SWITCH DISCONNECTOR ACCEPTS A FURTHER 19 ONE MODULE PRODUCTS

12 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
ACCEPTS A FURTHER 10 ONE MODULE PRODUCTS

## MAIN INCOMER RATING:

4 way enclosures: 63A
$8,12,16$ \& 21 way enclosures: 100A
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 61439-3

## Consumer Units

SPLIT-LOAD
SINGLE RCD ARRANGEMENTS
METAL
SURFACE

SPLIT-LOAD<br>DUAL RCD ARRANGEMENTS<br>METAL<br>SURFACE



K5682sMET
12 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
63 A 30 mA RCD
ACCEPTS A FURTHER 8 ONE MODULE PRODUCTS

## K5689sMET

16 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
63 A 30 mA RCD
ACCEPTS A FURTHER 12 ONE MODULE PRODUCTS

1 K5662sMET
12 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
80A 30mA RCD
ACCEPTS A FURTHER 8 ONE MODULE PRODUCTS
1 K5685sMET
16 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
80A 30 mA RCD
ACCEPTS A FURTHER 12 ONE MODULE PRODUCTS

## K5684sMET

21 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
80A 30 mA RCD
ACCEPTS A FURTHER 17 ONE MODULE PRODUCTS

All units are white coloured.
All units are pre-fitted with a switch disconnector and RCD together with all the 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 or RCD not being exceeded. MK recommends to comply with the 17th Edition Amendment 3 to comply with the 1
Wiring Regulations.
DIMENSIONS: Width Height Depth 4 WAY $144 \times 244 \times 116 \mathrm{~mm}$

1 K5666sMET
16 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
$2 \times 63$ A 30 mA RCD's
ACCEPTS A FURTHER 10 ONE MODULE PRODUCTS
1 K5688sMET
16 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
$2 \times 80 \mathrm{~A} 30 \mathrm{~mA}$ RCD'S
ACCEPTS A FURTHER 10 ONE MODULE
PRODUCTS
1 K5686sMET
16 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
$1 \times 63 \mathrm{~A} \& 1 \times 80 \mathrm{~A} 30 \mathrm{~mA}$ RCD's ACCEPTS A FURTHER 10 ONE MODULE PRODUCTS

1 K5683sMET
1
21 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
$2 \times 63$ A 30 mA RCD'S
ACCEPTS A FURTHER 15 ONE MODULE PRODUCTS
1 K5687sMET
21 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
$2 \times 80 \mathrm{~A} 3 \mathrm{~mA}$ RCD'S
ACCEPTS A FURTHER 15 ONE MODULE PRODUCTS
1 K5681sMET
21 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
$1 \times 63 \mathrm{~A} \& 1 \times 80 \mathrm{~A} 30 \mathrm{~mA}$ RCD's
ACCEPTS A FURTHER 15 ONE MODULE PRODUCTS
8 WAY

12 WAY $238 \times 244 \times 116 \mathrm{~mm}$
12 WAY $310 \times 244 \times 116 \mathrm{~mm}$
16 WAY $382 \times 244 \times 116 \mathrm{~mm}$
21 WAY $472 \times 244 \times 116 \mathrm{~mm}$
main incomer rating:
4 way enclosures: 63A
$8,12,16$ \& 21 way enclosures: 100A
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 61439-3

All units are white coloured.
All units are pre-fitted with a switch disconnector and RCD together with all the 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 configuration of RCD protected and non-protected
circuits, subject to the rating. of either the switch
or RCD not being exceeded. MK recommends the or RCD not being exceeded. MK recommends the comply with the 17th Edition Amendment 3 Wiring Regulations.
DIMENSIONS: Width Height Depth
4 WAY $144 \times 244 \times 116 \mathrm{~mm}$

| 8 WAY | 238 | $\times$ | 244 | $\times 116 \mathrm{~mm}$ |
| :--- | :--- | :--- | :--- | :--- |
| 12 WAY | 310 | $\times$ | 244 | $\times 116 \mathrm{~mm}$ |
| 16 WAY | 382 | $\times$ | 244 | $\times 116 \mathrm{~mm}$ |
| 21 WAY | 472 | $\times$ | 244 | $\times 116 \mathrm{~mm}$ | MAIN INCOMER RATING:

4 way enclosures: 63A
$8,12,16 \& 21$ way enclosures: 100A
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 61439-3

Technical Hotline +44 (0)1268563720

FULLY POPULATED ARRANGEMENTS
METAL
SURFACE



K7673sMET


K7665sMET


K7666sMET


K6550sMET
4 WAY ENCLOSURE
63 A 30 mA RCD
2 X MCB'S ( 1 X 6A \& 1 X 16A)

## K7663sMET

12 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
63 A 30 mA RCD
$6 \times$ MCB'S ( $2 \times 6 \mathrm{~A}, 2 \times 16 \mathrm{~A}$ \& $2 \times 32 \mathrm{~A}$ )
2 X RCBO'S ( 1 X 6 A \& $1 \times 40 A$ )
K7664sMET
12 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
$2 \times 63 \mathrm{~A} 3 \mathrm{mARCD}$ 'S
$6 \times$ MCB'S $(2 \times 6 A, 1 \times 16 A, 2 \times 32 A$ \&
$1 \mathrm{X} 40 \mathrm{~A})$

1 K7673sMET
12 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
6 X RCBO'S (2 X 6A, $1 \times 16 \mathrm{~A}, 2 \times 32 \mathrm{~A}$ \&
$11 \mathrm{X} 40 \mathrm{~A})$
ACCEPTS A FURTHER 4 ONE MODULE
PRODUCTS

## K7665sMET

16 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
$2 \times 63 \mathrm{~A} 30 \mathrm{~mA}$ RCD'S
$8 \times$ MCB'S $(2 \times 6 A, 2 \times 16 A, 3 \times 32 A$ \&
$1 \times 40 \mathrm{~A})$
ACCEPTS A FURTHER 2 ONE MODULE
PRODUCTS

## K7666sMET

16 WAY ENCLOSURE
100A SWITCH DISCONNECTOR
$2 \times 63 \mathrm{~A} 30 \mathrm{mARCD}$ 's
$10 \times$ MCB'S ( $3 \times 6 \mathrm{~A}, 2 \times 16 \mathrm{~A}, 4 \times 32 \mathrm{~A}$ \& $1 \times 40 \mathrm{~A})$


4 WAY ENCLOSURE
63A 30mA RCD
1 X MCB ( 1 X 50A)

## K6552sMET

## 8 WAY ENCLOSUR

63A 30mA RCD
16 X MCB'S
(3 X6A, $1 \times 16 \mathrm{~A}$ \& $2 \times 20 \mathrm{~A}$ )

## K7678sMET

1
21 WAY ENCLOSURE
1 X 63A \& 1 X 80A 30mA RCD'S

## 12 X MCB'S

$3 \times 6$, $2 \times 16$, $2 \times 20 \mathrm{~A}$
4 X $32 A$ \& $1 \times 40 A$ )
1 ACCEPTS A FURTHER 3 ONE MODULE PRODUCTS

## All units are white coloured.

All units are pre-fitted with a switch disconnector and RCD together with all the necessary split-load cabling. The flexibility of design allows the RCD to cabing. the tiexionity of design allows the RCD to be positioned to suit the required contiguration of to the rating of either the switch or RCD not being exceeded.

| DIMENSIONS: | Width |  | Height |  | Depth |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 4 WAY | 144 | x | 244 | x | 116 mm |
| 8 WAY | 238 | x | 244 | x | 116 mm |
| 12 WAY | 310 | x | 244 | $\times$ | 116 mm |
| 16 WAY | 382 | x | 244 | $\times$ | 116 mm |
| 21 WA | 472 |  | 244 |  |  |

## MAIN INCOMER RATING:

4 way enclosures: 63A
$8,12,16$ \& 21 way enclosures: 100A
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 61439-3

## Sentry

## Consumer Units

INSULATED
SURFACE

## Switch <br> Disconnectors <br> Double Pole

TWO MODULE


## K5604SMAG

4 WAY ENCLOSURE
ACCEPTS 4 ONE MODULE PRODUCTS
(1 INTEGRAL NEUTRAL BAR)

## K5608SMAG

8 WAY ENCLOSURE
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: K5604sMAG K5608sMAG K5612sMAG K5616sMAG K5616sMAG K5621sMAG

## MAIN INCOMER MAXIMUM RATING

K5604sMAG and K5504sMAG: 63A
All other consumer units: 100A

1 K5612SMAG
12 WAY ENCLOSURE
ACCEPTS 12 ONE MODULE PRODUCTS
(2 INTEGRAL NEUTRAL BARS
1 FITTED WITH LINK)

## K5616SMAG

16 WAY ENCLOSURE
ACCEPTS 16 ONE MODULE PRODUCTS (3 INTEGRAL NEUTRAL BARS
FITTED WITH LINK)
K5621SMAG
21 WAY ENCLOSURE
ACCEPTS 21 ONE MODULE PRODUCTS
(4 INTEGRAL NEUTRAL BARS
FITTED WITH LINKS)
K5687SMAG17ED
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 5500s
100A 230 V
5560s
63 A 230 V
1 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
1 Wiring Regulations
(537.2.2.2 and 537.3.2.2)

DIMENSIONS:
$81 \times 36 \times 76 \mathrm{~mm}$
CABLE CAPACITY:
$50 \mathrm{~mm}^{2}$
BS EN 60947-3:1999

## MCBs <br> Single Pole

TYPE B
ONE MODULE

## MCB

Single Pole

TYPE C
ONE MODULE


## Sentry

## RCBOs <br> With Solid Neutral

Single Pole

TYPE B
ONE MODULE

TYPE C
ONE MODULE

Residential 6kA RCD
Double Pole
Type AC
16 AMP
TWO MODULE


## Sentry

32 AMP
TWO MODULE
40 AMP
TWO MODULE

## 63 AMP <br> TWO MODULE <br> 80 AMP <br> TWO MODULE



1 7860s
63 A 230 V
30mA TRIPPING CURRENT
7560s
63A 230V
100 mA
TRIPPING CURRENT
7660s
63A 230V
300mA TRIPPING CURRENT

80A 230V
30mA TRIPPING CURRENT
1 7580s
80A 230V
100 mA TRIPPING CURRENT

## 7680s

1 80A 230V
300mA TRIPPING CURRENT

## Sentry

## Industrial 10kA RCDs

Double Pole
Type AC

| $\vdots 16$ AMP | 32 AMP | 40 AMP | 63 AMP | 80 AMP | 100 AMP |
| :--- | :--- | :--- | :--- | :--- | :--- |
| TWO MODULE | TWO MODULE | TWO MODULE | TWO MODULE | TWO MODULE | TWO MODULE |



| 6016s <br> 16A 110 V <br> 10 mA TRIPPING <br> CURRENT | 1 | 6032s <br> 32 A 110 V <br> 30mA TRIPPING <br> CURRENT | 1 | 5740 s 40A 230V 30mA TRIPPING CURRENT | 1 | 5760s <br> 63A 230V <br> 30 mA TRIPPING <br> CURRENT | 1 | 6080s <br> 80A 110V <br> 30mA TRIPPING <br> CURRENT | 1 | 7700 s <br> 100 A 230 V 30mA TRIPPING CURRENT |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6416s <br> 16 A 110 V <br> 30mA TRIPPING <br> CURRENT | 1 | 6730s <br> 32 A 230 V <br> 30mA TRIPPING <br> CURRENT | 1 |  |  | 6160s <br> 63A 230V <br> 100mA TRIPPING <br> CURRENT | 1 | 5780s <br> 80A 230 V <br> 30mA TRIPPING <br> CURRENT | 1 | 6600 s <br> 100A 230V <br> 100mA TRIPPING <br> CURRENT |
| 6316s <br> 16A 230 V <br> 10mA TRIPPING <br> CURRENT | 1 |  |  |  |  | 5860s <br> 63A 230V <br> 300mA TRIPPING <br> CURRENT | 1 | 6180s <br> 80A 230 V <br> 100mA TRIPPING <br> CURRENT | 1 | 7800 s <br> 100A 230V <br> 300mA TRIPPING <br> CURRENT |
| 5716s <br> 16A 230V <br> 30mA TRIPPING CURRENT | 1 |  |  |  |  |  |  | 5880s <br> 80A 230V <br> 300 mA TRIPPING <br> CURRENT | 1 | Suitable for installation in <br> Sentry Consumer Units and <br> two or four module enclosures <br> Positive contact status <br> indication in accordance <br> with 17th Edition IET Wiring Regulations (537.2.2.2 and <br> 537.3.2.2) <br> DIMENSIONS: <br> CABLE CAPACITY: <br> $50 \mathrm{~mm}^{2}$ <br> BS EN 61008:1995 |

## Sentry

Industrial 10kA RCDs
Pulsating d.c.
Fault Current Sensitive
Double Pole Type A

TWO MODULE

Industrial 10kA
RCDs
Time Delayed Double Pole

TWO MODULE

Industrial 10kA RCDs
Four Pole
Type AC
25 AMP
FOUR MODULE

40 AMP
FOUR MODULE




6425s


6216s
16A 230V
10mA TRIPPING CURRENT

## 6630s

32A 230V
30mA TRIPPING CURRENT

## 5640s

40A 230V
30mA TRIPPING CURRENT

## 5660s

63A 230V
30mA TRIPPING CURRENT
Suitable for installation in Sentry Consumer Units and two or four module enclosures.
Positive contact status indication in accordance
with 17 th Edition with 17th Edition IET Wiring Regulations (537.2.2.2 and 537.3.2.2)

DIMENSIONS:
$85 \times 36 \times 75 \mathrm{~mm}$.
CABLE CAPACITY:
$50 \mathrm{~mm}^{2}$
BS EN 61008:1995

## 6980s

80A 230V
100mA TRIPPING CURRENT
1 TIME DELAYED

## 6400s

100A 230V
1 100mA TRIPPING CURRENT TIME DELAYED

Suitable for installation in Sentry Consumer
1 Units and Four Module enclosures. When used as a mains incomer these units will provide discrimination with downstream instantaneously operating 10 mA 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 30 mA RCD, but where earth leakage protection is still required for these circuits or where compliance is required to the indirect contact protection requirements of the IET Wiring Regulations.
DIMS: $81 \times 36 \times 76 \mathrm{~mm}$
CABLE CAPACITY: $50 \mathrm{~mm}^{2}$
BS EN 61008:1995
NOT TO BE USED FOR PERSONAL PROTECTION AGAINST ELECTRIC SHOCK

1 Suitable for installation in Sentry four module enclosures and Commando Combi.
enclosures and Commando Combl.
Positive contact status indication in accordance Positive contact status indication in accord
with 17 th Edition IET Wiring Regulations with 17th Edition IET Wiring
$(537.2 .2 .2$ and 537.3.2.2)
DIMENSIONS:
DIMENSIONS:
$85 \times 72 \times 75 \mathrm{~mm}$
CABLE CAPACITY:
$50 \mathrm{~mm}^{2}$
BS EN 61008:1995

## Sentry

Industrial 10kA RCDs Four Pole Type AC

63 AMP
FOUR MODULE

Industrial 10kA RCD:
Pulsating d.c.
Fault Current
Sensitive, Four Pole
Type A


| 6463s <br> 63A 230/400V <br> 30mA TRIPPING CURRENT | 1 | 6640s <br> 40A 230/400V <br> 30mA TRIPPING CURRENT | 6220s 1 <br> 20A  <br> DOUBLE POLE  | $\begin{aligned} & \text { 6420s } \\ & \text { 20A } \\ & \text { FOUR POLE } \end{aligned}$ | $1 \begin{array}{ll}74 \\ & 40 \\ & \text { FO }\end{array}$ | $440 s$ UR POLE | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6363s <br> 63A 230/400V <br> 100mA TRIPPING CURRENT | 1 | Suitable for installation in Sentry two or four module enclosures. <br> Positive contact status indication <br> in accordance with 17th Edition IET <br> Wiring Regulations <br> (537.2.2.2 and 537.3.2.2) <br> DIMENSIONS: <br> CABLE CAPACITY: <br> $50 \mathrm{~mm}^{2}$ <br> BS EN 61008:1995 | 6720s 1 <br> 20A  <br> DOUBLE POLE  | $\begin{aligned} & \text { 7240s } \\ & \text { 40A } \\ & \text { DOUBLE POLE } \end{aligned}$ | $1 \quad 74$ | 463s UR POLE | 1 |
| 6263s <br> 63A 230/400V <br> 300mA TRIPPING CURRENT | 1 |  | 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 <br> A manual override enables the temporary setting of the contactor in either the on or off position in addition to normal automatic operation. <br> When a contactor is mounted alongside an MCB of greater than 10 amp current rating or two contractors are mounted alongside an MCB or side by side, it is necessary to insert a blank module between them (list no.5544s) | $\begin{aligned} & \text { 7263s } \\ & \text { 63A } \\ & \text { DOUBLE POLE } \end{aligned}$ | 1 |  |  |
|  |  |  |  | CONTACTOR RATINGS: |  |  |  |
|  |  |  |  |  | $\begin{array}{\|l} 6220 \mathrm{~s} \\ 6420 \mathrm{~s} \\ 6720 \mathrm{~s} \end{array}$ | $\begin{aligned} & \text { 7240s } \\ & 7440 \mathrm{~s} \end{aligned}$ | $\begin{array}{\|l\|l\|} \hline 7263 \mathrm{~s} \\ 7463 \mathrm{~s} \end{array}$ |
|  |  |  |  | Rated Current th | 20 A | 40A | 63 A |
|  |  |  |  | heating <br> Single phase 230 V Three phase 400V | $\begin{aligned} & 5.4 \mathrm{~kW} \\ & 16 \mathrm{~kW} \end{aligned}$ | $\begin{aligned} & 8.6 \mathrm{~kW} \\ & 26 \mathrm{~kW} \end{aligned}$ | $\begin{aligned} & 13.6 \mathrm{~kW} \\ & 41 \mathrm{~kW} \end{aligned}$ |
|  |  |  |  | MOTORS <br> Single phase 230 V Three phase 400V | $\begin{aligned} & 1.1 \mathrm{~kW} \\ & 4 \mathrm{~kW} \end{aligned}$ | $\begin{aligned} & 2.2 \mathrm{~kW} \\ & 7.5 \mathrm{~kW} \end{aligned}$ | $\begin{array}{\|l\|l\|l\|l\|} \hline 4 \mathrm{~kW} \\ 11 \mathrm{~kW} \end{array}$ |
|  |  |  |  | LIGHTING <br> Incandescent and Halogen lamps Fluorescent Lamps: (Electronic Ballast) | $\begin{aligned} & 2,800 \mathrm{~W} \\ & \text { 2,000W } \end{aligned}$ | $\begin{aligned} & 7,000 \mathrm{~W} \\ & 4,200 \mathrm{~W} \end{aligned}$ | $\begin{array}{\|l} 10,000 \mathrm{~W} \\ 6,300 \mathrm{~W} \end{array}$ |
|  |  |  |  | Voltage rating (coil) | 230 V 5 Hz | 230V 50Hz | 230 V 5 Hz |
|  |  |  |  | CABLE CAPACITY | $6 \mathrm{~mm}{ }^{2}$ rigid | $25 \mathrm{~mm}{ }^{2}$ rigid | $25 \mathrm{~mm} 2{ }^{2}$ rigid |
|  |  |  |  | BS EN61095 |  |  |  |
|  |  |  |  | DIMENSIONS: | 6220S: <br> $84 \times 18 \times 66 \mathrm{~mm}$ | 6420S: <br> $84 \times 36 \times 66 \mathrm{~mm}$ | 6720S: <br> $84 \times 18 \times 66 \mathrm{~mm}$ |
|  |  |  |  |  | 7240S: <br> $84 \times 36 \times 66 \mathrm{~mm}$ | 7263S: <br> $84 \times 36 \times 66 \mathrm{~mm}$ | 7440S: <br> $84 \times 54 \times 66 \mathrm{~mm}$ |
| 284 mkelectric. | o.uk |  |  |  | $\begin{aligned} & \text { } 74 \times 30 \times 0 \\ & 84 \times 54 \times 66 \mathrm{~mm} \\ & \hline \end{aligned}$ | ( including half $m$ | dule blank) |

Sentry

Bell $\quad$ Time Switches<br>Transformer

TWO MODULE

|  | QUNCHRONOUS |
| :--- | :--- |
| THREE MODULE | T |

QUARTZ


ONE MODULE

| DIGITAL | DIGITAL |
| :--- | :--- |
| ONE CHANNEL | ONE CHANNEL |
| TWO MODULE | ONE MODULE |

DIGITAL
TWO CHANNEL


| $\begin{aligned} & \text { 57111s } \\ & \text { RATING AA AT 8V } \\ & \text { PRIMARY } \\ & \text { 220-240V A.C.50HZ } \end{aligned}$ | 5707s <br> 7 DAY DIAL <br> MIN SETTING 3 <br> HOURS <br> 5724s | 5824s <br> 24 HOUR DIAL MIIN SETTING 30 MINUTES | $\begin{aligned} & \text { 5833s } \\ & \text { 24 HOUR DIAL } \\ & \text { MIN SETTING } 30 \\ & \text { MINUTES } \end{aligned}$ | 5731s <br> 24 HOUR/7 DAY <br> DISPLAY <br> MIN SETTING 1 <br> MINUTE | $\begin{array}{ll} \text { 5733s } & 1 \\ \text { 24 HOUR DIAL } & 1 \\ \text { MIN SETTING 1 } \\ \text { MINUTE } \end{array}$ | $\begin{aligned} & 5732 \mathrm{~S} \\ & \text { 243 HOUR/7 DAY } \\ & \text { DISPLAY } \\ & \text { MIN SETING } 1 \\ & \text { MINUTE } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Suitable for installation in <br> Sentry Consumer Units and two or four module <br> enclosures. <br> NOTE: <br> When installed in a <br> consumer unit, ensure <br> that output cables <br> inside the enclosures <br> are suitable for a 230 V <br> environment, either by <br> BS 2848 or using 230V <br> cable. <br> Complete with terminal surface mounting. DIMENSIONS: <br> CABLE CAPACITY: <br> $1 \times 2.5 \mathrm{~mm} 2$ EN $61558-2-8$ | 5724s <br> 24 HOUR DIAL MIN SETTING 30 MINUTES <br> Suitable for DIN rai mounting in Sentry Consumer Units or four voltage rating: CURRENT RATING: Resistive load 16A Inductive load 4 A Tungsten lamps 6 A $(1350 \mathrm{~W})$ (1350W) DIMENSIONS: CABLE CAPACITY: $4 \times 1.5 \mathrm{~mm}^{2}$ | Suitable for DIN rail <br> mounting in Sentry <br> Consumer Units and <br> two or four module enclosures <br> VOLTAGE RATING: <br> $220-240$ Va.c. $50-60 \mathrm{~Hz}$ <br> CURRENT RATING: <br> Resistive load 16A <br> Inductive load 4A <br> (1350W) <br> Fluorescent lamps IMEN <br> DIMENSIONS: <br> CABLE CAPACITY: <br> $2 \times 2.5 \mathrm{~mm}^{2}$ or 4 x $1.5 \mathrm{~mm}^{2}$ <br> EN 60730-2-7:1993 | Suitable for DIN rai <br> mounting in Sentry <br> Consumer Units and <br> two or four enclosures <br> VOLTAGE RATING: <br> 240 V 50 Hz <br> CURRENT RATING: <br> Resistive Ioad 16A <br> Inductive load 4A <br> Tungsten lamps 6A <br> Fluorescent lamps 1350 W <br> DIMENSIONS: <br> $90 \times 18 \times 68 \mathrm{~mm}$ <br> $2 \times 25 \mathrm{~m}^{2}$ OIT <br> $1.5 \mathrm{~mm}^{2}$ <br> EN 60730-2-7:1993 | Pre-programmed with UK time and automatic summer/wint adjustment. <br> programming selections Freely selectable day grouping facility. Manual time adjustment. Power reserve of 3 years Suitable for DIN-ra mounting in Sentry two or four module enclosures. VOLTAGE RATING: $240 V 50 / 60 \mathrm{~Hz}$ CURRENT RATING: Resistive load 16A Inductive load 2.5A Tungsten lamps 5A (1000W) Fluorescent lamps 1000W DIMENSIONS: $85 \times 36 \times 68 \mathrm{~mm}$ CABLE CAPACITY: $2 \times 2.5 \mathrm{~mm}^{2}$ or 4 x $1.5 \mathrm{~mm}^{2}$ | Provides 50 <br> programming selections. Freely selectable day grouping faciity. Manual time adjustment, holiday programme and random generator are standard facilities. <br> Power reserve of 150 hours. <br> Suitable for DIN rail mounting in Sentry Consumer Units and two or four module enclosures VOLTAGE RATING: $240 \mathrm{~V} 50 / 60 \mathrm{~Hz}$ CURRENT RATING: Resistive load 16A Inductive load 2.5A Tungsten lamps $5 A$ (1000W) <br> Fluorescent lamps roown DIMENSIONS: CABLE CAPACITY: $2 \times 2.5 \mathrm{~mm}^{2}$ or 4 x EN 60730-2-7:1993 | Pre-programmed with UK time and automatic adjustment <br> Provides 50 <br> programming selections. reely selectable day grouping facility. Manual veride, time adjustment. Power reserve of 3 years. Suitable for DIN-rail mounting in Sentry two or four module enclosures VOLTAGE RATING: CURRENT RATING Resistive load 16A Inductive load 2.5A Tungsten lamps 5A (1000W) luorescent lamps 1000W DIMENSIONS: CABLE CAPACITY: $2 \times 2.5 \mathrm{~mm}^{2}$ or 4 x $1.5 \mathrm{~mm}^{2}$ <br> EN 60730-2-7:1993 |

$\begin{array}{l:c}\text { Time } & \text { Consumer } \\ \text { Delay } & \text { Unit Cable Kits } \\ \text { Switches } & \\ & \end{array}$
ONE MODULE

5650s
DELAY RANGE
1-7 MINUTES (APPROX)
Suitable for installation in Sentry Consumer Units and two or four module enclosures. Offers time of either tungsten or fluorescent of either tungsten or fuorescent push switches It can also be used to control fans in bathrooms without a window. Delay setting can be over-ridden 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 1300 W
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:
230 V 5 Hz
DIMENSIONS:
$84 \times 18 \times 70 \mathrm{~mm}$
CABLE CAPACITY:
$1 \times 4 \mathrm{~mm}^{2}$ or $2 \times 1.5 \mathrm{~mm}^{2}$
K5563s
SPLIT-LOAD KIT
CONSISTS OF 3 CABLES
(2 NEUTRAL AND 1 LIVE) FOR
USE WHEN ASSEMBLING A
SPLIT LOAD ARRANGEMENT

## 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

## K5568s

17TH EDITION CABLE KIT
FOR SWITCH AND TWIN RCD
ARRANGEMENT

## 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

## Accessories



K6061SMET


KAX26s

5562s
USE WHEN ASSEMBLING A CONSUMER UNIT AS A DISTRIBUTION BOARD
ENABLES DIRECT CONNECTION
OF CABLES TO THE NEUTRAL
BAR. CONSISTS OF A 25MM2
CAPACITY TERMINAL WITH
CLAMP SCREW

## K8041s

10
LOCKING DEVICE FOR USE WHEN LOCKING A SENTRY
MCB, RCBO, RCD OR SWITCH DISCONNECTOR IN EITHER THE

## ON OR OFF POSITION

## K5593s

BARREL LOCK AND KEY KIT
5 SUITABLE FOR SECURING 'K' SERIES SENTRY CONSUMER UNIT LIDS.
ONLY SUITABLE FOR HYBRID AND INSULATED CONSUMER UNITS
$5544 s$
MCB BLANK - GREY DESIGNED
TO FILL UNUSED MODULES IN SENTRY CONSUMER UNITS AND SMALL ENCLOSURES.
DIN-RAIL MOUNTED

## K5545sMAG

COVER MOUNTED BLANK 10 FILLING SPACES IN THE 'K' SERIES SENTRY CONSUMER UNIT COVER, WHERE THERE ARE UNUSED MODULES

## K5511s

BUSBAR 11 MODULE

## K5590s

BUSBAR 20 MODULE

## KAX26S

BUSBAR COVER
SUITABLE FOR INSULATING THE BUSBARS K5511S AND K5590S 20 MODULE. ONLY SUITABLE FOR HYBRID AND INSULATED CONSUMER UNITS

K5597s
CONSUMER UNIT LABELS
ADDITIONAL PRINTED
AND BLANK LABELS, FOR
IDENTIFYING DEVICES AND CIRCUITS ON DUAL \& TRIPLE RCD BOARDS

## K5599s

CONSUMER UNIT LABELS
ADDITIONAL PRINTED AND BLANK LABELS, FOR IDENTIFYING DEVICES AND CIRCUITS ON SINGLE RCD BOARDS
K5804sD1MAG
K5808sD1MAG
K5812sD1MAG
K5816sD1MAG

## K5821sD1MAG

REPLACEMENT PLASTIC

## FRONT COVERS

## K6060SMET

16 WAY METAL CONSUMER UNIT SURFACE MOUNTING KIT K6061SMET


## PRODUCT APPLICATION

ASPECT DOUBLE SOCKET - 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


## SENTRYSOCKET®

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 \& 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.

Technical Hotline
＋44（0）1268 563720

## RCD Protected

Switchsocket Outlets

ALBANY PLUS
FLUSH

METALCLAD PLUS
SURFACE

MASTERSEAL PLUS
IP66
SURFACE

K6300WHI
1 GANG DP，30mA RATED，
TRIPPING CURRENT，
ACIIEE CONTROL CIRCUIT
K6303WHI
1GANG DP，30mA RATED，
TRPPING CRRENT，PASSIVE
CONTROL CIRCUIT
K6231WHI

2 GANG SP，30mA RATED， TRIPPING CURRENT， ACTIVE CONTROL CIRCUIT

## K6233WHI

2 GANG SP，30mA RATED，
TRIPPING CURRENT，
PASSIVE CONTROL CIRCUIT

## MOUNTING BOXES

Flush：886ZIC -35 mm deep
Boxes must have a minimum depth of 30 mm
SURFACE
K2140WHI， 30 mm deep，products have up to 15 mm thick frontplates DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 7288：1990

1 K6301BSS
K6301BRC
K6301PCR
1 K6301SAG
1 GANG DP
30mA RATED TRIPPING
CURRENT
ACTIVE CONTROL CIRCUIT
K6304BRC

## K6304BSS

1 GANG DP
130 mA RATED TRIPPING
CURRENT
PASSIVE CONTROL CIRCUIT

## MOUNTING BOXES

Flush：886ZIC－ 35 mm deep
Boxes must have a minimum depth
of 30 mm
SURFACE
with knockouts：K897ALM without knockouts：K830ALM DIMENSIONS
$86 \times 146 \mathrm{~mm}$
FIXING CENTRES
120.6 mm

BS 7288：1990

1 K6102ALM 1
1 1GANG DP
10mA RATED TRIPPING
CURRENT
1 ACTIVE CONTROL CIRCUIT

## K6302ALM

1 GANG DP
30 mA RATED TRIPPING CURRENT
1 ACTIVE CONTROL CIRCUIT
1 K6305ALM
1 GANG DP
30mA RATED TRIPPING
CURRENT
PASSIVE CONTROL CIRCUIT

## DIMENSIONS

$86 \times 147 \times 54 \mathrm{~mm}$
KNOCKOUTS
$8 \times 20 \mathrm{~mm}$
Three in top side，two in bottom side，
one in each end and one in base
SPARE BOX
K897ALM
BS 7288：1990

1 K6231ALM 1
2 GANG SP
30mA RATED TRIPPING
CURRENT
ACTIVE CONTROL CIRCUIT
1 K6233ALM
2 GANG SP
30mA RATED TRIPPING
CURRENT
PASSIVE CONTROL CIRCUIT
1 DIMENSIONS
$86 \times 147 \times 54 \mathrm{~mm}$
$86 \times 147 \times 54 n$
KNOCKOUTS
KNOCKOUTS
Three in top side，two in bottom side，
one in each end and one in base
SPARE BOX
K897ALM
BS 7288：1990

K56301GRY
K56301WH
K56301BLK
1 GANG DP
30mA RATED TRIPPING
CURRENT ACTIVE CONTROL
CIRCUIT
K56231GRY 1
K56231WHI 1
K56231BLK 1
2 GANG SP
30mA RATED TRIPPING
CURRENT ACTIVE CONTROL
CIRCUIT
K56233GRY 1
K56233WHI
K56233BLK
2 GANG SP
30mA RATED TRIPPING
CURRENT
PASSIVE CONTROL CIRCUIT
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 240 V a．c．
Standard Shutters
dimensions
$157 \times 175 \times 89 \mathrm{~mm}$
BS 7288：1990
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 greater cabling capacity and improved aesthetics.


PRESTIGE 3D
DADO AND SKIRTING

## PRESTIGE 3D DADO AND SKIRTING

Prestige 3D Dado and Skirting offers a comprehensive range of Cat $5 \mathrm{e}, 6$ and 7 compliant full 3 compartment trunking with maximum cable capacity.


PRESTIGE 3D ANTIBAC BLUE

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.

- Improved aesthetics with single piece covers
- All PVC extrusions manufactured from $100 \%$ recycled materials*


PRESTIGE 3D COMPACT

## 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.

- 10 Year guarantee
*Based on 2014 consumption



## PRESTIGE 3D DADO AND SKIRTING

## RANGE INTRODUCTION

Prestige 3D Dado and Skirting offers a comprehensive range of Cat $5 \mathrm{e}, 6$ and 7 compliant compartment trunking with maximum cable capacity.

Prestige 3D meets both the demands for easier and faster installation while maintaining high aesthetics.

[^23]FEATURES \& BENEFITS
CAT 5E, 6 \& 7 COMPLIANT
Flexible Internal and External Corners, moulded Flat Angles and Tees
TOOL FREE CABLE ENTRY
Unique 'open box' mounting frames combined with divider knockouts to provide unhindered tool-free cable entry

## MAXIMISES CAPACITY

Innovative External Corner Data Sweep allows
continuous cable capacity and maintains the minimum trunking depth

PRE-DRILLED TRUNKING BASES
Eliminates the need to measure and drill fixing holes on site thus reducing installation time

## HINGED LID

Supports cables during installation
STYLISH AND ROBUST
Curved outer covers that complement MK Logic Plus accessories

MADE FROM 100\% RECYCLED PVCu*
10 YEAR GUARANTEE

## Prestige 3D Dado and Skirting



DIVIDER KNOCKOUTS
Wiring is also made easy with $50 \times 21 \mathrm{~mm}$ knockouts at 100 mm intervals along compartment dividers, providing instant access to mounting boxes, with no drilling or cutting


BACK BOXES
1,2 and 3 gang 45 mm deep back boxes and 1 and 2 gang 40 mm 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).


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ELECTROMAGNETIC INTERFERENCE
Additional data cable／signal protection is provided by fitting screening divider VP30．

## 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 $5 \mathrm{e}, 6$ 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．

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 $5 \mathrm{e}, 6$ and 7 data cabling compliance，with no loss of capacity and without the need for bulky，protruding
corner covers．

## Prestige 3D Dado and Skirting

Component Selector Chart

Profile Lengths
Fittings

| Main Carrier | Straight Cover | Curved Cover | Square Cover | Flexible |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  | Corner |
| 3 METRES | 3 METRES | 3 metres | 3 METRES |  |
| 6 m | 30 m | 30 m | 30 m | 2 |



| VP180WHI VP180CHA | VP100WHI VP100CHA* | VP110WHI X2 VP110CHA X2 | VP181WHI VP181CHA |
| :---: | :---: | :---: | :---: |



| VP180WHI VP180CHA | VP100WHI VP100CHA* | VP110WH VP110CHA | VP115WHI VP115CHA | VP191WHI VP191CHA |
| :---: | :---: | :---: | :---: | :---: |

* Use Charcoal lid to help achieve compliance to Part M

LNヨWヨコVNVW ヨาをトつ

| Flexible | $\vdots$ End Cap |  |
| :--- | :--- | :--- |
| External |  | $\vdots$ |
| Corner |  |  |
| CONSISTS OF | SUPPLIED AS LEFT |  |
| COVER AND | AND RIGHT－HAND |  |
| DATA SWEEP | 2 | PAIR |


| Joint Cover | $\vdots$ | Flat Angle |
| :--- | :---: | :--- |
|  | $\vdots$ |  |
|  | CONSISTS OF |  |
|  | $\vdots$ | COVER AND |
|  | 5 | CARRIER |

Flat Tee
CONSISTS OF
COVER AND
CARRIER
Adaptor
SUITABLE FOR
20 AND 25MM CONDUIT
AND YT2 AND YT4
1 MINI－TRUNKING 10
？

| VP182WHI VP182CHA | VP183WHI VP183CHA | VP184WHI VP184CHA | VP185WHI VP185CHA | VP187WHI VP187CHA | VP188WHI VP188CHA |
| :---: | :---: | :---: | :---: | :---: | :---: |

## Prestige 3D Dado

## and Skirting

## Accessories

| Socket Spacer | Part M Flange and Socket Spacer | Open Back Boxes | Open Mounting Frames* | MCB/RCD <br> Housing |
| :---: | :---: | :---: | :---: | :---: |



| Cable Retainer | Screw <br>  <br>  <br>  <br> Fixing Kit | Screening Divider |
| :--- | :---: | :--- |
|  |  |  |




## PRESTIGE 3D ANTIBAC BLUE

## RANGE INTRODUCTION


#### Abstract

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.

## HOW TO SPECIFY

A range of antibacterial 3 compartment Dado and Skirting, designed with a curved covers to compliment MK Logic Plus accessories. Products to have Blue fluorescent additive to clearly identify antibacterial properties. Cat 5e, 6 and 7 compliant on all Tees, Angles, Internal and External corners utilising data sweeps that ensure no loss of capacity without the need for bulky protruding covers. Products to have pre-punched bases and divider knockouts at 100 mm intervals to facilitate easy installation without the need for drilling and cutting.

## FEATURES \& BENEFITS

## UNIQUE ANTIBACTERIAL SOLUTION

Offers a complete antibacterial solution. >99.9\% kill rate against MRSA and Klebsiella pneumoniae

UNIQUE PATENTED FLUORESCENCE
Demonstrable under UV light, providing customer confidence

## CAT5E, 6 \& 7 COMPLIENT

Flexible internal and external corners, moulded flat angles and tees

## TOOL FREE CABLE ENTRY

Unique 'open box' mounting frames combined with divider knockouts to provide unhindered tool free cable entry

## MAXIMISES CAPACITY

Innovative external corner data sweep allows continuous cable capacity and maintains the minimum trunking depth

## PRE-DRILLED TRUNKING BASES

Eliminates the need to measure and drill fixing holes on site thus reducing installation time

## TAMPER RESISTANT

Screw fixing Kit available for installations where higher security is required e.g. public buildings, hospitals, schools

## PART M COMPLIANCE

Achievable utilising MK Logic Plus Graphite accessories or Part M Flange or Socket Spacer

10 YEAR GUARANTEE Antibac Blue

## 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 $£ 1$ billion.
- 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.

## Prestige 3D Antibac Blue

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 <br> START OF TEST | \％ORGANISMS <br> AFTER 24 HOUR <br> PERIOD | \％ORGANISMS AT <br> START OF TEST | \％ORGANISMS AFTER <br> 24 HOUR PERIOD |  |  |  |  |
| MRSA | 100 | $<0.1$ | 100 | 0.1 |  |  |  |  |
| KLEBSIELLA <br> PNEUMONIAE | 100 | $<0.1$ | 100 | 1.1 |  |  |  |  |



LOGIC PLUS SWITCHSOCKET OUTLET


[^24]
## Prestige 3D Antibac Blue



DIVIDER KNOCKOUTS
Wiring is also made easy with $50 \times 21 \mathrm{~mm}$ knockouts at 100 mm intervals along compartment dividers, providing instant access to mounting boxes, with no drilling or cutting.

BACK BOXES
1,2 and 3 gang 45 mm deep back boxes and 1 and 2 gang 40 mm frames ensure Cat $5 \mathrm{e}, 6$ 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).


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.

## Prestige 3D Antibac Blue

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 $5 \mathrm{e}, 6$ 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．


UNIQUE FLUORESCENCE
For complete customer confidence，Prestige 3D Antibac Blue features a patented fluorescent additive which glows bright blue under a UV light， unlike standard PVCu which glows dull purple．


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
PRESTIGE 3D
PRESTIGE 3D ANTIBAC BLUE

All fittings are moulded with styling lines for aesthetic continuity．

 rung．


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


CHOICE OF TWO PROFILES
Available in Dado and Skirting profiles
to suit most installations．

## Prestige 3D Antibac Blue

Profile Lengths

| Component | Main | Straight | $\vdots$ Curved | $\vdots$ Square |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Selector | Carrier* | Cover | Cover | Cover |  |
| Chart |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  | 3 METRES | 3 METRES | 3 METRES | 3 METRES |  |
|  | 6 m | 6 m | 30 m | 30 m |  |

## Fittings



SKIRTING
170 X 57MM

[^25]
# Prestige 3D Antibac Blue 

## Accessories

| Joint | Flat | Flat Tee |  |
| :--- | :--- | :--- | :--- |
| Cover | Angle |  |  |
|  |  |  |  |
|  |  | CONSISTS OF | CONSISTS OF |
|  | COVER AND | COEVR AND |  |
|  | CARRIER | CARRIER |  |
|  |  |  |  |


| Flange | Open Back |
| :--- | :--- | :--- |
| and Socket | Boxes |
| Spacer |  |
|  |  |
|  |  |

## Open Mounting Frames＊



| VXAB40CHA＊20 | VP121WHI | 25 | VP131WHI |
| :--- | :--- | :--- | :--- | :--- |
| PART M FLANGE FITTED | 1 GANG 45MM |  | 1 GANG 40MM OPEN |



VPAB197WHI
FLAT ANGLE DOWN
VPAB196WHI


FLAT ANGLE UP VPAB195WHI

VPAB194WHI


VP105WHI
CABLE RETAINER

VP30＊＊
1．5M SCREENING DIVIDER
VX31
300MM SCREEN
CONNECTING CABLE


## CASE STUDY

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.

BENEFITS
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.


## PRESTIGE 3D COMPACT

## 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.

## HOW TO SPECIFY

A range of compact 3 compartment Dado and Skirting manufactured from recycled PVCu, designed with a curved covers to compliment MK Logic Plus accessories. Cat 5e, 6 and 7 compliant on all Tees, Angles, Internal and External corners utilising data sweeps that ensure no loss of capacity without the need for bulky protruding covers. Products to have pre-punched bases and divider knockouts at 100 mm intervals to facilitate easy installation without the need for drilling and cutting.

## FEATURES \& BENEFITS

CAT5E, 6 \& 7 COMPLIENT
Flexible Internal and External Corners, moulded Flat Angles and Tees

TOOL FREE CABLE ENTRY
Unique 'open box' mounting frames combined with divider knockouts to provide unhindered tool-free cable entry

## MAXIMISES CAPACITY

Innovative External Corner Data Sweep allows continuous cable capacity and maintains the minimum trunking depth

PRE-DRILLED TRUNKING BASES
Eliminates the need to measure and drill fixing holes on site thus reducing installation time

HINGED LID
Mounting frames for LJU6/Euro data outlets to maximise use of space

## STYLISH AND ROBUST

Curved outer covers that complement MK Logic Plus accessories

MADE FROM 100\% RECYCLED PVCu*
10 YEAR GUARANTEE

## Prestige 3D Compact

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
$50 \mathrm{~mm} \times 21 \mathrm{~mm}$ knockouts at 100 mm 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.



NTERNAL 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 $5 \mathrm{e}, 6$ and 7 data cabling requirements.


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 $5 \mathrm{e}, 6$ 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 $5 \mathrm{e}, 6$ 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 VCT30．

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 $5 \mathrm{e}, 6$ and 7 data cabling compliance，with no loss of capacity and without the need for bulky，protruding corner covers．

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．

## Prestige 3D Compact

Profile Lengths



|  |  |  |  |
| :---: | :---: | :---: | :---: |
| VCT140WHI |  |  |  |
|  |  | vCT100wh | vCT110WHI X2 |
|  |  |  |  |


|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| VCT140WHI | VCT160WHI | VCT100WHI | vCT110WHI | vCT120WHI |
|  |  |  |  |  |
|  |  |  |  |  |

## Prestige 3D Compact

Fittings



VCT161WHI
VCT162WHI
VCT163WHI
(2X L/R PAIRS)
VCT164WHI
VCT165WHI
VCT166WHI

## Prestige 3D Compact

## Accessories

## Socket Spacer

## Part M Flange and Socket <br> Spacer

## Open Mounting Frames

## Screening Divider



## Adaptors

SUITABLE FOR 20 AND 25MM CONDUIT AND YT2 AND YT4 MINI-TRUNKING. CONSISTS OF COVER AND CENTRE COMPARTMENT CABLE BRIDGE

## Cable

Retainer

## Screw Fixing

Kit

MCB/RCD Housing

VCT148WHI
FOR USE WITH COVER VCT110WHI

10 VCT105WHI
CABLE RETAINER

VTS1000
SCREW FIXING KIT

20 VCT35WHI
MCB/RCD HOUSING WITH COVER (ACCESSORY NOT SUPPLIED)


## PRESTIGE 2COM

## RANGE INTRODUCTION


#### Abstract

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.


## HOW TO SPECIFY

A range of 60 mm deep 2 compartment Dado trunking manufactured from recycled PVCu, designed with covers to maximise data channel cabling. Cat 5e, 6 and 7 compliant on all Tees, Angles, Internal and External corners to avoid deformation. Products to have pre-drilled trunking bases at 100 mm intervals to facilitate easy installation without the need for drilling and cutting

## FEATURES \& BENEFITS

CAT 5e, 6 \& 7 COMPLIANT
50 mm radius bends on all corners so cables lie in trunking correctly to avoid any deformation which may result in signal distortion and loss

## 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 LJU6/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 100\% RECYCLED MATERIAL*

[^26]35 mm boxes for larger cabling size requirements，deep
accessories，data and power．

Accessories can be mounted in either or both compartments．
＂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．

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 50 mm Radius．

Screw fix option
Unobtrusive screw fixings to maximise security against tampering．

## Prestige ？com



CABLE DIVIDER
Sub－divides internal compartments．

## 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 50 mm 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 50 mm radius inserts to ensure continued data cable protection．

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．

CROSSOVER BRIDGE
Permits cabling to cross from one cable compartment to another within
the assembly，
whilst maintaining
segregation．

| Main | Straight |
| :--- | :--- |
| Carrier | Cover |
|  |  |
| DIMENSIONS |  |
| $210 \times 60 \mathrm{MM}$ |  |

## Coupler

 Assembly
## Lid Joint

Cover

VTS2001WHI 3 METRE LENGTHS VTS2001D1WHI 2 METRE LENGTHS for (non uk) markets

Not supplied with lid (cover) 3 METRE LENGTHS VTS5D1WHI 2 METRE LENGTHS FOR (NON UK) MARKETS

Note each main carrier requires two straight covers

2 VTS2010WHI
USED TO JOIN 2 COVER
PIECES AT REMOTE POINT FROM COUPLER

| Cable | Crossover | Mini Trunking | Socket Spacer |
| :--- | :--- | :--- | :--- |
| $:$ | Retainer | Bridge | Adaptor |
|  |  |  |  |
|  |  |  |  |



Internal Corner Assembly

CONSISTS OF COVER AND CARRIER

External Corner Assembly

CONSISTS OF COVER，
CARRIER AND RADIUS INSERT

Radius Insert


EXTERNAL
CORNER
End Cap
Assembly

Cable Divider

VTS2004WHI INCLUDES ADDITIONAL SCREW FIXING FOR EXTRA SECURITY 50MM RADIUS BEND VTS2018WHI SPARE INTERNAL SCREW COVERS FOR CORNER PIECES

1 VTS2003WHI
INCLUDES ADDITIONAL SCREW FIXING FOR EXTRA SECURITY 50MM RADIUS BEND
10 VTS2019WHI
SPARE EXTERNAL
SCREW COVERS FOR CORNER PIECES

1 VTS2009WHI
50MM RADIUS BEND INSERT FOR DATA CABLES EXTERNAL CORNER

1 VTS2006WHI
END CAP ASSEMBLY

2 VTS50WHI
30m
CABLE DIVIDER 3 METRE LENGTHS


## Prestige 2com

Accessory Boxes



VTS6025WH 25 VTS7025WH 10 VTS8035 10
1 GANG 25MM DEEP VTS6035WHI

1 GANG 35MM DEEP

2 GANG 25MM DEEP VTS7035WHI 10 2 GANG 35MM DEEP GANG 35MM DEEP K3716 100 BOX EARTH TERMINAL VTS8028WHI 5 3 GANG 28MM DEEP

VTS4545WHI
10
FLAT ADAPTOR PLATE
45MM X 45MM APERTURE
10
RAISED ADAPTOR PLATE
(NON UK)
45MM X 45MM APERTURE


## PRODUCT APPLICATION

ECHO 2 CHANNEL TRANSMITTER - ALBANY PLUS BRUSHED CHROME

Echo ${ }^{\text {TM }}$ is an innovative range of entirely wireless, batteryless and self-powered switches and controls. Being wireless offers fantastic benefits, including instant installation and location flexibility. This reduces disruption and cost as there is no need to channel walls and run switching cables.


## Prestige Poles

 and Posts
## 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 $100 \%$ recycled material*

Prestige Power<br>Poles

PPA100WHI 1
POWER POLE ASSEMBLY WITH WHITE PAINTED ALUMINIUM BODY, WHITE PVC-U COVER AND 6 OUTLET BOXES

PPA100ALM 1 POWER POLE ASSEMBLY WITH ANODISED ALUMINIUM BODY,
WHITE AND CHARCOAL
PVC-U COVERS
AND 6 OUTLET BOXES


## 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 $100 \%$ recycled material*
* Based on 2014 consumption.


## Prestige Power <br> Posts

PPT650WHI 1

PPT650ALM 1 POWER POST ASSEMBLY WITH WHITE PAINTED ALUMINIUM BODY, WHITE PVC-U COVER AND 5 OUTLET BOXES

POWER POST ASSEMBLY
WITH ANODISED
ALUMINIUM BODY,
WHITE AND CHARCOAL
PVC-U COVERS
AND 5 OUTLET BOXES


# Prestige 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．



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．
PPC50WHI
END LOAD PLATE
PPCMHWHI1



AVAILABLE IN A CHOICE OF TWO COLOURS，WHITE OR CHARCOAL ACCEPTS UP TO 4 X ONE MODULE SINGLE MODULE RCBO＇S，UP TO A MAXIMUM COMBINED RATING OF 63A （SEE PAGES 279－280）．
THE HOUSING UNIT INCLUDES FIXING COVER MOULDING


## CASE STUDY

## 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



## POWERLINK PLUS

## RANGE INTRODUCTION

## 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.

## HOW TO SPECIFY

A busbar trunking system manufactured from recycled PVCu designed with plug in flush fitting accessories. Pre-fabricated corners and end caps supplied with carriers and busbar shields to provide maximum flexibility, systems integrity and protection. Pre-drilled trunking bases aid easy assembly and installation.

## FEATURES \& BENEFITS

## 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

## MADE FROM 100\% PVCu

Powerlink Plus is both robust and easily workable on site
ALL EXTRUSIONS MANUFACTURED FROM 100\% RECYCLED
MATERIAL*
*Based on 2014 consumption


ACCESSORY SPACER

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.

With Powerlink Plus the choice is yours - hard wiring or an integral 63 A busbar with power accessories that simply plug into place.


EXTERNAL CORNER
Supplied with carrier,
busbar shield and
outer clip-on cover.

## MCB/RCD <br> 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 preassembled angles, crossovers or special corners. Supplied with busbar shield.


## Powerlink Plus

## Component Selector Chart

Standard length: 3 metres
Supplied with covers
Trunking size: 170 mm (Height) $\times 50 \mathrm{~mm}$ (Depth)
With extension fitted:
212 mm (Height) $\times 50 \mathrm{~mm}$ (Depth)
Material PVCu
Colour: White


Dado
Trunking
With
Busbars


Dado
Trunking Without Busbars


Skirting And Dado Trunking With Busbars

## Profile Lengths

| Trunking | Coupler |
| :--- | :--- |
|  |  |
| WITH AND WITHOUT |  |
| 63 AMP BUSBARS | WITH BUSBAR SHIELD |



| K1963WHI | 3 m | K1908WHI |
| :--- | :--- | :--- |
| K1903WHI |  | 5 |
| 3 m | K1908WHI | 5 |
| K1962WHI |  |  |
| 3 m | K1945WHI | 5 |

## Powerlink Plus

## Fittings

Internal Corner

WITH BUSBAR SHIELD
WITH BUSBAR SHIELD
?

K1904WHI K1904CHA

K1904WHI

K1944WHI

| $\begin{aligned} & \text { K1904WHI } \\ & \text { K1904CHA } \end{aligned}$ | $\begin{aligned} & 1 \\ & 1 \end{aligned}$ | K1905WHI* | 1 | K1906WHI* | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| K1904WHI | 1 | K1905WHI | 1 | K1906WHI | 1 |
| K1944WHI | 1 | K1911WHI* | 1 | K1912WHI* | 1 |

## Powerlink Plus

Flat Angle
Flat Tee


Dado
Trunking
With
Busbars


Dado
Trunking
Without
Busbars


Skirting And Dado
Trunking
With Busbars

*Requires $1 \times 1919$ Cable Link Assembly

## Spares

| Cable Retainers | Cable Entry Box |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

FLUSH

Mini Trunking
Adaptors

## Covers and Cable Divider

3 METRE LENGTHS


## Powerlink Plus

| Socket Outlets | Switchso Outlets |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 'PLUG-ON' | 'PLUG-ON' | 'PLUG-ON' | 'WIRE-IN' | 'WIRE-IN' |
| 13 AMP | 13 AMP | 13 AMP | 13 AMP | 13 AMP |
| STANDARD | STANDARD | NON STANDARD | STANDARD | NON STANDARD |

1956WHI
STANDARD
SOCKET OUTLET

[^27]5 1950WHI
STANDARD SWITCHSOCKET
WITH NEON
1951WHI
STANDARD
SWITCHSOCKET
For plugging onto the busbars.
Supplied complete with one accessory
spacer and fixing screws.

5
1953WHI
NON STANDARD
SWITCHSOCKET
5
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.

5 1952WHI
STANDARD
SWITCHSOCKET

[^28]5 1955WHI
NON STANDARD
SIDE WIRED
SWITCHSOCKET
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 wit accessory spacer and
fixing screws.

Connection
Units

DP SWITCHED
＇PLUG－ON＇
32 AMP
＇PLUG－ON＇
DP Switches

Two Way Switch
20 AMP SP

Telephone
Socket Outlets

1970WHI
WITH NEON AND
13A FUSE
1971WHI
WITH NEON
FLEX OUTLET AND 13A FUSE

For feeding from the busbars and
controlling remote equipment．
Supplied complete with
fixing screws．

5 1943WHI 5
WITH NEON
5 For plugging onto the busbars．
Can be used either as a busbar switch disconnector or for feeding and disconnector or for feeding and
controlling remote equipment． The switch can accommodate up to $10 \mathrm{~mm}^{2}$ cables．Supplied complete with fixing screws．

5 1942WHI
Can be used for lighting and remote
Can be used for lighting and remote equipment．It is not connected to the Supplied complete with fixing screws．

5 1995WHI 5
HANDSET POLARISED
SOCKET OUTLET
1999WHI
5
RJ11
TELEPHONE／DATA SOCKET
1980 Supplied complete with enclosure
box together with fixing screws，
connecting tool，cable tie and fixing
screws for mounting on to the dado
runking．A full list of instructions
wery pack Approved for use with
every pack．Approved for use with accordance with the conditions in th instructions for use．
1995 Supplied complete with enclosure
box together with fixing screws，
connecting tool，cable tie and fixing
crews for mounting on to the dado
for use with telecom
ranch systoms in unicatio
with the conditions in the instructions
for use．

| Data Outlets | ELV |
| :--- | :--- | :--- |
|  | Blank Plates |
|  |  |

RJ45
Flush
Accessory
Mounting
Frames

## Flush <br> Accessory Frames

Trunking Accessories and Plug in Cable Terminations (3 Pole)


1978WHI
RJ45 CATEGORY 5E
COMPUTER/DATA SOCKET

## 1976WHI

RJ45/EURO OUTLET
TWO MODULE UNSERVICED

## 1947WHI

RJ45/LJU6C OUTLET
TWO MODULE, UNSERVICED
1978 Data socket to
Category 5 e.
K1976 Euro $50 \times 50 \mathrm{~mm}$
(accommodates 2 outlets).
K1947 Cut out dimensions LJU6C $22 \times 37 \mathrm{~mm}$
for each outlet.

1986WHI
ELV BOX AND COVER
5 Can be punched for use with any ELV accessory that can be mounted over the busbars.
Supplied complete with enclosure box Supplied complete with enclosure box to the trunking.

5
1928GLV
2 GANG ACCESSORY
MOUNTING KIT
WITH FRAME AND
PATTRESS

## 1946WHI

2 GANG ACCESSORY
MOUNTING KIT
WITH FRAME AND
PATTRESS
1998
1 GANG MOUNTING
FRAME \& BOX FOR ELV
ACCESSORIES

## 12024SLT9

MOUNTING FRAME FOR
2 GANG ACCESSORY
1928GLV 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.

K1925WHI
PLUG IN BUSBAR COUPLER
1919
CABLE LINK ASSEMBLY
1923WHI
10MM² CABLE TERMINATION
1924WHI
25MM² CABLE TERMINATION
(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 125 mm . 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.

Trunking
Components
and Spares



## PINNACLE

## 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 ${ }^{\text {™ }}$ 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.

## HOW TO SPECIFY

A bench top trunking system manufactured from recycled PVCu designed to compliment MK Logic Plus accessories. Pre-fabricated corners to provide maximum flexibility, systems integrity and protection. Two separate compartments to provide cable segregation with the option to sub-divide the main compartment by means of a clip-in cable divider. Coupler sets provide fixing between two units while maintaining IP4X classification.

## FEATURES \& BENEFITS

UNIQUE CURVED APPEARANCE
Total physical and visual integration with the MK Logic Plus ${ }^{\text {TM }}$ 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 100\% RECYCLED MATERIAL*

[^29]PRE-FABRICATED CORNERS
Pre-fabricated internal and external corners are available for maximum flexibility, system integrity and protection.

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.

## Pinnacle

Trunking

End Caps
Coupler Set＊


## PTS2WHI

INGLE TRU
SUPPLIED WITH LIDS
90MM HIGH X 105MM WIDE
PTS3WHI
SUPPLIED WITH LID
90MM HIGH X 105MM WIDE

PTS2WHI 4m


## PTD2WHI

2m
3m
PECDWHI
PAIR
5 PCWH
CONSISTS OF COUPLER
AND Joint cover
＊COUPLER SETS
To maintain Heavy Duty
and IP4X classification
both coupler and joint cover must be used
Internal

Corner

FABRICATED
-

External Corner

Cable Divider
Cable Retainer

2 METRE LENGTHS

PICLWHI

## Bench Units

ONE GANG
AND TWO GANG


PBUS1WHI


PBUS2WHI


TWO GANG
PLUS ONE GANG


THREE GANG


PBUS1WHI
1 GANG SINGLE BENCH UNIT WITH 1 GANG ACCESSORY BOX (VTS6035) PBUD1WHI

Supplied complete with accessory boxes, end caps and pre-cut lids.

DIMENSIONS
PBUS1:
105 mm high
90 mm deep
130 mm wide PBUD1:
105 mm high
185 mm deep
130 mm wide

## PBUS2WHI

2 GANG
SINGLE BENCH UNIT
WITH
2 GANG ACCESSORY BOX
(VTS7025)
PBUD2WHI
Supplied complete with accessory boxes, end caps and pe-cut lids.

## DIMENSIONS

PBUS2:
105 mm high
90 mm deep
90mm wide
PBUD2:
105mm high
185 mm deep
190 mm wide

PBUD21WHI
$2+1$ GANG
DOUBLE BENCH UNIT WITH 2 X 2 GANG
(VTS7025)
AND $2 \times 1$ GANG
(VTS6035)
ACCESSORY BOXES
Supplied complete with accessory boxes, end caps and pre-cut lids.

DIMENSIONS
PBUD21:
105 mm high
185 mm deep
290 mm wide

## Accessory Boxes



VTS6025WHI
1 GANG OUTLET BOX
25MM DEEP
HORIZONTAL AND
VERTICAL MOUNTING
VTS6035WHI
1 GANG OUTLET BOX
35MM DEEP
HORIZONTAL AND
VERTICAL MOUNTING
VTS7025WHI
2 GANG OUTLET BOX
25MM DEEP
VTS8035
3 GANG OUTLET BOX 35MM DEEP

25 VTS7035WHI 10
2 GANG OUTLET BOX
35MM DEEP
VTS8028WHI
3 GANG OUTLET BOX
28MM DEEP

## VTS25SWHI

10
SOCKET SPACER TO ESTABLISH
THE MIIIMUM DISTANCE
BETWEEN ACCESSORIES
K3716
BOX EARTH TERMINAL

## 1 GANG

 ACCESSORY MOUNTING FRAME
## VTS7000WHI <br> 2 GANG

ACCESSORY MOUNTING FRAME

| PSC2WH <br> STRAIGHT COVER | 20 m | PCCD2WHI <br> CURVED COVER | 10m |
| :---: | :---: | :---: | :---: |
| PCCS2WHI 20 m |  | FOR DOUBLE |  |
| CURVED COVER FOR SINGLE |  | TRUNKING (2M) |  |
|  |  |  |  |

VTSKMH1WHI
MCB/RCD HOUSING
WITH COVER
(ACCESSORIES NOT
PROVIDED)
Mounts directly to trunking
to accept up to $2 \times$ one
module products from the
Sentry range of MCBs and
RCDs (excluding one module RCBOs).


## PREMIER

## 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 5 e and 6 data cable installation, and the MK Aspect and Logic Plus accessory ranges complement the style and finish of Premier Trunking.

[^30]
## FEATURES \& 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 100\% RECYCLED MATERIAL*


Material:
Pvcu Colour:
White

Trunking


| $50 \times 50 M M$ | NCT5050WHI | 12 m | NCT5050D1WHI $^{*}$ | 12 m | NCT50LIDWHI | 12 m | NCI5050WHI | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $75 \times 50 \mathrm{MM}$ | NCT7550WHI | 12 m | NCT7550D1 $^{*}$ | 12 m | NCT50LIDWHI | 12 m | NCI7550WHI | 5 |
| $75 \times 75 M M$ | NCT7575WHI | 12 m | NCT7575D1 $^{*}$ | 8 m | NCT75LIDWHI | 12 m | NCI7575WHI | 5 |
| $100 \times 40 \mathrm{MM}$ | NCT1040WHI | 12 m | NCT1040D1 $^{*}$ | 8 m | NCT100LIDWHI | 12 m | NCI1040WHI | 5 |
| $100 \times 50 \mathrm{MM}$ | NCT1050WH | 12 m | NCT1050D1 $^{*}$ | 8 m | NCT100LIDWHI | 12 m | NCI1050WHI | 5 |
| $100 \times 100 M M$ | NCT1010WHI | 12 m | NCT1010D1 $^{*}$ | 8 m | NCT100LIDWHI | 12 m | NCI1010WHI | 5 |

* 2 metre lengths are available
for NON UK markets

| External Corner |  |
| :--- | :--- |
|  |  |
|  | WITH |
| MOULA CORNER |  |


| Internal |  |
| :--- | :--- |
| Corner |  |
|  | WITH |
|  | DATA CORNER <br> MOULDED |


| $50 \times 50 \mathrm{MM}$ | NAE5050WHI | 2 |  | NAI5050WHI | 2 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $75 \times 50 \mathrm{MM}$ | NAE7550WHI | 2 |  | NAI7550WHI | 2 |  |  |
| $75 \times 75 \mathrm{MM}$ | NAE7575WHI | 2 |  | NAI7575WHI | 2 |  |  |
| $100 \times 40 \mathrm{MM}$ | NAE1040WHI | 2 |  | NAl1040WHI | 2 |  |  |
| $100 \times 50 \mathrm{MM}$ | NAE1050WHI | 2 | NDAE1050WHI | 2 | NAl1050WHI | 2 | NDAI1050WHI |
| $100 \times 100 \mathrm{MM}$ | NAE1010WHI* $^{*}$ | 1 |  | NAl1010WHI* | 1 |  |  |


| Joint | Cable | Cable | End Cap |
| :--- | :---: | :---: | :---: |
| Cover | Retainer | Divider |  |
|  |  |  | UNIVERSAL |
|  |  |  | 3 METRE |
| MOULDED | MOULDED | LENGTHS | EITHER END |
|  | MOULDED |  |  |


| NJC5050WHI | 10 | NBP50WHI | 10 | NVS50WHI | 36 m | NEP5050WHI | 5 |
| :--- | ---: | :--- | :--- | :--- | :--- | :--- | :--- |
| NJC7550WHI | 10 | NBP75WHI | 10 | NVS50WHI | 36 m | NEP7550WHI | 5 |
| NJC7575WHI | 10 | NBP75WHI | 10 | NVS75WHI | 36 m | NEP7575WHI | 5 |
| NJC1040WHI | 5 | NBP100WHI | 10 | NVS40WHI | 36 m | NEP1040WHI | 5 |
| NJC1050WHI | 5 | NBP100WHI | 10 | NVS50WHI | 36 m | NEP1050WHI | 5 |
| NJC1010WHI | 5 | NBP100WHI | 10 | NVS100WHI | 36 m | NEP1010WHI | 5 |



| NAF5050WHI | 2 |  | NTF5050WHI | 2 |  | NMD5050WHI |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NAF7550WHI | 2 |  | NTF7550WHI | 2 |  | 2 |
| NAF7575WHI | 2 |  | NTF7575WHI | 2 |  |  |
| NAF1040WHI | 2 |  |  | NTF1040WHI | 2 |  |
| NAF1050WHI | 2 | NDAF1050WHI | 2 | NTF1050WHI | 2 | NDTF1050WHI |
| NAF1010WHI* $^{*}$ | 1 |  |  | NTF1010WHI $^{*}$ | 1 |  |

* Fabricated

Data corner provides 32 mm
with Cat 5 e and 6 data cables

| Flat | Flange | Wall Plates |
| :--- | :--- | :--- |
| Cross | Coupler |  |
|  |  | FOR InTERNAL |
|  |  | CORNERS |
|  |  | MOULDED |


| $50 \times 50 \mathrm{MM}$ | NCU5050WHI | 1 | NFC5050WHI | 1 | NWP5050WHI | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $75 \times 50 \mathrm{MM}$ | NCU7550WHI | 1 | NFC7550WHI | 1 | NWP7550WHI | 5 |
| $75 \times 75 \mathrm{MM}$ | NCU7575WHI | 1 | NFC7575WHI | 1 | NWP7575WHI | 5 |
| $100 \times 40 \mathrm{MM}$ | NCU1040WHI | 1 | NFC1040WHI | 1 | NWP1040WHI | 5 |
| $100 \times 50 \mathrm{MM}$ | NCU1050WHI | 1 | NFC1050WHI | 1 | NWP1050WHI | 5 |
| $100 \times 100 \mathrm{MM}$ | NCU1010WHI | 1 | NFC1010WHI | 1 |  |  |


| Mounting | Accessory |
| :--- | :--- |
| Frames | Spacer |

## VTS6000WHI

1 GANG
ACCESSORY MOUNTING FRAME VTS7000WHI
2 GANG
ACCESSORY MOUNTING FRAME

MCB/RCD
Housings

## Accessory Boxes

ONE GANG TWO GANG
25 \& 35MM DEEP FOR 100MM WIDE TRUNKING

25 \& 35MM DEEP FOR 100MM WIDE TRUNKING

THREE GANG
28MM \& 35MM DEEP FOR
100MM WIDE TRUNKING


1 VTS6025WHI VTS6035WHI

35 mm deep boxes are only
for use in $100 \times 50 \mathrm{~mm}$
and $100 \times 100 \mathrm{~mm}$ trunking


VTS7025WHI

## VTS7035WHI

35 mm deep boxes are only
for use in $100 \times 50 \mathrm{~mm}$
and $100 \times 100 \mathrm{~mm}$ trunking

10 VTS8028WHI 5
10 VTS8035 5
K3716
BOX EARTH TERMINAL

Norwich

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 $100 \%$ recycled material＊

## Profile Lengths

## Single Compartment Trunking

$\begin{array}{ll}3 \text { METRE } & 3 \text { METRE } \\ \text { LENGTHS } & \text { LENGTHS }\end{array}$


NBT3WHI 12m
100 X 25MM
SINGLE COMPARTMENT


## Two Compartment Trunking

## 3 METRE <br> LENGTHS <br> 3 METRE <br> LENGTHS



NBT3TCWH 12m
100 X 25MM
TWO COMPARTMENT


NBT4TCWHI 12m
100 X 40MM
TWO COMPARTMENT

## HOW TO SPECIFY

A one or two compartment trunking system manufactured from recycled PVCu and designed to compliment MK Logic Plus accessories．Durable and impact resistant to Heavy Classification BS 4678 Part 4．Clip on covers and accessories aid easy
assembly and installation whilst a wide range of accessories
provide maximum versatility of installation．


Fittings

| Flat Tees | End Caps |
| :--- | :--- |
|  |  |
|  |  |
| 3 METRE | $\vdots$ |
| LENGTHS |  |



| 1 COM <br> 100 X 25MM | NTF3WHI | 1 | NEP3WHI | 10 |
| :--- | :--- | :--- | :--- | ---: |
| 1 COM <br> $100 \times 40 M M$ | NTF4WHI | 1 | NEP4WHI | 10 |
| 2 COM <br> 100 X 25MM | NTF3TCWHI | 1 | NEP3WHI | 10 |
| 2 COM <br> $100 \times 40 M M$ | NTF4TCWHI | 1 | NEP4WHI | 10 |

[^31]
## Fittings

| Flat Angle | Flat Angle |  | Internal Corner | External Corner |
| :---: | :---: | :---: | :---: | :---: |
|  | SMALL COMPARTMENT TO OUTSIDE | SMALL <br> COMPARTMENT <br> TO INSIDE |  |  |




| $\begin{aligned} & \hline 1 \text { COM } \\ & 100 \times 25 \mathrm{MM} \end{aligned}$ | NCI3WHI | 10 | NS01WHI | 10 | NS02WHI | 5 | NS01TWHI | 5 | NBT100LIDWHI 12m |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 1 \mathrm{COM} \\ & 100 \mathrm{X} 40 \mathrm{MM} \end{aligned}$ | NCI4WHI | 10 | NS01WHI | 10 | NS02WHI | 5 | NS01TWHI | 5 | NBT100LIDWHI 12m |
| $\begin{aligned} & 2 \text { COM } \\ & 100 \text { X 25MM } \end{aligned}$ | NCI3WHI | 10 | NS01WHI | 10 | NS02WHI | 5 | NS01TWHI | 5 | NBT100LIDWHI 12m |
| $\begin{aligned} & 2 \mathrm{COM} \\ & 100 \mathrm{X} 40 \mathrm{MM} \end{aligned}$ | NCI4WHI | 10 | NS01WHI | 10 | NS02WHI | 5 | NS01TWHI | 5 | NBT100LIDWHI 12m |

## Egatube ${ }^{\circledR}$ Industrial



## Trunking

3 METRE LENGTHS
TO ORDER, USE GRY OR WHI SUFFIX, E.G. CLT1WHI


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 $100 \%$ recycled material.*
Manufactured in accordance with BS 4678 Part 4.

Standard Length: 3 metres
Material: PVCu
Colour: White

When ordering, use colour suffix GRY or WHI, e.g. FTF1WHI

## Flat Tee

MOULDED
GRY OR WHI
FABRICATED
GRY OR WHI


## HOW TO SPECIFY

A heavy duty industrial cable trunking system manufactured from recycled PVCu. Durable and impact resistant to Heavy Classification BS 4678 Part 4. Clip on covers and accessories aid easy assembly and installation whilst a wide range of accessories provide maximum versatility of installation.

| $50 \times 50 \mathrm{MM}$ | FTF1 | 1 |  |
| :--- | :--- | :--- | :--- |
| $75 \times 50 \mathrm{MM}$ | FTF2 | 1 |  |
| $75 \times 75 \mathrm{MM}$ | FTF3 | 1 |  |
| $100 \times 50 \mathrm{MM}$ |  | FTF4 |  |
| $100 \times 75 \mathrm{MM}$ |  | FTF5 | 1 |
| $100 \times 100 \mathrm{MM}$ |  | FTF6 | 1 |
| $150 \times 75 \mathrm{MM}$ |  | FTF7 | 1 |
| $150 \times 100 \mathrm{MM}$ |  | FTF8 | 1 |
| $150 \times 150 \mathrm{MM}$ |  | FTF9 | 1 |

Spare Trunking Li
3 METRE LENGTHS TO ORDER, USE GRY OR WHI SUFFIX,
E.G. CLT1WHI

Flat Angle

MOULDED
GRY OR WHI

External
Corner

FABRICATED
GRY OR WHI

Internal Corner

FABRICATED
GRY OR WHI

| CLT50LID | 12 m | FAF1 | 1 |  | FAE1 $^{*}$ | 1 | FAI1 $^{*}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| CLT75LID | 12 m | FAF2 | 1 |  | FAE2 $^{*}$ | 1 | 1 |
| CLT75LID | 12 m | FAF3 | 1 |  | FAI2 $^{*}$ | 1 |  |
| CLT100LID | 12 m |  |  | FAF4 | 1 | FAI3 $^{*}$ | 1 |
| CLT100LID | 12 m |  | FAF5 | 1 | FAE4 $^{*}$ | 1 | FAI4 $^{*}$ |
| CLT100LID | 12 m |  | FAF6 | 1 | FAE5 $^{*}$ | 1 | FAI5 $^{*}$ |
| CLT150LID | 12 m |  | 1 | FAE6 $^{*}$ | 1 | FAI6 $^{*}$ | 1 |
| CLT150LID | 12 m |  | FAF7 | 1 | FAE7 $^{*}$ | 1 |  |
| CLT150LID | 12 m |  | FAF8 | 1 | FAE8 $^{*}$ | 1 | FAI7 $^{*}$ |


| End Cap | Couplings |  | Accessories |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
|  | EXTERNAL |  |  |
| MOULDED | WITH RIVETS | MOULDED | INTERNAL PLAIN |
| GRY OR WHI | GRY OR WHI | GRY OR WHI |  |


| TEP1 | 10 |  |  | TCI1 | 10 | EGF5WHI <br> 1 GANG <br> ACCESSORY FRAME | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TEP2 | 10 |  |  | TCl2 | 10 |  |  |
| TEP3 | 5 |  |  | TCl3 | 5 | TPR1GRY | 200 |
| TEP4 | 5 |  |  | TCI4 | 5 | GREY PLASTIC |  |
| TEP5 (WHI ONLY) | 5 |  |  | TCI5 | 5 | HOLE SIZE 7.2MM |  |
| TEP6 | 5 | TCE6 | 5 | TCI6 | 5 | TPR1WHI | 200 |
| TEP7* | 1 | TCE7* | 1 |  |  | WHITE PLASTIC |  |
| TEP8* | 1 | TCE8* | 1 |  |  |  |  |
| TEP9* | 1 | TCE9* | 1 |  |  |  |  |

## Egatube ${ }^{\circledR}$ Cornice



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 $100 \%$ recycled material*
* Based on 2014 consumption.


## HOW TO SPECIFY

A cornice trunking system manufactured from recycled PVCu and available in $40 \mathrm{~mm} \times 40 \mathrm{~mm}$ and $90 \mathrm{~mm} \times 90 \mathrm{~mm}$. Accessories designed to overlap the edge of trunking covers to hide joint line. Clip on covers and accessories aid easy assembly and installation whilst a wide range of accessories provide maximum versatility of installation.

| Trunking | $\vdots$ Trunking |
| :--- | :--- |
| $\mathbf{4 0 \times 4 0 \mathrm { mm }}$ | $\mathbf{9 0 \times 9 0 m m}$ |
|  |  |
| SINGLE | THREE |
| COMPARTMENT | COMPARTMENT |
| 3 METRE LENGTHS | 3 METRE LENGTHS |



| $40 \times$ 40MM | CT1WHI | 30 m |  |  |
| :--- | :--- | :--- | :--- | :--- |
| $90 \times$ 90MM |  | CT2WHI | 12 m |  |

## Egatube ${ }^{\circledR}$ Cornice

| End Caps | $\vdots$ Internal | $\vdots$ External |
| :---: | :---: | :---: |
|  | Corners | Corners |
|  |  |  |
|  |  |  |
|  |  | $\vdots$ |

## Cable Retaining Straps

Joint
Covers

| CEP1WHI | 10 | CIP1WHI | 10 | CXP1WHI | 10 | CST1WHI | 25 | CJC1WHI | 10 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| CEP2WHI | 10 | CIP2WHI | 10 | CXP2WHI | 10 | CST2WHI | 10 | CJC2WHI | 10 |

Intersection CT2 to YT3
Mini Trunking

Intersection RIGHT HAND

|  |  |  |  | Cl1WHI | 10 |
| :--- | :--- | :--- | :--- | :--- | ---: |
| CAR22WHI | 1 | CAL23WHI | 1 | CAR23WHI | 1 |

## EGATUBE ${ }^{\circledR}$ CONDUIT

## RANGE INTRODUCTION

## 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
- 2 grades of round conduit to suit various site conditions
- All extrusions manufactured from $100 \%$ recycled material*

Where there is a choice of colour state the appropriate suffix with the list number when ordering e.g. HIP2BLK For 16 mm sizes use 20 mm fittings with reducers. (Ref. ER1).

| 16 mm |  |  |
| :--- | :--- | :--- |
| 20 mm | ENB2 | 25 |
| 25 mm | ENB3 | 10 |
| 32 mm |  |  |
| 38 mm |  |  |
| 50 mm |  |  |

## Egatube ${ }^{\circledR}$ Conduit



|  | WALL | THICKNESS: (nominal mm): | WALL THICKNESS: (nominal mm): |
| :--- | :---: | :--- | :---: |
| HIP1 | 1.7 | HLG1 | 1.1 |
| HIP2 | 1.8 | HLG2 | 1.2 |
| HIP3 | 1.9 | HLG3 | 1.5 |
| HIP4 | 2.5 | HLG4 | 1.5 |
| HIP5 | 2.5 | HLG5 | 1.5 |
| HIP6 | 3.2 | HLG6 | 1.8 |


| LIGHT GAUGE COUPLINGS NOT REQUIRED WHI ONLY | Spacer Bar Saddle <br> BLK OR WHI | Spring Clip Saddle <br> BLK OR WHI | Strap Saddle <br> BLK OR WHI | Quickfit Spacer Saddle <br> BLK OR WHI | Conduit Clip <br> BLK OR WHI |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\square$ |  |  |  |  |  |


| LNB1WHI | 25 | ESB1 | 50 |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | :--- | ---: | :--- | :--- | :--- | :--- | :--- |
| LNB2WHI | 100 | ESB2 | 100 | MEC2 | 100 | ES2 | 100 | EQS2 | 100 | ECC2 |
| LNB3WHI | 50 | ESB3 | 100 | MEC3 | 50 | ES3 | 100 | EQS3 | 100 | ECC3 |
| LNB4WHI | 50 | ESB4 | 50 | MEC4WHI | 25 |  |  |  | 50 |  |
| LNB5WHI | 25 | ESB5 | 25 |  |  |  |  |  |  |  |
| LNB6WHI | 25 | ESB6 | 25 |  |  |  |  |  |  |  |

## Egatube ${ }^{\circledR}$ Conduit

| $\vdots$ Inspection | Quick Fit | $\vdots$ Inspection | Quick Fit Tee | Inspection |
| :--- | :--- | :--- | :--- | :--- |
| Elbow | Inspection | Tee |  | Bend |
|  | Elbow |  |  |  |
| BLK OR WHI | BLK OR WHI | BLK OR WHI | BLK OR WHI | BLK OR WHI |


| 20 mm | EIE2 | 25 | EQE2 | 25 | EIT2 | 25 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EQT2 | 25 | EIB2 |  |  |  |  |
| 25 mm |  |  | EIT3 | 25 | EQT3 | 25 |
| 32 mm |  |  |  | EIB3 |  |  |
| 38 mm |  |  |  |  |  |  |
| 50 mm |  |  |  |  |  |  |


| Compression | Adaptor | Adaptor | Clip－in | Bell Mouth |
| :---: | :---: | :---: | :---: | :---: |
| Gland | Male Thread | Female Thread | Adaptor | Bush |
|  | WITH LOCK RING | WITH MALE BUSH |  |  |
| ＊BLK OR WHI | BLK OR WHI | BLK OR WHI | WHI ONLY | WHI ONLY |



| 20 mm | ECG2＊7－10．5 | 100 | EMA2 | 100 | EFA2 | 100 | CEA2WHI | 50 | BMB2WHI |
| :--- | :--- | ---: | :--- | ---: | :--- | ---: | :--- | :--- | :--- |
| 25 mm | ECG3BLK 8－13 | 50 | EMA3 | 50 | EFA3 | 50 |  | 50 |  |
| 32 mm |  |  | EMA4 | 25 | EFA4 | 25 |  |  |  |
| 38 mm |  |  | EMA5 | 25 | EFA5 | 25 |  |  |  |
| 50 mm |  |  | EMA6 | 10 | EFA6 | 10 |  |  |  |

## Egatube ${ }^{\circledR}$ Conduit



| EQB2 | 25 | EP2 | 100 | EP2S | 100 | EHL2GRY | 100 | ECL2 | 100 | ER1 $20 \times 16$ | 50 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EQB3 | 25 | EP3 | 100 | EP3S | 100 | EHL3GRY | 100 | ECL3 | 100 | ER2 $25 \times 20$ | 50 |
|  |  |  |  |  |  |  | ECL4 | 50 |  |  |  |
|  |  |  |  |  |  |  | ECL5 | 25 | ER5WH $38 \times 32 \quad 10$ |  |  |
|  |  |  |  |  |  | ECL6 | 25 |  |  |  |  |


| Male | Male | Female |
| :---: | :---: | :---: |
| Bush | Bush | Bush |
| Plain | Screwed | Screwed |
| BLK OR WHI | BLK ONLY | BLK ONLY |


| Bending |  |
| :--- | :--- |
| Springs |  |
| GREEN | RED |
| HEAVY GAUGE | LIGHT GAUGE |
| FOR HIP AND ESP | FOR HLG |



| MPB2 | 100 | SMB2BLK | 50 | EBF2BLK | 100 | ESS2 | 1 | ELS2 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| MPB3 | 100 | SMB3BLK | 50 | EBF3BLK | 100 | ESS3 | 1 | ELS3 | 1 |
|  | SMB4BLK | 50 |  |  |  |  |  |  |  |
|  | SMB5BLK | 25 |  |  |  |  |  |  |  |
|  | SMB6BLK | 25 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

Circular
Boxes

BLK OR WHI
Egatube ${ }^{\circledR}$ Boxes

## Egatube ${ }^{\circledR}$ Boxes

## ININ ant IINanos

| Angle | $\vdots$ Tee |
| :--- | :---: |
| Boxes | Boxes |
|  | $\vdots$ |
|  | $\vdots$ |

Intersection
Boxes

Tangent Boxes

BLK OR WHI
BLK OR WHI

## BLK OR WHI

BLK OR WHI


## MATERIAL: <br> PVCu

LID FIXING CENTRES:
50.8 mm

PILLAR THREAD SIZE:
M4 (Brass inserts)
All boxes contain a moulded recess for earth terminal.

ALL CIRCULAR BOXES
For 16 mm sizes use 20 mm fittings with reducers. (Ref. ER/1)
Some circular boxes are available with extended lugs for the support of heavy loads
LOAD SUSPENSION
Standard Circular Box: 3 kg . @ $60^{\circ} \mathrm{C}$ max
Extended Lug Box: 10 kg . @ $60^{\circ} \mathrm{C}$ max.
For enclosed lighting fittings see 'Heat Resistant Box' on page 356 or use 'Steel Insert Clips' on page 357.

## Egatube ${ }^{\circledR}$ Accessories

## Adaptable <br> Boxes

BLK OR WHI
BLK OR WH


Heat-Resistant
Boxes

BLK ONLY

Circular Lids
Gaskets
and Screws

BLK OR WHI


## Egatube ${ }^{\circledR}$ Accessories

Extension
Rings

BLK OR WHI

## Accessories

Pendant
Dome Cover

BLK OR WHI


| EER3 | 25 |
| :--- | :--- |
| NOM DEPTH 12.5 mm <br> EER5 <br> NOM DEPTH 19 mm | 25 |
| EER6 <br> NOM DEPTH 25 mm <br> EER7 | 25 |
| NOM DEPTH 32 mm <br> EER8 <br> NOM DEPTH 38 mm <br> EER9 | 25 |
| NOM DEPTH 50 mm | 25 |

## NOM DEPTH 50 mm

Available in Black or White．
When ordering use colour suffix BLK or WHI．
MATERIAL：
PVCu
FIXING CENTRES：
50.8 mm

To suit circular conduit boxes．
EER6－EER9 are fitted with slots to suit
Steel Insert Clips．

## Egatube ${ }^{\circledR}$

## Accessory Boxes

## Round Corner <br> Accessory Boxes

16 mm
PLASTER DEPTH

FLUSH

35 mm
FLUSH

25 mm

SURFACE

## Square Corner

Accessory Boxes
$25 \mathrm{~mm} \quad 32 \mathrm{~mm}$

SURFACE SURFACE




## Coupling



Manufactured in accordance with:
BS 4607 Part 5
Standard length: 3 metres
Material: PVCu
Colour: White

| $13 \mathrm{~mm} \times 8 \mathrm{~mm}$ | EOC1WHI | 150 m |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $16 \mathrm{~mm} \times 10 \mathrm{~mm}$ | EOC2WHI | 150 m |  |  |  |  |
| $22.5 \mathrm{~mm} \times 11 \mathrm{~mm}$ | EOC3WHI | 150 m | CO3WHI | 50 | OA3WHI | 50 |
| $29 \mathrm{~mm} \times 11 \mathrm{~mm}$ | EOC4WHI | 150 m | CO4WHI | 50 |  |  |
| $29 \mathrm{~mm} \times 16 \mathrm{~mm}$ | EOC5WHI | 150 m |  |  |  |  |
| $23 \mathrm{~mm} \times 14 \mathrm{~mm}$ | EOC6WHI | 150 m |  |  |  |  |

All extrusions manufactured from
$100 \%$ recycled material.*

* Based on 2014 consumption.

| Saddle | External Spring Clip Oval |
| :---: | :---: |
|  |  |


| 16 mm | OS2WHI | 100 | XC2WHI | 100 |
| :--- | :--- | :--- | :--- | :--- |
| 20 mm | OS3WHI | 100 | XC3WHI | 100 |
| 25 mm | OS4WHI | 100 | XC4WHI | 100 |

Egaflex

The Egaflex PVCu conduit range is a corrugated pliable 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

Corrugated
PVCu
Conduit

Adaptor
Nylon


| 16 mm | EF1WHI | 50 m Coil | FAB1WHI | 50 |
| :--- | :--- | :--- | :--- | :--- |
| 20 mm | EF2WHI | 50 m Coil | FAB2WHI | 50 |
| 25 mm | EF3WHI | 50 m Coil | FAB3WHI | 50 |

Material: PVCu
Colour: White
Standard length: 50 metres coil

## Rectangular

Channelling

2 METRE LENGTHS

| 12 mm | (8mm DEPTH APPROX) | REC1WHI | 150 mm |
| :--- | :--- | :--- | :--- |
| 25 mm | (8mm DEPTH APPROX) | REC2WHI | 150 mm |
| 25 mm | (9.5mm DEPTH APPROX) | REC3WHI | 150 mm |



All extrusions manufactured from
100\% recycled material.*
against quantity orders.

* Based on 2014 consumption.



## EGA ${ }^{\circledR} \mathrm{MINI}$

## 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 \& 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
For faster installation
ALL EXTRUSIONS MANUFACTURED FROM 100\% RECYCLED MATERIAL*

5 YEAR GUARANTEE
*Based on 2014 consumption

## HOW TO SPECIFY

A range of mini conduit manufactured from recycled PVCu and available in $16 \mathrm{~mm} \times 16 \mathrm{~mm}$ to $50 \mathrm{~mm} \times 50 \mathrm{~mm}$ sizes. All products to be designed and manufactured to comply to BS EN 50085 Part 1 whilst a wide range of accessories provide maximum versatility and installation. Additional optional "Speedfix" mini trunking to utilize foam adhesive for fast location and installation for power circuits and low voltage wiring.

Manufactured in accordance with BS EN 50085 Part 1.

Standard Length:
3 metres
Available in 2 metre lengths for Non UK Markets.

Material: PVCu

Mini
Trunking

3 METRE LENGTHS

2 METRE LENGTHS (FOR NON UK MARKETS)

Coupling

MOULDED

| $16 \times 16 \mathrm{~mm}$ | YT1WHI | 90 m |  | YT1D1WHI | 60 m | YC1WHI |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $25 \times 16 \mathrm{~mm}$ | YT2WHI | 90 m | YT2CHA | 30 m | YT2D1WHI | 60 m | YC2WHI OR CHA |
| $32 \times 12.5 \mathrm{~mm}$ | YT200WHI | 30 m |  |  | YT200D1WHI | 32 m | YC200WHI |
| $40 \times 16 \mathrm{~mm}$ | YT3WHI | 45 m |  |  | 20 |  |  |
| $40 \times 25 \mathrm{~mm}$ | YT4WHI | 45 m | YT4CHA | 30 m | YT4D1WHI | 32 m | YC4WHI |
| $40 \times 40 \mathrm{~mm}$ | YT5WHI | 45 m |  |  | YT5D1WHI | 32 m | YC5WHI |
| $50 \times 25 \mathrm{~mm}$ | YT6WHI | 30 m |  | YT6D1WHI | 32 m |  |  |
| $50 \times 32 \mathrm{~mm}$ | YT7WHI | 30 m |  | YT7D1WHI | 32 m |  |  |
| $50 \times 50 \mathrm{~mm}$ | YT8WHI | 12 m |  |  | 10 |  |  |

Manufactured in accordance with BS EN 50085 Part 1.

Standard Length: 3 metres

Available in 2 metre lengths for Non UK Markets.

Material: PVCu

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.

## Speedfix

Mini
Trunking

3 METRE LENGTHS


## Twin

Compartment
Trunking

3 METRE LENGTHS
2 METRE LENGTHS

| $16 \times 16 \mathrm{~mm}$ | SPF1WHI | 60 m | SPF1D1WHI | 60 m |  |
| :--- | :--- | :--- | :--- | :--- | :--- |

## Ega Mini®



| YEP1WHI | 20 | YAI1WHI | 20 |  | YAE1WHI | 20 |  |
| :--- | :--- | :--- | ---: | :--- | :--- | ---: | ---: |
| YEP2WHI OR CHA | 20 | YA12WHI OR CHA | 20 |  |  | YAE2WHI OR CHA | 20 |
| YEP200WHI | 20 | YA1200WHI | 20 |  | YAE200WHI | 20 |  |
| YEP3WHI | 20 | YA13WHI | 5 | YDA13WHI | 10 | YAE3WHI | 5 |
| YEP4WHI OR CHA | 20 | YA14WHI OR CHA | 5 |  |  | YDAE3WHI |  |
| YEP5WHI | 20 | YA15WHI | 5 |  | YAE4WHI OR CHA | 5 |  |
| YEP6WHI | 10 | YA16WHI | 5 |  | YAE6WHI | 5 |  |
| YEP7WHI | 10 | YA17WHI* | 5 |  | 5 |  |  |
| YEP8WHI | 10 | YA18WHI | 5 |  | YAE7WHI* | 5 |  |

Flat Angle

MOULDED

Flat Data
Angle

MOULDED

Flat Tee

MOULDED

Flat Data Tee

MOULDED

| 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 |
| YAF4WHI OR CHA | 5 |  |  | YTF4WHI OR CHA | 5 | YTF42WHI OR CHA | 5 |  |  |
| YAF5WHI | 5 |  |  | YTF5WHI | 5 | Flat Tee vertical aperture sizes: YTF21WHI $16 \times 16 \mathrm{~mm}$ |  | Flat Tee vertical aperture sizes: YTF42WHI $25 \times 16 \mathrm{~mm}$ |  |
| YAF6WHI | 5 |  |  | YTF6WHI | 5 |  |  |  |  |
| YAF7WHI* | 5 |  |  | YAF6WHI* | 5 |  |  |  |  |
| YAF8WHI | 5 |  |  | YAF8WHI | 5 |  |  |  |  |

## Ega Mini®



| $16 \times 16 \mathrm{~mm}$ |  |  | YEA1WHI | 25 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $25 \times 16 \mathrm{~mm}$ | YST21WHI | YST22WHI | 10 | YEA2WHI | 25 | UEA2WHI |
| $40 \times 16 \mathrm{~mm}$ |  |  | YEA3WHI | 25 | UEA3WHI |  |

Side Tees (perpendicular)
Aperture Sizes
YST22WHI: $25 \times 16 \mathrm{~mm}$

UEA Adaptors
For fixing with adhesive. They are particularly useful when spurring off from a larger trunking section.

## Circular

Boxes

MOULDED


| $16 \times 16 \mathrm{~mm}$ | YCR1ELWHI | $\mathbf{1 0}$ |
| :--- | :--- | :--- |
| $25 \times 16 \mathrm{~mm}$ | YCR1ELWHI | $\mathbf{1 0}$ |
| $40 \times 16 \mathrm{~mm}$ | YCR1ELWHI | $\mathbf{1 0}$ |

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 356).
Lid fixing centres: 50.8 mm
Pillar thread size: M4 (Metal inserts)
Load Suspension: $5 \mathrm{~kg} @ 60^{\circ} \mathrm{C}$ max.

## Ega Mini®

Round
Corner
Accessory
Boxes

Square
Corner
Accessory
Boxes
SURFACE

SURFACE


ESU231WHI
1 GANG 25MM
ONE ENTRY
CENTRE (TOP)

## ESU2311WHI

1 GANG 25MM
ONE ENTRY (SIDE)

## ESU2323WHI

2 GANG 25MM
three entries
(TOP \& BOTH SIDES)
ESU3511WHI
1 GANG 32MM
ONE ENTRY
CENTRE (TOP)
ESU3523WHI
2 GANG 32MM
THREE ENTRIES.
(TOP, LEFT \& RIGHT SIDE)

ESU2211WHI
1 GANG 25MM ONE ENTRY (SIDE)

## ESU2512WHI

1 GANG 25MM
TWO ENTRIES
(TOP \& BOTTOM)
10
2 GANG 25MM
THREE ENTRIES
(TOP \& BOTH SIDES)
ESU2523WHI
2 GANG 25MM
three entries
(TOP \& BOTTOM)

## ESU2713WHI

1 GANG 32MM
THREE ENTRIES
(TOP \& BOTTOM)
ESU2721WHI
2 GANG 32MM
ONE ENTRY
CENTRE (TOP)
ESU4423WHI
2 GANG 41MM
THREE ENTRIES
(TOP \& BOTH SIDES)
Ega Round and Square Corner boxes are for use in conjunction with mini trunking adaptors,
trunking ad
YEA - straight entry and
YSA - side entry.
Material:
PVCu
Dimensions:
1 gang: $86 \times 86 \mathrm{~mm}$
2 gang: $86 \times 146 \mathrm{~mm}$
Fixing Centres:
1 gang: 60.3 mm
2 gang: 120.6 mm
2 gang: 120.6 mm
BS 4662 and BS 5733
where applicable.

SIDE MOUNTING
SURFACE

Egaline
Wall Box
Assemblies
FOR AMERICAN
ACCESSORIES

|  | Egaline |
| :--- | :--- |
|  | Wall Box |
|  | Assemblies |
| SIDE MOUNTING | FOR AMERICAN |
| SURFACE | ACCESSORIES |

## RED ALERT ${ }^{\text {TM }}$

## 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 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.

[^32]
## FEATURES \& 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 100\% RECYCLED MATERIAL*

[^33]EASILY CUT TO REQUIRED LENGTH


| Trunking | Coupling | $\vdots$ End Cap | Flat Angle |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |
|  |  |  |  |  |

Red trunking and
fittings are only
available in the
$25 \times 16 \mathrm{~mm}$ profile


| $16 \times 16 \mathrm{~mm}$ | YT1WHI | 90 m | YC1WHI | 20 | YEP1WHI | 20 | YAF1WHI | 20 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
|  | YT2RED | 30 m | YC2RED | 20 | YEP2RED | 20 | YAF2RED | 20 |
|  | YT2WHI | 90 m | YC2WHI | 20 | YEP2WHI | 20 | YAF2WHI | 20 |
| $32 \times 12.5 \mathrm{~mm}$ | YT200WHI | 30 m | YC200WHI | 20 | YEP200WHI | 20 | YAF200WHI | 20 |
| $40 \times 16 \mathrm{~mm}$ | YT3WHI | 45 m | YC3WHI | 10 | YEP3WHI | 20 | YAF3WHI | 5 |


|  | Internal | $\vdots$ External | $\vdots$ |
| :---: | :---: | :---: | :---: |
| Corner | Corner | Side Tee | $\vdots$ |
|  |  |  | Flat Tee |
|  |  |  |  |
|  |  |  |  |


| $16 \times 16 \mathrm{~mm}$ | YAI1WHI | 20 | YAE1WHI | 20 |  | YTF1WHI | 20 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | $25 \times 16 \mathrm{~mm}$ | YAI2RED | 20 | YAE2RED | 20 | YST21WHI | 10 | YTF21WHI |
|  |  | 20 |  | 20 |  | 10 | YTF22RED | 20 |
|  |  |  |  | YST22WHI | 10 | YTF22WHI | 20 |  |
| $32 \times 12.5 \mathrm{~mm}$ | YAI200WHI | 20 | YAE200WHI | 20 |  | YTF200WHI | 20 |  |
| $40 \times 16 \mathrm{~mm}$ | YAl3WHI | 5 | YAE3WHI | 10 |  | YTF3WHI | 5 |  |

## Boxes

|  | STANDARD | CIRCULAR |
| :--- | :--- | :--- |
| MI ACCESSORY BOX | ACCESSORY BOX | ACCESSORY BOX |
| （1 ENTRY） | （1 ENTRY） | $(1 / 2$ ENTRY） |



| ESU501RED | 5 | ESU503RED | 5 | YCR502RED | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| ESU501WHI | 5 | ESU503WHI | 5 | YCR502WHI | 5 |

SQUARE ACCESSORY BOXES
Accessory fixing centres： 60.3 mm
External dimensions： $86 \times 86 \times 38 \mathrm{~mm}$
Pillar thread size：M3．5

CIRCULAR ACCESSORY BOXES
Accessory fixing centres：
50.8 mm and 70.0 mm External dimensions： 134 mm diameter Pillar thread size： M4 Load suspension： 3 kg at $60^{\circ} \mathrm{C}$ max



## Ega Communication ${ }^{\circledR}$



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 100\% recycled material.*

* Based on 2014 consumption.


## Communication

Trunking

3 METRE LENGTHS


2 METRE LENGTHS (NON UK)

| $11 \times 8 \mathrm{~mm}$ | CMT1WH | 60 m | CMT1D1WH | 60 m |
| :--- | :--- | :--- | :--- | :--- |
| $16 \times 10 \mathrm{~mm}$ | CMT3WHI | 60 m |  |  |
| $20 \times 12.5 \mathrm{~mm}$ | CMT4WHI | 60 m |  |  |

Standard Length:
3 metres

Available in 2 metre lengths
for non UK markets.

2 metre lengths are available
for Non UK Markets.
Material:
PVCu
COLOUR:
White
$\qquad$

Self adhesive tape should not be relied upon for permanent fixing of the Speedfix range. as screws) should be used.


| $11 \times 8 \mathrm{~mm}$ | SMT1WHI | 60 m | SMT1D1WHI | 60 m | CMA1WHI | 25 |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $16 \times 10 \mathrm{~mm}$ | SMT3WHI | 60 m | SMT3D1WHI | 60 m | CMA3WHI | 25 |  |  |  |
| $20 \times 12.5 \mathrm{~mm}$ | SMT4WHI | 60 m | SMT4D1WHI | 60 m | CMA4WHI | 25 | YCR1001ELWHI | 10 | YCR1002ELWHI |

Circular boxes accept standard ceiling roses and pull switches. The base incorporates earth terminal facility (order terminal separately, see page 356 ). LID FIXING CENTRES:
50.8 mm

PILLAR THREAD SIZE:
M4 (Metal inserts)
Load suspension:
5 kg @ $60^{\circ} \mathrm{C}$ max


## INTERACT UNDERFLOOR POWER

## RANGE INTRODUCTION

Interact Underfloor Power is a low profile powertrack system catering for single and multi-circuit applications, specifically designed to ensure a fast and simple installation.

It is suitable for standard, clean earth, uninterrupted or dedicated power supplies and allows power throughout the building.

## HOW TO SPECIFY

A low profile 63A underfloor powertrack system to cater for single and multi-circuit applications. Snap fast crocodile joints to ensure fast and simple installation with provision for 300 mm socket spacing's.
Key and colour coded tap-offs and sockets used to prevent cross pole contamination.

FEATURES \& BENEFITS
PATENTED ‘SNAP FAST’ CROCODILE JOINTS
Ensures fast and simple installation
DUAL TAP-OFF FOR TWIN SYSTEM
Offers simple 'single fit' installation
KEY CODED AND COLOUR CODED TAP-OFFS
Provides mechanical protection against cross pole contamination

POWERTRACK WITH INTEGRAL END FEED AVAILABLE

COMPLIES WITH WIRING REGULATIONS
Complies with both the requirements of BS EN 61534 and BS 7671:2014 IET Wiring Regulations (17th Edition)

AVAILABLE IN 63A

5 YEAR GUARANTEE

## Interact Under

## AVAILABLE IN 63A

- Flexible to suit project requirements
- Lower rating opens opportunities for low cost installations

KEY CODED TRACK

- Prevents inadvertent mixing of configurations

SIMPLIFIED TRACK ORDERING
Track comes complete with:

- Dust Covers
- End Caps
- Fixing Bracket
- Crocodile Joints

A GENUINE TWIN POWERTRACK SYSTEM

- Clean Earth and Standard Earth in one single track
- Single fitting of two circuits for speed of installation


PRE-ATTACHED SLIDING DUST COVERS

- Keeps track clean prior to and during installation

[^34]END FEED WITH INTEGRAL TERMINAL BLOCK

- Track can be supplied with integral end feed on request


PRE-ATTACHED SLIDING SLAB-FIXINGS

- Ensure secure fixing location of track

PATENTED ‘SNAP FAST’
CROCODILE JOINTS

- $\quad$ No tools needed, ensures a fast and simple installation

KEY CODED AND COLOUR CODED
TAP-OFFS AND SOCKETS

- Provides mechanical protection against cross pole contamination


## SOCKET SPACINGS

- 300 mm socket spacings
- Enables tap-off to be fitted at regular intervals


## Interact Under

63 AMP SYSTEM

63 Amp Track


STANDARD GREY SPN

| PENLL |  |
| :--- | :--- |
| AUX GREEN SINGLE | CLEAN EARTH |
| PHASE | RED CE |

PIIII
3 PHASE GREEN TPN
DUAL CE \& STD RED / GREY DUAL

| 1.2m TRAC | PE IS EARTHED TO CASE |  |  | PE IS EARTHED TO CASE |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PITCH 300MM 4 SOCKETS | UB61233GRY | UB61233GRN | UB61234RED | UB61235GRN | UB61236DU0 |
| 2.4 m TRACK |  |  |  |  |  |
| PITCH 300MM 8 SOCKETS | UB62433GRY | UB62433GRN | UB62434RED | UB62435GRN | UB62436DU0 |
| 3.6 m TRACK |  |  |  |  |  |
| $\begin{aligned} & \text { PITCH 300MM } \\ & 12 \text { SOCKETS } \end{aligned}$ | UB63633GRY | UB63633GRN | UB63634RED | UB63635GRN | UB63636DU0 |

[^35]| ${ }^{\text {N2 L2PE }}$ | penil |
| :---: | :---: |
| 11 丰 | －11 |
| Standard grey | AUX Green |


CLEAN EARTH RED


3 PHASE GREEN

11111＊－

DUAL CE \＆STD RED／GREY

End Feeds


| Standard Grey | Aux Green | Clean Earth Red | 3 Phase Green | Dual CE \＆Std <br> Red／Grey |
| :---: | :---: | :---: | :---: | :---: |
| Standard |  |  |  |  |
| UF63GRY | UF63GRN | UF64RED | UF65GRN | UF66DU0 |
| OPPOSITE END FEED |  |  |  |  |
| UF63GRYLH | UF63GRNLH | UF64REDLH | UF65GRNLH | UF66DUOLH |

Each opposite End Feed comes with an end cap to close off the powertrack run．
Terminal Capacity $=16 \mathrm{~mm}^{2}$

## Integral Feed Track

| Standard Grey | Aux Green | Clean Earth Red |
| :---: | :---: | :---: |
| 1．2M＊PITCH 300MM 4 SOCKETS |  |  |
| IFUB61233GRY | IFUB61233GRN | IFUB61234RED |
| 2．4M＊PITCH 300MM 8 SOCKETS |  |  |
| IFUB62433GRY | IFUB62433GRN | IFUB62434RED |
| 3．6M＊PITCH 300MM 12 SOCKETS |  |  |
| IFUB63633GRY | IFUB63633GRN | IFUB63634RED |

＊Nominal length of Interact Underfloor Power excluding feed section．Feed section is 100 mm in length．

## Flexible Interlinks




Tap-offs are supplied as single cables inside steel flexible conduit, except those with 'C' suffix, which are supplied with 3 or 4 core LSF flex, as appropriate. * Unfused tap-offs in excess of 3 m , must only be used on powertrack protected with a 32A (or less) circuit protection device. ** 3M tap offs. Stated length refers to length of wires within the unit, not the conduit length. Conduit length will be between 2.7 and 2.8 meters in length when fully extended. When un-extended, conduit length will decrease by a further 0.1 to 0.2 meters. Minimum length of un-extended conduit will be 2.5 meters.
This is to comply with BS7671:2008 17th Edition IET Wiring Regulations. † Key codes shown are from the perspective of the Power Track socket, the tap-off key code will be a mirror image when viewed from underneath. $\dagger \dagger$ Add 'DE' suffix for Dual Earth High Integrity Earthing, e.g. UT51301DE. Unfused tap-offs - High Integrity Earthing as standard. Fused tap-offs - add ' 607 ' suffix for High Integrity Earthing by use of a single $4 \mathrm{~mm}{ }^{2}$ earth conductor, e.g. UT51301607 $\dagger \dagger \dagger$ Neutrik tap-offs - add 'DEN' suffix for Dual Earth High Integrity Earthing with a neutrik connector e.g. UT33201DEN. For UT33204 and UT53204 add ' N ' suffix for the neutrik connector

## Other Components



| PART NO. | DESCRIPTION |
| :--- | :--- |
| UK1 | Additional Slab Brackets |
| UK3 | Additional End Plates |
| UK5* | Height Adjustable Slab Bracket - Track 17mm, 27mm And 39mm |
| UK5F* | Height Adjustable Slab Bracket - End Feed 17mm, 27mm And 39mm |
| UKDC | Additional Dust Cover |

* Fixing brackets should be positioned within 300 mm from either end of a track run and either side of all joints.

Minimum support requirement 3.6 m length $=4$ brackets, 2.4 m length $=3$ brackets, 1.2 m length $=2$ brackets.

## CABLELINK PLUS MODULAR

## RANGE INTRODUCTION

Cablelink Plus Modular Floorboxes have been specifically engineered to ensure robustness, a faster installation and maximum life span flexibility.

The unique "Ladder" design enables modules to be positioned at lower heights within the box to cater for Cat 6, 6A \& 7 patch leads, transformer plug tops and audio visual applications. The design allows the complete box and modules to be easily installed and removed.

[^36]FEATURES \& BENEFITS

TESTED TO EN 50085-2-2 TO ACCEPT 5000N LOAD

SUPPORTS CAT 6, CAT 6A \& CAT 7

QUICK RELEASE BLADES
Ensures fast and simple installation
FLEXIBLE SOULTION
Choice of two frame sixes provide 3 and 4 module options

COMPLIES WITH WIRING REGULATIONS
Provision of RCD protections supports IET 17th
Edition Wiring Regulations
SELF CLOSING LID
In accordance with IEC 61534-22
WIDE RANGE OF POWER AND DATA ACCESSORIES
SUPORT CAT6, CAT GA\&CAT

5 YEAR GUARANTEE

Cablelink Plus Modular Floorbox
TESTED TO EN 50085-2-2 TO ACCEPT 5000N LOAD

OUTLET BOX COLOUR

- Grey (RAL 7011)

ROBUST CORD CAPS

- Designed for improved retention

HANDLE

- Designed for improved accessibility

8MM RECESSED LID

- Simple carpet cut out
- Easily removable and reversible for improved accessibility
- Can be hinged from either of two sides
- Self Closing in accordance with BS EN 61534-22

OPTIONAL LOCKABLE LID

- Added security when not in use


OPTIONAL LID TETHER

- Added security
- Eliminates lid losses

MODULE RETAINER CLIP
Secures module to 'ladder' frame*


## LADDER DESIGN

- Modules can be positioned at different heights ( $100-124 \mathrm{~mm}$ range)
- Increased clearance for Cat 6, 6A and 7 patch leads, transformer plugs and audio visual applications
- Improved module retention via easy fix clips


## MODULES

- Design enables modules to be installed/removed whilst box is still in situ
- Left and right handed power plates provide plug top cable strain relief
- Pre-wired power modules available for quicker installation
- Cat 6, 6A and 7 and fibre solutions available
*When module retainer clip fitted, first rung of 'ladder' frame can not be used.
**Only on 265 X 265 boxes.
ONE PIECE MOULDED FRAME
- Simple ordering of product
- Faster installation

BLADES

- Quick release blades to secure firmly in position for a "fit and forget" installation
- No tools required for faster installation
- Self adjusting blades - ensures floorbox remains secure throughout service life
- Fixes to floor thicknesses of $15-50 \mathrm{~mm}$


## Cablelink Plus Modular Floorbox

The Modular Floorbox and Modules are ideal for use with the Interact Underfloor Power System - see page 371 for details.

## Modular Floorbox Selector Guide

The Design Service enables bespoke customised floorboxes to be configured and delivered to meet the customers individual requirements.
Step 1 Choose the number of compartments required (3 or 4 compartments)
Step 2 Choose whether the lid is lockable or not
Step 3 Choose which modules are required (See below for power options and next page for data / other options)
Step 4 What height are the modules to be fitted ( $100 \mathrm{~mm}, 108 \mathrm{~mm}, 116 \mathrm{~mm}$ or 124 mm )
Step 5 Do the power modules require tap-offs?
Step 6 If yes choose which type (See page 376 for tap-off options)

## Floorbox



* Lockable option available - add suffix 'L' e.g CRMB265-3GRYL. Floorbox lids must never be locked whilst in use. Box not supplied with key. Supplied complete as floorbox with 8 mm recess lid. Smaller compartment floorbox available in Cablelink Plus Single Pan Box, see page 384 for more details.
For pre-configured options available - see page 381.

Serviced Power

Modules

| - Modules | Description | Left Hand Modu |  |
| :---: | :---: | :---: | :---: |
|  |  | Standard | Clean Earth |
|  | 2G 13A SWITCH SOCKET OUTLET | CRM11730* | CRM11730CE* |
| Left hand module CRM11730 | 2G 13A SWITCH SOCKET OUTLET NON STANDARD (T PIN) | CRM11730NS* | CRM11730NSCE |
|  | 2G 13A SOCKET OUTLET | CRM11731* |  |
|  | 2 G 13A 30MA PASSIVE RCD SWITCH SOCKET OUTLET | CRM11735* | CRM11735CE |
| $\begin{aligned} & \text { RIGHT HAND MODULE } \\ & - \text { CRM11730RH } \end{aligned}$ | 3G 13A SOCKET OUTLET | CRM11720 | CRM11720CE |
|  | 4G 13A SWITCH SOCKET OUTLET ${ }^{\dagger}$ | CRM11750 | CRM11750CE |
|  | 4G 13A SWITCH SOCKET OUTLET NON STANDARD (T PIN) ${ }^{\dagger}$ | CRM11750NS | CRM11750NSCE |
| Additional plates are available via the Design Service, see page 16 | 4G 13A SOCKET OUTLET ${ }^{+}$ | CRM11751 |  |

${ }^{\dagger}$ Double module size with staggered arrangement to provide strain relief clearance for moulded plugs.

* Add 'RH' suffix for Right Hand Module, e.g. CRM11730RH
- Modules are available Left Hand and Right Hand to achieve a 'staggered' arrangement
- 'Staggered' arrangement ensures strain relief clearance for moulded plug tops
- Add 'RH' suffix for Right Hand Module, e.g CRM11730RH
- When four socket outlets are required, order CRM11750 'staggered' arrangement
- For more detail on how to order and configure your Cablelink Plus Modular Floorbox, please see page 731-734

Modules have unique two piece design to provide quick and sate installation. Earthing achieved through screwed connection between base and module plate.

## Accessory Modules

The conduit entry faces are integral with the accessory plate, enabling quick termination to the power or data plate and facilitates the remaining part of the back box to be fitted quickly with no risk to wiring being damaged.

## Unserviced Data Modules



CRM21201


CRM21215

| Part No. | Description |
| :--- | :--- |
| CRM21201 | $4 \times$ LJU6C Apertures (Knockouts) |
| CRM21301 | $6 \times$ LJU6C Apertures |
| CRM21500 | $4 \times$ ST Fibre Connector Apertures |
| CRM21215* | $4 \times$ LJU6C Aperture Wave Plate |
| CRM21117 | $4 \times$ Alphasnap Apertures |
| CRM31501 | $2 \times$ Euro $50 \times 50 \mathrm{~mm}$ Apertures |

Earthing studs are provided on all Unserviced data modules to enable a reliable connection to earth to be made. Earthing Kit CX-10 is recommended for use to ensure the earthing cable is connected correctly.

$$
\text { * Larger back boxes are available on request via the Design Service, see page } 16 .
$$

## Optional Extras



LID TETHER

| Part No. | Description |
| :--- | :--- |
| CX-01 | Cable Retainers - pack of 10 |
| CX-02 | Lid Tether Kit - pack of 5 |
| CX-04GRY | Cord Cap for $265 \times 265$ and $340 \times 265 \mathrm{~mm}$ Lid - Grey |
| CX-10 | Earthing Kit - pack of 10 |
| CRXKEY | Lock Key - pack of 2 |
| CRM31201 | Blank Module |

## Pre－Configured Range

To aid fast and simple product selection，storage and installation，a selection of popular pre－configured floorboxes are available to order：
－2， 3 or 4 module options
－Supplied with Serviced Power and／or Unserviced Data Plates
－Choice of standard modules or pre－wired to a tap－off
－Pre－wired boxes supplied with a 3m tap－off，High Integrity Earthing compliance as standard

## 2 Module Configuration－ 265 x 265mm Floorbox

|  |  | Part no．Module 1 |  | Module 2 | Module 3 | Tap－Off |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | CRM321 | 2G Switch Socket Outlet | BLANK | 4G DATA PLATE LJU6C | NA |
|  |  | CRM321W | 2G Switch Socket Outlet | BLANK | 4G DATA PLATE LJU6C | UT33201 GREY 4MM² 3M |

All modules supplied set at 90 mm from top of lid to base of module．

## 3 Module Configurations－ 265 x 265mm Floorbox



All modules supplied set at 90 mm from top of lid to base of module

4 Module Configurations－ $340 \times 265 \mathrm{~mm}$ Floorbox

| Part $n 0$. |  | Module 1 | Module 2 | Module 3 | Module 4 | Tap－Off |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CRM431 | 2G Switch Socket Outlet | Blank | Blank | 4G Data Plate LJU6C | NA |
|  | CRM431W | 2G Switch Socket Outlet | Blank | Blank | 4G Data Plate LJU6C | UT33201 GREY <br> 4MM ${ }^{3}$ 3M |
|  | CRIM434 | 2G Switch Socket Outlet | 2G Switch Socket Outlet | Blank | 4G Data Plate LJU6C | NA |
|  | CRM434W | 2G Switch Socket Outlet | 2G Switch Socket Outlet | Blank | 4G Data Plate LJU6C | UT33201 GREY <br> $4 \mathrm{MM}^{2} 3 \mathrm{M}$ |
|  | CRM444 | 2G Switch Socket Outlet | 2G Switch Socket Outlet | 4G Data Plate LJU6C | 4G Data Plate LJU6C | NA |
|  | CRM444W | 2G Switch Socket Outlet | 2G Switch Socket Outlet | 4G Data Plate LJU6C | 4G Data Plate LJU6C | UT33201 GREY <br> $4 \mathrm{MM}^{2} 3 \mathrm{M}$ |

[^37]

## PRODUCT APPLICATION

## MULTIMEDIA SOLUTIONS - COMBINATION PLATES

The combination plates provide unrivalled aesthetic enhancement and reduced visual impact on the wall, created when numerous devices are individually
 installed in one location. Additionally they offer a functional solution for when power, audio visual and data connectivity are required at a single point.

[^38]

## CABLELINK PLUS SINGLE PAN BOX

## RANGE INTRODUCTION

Cablelink Plus Single Pan Box provides an effective interface between services beneath the floor and the office environment.

Designed to offer robustness and constructed with a single piece metal frame, the floorbox is available with 1,3 and 4 compartments and a choice of 70 mm or 95 mm box depths to cater for floor voids of restricted space.

FEATURES \& BENEFITS

TESTED TO EN 50085-2-2 TO ACCEPT 5000N LOAD

## SUPPORTS CAT 6 \& CAT 7

70 mm through the use of the wave plate
SHALLOW VOIDS ACCOMMODATED
With 70 mm pan depth
ADJUSTABLE DEVICE PLATE
To increase wiring space or greater plug top clearance

COMPLIES WITH WIRING REGULATIONS
Provision of RCD protections supports IET 17th Edition Wiring Regulations

SELF-CLOSING LID
In accordance with IEC 61534-22
FLOORBOXES ARE RATED IP2X IN ACCORDANCE WITH BS EN 50085-1

WIDE RANGE OF POWER AND DATA ACCESSORY PLATES

5 YEAR GUARANTEE

## Cablelink Plus Single Pan Box

TESTED TO EN50085-2-2
TO ACCEPT 5000N LOAD


HANDLE

- Designed for improved accessibility

OPTIONAL LOCKABLE LID

- Added security when not in use
- RATCHET LEVELLING SYSTEM
- $\quad$ Self levelling and rapid fitting of frame and lid

OPTIONAL CABLE RETAINERS

STAGGERED PLATE

- Provides strain relief clearance for moulded plug tops
- Device plate positioned to provide 35 mm wiring space for 70 mm deep box and 45 mm wiring space for 95 mm deep box
- Stagger plate only
available within 3 compartment floorbox

ONE PIECE FRAME

- Robust metal design
- 70 mm pan depth is ideal for shallow applications and plenum floors
- 70 mm and 95 mm pan depths available


## Cablelink Plus Single Pan Box

The Single Pan Box is ideal for use with the Interact Underfloor Power System－see page 371 for more details．The design service enables bespoke customised floorboxes to be configured and delivered to meet individual requirements．

Floorbox selector guide
Step 1 Choose either a 1， 3 or 4 compartment box
Step 2 Choose the depth required（ 70 mm or 95 mm ）
Step 3 Choose which accessories are required（See below for accessory plate options）
Step 4 Do the power modules require tap－offs？
Step 5 If yes choose which type？（see page 376 for tap－off options）


| Compartments | 1 | 3 | 4 |
| :--- | :--- | :--- | :--- |
| Box Size | $100 \times 200 \mathrm{~mm}$ | $265 \times 265 \mathrm{~mm}$ | $340 \times 265 \mathrm{~mm}$ |
| 70mm Depth | CRB100UK－70－1GRY＊＊ | CRB265UK－70－3GRY＊ | CRB340UK－70－4GRY＊ |
| 95mm Depth | CRB100UK－1GRY＊＊ | CRB265UK－3GRY＊ | CRB340UK－4GRY＊ |

＊Lockable option available－add suffix＇L＇e．g CRB265UK－3GRYL．Floorbox lids must never be locked whilst in use．Box not supplied with key．95mm depth floorbox device plate provides wiring space of 45 mm allowing for Cat 6 ／Cat 7 compliance． 70 mm depth floorbox device plate provides wiring space of 35 mm ．Spare lids and frames are available，please see page 439 for details．＊＊These boxes will only accept CXP10745 for power plate option．

## Accessory Plates

Accessory plates are common to most ranges，they will fit all Cablelink Plus Single Pan，Screed and Onix Plus ${ }^{\text {Tm }}$ floorboxes． Standard Plates are for use with $100 \times 200 \mathrm{~mm}, 265 \times 265 \mathrm{~mm}$ and $340 \times 265 \mathrm{~mm}$ floorboxes．

Serviced Power Plates
Standard Part No．Description

| CXP10730＊＝ | 2G 13A Switch Socket Outlet |
| :--- | :--- |
| CXP10730NS＊＝ | 2G 13A Switch Socket Outlet Non－Standard（T Pin） |
| CXP10731＊＝ | 2G 13A Socket Outlet |
| CXP10731NS | 2G 13A Socket Outlet Non Standard（T Pin） |
| CXP10745 | 2G 13A Angled Socket Outlet |
| CXP10735＊ | 2G 13A RCD 30mA Passive Switch Socket Outlet＊＊ |
| CXP10760 | 2G 13A Switch Socket Outlet－Side Wired |
| CXP10720 | 3G 13A Socket Outlet |
| CXP10740 | 2G 16A 2P＋E German Socket Outlet＊＊Non UK |

## Optional Extras

| Part No． |  |
| :--- | :--- |
| CX－01 | Cable Retainers（Pack of 10） |
| CX－02 | Lid Tether Kit（Pack of 5） |
| CX－03GRY | Cord Cap for $100 \times 200 \mathrm{~mm}$ Lid - Grey（Pack of 10） |
| CRXKEY | Lock Key（Pack of 2） |

## Pre-Configured Range

To aid fast and simple product selection, storage and installation, a selection of popular
pre-configured 95 mm floorboxes are available to order:

- 1, 3 or 4 compartment options
- Supplied with Service Power/or Unserviced Data Plates


## 1 Compartment Configuration - $100 \times 200 \mathrm{~mm}$ Floorbox

| Part no. Accessory |  |  | Tap-Off |
| :---: | :---: | :---: | :---: |
| ¢ | CRP100-RCD | RCD Socket | NA |
| y, y | CRP101 | 2G 13A Angled/Unswitched Socket Outlet | NA |
| [8, ${ }^{\text {a }}$ | CRP121 | 1G 13A Switch Socket and $2 \times$ LJU6C aperture | NA |

## 3 Compartment Configurations - 265 x 265mm Floorbox

|  | Part no . | Accessory Plate 1 | Accessory Plate 2 | Accessory Plate 3 | Tap-Off |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | CRP321 | 2G Switch Socket Outlet | Blank | 4G Data Plate LJU6C | NA |
|  | CRP321W | 2G Switch Socket Outlet | Blank | 4G Data Plate LJU6C | $\begin{aligned} & \text { UT33201 GREY } \\ & 4 \mathrm{~mm}^{2} 3 \mathrm{~m} \end{aligned}$ |
|  | CRP333 | 2G Switch Socket Outlet | 4G Data Plate LJU6C | 4G Data Plate LJU6C | NA |
|  | CRP333W | 2G Switch Socket Outlet | 4G Data Plate LJU6C | 4G Data Plate LJU6C | $\begin{aligned} & \text { UT33201 GREY } \\ & 4 \mathrm{~mm}^{2} 3 \mathrm{~m} \end{aligned}$ |
|  | CRP334 | 2G Switch Socket Outlet | 2G Switch Socket Outlet | 4G Data Plate LJU6C | NA |
|  | CRP334W | 2G Switch Socket Outlet | 2G Switch Socket Outlet | 4G Data Plate LJU6C | UT33201 GREY $4 \mathrm{~mm}^{2} 3 \mathrm{~m}$ |
|  | CRP336 | 2G Switch Socket Outlet Clean Earth | 2G Switch Socket Outlet Clean Earth | 4G Data Plate LJU6C | NA |
|  | CRP336W | 2G Switch Socket Outlet Clean Earth | 2G Switch Socket Outlet Clean Earth | 4G Data Plate LJU6C | $\begin{aligned} & \text { UT33204 CE RED } \\ & 4 \mathrm{~mm}^{2} 3 \mathrm{~m} \end{aligned}$ |

## 4 Compartment Configurations - $340 \times 265 m m$ Floorbox

|  | Part no. | Accessory Plate 1 | Accessory Plate 2 | Accessory Plate 3 | Accessory Plate 4 | Tap-Off |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CRP421 | 2G Switch Socket Outlet | Blank | Blank | 4G Data Plate LJU6C | NA |
|  | CRP421W | 2G Switch Socket Outlet | Blank | Blank | 4G Data Plate LJU6C | $\begin{aligned} & \text { UT33201 GREY } \\ & 4 \mathrm{~mm}^{2} 3 \mathrm{~m} \end{aligned}$ |
|  | CRP434 | 2G Switch Socket Outlet | 2G Switch Socket Outlet | Blank | 4G Data Plate LJU6C | NA |
|  | CRP434W | 2G Switch Socket Outlet | 2G Switch Socket Outlet | Blank | 4G Data Plate LJU6C | $\begin{aligned} & \text { UT33201 GREY } \\ & 4 \mathrm{~mm}^{2} 3 \mathrm{~m} \end{aligned}$ |
|  | CRP444 | 2G Switch Socket Outlet | 2G Switch Socket Outlet | 4G Data Plate LJU6C | 4G Data Plate LJU6C | NA |
|  | CRP444W | 2G Switch Socket Outlet | 2G Switch Socket Outlet | 4G Data Plate LJU6C | 4G Data Plate LJU6C | $\begin{aligned} & \text { UT33201 GREY } \\ & 4 \mathrm{~mm}^{2} 3 \mathrm{~m} \end{aligned}$ |



# SLAB BOXES 

RANGE INTRODUCTION

The Slab Box provides the same services (power and data) as a floorbox, but with the benefit of a more aesthetically pleasing grommet access.

FEATURES \& BENEFITS
FLEXIBLE EFFECTIVE UNDERFLOOR SOLUTON

## ALTERNATIVE OPTION TO FLOORBOXES

Use in conjunction with a grommet for an aesthetic alternative

COMPLIES WITH WIRING REGULATIONS
Provision of RCD protections supports IET 17th
Edition Wiring Regulations
WIDE RANGE OF POWER AND DATA ACCESSORIES

FAST AND EFFICIENT INSTALLATION

5 YEAR GUARANTEE

[^39]
## Slab Boxes

CONNECTION POINT FOR THE DISTRIBUTION OF POWER AND DATA SERVICES

- Flexible and cost effective underfloor solution

WIDE RANGE OF POWER SOCKETS, DATA PLATES AND OUTLETS

- Comprehensive range to meet all requirements
- Product quality guaranteed


AVAILABLE IN 1, 2, 3 AND 4 COMPARTMENTS

- Accommodates a wide range of accessory mounting plates

OPTIONAL BOX SUPPORT AVAILABLE

SIDE AND END ENTRY KNOCK OUTS

- Ensures a fast and simple installation


## Slab Boxes

| Part No. | Description |
| :--- | :--- |
| SB100 | 1 Compartment $190 \times 76 \times 45 \mathrm{~mm}$ |
| SB200 | 2 Compartments $190 \times 154 \times 45 \mathrm{~mm}$ |
| SB300 | 3 Compartments $190 \times 231 \times 45 \mathrm{~mm}$ |
| SB400 | 4 Compartments $190 \times 310 \times 45 \mathrm{~mm}$ |

## Box Supports

| Part No. |  |
| :--- | :--- |
| SB9001 | 1 Compartment Box Support |
| SB9002 | 2 Compartments Box Support |
| SB9003 | 3 Compartments Box Support |
| SB9004 | 4 Compartments Box Support |

## Partitions

| Part No. Description |  |
| :---: | :---: |
| SB9005 | Blank Partition |
| SB9006 | Interlink Partition |

## Slab Boxes

## Accessory Plates

Accessory Plates are supplied in Light Grey (LGY) finish.
Serviced Power Plates

|  | Part No. | Description |
| :---: | :---: | :---: |
|  | CRX10730* $\dagger$ | 2G 13A Switch Socket Outlet |
| CRX10731NS | CRX10735* $\dagger$ | 2G 13A Passive RCD Switch Socket Outlet |
| $\square^{1}=5^{8}=5^{2}$ | CRX10731 ${ }^{\dagger}$ | 2G 13A Socket Outlet |
|  | CRX10731NS ${ }^{\dagger}$ | 2G 13A Socket Outlet Non-Standard (T Pin) |
| CRX10720 | CRX10720 | 3G 13A Socket Outlet |
| - $\quad \therefore$. | CRX10741 | 2G 15A 127V USA Socket Outlet (non UK) |
|  | * For Clean Earth wiring - add suffix 'CE' e.g CRX10730CE. <br> ${ }^{+}$Plates are supplied with the MK Electric 3-pin safety shutter. |  |

## Unserviced Data Plates




## GROMMETS

## RANGE INTRODUCTION

Power, data and accessory grommets offer an ideal solution for a fast, simple and unobtrusive installation.

Easy to install and relocate if necessary, Grommets are ideal for use with Slab Box and DeskPod ${ }^{\text {Tw }}$, perfect for any office environment.

FEATURES \& BENEFITS

ROTARY OR SPLIT LID VARIATIONS
To meet all requirements
ONE TOUCH SELF-ADJUSTING MECHANISIM
For a fast, simple and secure installation
SPRING LOADED BLADES
For fast and simple installation
LID TETHER
For added security
WIDE RANGE
Available in $5^{\prime \prime}$ and $8^{\prime \prime}$
5 YEAR GUARANTEE

## HOW TO SPECIFY

A range of $5^{\prime \prime}$ and $8^{" \prime}$ power, data and accessory grommets for use on underfloor power systems. Access to be available via rotary or split lid configurations. A one touch self-adjusting fixing mechanism featuring spring loaded blades to enable fast and simple installation. Integral lid tethers to provide additional security and prevent lid losses.

## Grommets

 mechanism

## Grommet Boxes

Grommets provide an aesthetic alternative to floorboxes and offer the additional benefits of being fast and simple to install.

- Choose from 5" or 8" grommets
- Range includes both Access Grommets and Serviced Grommets
- Ideal for use with DeskPod™ (8" Grommet) or Slab Box


## 5" Access Grommet Boxes



## 5" Power Grommet Boxes



| Part Number |  |
| :--- | :--- |
| GR200GRY | Poscription |
| GR201GRY | Power Grommet BS 1363 MK Switch Socket Outtet |
| GR205GRY | Power Grommet BS546 5A MK Switch Socket Outlet |

## 5" Data Outlet Grommet Boxes



| Part Number | Description |
| :--- | :--- |
| GR5050GRY | $50 \times 50 \mathrm{~mm}$ EURO Accessory Grommet (unserviced) |
| GR800GRY | $2 \times$ LJU6C Grommet (unserviced) |

> GR800GRY

## 8" Grommets

Larger grommets have an increased cord outlet size making them ideal to house DeskPod ${ }^{\text {Tm }}$ conduits.

8" Access Grommets

|  | Part Number | Description |
| :--- | :--- | :--- |
| GR850GRY | Simple Access Grommet (push fit) |  |
| GR855GRY | Secure Access Grommet* |  |
| ${ }^{*}$ Comes with fixing clips |  |  |

## 1 Compartment Cablelink Plus Single Pan Floorboxes



| Part Number | Description |
| :--- | :--- |
| CRB100UK-1GRY* | $100 \times 200 \mathrm{~mm}$ Single Compartment Floorbox -95 mm Deep |
| CRP100-RCD | $100 \times 200 \mathrm{~mm}$ Single Compartment Floorbox fitted with RCD 16A 30mA $2 \times$ module RCD Socket Outlet |
| CRP101 | $100 \times 200 \mathrm{~mm}$ Single Compartment Floorbox fitted with 2G 13A Socket Outlet |
| CRP121 | $100 \times 200 \mathrm{~mm}$ Single Compartment Floorbox fitted with 1G 13A Socket outlet and $2 \times$ LJU6C aperture |

* Accessory Plates - see below for details.

| Accessory Plates for 1 Compartment Cablelink Plus Single Pan Floorboxes |  |  |  |
| :---: | :---: | :---: | :---: |
| Serviced Power Plates |  | Unserviced Data Plates |  |
| Standard Part No. | Description | Standard Part No. | Description |
| CXP10745 | 2G 13A Angled Socket Outlet | CXP20101 | $2 \times$ LJU/2 Apertures |
|  |  | CXP20200 | $2 \times$ LJU6C Apertures |
|  |  | CXP20201* | $4 \times$ LJUGC Apertures |
|  |  | CXP20215 | $4 \times$ LJU6C Wave Apertures |
|  |  | CXP20205 | $4 \times$ Krone Apertures |
|  |  | CXP20301 | $6 \times$ LJU6C Apertures |
|  |  | CXP30501 | $2 \times$ Euro $50 \times 50 \mathrm{~mm}$ Apertures |
|  |  | CXP20500 | $4 \times$ ST Fibre Connector Apertures |
|  |  | CXP30201 | Blank Plate |

[^40]

## DESKPOD ${ }^{\text {™ }}$

## RANGE INTRODUCTION

DeskPod ${ }^{\text {TM }}$ offers a comprehensive range of fully customisable and pre-configured desk modules, providing convenient access to power and data services to the end user, where it is needed.

Delivering the final link in the chain of the power distribution circuit, DeskPod ${ }^{\text {TM }}$ modules are compatible with the Interact Underfloor Power System, Cablelink Plus Floorboxes and Grommets

The range incorporates in-built product design features to address the increasing and varied demands of individual requirements.

## FEATURES \& BENEFITS

TOTAL FLEXIBILITY
Custom designed and versatile to suit all requirements

MANUFACTURED FROM ANODISED ALUMINIUM AND POLYCARBONATE

Chemical, colour fade, impact resistant and flame retardant

AVAILABLE WITH DUAL USB CHARGING MODULE
With Dynamic Device Recognition ideal for tablets, smart phones, cameras

PRE-WIRED TAP OFFS
For easy installation
COMPLIES WITH WIRING REGULATIONS
Provision of RCD protections supports IET 17th Edition Wiring Regulations

5 YEAR GUARANTEE

## HOW TO SPECIFY

A range of 3 and 4 pole desk modules to provide convenient access to power and data services with provision for data modules and RCD protection. Product to be manufactured from anodised aluminium and polycarbonate to provide, chemical, colour fade, impact resistance and flame retardant properties.


TAP-OFFS
Available pre-wired to tap-offs for quick installation - see page 401

8" GROMMET
Provide access where DeskPods are contained within the floor void -
see page 394


INTEGRAL FIXING BRACKET

- In-built 2 position bracket to allow fast and simple mounting of the unit

INCOMING SUPPLY

- Conduit entry available for hard wiring tap-offs
- Flex entry available for hard wiring to a BS 1363 plug
- $\quad 3$ and 4 pole Wago or Wieland connectors
- Other industry standard options available on request


PROTECTION

- Choice of MCB, RCD, RCBO or unit fusing at 12.5A

WIRING CONFIGURATION

- Available as Standard, Clean Earth or High Integrity Earthing† compliant

EXTERNAL EARTH LEAD

- All power units include an earth lead to allow bonding to any metalwork, e.g. desk installation



## Custom Designed DeskPods

The design service enables customised floorboxes to be configured and delivered to meet individual requirements.
Step 1 Choose the shroud for the DeskPod unit
Step 2 Choose the in feed option
Step 3 Does the unit require any connection to a tap-off?
Step 4 Does the unit require any protection?
Step 5 Choose the number and type of sockets required
Step 6 Choose the number and type of data modules
Step 7 Choose the end feed options

## Supply Options

|  | Option Ref. |
| :--- | :--- |

All end caps include fixing bracket. * Wieland GST connectors include retaining clip to minimise risk of accidental disconnection. ** Wago Winsta, Neuturik and other components available on request.

## Wiring Options

| Option Ref. |  |
| :--- | :--- |
| STANDARD | Single protective conductor |
| CLEAN EARTH | Additional clean earth protective conductor |
| HIGH INTEGRITY EARTHING | Protective conductor meets requirements for High Integrity Earthing=, BS 7671:2008 <br> IET Wiring Regulations |

${ }^{\dagger}$ In the 17th Edition of the IET Wiring Regulations, these requirements are found in Regulation 543.7.

## Circuit Protection Options

| Option Ref. |  | Description |  |
| :--- | :--- | :--- | :---: |
|  | UNIT FUSE | 12.5A High breaking capacity ceramic fuse to BS EN60127-2 <br> Fuse length: 32 mm Fuse diameter: 6.35 mm |  |
|  | MCB | $16 \mathrm{~A}^{\star}$, Type B, Single Pole, 6kA (MK Sentry) |  |
|  | RCD | $16 \mathrm{~A}, 30 \mathrm{~mA}$ tripping current, Double Pole, 6kA (MK Sentry) |  |
|  | RCBO | $10 \mathrm{~A}^{\star}$, Type C, 30 mA tripping current, Double Pole 6 kA |  |

[^41]
## Circuit Isolation



* Alternative circuit protection ratings available on request. All circuit protection devices are from the MK Sentry range. RCD's do not provide overcurrent protection.


## Socket Outlets - Standard

| Item |  | Description |
| :---: | :---: | :---: |
|  | UNFUSED | Colour of socket outlet - black |
|  | FUSED | Individually fused 3.15 or 5 ${ }^{*}$. Colour of socket outlet - black |
|  | USB MODULE | Dual USB changing module |

* For information regarding available socket and fuse options see technical page 684.


## Spacers

|  | Item | To provide extra space for internal cable termination and capacity, extra width on the socket for <br> transformer plugs and other adaptors |
| :--- | :--- | :--- |
|  | HALF SPACER | To provide extra space for internal cable termination and capacity, extra width on the socket for <br> transformer plugs and other adaptors |

End Caps

BLANK CONDUIT ENTRY | Solid end cap. End cap includes Ø20mm or Ø25mm cutter position holes for conduit or cable gland |
| :--- |
| (used for data only module) |

## End Caps

|  | Part Number <br> Wieland GST <br> Connector |  | Description <br> Wago WINSTA <br> Connector |
| :--- | :--- | :--- | :--- |
|  | DPC1120 | DPC1320 | Power lead 1.5mm², 13A plug to 3 Pole (female) connector 2 metres |
|  | DPC1130 | DPC1330 | Power lead $1.5 \mathrm{~mm}^{2}, 13$ A plug to 3 Pole (female) connector 3 metres |
|  | DPC1150 | DPC1350 | Power lead $1.5 \mathrm{~mm}^{2}, 13$ A plug to 3 Pole (female) connector 5 metres |


| End Caps |
| :--- |
| $\qquad$Part Number <br> Wieland GST <br> Connector |
| $\qquad$Wago WINSTA <br> Connector |
|  |
|  |
|  |

[^42]${ }^{+}$In the 17th Edition of the IET Wiring Regulations, these requirements are found in Regulation 543.7

## Tap-off Leads

- Choose from a vast range of tap-off leads to meet installation requirements

DUAL USB CHARGING

- Alternative tap-offs available on request


| Type | Pin Position |  |  |  | Cable / <br> Conduit |  | Protection | $\begin{aligned} & 3 \text { metre * }^{2.5 \mathrm{~mm}^{2}} \end{aligned}$ | $4.0 \mathrm{~mm}^{2}$ | 5 metre* <br> $2.5 \mathrm{~mm}^{2}$ | $4.0 \mathrm{~mm}^{2}$ | Key codes ${ }^{\dagger}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| STANDARD GREY |  | N2 | L2 | PE | LSF / LSF | 13A | Fused | UT31301C |  | UT51301C |  |  |
|  |  |  |  |  | 16 mm | 32A | Unfused |  | UT33201 |  | UT53201 |  |
|  |  |  |  |  | 16 mm | 13A | Fused | UT31301 |  | UT51301 |  |  |
| AUX / PHASE 1 GREEN | PE N1 L | L1 |  |  | LSF / LSF | 13A | Fused | UT31302C |  | UT51302C |  |  |
|  |  |  |  |  | 16 mm | 32A | Unfused |  | UT33202 |  | UT53202 |  |
|  |  |  |  |  | 16 mm | 13A | Fused | UT31302 |  | UT51302 |  |  |
| PHASE 2 GREEN | PE N1 | L2 |  |  | LSF / LSF | 13A | Fused | UT31310C |  | UT51310C |  |  |
|  |  |  |  |  | 16 mm | 32A | Unfused |  | UT33210 |  | UT53210 |  |
|  |  |  |  |  | 16 mm | 13A | Fused | UT31310 |  | UT51310 |  |  |
| PHASE 3 GREEN | PE N1 |  | L3 |  | LSF / LSF | 13A | Fused | UT31311C |  | UT51311C |  |  |
|  |  |  |  |  | 16 mm | 32A | Unfused |  | UT33211 |  | UT53211 |  |
|  |  |  |  |  | 16 mm | 13A | Fused | UT31311 |  | UT51311 |  |  |
| ALL PHASE GREEN | PE N1 | L1 L2 | L3 |  | 16 mm | 28A | Unfused |  | UT33205 |  | UT53205 |  |
| CE RED | CE N1 | L1 |  | PE | LSF / LSF | 13A | Fused | UT31304C |  | UT51304C |  |  |
|  |  |  |  |  | 16 mm | 32A | Unfused |  | UT33204 |  | UT53204 |  |
|  |  |  |  |  | 16 mm | 13A | Fused | UT31304 |  | UT51304 |  |  |
| DUO (RED) | CE N1 | L1 N2 | L2 | PE | 20 mm | 28A | Unfused |  | UT33206 |  | UT53206 |  |

4 m tap-offs and other alternatives are available on request via MK Design Service, See page 16.
Tap-offs are supplied as single cables inside steel flexible conduit, except those with ' $C$ ' suffix, which are supplied with 3 or 4 core LSF flex, as appropriate.

* Unfused tap-offs in excess of 3m, can only be used on powertrack protected with a 32A (or less) circuit protection device.
** When fully stretched to ensure the conductor lengths do not exceed 3 m to comply with BS 7671:2008 17th Edition IET Wiring Regulations to ensure the conduit remains flexible this is then shortened by a further
$0.1-0.2$ of slack when wired to a module.
${ }^{\dagger}$ Key codes shown are from the perspective of the Power Track socket, the tap-off key code will be a mirror image when viewed from underneath. Add 'DE' suffix for Dual Earth High Integrity Earthing ${ }^{\dagger t}$, e.g. UT51301DE. Unfused tap-offs - High Integrity Earthing' ${ }^{\dagger+}$ as standard. Fused tap-offs - add '607' suffix for High Integrity Earthing ${ }^{\dagger \dagger}$, e.g. UT51301607



## CASE STUDY

## SIR CHRIS HOY VELODROME, GLASGOW

The Sir Chris Hoy Velodrome, part of the Emirates Arena complex, is a brand new, state-of-the-art facility owned by Glasgow City Council. Opened in October 2012, the joint venue is located on a 10.5 hectare site in Dalmarnock and provides a first class venue that will inspire thousands of youngsters to follow in the footsteps of some of their favourite sport stars.

As part of the $£ 113 \mathrm{~m}$ development, MK Electric's Power Distribution Systems was chosen by the architect group, 3DReid, and consultant, Arup, in conjunction with the project managers to supply three main products to the site; the Onix Plus screed floorbox, the Cablelink Plus single pan raised floorbox and the DeskPod.
"Further to workshops with the design team, FES selected MK Electric as we believed their product range would be the best solution to complement the building fabric."

Chris Allen, senior operations director, FES

## ONIX PLUS ${ }^{\text {m }}$

## RANGE INTRODUCTION

## Onix Plus ${ }^{\text {rTM }}$ Floorboxes and Power

 Grommets are a unique, innovative solution to hard floor power and data distribution requirements in screed floors with coverings such as laminate, wood, stone and marble.Stylish and robust design offers superior load bearing performance and greater durability. Floorbox lids with snorkel or plain lid provide wet wash solutions.

Used in conjunction with the Cablelink Plus Screed Ducting System these products are ideal for reception areas, offices, airports, shopping malls and exhibition halls.

FEATURES \& BENEFITS
IP44 RATED
Wet washable and IP44 rated when not in use
TESTED TO EN 50085-2-2 TO ACCEPT 10,000N LOAD

5kN for Onix Plus Grommet
COMPLIES WITH WIRING REGULATIONS
Provision of RCD protections supports IET 17th
Edition Wiring Regulations
SUPPORTS CAT 6

FLEXIBLE SOLUTION
Selection of lid recess depths available, allowing for various floor depths

WIDE RANGE OF POWER AND DATA ACCESSORIES

5 YEAR GUARANTEE

## HOW TO SPECIFY

A range of 2,3 and 4 compartment floorboxes and grommets to supply power and data services in screed floor systems. Products to be wet washable to IP44 when products are not in use and tested to EN50085-2-2 to accept 10,000N loads. Adjustable to accommodate floor covering thicknesses between 12 mm and 30 mm . Provision of RCD protection to support compliance to 17th Edition Wiring Regulations. Available in Aluminium, Nickel and Brass colour options.

Onix Plus ${ }^{\text {Tm }}$ Floorbox with Snorkel Cord Outlet Lid
TESTED TO EN50085-2-2 TO ACCEPT 10,000N LOAD

SNORKEL CORD OUTLET

- Design allows access of plug tops and 16A 2P+E MK Commando Plug
- Supplied with a 9 mm wide flange to cater for poorly cut tile infills

WET WASHABLE

- Plain lid and snorkel design allows floor to be washed even when in use
- The lid will withstand 10 mm of standing water when in use


ATTRACTIVE, AESTHETIC LIDS

- Stylishly designed
- Recess depth options available to suit


STAGGERED PLATE

- Provides strain relief clearance for moulded plug tops
- Stagger only available with 3 and 4 compartment floorboxes


BASE FIXING FEET

SERVICE OUTLET BOX

- Option of two screed depths: $55-80 \mathrm{~mm}$ and $80-110 \mathrm{~mm}$
- Deeper screed depths available on request
- Flat sided base design ensures a stronger screed solution and faster taping
- 'Fast fix' installation


## Onix Plus ${ }^{\text {™ }}$ Boxes and Snorkel Lids

The Base Units are installed prior to screeding. Designed for use with the Cablelink Plus Screed Ducting System (see page 422 for more details). Snorkel design allows floor to be washed even when in use - IP44 when not in use, IP2 x when in use.

## Onix Plus Box Selector Guide

- Service Outlet Boxes and Junction Boxes are ordered as two parts - "Base" and "Lid"
- Base - identify screed depth, number of compartments required and preferred box size
- Lid - choice of lid type, available with and without snorkel
- Junction Box - supplied complete with disposable steel screed lid and cable flyover
- Accessory Plates - select from wide range of power and data see page 423 for details
- Alternative deeper Junction Boxes and Screed Base Unit depths are available - please contact Technical Services for details


## Screed Base Units: Standard



| Base size | $200 \times 200 \mathrm{~mm}$ | $265 \times 265 \mathrm{~mm}$ | $340 \times 340 \mathrm{~mm}$ |
| :--- | :--- | :--- | :--- |
| Compartment | 2 | 3 | 4 |
| SCREED 55-80MM <br> 35MM WIRING SPACE | NXB200UK-2 | NXB265UK-3 | NXB340UK-4 |
| SCREED <br> 80-110MM <br> 35MM WIRING SPACE |  | NXB265XUK-3 | NXB34OXUK-4 |

Wiring space can also be reduced to 25 mm when used in shallow screed depths. Both require the use of a plate height adjustment kit - part number CUBA-1. For 200x200mm base, use 'Compact' power and data plates only - see page 423 .
Supplied with PVC ducting side plates. Number of ducting knockouts varies by size: $200 \times 200 \mathrm{~mm}-2 \times 60 \times 25 \mathrm{~mm}$
$265 \times 265 \mathrm{~mm}-3 \times 60 \times 25 \mathrm{~mm}$ and $340 \times 340 \mathrm{~mm}-3 \times 90 \times 35 \mathrm{~mm}$. see page 423 for alternative plates
If screed depth is $55-65 \mathrm{~mm}$, reduce height by use of CUBA-1 and use side entry power socket outlets - see page 423.

## Junction Boxes

| Size | $200 \times 200 \mathrm{~mm}$ | $265 \times 265 \mathrm{~mm}$ | $340 \times 340 \mathrm{~mm}$ |
| :--- | :--- | :--- | :--- |
| $55-80 \mathrm{MM}$ | NXJ200UK | NXJ265UK | NXJ340UK |
| $80-110 \mathrm{Mm}$ | NXJ200XUK | NXJ265XUK | NXJ340XUK |

Disposable steel screed lid and cable flyover supplied as standard. LIDS MUST BE ORDERED SEPARATELY.
Supplied with four side adaptor plates, 4 PVC ducting plates. Number of ducting knockout varies by size:
$200 \times 200 \mathrm{~mm}-2 \times 60 \times 25 \mathrm{~mm}, 265 \times 265 \mathrm{~mm}-3 \times 60 \times 25 \mathrm{~mm}$ and $340 \times 340 \mathrm{~mm}-3 \times 90 \times 35 \mathrm{~mm}$. See page 411 for alternative plates
Increased screed depth junction boxes available on request.

Box Lid: Snorkel Lid

| Size | $\mathbf{2 0 0} \times \mathbf{2 0 0 m m}$ | $\mathbf{2 6 5 \times 2 6 5 m}$ | $340 \times 340 \mathrm{~mm}$ |
| :--- | :--- | :--- | :--- | :--- |
| Depth 80-110 MM |  |  |  |
| RECESS DEPTH 15MM | NXLS200X-15 | NXLS265X-15 | NXLS340X-15 |
| RECESS DEPTH 20MM | NXLS200X-20 | NXLS265X-20 | NXLS340X-20 |
| RECESS DEPTH 25MM | NXLS200X-25 | NXLS265X-25 | NXLS340X-25 |
| RECESS DEPTH 30MM | NXLS200X-30 | NXLS265X-30 | NXLS340X-30 |

See page 685 to determine the minimum screed depth/finished floor depth combination required to enable the snorkel lid to close. All supplied as stainless steel lid with snorkel. Lids are supplied with frame and fittings.

Onix Plus ${ }^{\text {m" }}$ Floorbox with Edge Cord Outlet Lid

TESTED TO EN50085-2-2 TO ACCEPT 10,000N LOAD

ROBUST CORD CAPS*

- Designed for improved retention

ROBUST LOAD PLATE

- Superior load bearing performance
- Ideal for areas of heavy foot traffic
- A tile lifter should be used to lift all Onix Plus lids

STAGGERED PLATE

- Provides strain relief clearance for moulded plug tops
- Stagger only available with 3 and 4 compartment floorboxes


BASE FIXING FEET

- 'Fast fix' installation

ATTRACTIVE, AESTHETIC LIDS

- Stylishly designed
- Lid options allow for various floor coverings to be used



## Onix Plus ${ }^{\text {rTM }}$ Boxes, Cord Outlet and Blank Lids

The Base Units are installed prior to screeding. Designed for use with the Cablelink Plus Screed Ducting System - see page 422 for more details. Blank Lid is suitable for wet wash applications.

## Onix Plus Box Selector Guide

- Service Outlet Boxes and Junction Boxes are ordered as two parts, "Base" and "Lid"
- Junction Boxes - are supplied as a base and cable flyover
- Base - identify screed depth, number of compartments required and preferred box size
- Lid - choice of lid type. Cord Outlet Lid or Blank Lid. Cord caps must be ordered separately
- Accessory Plates - select from wide range of power and data options, see page 423 for details
- Alternative deeper Junction Boxes and Screed Base Unit depths are available - please contact Technical Services for details


## Screed Base

Units: Standard

| Base size | $200 \times 200 \mathrm{~mm}$ | $265 \times 265 \mathrm{~mm}$ | $340 \times 340 \mathrm{~mm}$ |
| :--- | :--- | :--- | :--- |
| Compartment | 2 | 3 | 4 |
| SCREED 55-80MM <br> 35MM WIRING SPACE | NXB200UK-2 | NXB265UK-3 | NXB340UK-4 |
| SCREED 80-110MM <br> 35MM WIRING SPACE |  | NXB265XUK-3 | NXB340XUK-4 |

Wiring space can also be reduced to 25 mm when used in shallow screed depths. Both require the use of a plate height adjustment
kit - part number CUBA-1. For $200 \times 200 \mathrm{~mm}$ base, use 'Compact' power and data plates only - see page 423
Supplied with four PVC side adaptor plates. Number of apertures varies by size: $200 \times 200 \mathrm{~mm}-2 \times 60 \times 25 \mathrm{~mm}$,
Supplied with four PVC side adaptor plates. Number of apertures varies by size: $200 \times 200 \mathrm{~mm}-2 \times 60 \times 2$
$265 \times 265 \mathrm{~mm}-3 \times 60 \times 25 \mathrm{~mm}$ and $340 \times 340 \mathrm{~mm}-3 \times 90 \times 35 \mathrm{~mm}$. See page 423 for alternative plates.
If screed depth is $55-65 \mathrm{~mm}$, reduce wiring space to 25 mm by use of suitable CUBA kit and use side entry power socket outlets see page 423.

Junction Boxes

| Size | $200 \times 200 \mathrm{~mm}$ | $265 \times 265 \mathrm{~mm}$ | $340 \times 340 \mathrm{~mm}$ |
| :--- | :--- | :--- | :--- |
| $55-80 \mathrm{~mm}$ | NXJ200UK | NXJ265UK | NXJ340UK |
| $80-110 \mathrm{MM}$ | NXJ200XUK | NXJ265XUK | NXJ340XUK |

Supplied complete with a disposable steel screed lid and cable flyover as standard. LIDS MUST BE ORDERED SEPARATELY.
Supplied with four side adaptor plates, $4 \times$ PVC ducting plates. Number of apertures varies by size
$200 \times 200 \mathrm{~mm}-2 \times 60 \times 25 \mathrm{~mm}, 265 \times 265 \mathrm{~mm}-3 \times 60 \times 25 \mathrm{~mm}$ and $340 \times 340 \mathrm{~mm}-3 \times 90 \times 35 \mathrm{~mm}$. See page 411 for alternative plates.

Box Lids: Cord
Outlet Lid


| Size | $200 \times 200 \mathrm{~mm}$ | $265 \times 265 \mathrm{~mm}$ | $340 \times 340 \mathrm{~mm}$ |
| :--- | :--- | :--- | :--- | :--- |
| Depth 55-80mm |  |  |  |
| RECESSS DEPTH 15MM | NXLC200-15 | NXLC265-15 | NXLC340-15 |
| RECESSS DEPTH 20MM | NXLC200-20 | NXLC265-20 | NXLC340-20 |
| RECESSS DEPTH 25MM | NXLC200-25 | NXLC265-25 | NXLC340-25 |
| RECESSS DEPTH 30MM | NXLC200-30 | NXLC265-30 | NXLC340-30 |
| Depth 80-110mm |  |  |  |
| RECESSS DEPTH 15MM | NXLC200X-15 | NXLC265X-15 | NXLC340X-15 |
| RECESSS DEPTH 20MM | NXLC200X-20 | NXLC265X-20 | NXLC340X-20 |
| RECESSS DEPTH 25MM | NXLC200X-25 | NXLC265X-25 | NXLC340X-25 |
| RECESSS DEPTH 30MM | NXLC200X-30 | NXLC265X-30 | NXLC340X-30 |

Cord outlet lid is not suitable for wet wash applications. Supplied as stainless steel lid.
Cord caps must be ordered separately. Lids are supplied with frame and fittings.

## Box Lids:

Blank Lid

| Size | $200 \times 200 \mathrm{~mm}$ | $265 \times 265 \mathrm{~mm}$ | $340 \times 340 \mathrm{~mm}$ |
| :---: | :---: | :---: | :---: |
| Depth 55-80mm |  |  |  |
| RECESSS DEPTH 15MM | NXLB200-15 | NXLB265-15 | NXLB340-15 |
| RECESSS DEPTH 2OMM | NXLB200-20 | NXLB265-20 | NXLB340-20 |
| RECESSS DEPTH 25MM | NXLB200-25 | NXLB265-25 | NXLB340-25 |
| RECESSS DEPTH 30MM | NXLB200-30 | NXLB265-30 | NXLB340-30 |
| Depth $80-110 \mathrm{~mm}$ |  |  |  |
| RECESSS DEPTH 15MM | NXLB200X-15 | NXLB265X-15 | NXLB340X-15 |
| RECESSS DEPTH 20MM | NXLB200X-20 | NXLB265X-20 | NXLB340X-20 |
| RECESSS DEPTH 25MM | NXLB200X-25 | NXLB265X-25 | NXLB340X-25 |
| RECESSS DEPTH 3OMM | NXLB200X-30 | NXLB265X-30 | NXLB340X-30 |

Blank Lid is suitable for wet wash applications. Supplied as a stainless steel lid.
Lids are supplied with frame and fittings.

| CORD CAP |  |
| :--- | :--- |
| Part Number | Description |
| NXLC-01GRY | Cord Cap - Grey (RAL 7011) |
| NXLC-01BEG | Cord Cap - Beige (RAL 1019) |

## Onix Plus ${ }^{\text {™ }}$ Metal Power Grommet

SIMPLE FLOOR
THICKNESS ADJUSTMENT
－Accommodates floor covering thicknesses between 12 mm and 30 mm

BASE FIXING FEET
－Fast Fix Installation


COLOUR OPTIONS
－Available in Aluminium，Nickel finish and Brass

## Onix Plus ${ }^{\text {Tm }}$ Metal Power Grommet

The range of power grommets provide access to power in areas where standard plastic grommets are not robust enough, where improved aesthetics are required, or a wet wash solution is required.

## IP44 Wet Wash

Specifically designed to seal against water ingress to IP44 when the lid is closed, allowing the floor to be washed.

## Onix Plus Metal Grommet Selector Guide

- Base - select preferred base depth (use for screed floors only)
- Grommet - choose finish of unserviced grommet
- Select either switched Socket Outlet or Unserviced Data Outlet to service the grommet
- Serviced Data Grommets are available via the Design Service


## Screed Base Units

|  | Part No. <br> NXGB100-1 | Grommet Base Unit $55-80 \mathrm{~mm}$ depth |
| :--- | :--- | :--- |
| NXGB100X-1 | Grommet Base Unit $80-110 \mathrm{~mm}$ |  |
| * A minimum finished floor thickness of 68 mm is required. (Screed and floor tile thickness added together). <br> * Conduit entry only, not compatible with ducting. |  |  |

## Serviced Power Grommets*



NXGCALP

Part No. Description

| NXGCALP | 13A 1G Switched Socket Outlet Grommet - Aluminium |
| :--- | :--- |
| NXGCBRP | 13A 1G Switched Socket Outlet Grommet - Brass |
| NXGCNIP | 13A 1G Switched Socket Outlet Grommet - Nickel |

Socket outlets feature the MK Electric 3-pin operated safety shutter.
*Not dual earth

## Unserviced Data Grommets



MXGCALD

| Part No. | Description |
| :--- | :--- |
| NXGCALD | Unserviced Grommet with $1 \times 50 \times 75 \mathrm{~mm}$ Euro aperture - Aluminium |
| NXGCBRD | Unserviced Grommet with $1 \times 50 \times 75 \mathrm{~mm}$ Euro aperture - Brass |
| NXGCNID | Unserviced Grommet with $1 \times 50 \times 75 \mathrm{~mm}$ Euro aperture - Nickel |

## Accessory Plates

Accessory plates are common to most ranges, they will fit all Onix Plus ${ }^{\text {Tm }}$, Cablelink Plus Single Pan, and Screed floorboxes. Standard Plates are for use with $265 \times 265 \mathrm{~mm}, 340 \times 265 \mathrm{~mm}$ and $340 \times 340 \mathrm{~mm}$ Floorboxes. Compact Plates are for use with $200 \times 200 \mathrm{~mm}$ Floorboxes only. Both Standard and Compact Plates are supplied in Light Grey (LGY) finish.

## Serviced Power Plates



## Unserviced Data Plates



* Data apertures are supplied as knockouts. = Additional floor depth restrictions apply when using these plates - See page 685 for details. Compact Plates (power and data) are for use with $200 \times 200 \mathrm{~mm}$ bases.

| Side Adaptor | Side plate | CUBP200-01 | CUBP200-02 | CUBP200-03 | CUBP200-04 | CUBP200-08 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Plates | APERTURE TYPE | BLANK BLANK | ROUND CONDUIT* | PVC | PVC | METAL DUCTING |
|  | APERTURE SIZE |  | 25/20 | $60 / 25$ | 90 /35 | UP TO 100x38 |
|  | NO. PER PLATE |  | 2/2 | 2 | 1 |  |
|  | Side plate | CUBP265-01 | CUBP265-02 | CUBP265-03 | CUBP265-04 | CUBP265-08 |
|  | APERTURE TYPE | BLANK BLANK | ROUND CONDUIT* | PVC | PVC | METAL DUCTING |
|  | APERTURE SIZE |  | 25/20 | $60 / 25$ | 90 / 35 | UP TO 225×38 |
|  | NO. PER PLATE |  | 3/2 | 3 | 2 |  |
|  | Side plate | CUBP340-01 | CUBP340-02 | CUBP340-03 | CUBP340-04 | CUBP340-08 |
|  | APERTURE TYPE | blank blank | ROUND CONDUIT* | PVC | PVC | METAL DUCTING |
|  | APERTURE SIZE |  | 25/20 | $60 / 25$ | 90/35 | UP TO $300 \times 38$ |
|  | NO. PER PLATE |  | 4/4 | 4 | 3 |  |



## CASE STUDY

## THE CO-OPERATIVE GROUP HEADQUARTERS, MANCHESTER

When The Co-operative Group set about identifying a site to replace its city centre estate the challenge lied in erecting a flexible and future-proofed building that could accommodate a mobile and dynamic working style, without compromising aesthetics.

To meet The Group's needs, MK Electric supplied 89 Onix Plus ${ }^{\text {TM }}$ Floorboxes and Power Grommets with snorkel lids, and 21 of the same solution with blank lids.
"From the design and construction of the building, to the electrical components used and management of the project, One Angel Square sets a new international benchmark in sustainable design within the commercial sector and is widely acknowledged as one of the most sustainable large office spaces in Europe. The new head office also benefits from MK Electric's innovative floorbox solution which will allow our business to be as flexible as possible as our building and layout needs change and evolve."

David Pringle, Director of NOMA


## CABLELINK PLUS SCREED SYSTEM

## RANGE INTRODUCTION

Cablelink Plus Screed System provides adaptable power and data distribution highways in screed floors.

Specifically designed to offer superior load bearing performance and greater robustness.

The Screed System consists of Service Outlet Boxes, Junction Boxes, Vertical Access Boxes, PVCu and Metal Ducting. These can be used together to provide a complete layout in floors with an overall finished floor depth as low as 64 mm

## HOW TO SPECIFY

A power and data distribution system designed for use in screed floors consisting of outlet boxes, junction boxes, access boxes PVCu and Metal ducting. All product to be suitable to fit in screeded depths of 55 mm to 110 mm and tested to comply to EN50085-2-2. One, Two, Three and Four compartment floorbox products to be available with self closing lids and and wide provision of RCD protection to support compliance to 17th Edition Wiring Regulations. All products to designed to support Cat 6 structured cabling systems.

FEATURES \& BENEFITS

TESTED TO EN 50085-2-2 TO ACCEPT 5000N LOAD

CAT 6 \& CAT 6A COMPLIANT

## FLEXIBLE SOLUTION

Choice of 1, 2, 3 or 4 compartment floorboxes
SUITABLE FOR SCREEDED DEPTH FROM 55MM TO 110MM

COMPLIES WITH WIRING REGULATIONS
Provision of RCD protections supports IET 17th
Edition Wiring Regulations. Floorboxes are IP2X rated in accordance with BS EN 50085-1

## SELF-CLOSING LID

In compliance with IEC 61534-22
PVCu DUCTING MANUFACTURED FROM 100\% RECYCLED MATERIAL*

WIDE RANGE OF POWER AND DATA ACCESSORIES

5 YEAR GUARANTEE
*Based on 2014 consumption

Screed System
dUCTING

- Choice of PVCu or metal
- PVCu ducting sizes: $90 \times 35 \mathrm{~mm}$ and $60 \times 25 \mathrm{~mm}$
- PVCu ducting manufactured from $100 \%$ recycled material


LID OPENING TO $80^{\circ}$

- Self closing lid in accordance with IEC 61534-22


STAGGERED PLATES

- Provides strain relief clearance for moulded plugs
- Stagger only available with 3 and 4 compartment floorboxes
- Option of two screed depth variants: $55-80 \mathrm{~mm}$ and $80-110 \mathrm{~mm}$
- Flat side base design ensures a stronger screed solution and faster taping
- Optional 10 mm plate height adjustment kit for increased wiring space to support Cat 6 and Cat 6A compliance
- Deeper screed depths available on request
- Deeper screed depths have fixed wiring spaces
- IP2X rated in accordance with BS EN 50085-1


## Screed System

JUNCTION BOX FLY OVER

- Allows for 'through', 'tee', 'angle' and 'crossover' configurations
- Supports Cat 6 \& Cat 6A compliance

ROBUST CORD CAPS

- Designed to improve retention


OPTIONAL CABLE RETAINERS

- Acts as cable tidy to prevent
cables being trapped


## Screed Outlet Boxes

The Service Outlet Box should be positioned directly on the structural floor slab．The box provides location and connection facilities for power and data service outlets．

## Service Outlet Box Selector Guide

－Service Outlet Boxes are ordered as two parts－＂Base＂and＂Frame and Lid＂
－Base－identify screed depth，number of compartments required and preferred box size
－Frame and Lid－choose trim colour and lid recess depth
－Side Adaptor Plates－choose alternative to PVC ducting plates if required
－Accessory Plates－select from wide range of power and data options－see page 423

| Base | Base size <br> Compartment | $\begin{aligned} & 100 \times 200 M M^{*} \\ & 1 \end{aligned}$ | $\begin{aligned} & 200 \times 200 \mathrm{MM} \\ & 2 \end{aligned}$ | $\begin{aligned} & 265 \times 265 M M \\ & 3 \end{aligned}$ | $\begin{aligned} & 340 \times 265 M M \\ & 4 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | SCREED 55－80MM 35MM WIRING SPACE | CUB100UK－1 | CUB200UK－2 | CUB265UK－3 | CUB340UK－4 |
|  | SCREED 80－110MM 35MM WIRING SPACE | CUB100XUK－1 | CUB200XUK－2 | CUB265XUK－3 | CUB340XUK－4 |

Increased wiring space of 45 mm below the plate is required to achieve Cat 6 \＆Cat 6 A compliance．Wiring space can also be reduced to 25 mm when used in shallow screed depths． Both require the use of a plate height adjustment kit－part number CUBA－1．
Disposable steel screed lid（recyclable）supplied as standard．If screed depth is 55 mm ，reduce wiring space to 25 mm by use of suitable CUBA kit，floor covering must be 8 mm thick when compressed，and use side wired socket outlets－see page 423．Supplied with $4 \times$ PVC Ducting side plates．Number of knockouts varies by size： $100 \times 200 \mathrm{~mm}-$ $1 \times 60 \times 25 \mathrm{~mm}, 265 \times 265 \mathrm{~mm}-3 \times 60 \times 25 \mathrm{~mm}$ and $340 \times 265 \mathrm{~mm}-3 \times 90 \times 35 \mathrm{~mm}$ ．${ }^{*}$ These boxes will only accept CXP10745

Frames
and Lid


| Frame／Lid Size | $100 \times 200 \mathrm{MM}$ | $200 \times 200 \mathrm{MM}$ | 265 X 265MM | $340 \times 265 \mathrm{MM}$ |
| :---: | :---: | :---: | :---: | :---: |
| RECESS：8MM | CXL100－8GRY | CXL200－8GRY＊ | CXL265－8GRY＊ | CXL340－8GRY＊ |
| RECESS：12MM＊＊ |  | CXL200－12GRY | CXL265－12GRY | CXL340X－12GRY |

＊Lockable option available－add suffix＇L＇e．g CXL265－8GRYL．Floorboxes must never be locked whilst in use．Not supplied with key．
An optional 2 mm lid packer is available when used with thinner carpet tiles－see Optional Extras below．
If a 12 mm lid is required for use in $80-110 \mathrm{~mm}$ screed，please add＇ X ＇e．g．CXL265X－12GRY．
${ }^{* *}$ For 12 mm recess depth lids use Onix Plus ${ }^{T M}$ base，see page 405 i．e NXB265UK－3．
Side Adaptor
Plates

| Side plate | CUBP200－01 | CUBP200－02 | CUBP200－03 | CUBP200－04 | CUBP200－08 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| aperture type | blank blank | Round Conouit＊ | PVC | pvc | metal ducting |
| APERTURE SIIE（MM） |  | 25／20 | $60 / 25$ | 90／35 | UP T0 100x38 |
| No．Per Plate |  | 2／2 | 2 | 1 |  |
| Side plate | CUBP265－01 | CUBP265－02 | CUBP265－03 | CUBP265－04 | CUBP265－08 |
| APERTURE TYPE | blank blank | Rouno Conouit | PVC | PVC | metal ducting |
| APERTURE SIIE（mM） |  | 25／20 | $60 / 25$ | 90／35 | UP T0 $225 \times 38$ |
| No．Per Plate |  | 3／2 | 3 | 2 |  |
| Side plate | CUBP340－01 | CUBP340－02 | CUBP340－03 | CUBP340－04 | CUBP340－08 |
| APERTURE TYPE | blank blank | ROUND CONDUIT＊ | PVC | PVC | metal ducting |
| APERTURE SIIE（MM） |  | 25／20 | 60／25 | 90／35 | UP T0 300x38 |
| No．Per Plate |  | 4／4 | 4 | 3 |  |

See page 421 for information regards PVCu ducting，page 422 for metal ducting．＊Knockouts 20 mm and 25 mm ．


LID TETHER

| Part No． | Description |
| :--- | :--- |
| CX－01 | Cable Retainers－pack of 10 |
| CX－02 | Lid Tether Kit－pack of 5 |
| CX－03GRY | Cord Cap for $100 \times 200 \mathrm{~mm}$ Lid - Grey |
| CX－04GRY | Cord Cap for $265 \times 265$ and $340 \times 265 \mathrm{~mm}$ Lid - Grey |
| CX－05 | Ratchet levelling kit |
| CUBA－1 | Plate Height Adjustment Kit $+/-10 \mathrm{~mm}$. <br> Suitable for $265 \times 265 \mathrm{~mm}$ and $340 \times 265 \mathrm{~mm}$ boxes only <br> CRXKEY |
| Lock Key - pack of 2 |  |

Screed System

## Junction Box

CHOICE OF JUNCTION BOX LID

- Supplied with a plain lid optional recessed lids available

JUNCTION BOX FLY OVER

- Allows for 'through,' tee,' 'angle' and 'crossover' configurations
- $\quad$ Supports Cat 6 \& Cat 6A compliance


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## Junction Boxes

The Junction Box should be positioned directly on the structural floor slab. The box provides access to cables at the intersection of ducting runs or changes of direction. The ducting forms a system of tunnels to segregate services within the junction box.

## Junction Box Selector Guide

- Junction Boxes are supplied as a base, lid and cable flyover as standard
- Lid - supplied complete as a plain flat lid as standard
- Alternative deeper Junction Boxes are available - please contact Technical Services for details


## Junction Box



Supplied complete with a plain flat lid, disposable steel screed lid and cable flyover as standard.
Supplied with four side adaptor plates, $4 \times$ PVC ducting plates - number of ducting knockouts varies by size: Supplied with four side adaptor plates, $4 \times P V C$ ducting plates - number of ducting knockouts varies by

## Recessed Lid and Frame

|  | Recess/Base Size | 200 X 200MM | 265 X 265MM | $340 \times 340 \mathrm{MM}$ |
| :---: | :---: | :---: | :---: | :---: |
|  | Depth 53-80MM |  |  |  |
|  | RECESS DEPTH 8MM | CUJL200-8GRY | CUJL265-8GRY | CUJL340-8GRY |
|  | RECESS DEPTH 12MM | CUJL200-12GRY | CUJL265-12GRY | CUJL340-12GRY |
|  | Depth 80-110MM |  |  |  |
|  | RECESS DEPTH 8MM | CUJL200X-8GRY | CUJL265X-8GRY | CUJL340X-8GRY |
|  | RECESS DEPTH 12MM | CUJL200X-12GRY | CUJL265X-12GRY |  |

Supplied as a recessed lid to accept floor covering.

## Side Adaptor Plates



| Side plate | CUBP200-01 | CUBP200-02 | CUBP200-03 | CUBP200-04 | CUBP200-08 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| APERTURE TYPE | BLANK BLANK | ROUND CONDUIT* | PVC | PVC | METAL DUCTING |
| APERTURE SIZE |  | 25/20 | $60 / 25$ | 90/35 | UP TO 100×38 |
| NO. PER PLATE |  | 2/2 | 2 | 1 |  |
| Side plate | CUBP265-01 | CUBP265-02 | CUBP265-03 | CUBP265-04 | CUBP265-08 |
| APERTURE TYPE | BLANK BLANK | ROUND CONDUIT** | PVC | PVC | METAL DUCTING |
| APERTURE SIZE |  | 25/20 | $60 / 25$ | 90/35 | UP TO 225×38 |
| No. PER PLATE |  | 3/2 | 3 | 2 |  |
| Side plate | CUBP340-01 | CUBP340-02 | CUBP340-03 | CUBP340-04 | CUBP340-08 |
| APERTURE TYPE | BLANK BLANK | ROUND CONDUIT** | PVC | PVC | METAL DUCTING |
| APERTURE SIZE |  | 25/20 | $60 / 25$ | $90 / 35$ | UP TO 300×38 |
| No. PER PLATE |  | 4/4 | 4 | 3 |  |

## Screed System

## Vertical Access Boxes

The Vertical Access Box provides draw-in facilities to allow for a change of plane or direction of the ducting and connection to skirting trunking systems, distribution boards, boxes etc

- Conduit or ducting can be run vertically or horizontally from the box


## Vertical Access Boxes - for PVC Ducting

|  | List No. | Type | List No. | Type |
| :--- | :--- | :--- | :--- | :--- |
|  | Shallow Access |  | Full Access |  |
| SF88152 | TWIN | SF88172 | TWIN |  |
| SF88153 | TRIPLE | SF88173 | TRIPLE |  |

When using VAB with 2 or 3 compartment trunking, the full access version of the VAB should be used to give maximum accessibility. If using $60 \times 25 \mathrm{~mm}$ ducting, the ducting can be joined into the box using SF88150

## Cover Plates - for Vertical Access Boxes (PVC Ducting)

| List No. | Type | List No. | Type |
| :---: | :---: | :---: | :---: |
| Overlapping Shallow Access |  | Flush Shallow Access |  |
| SF88180 | TWIN | SF88176 | Twin |
| SF88181 | TRIPLE | SF88177 | TRIPLE |
| Overlapping Shallow Access |  | Flush Shallow Access |  |
| SF88188 | TWIN | SF88184 | TWIN |
| SF88189 | TRIPLE | SF88185 | TRIPLE |

## Vertical Access Boxes - for Metal Ducting

| Box Size | 265MM | 340MM |
| :--- | :--- | :--- | :--- |
| VERTICAL ACCESS BOX | CUV265UK-2 | CUV340UK-3 |

Supplied with flush cover plate and Metal Ducting side adaptor plate:
265 mm box $=$ CUBP265-08, 340 mm box $=$ CUBP340-08. CUV boxes are supplied 3 compartment and can be easily converted to 2 compartment on site.

## Spares

| Box Size | 265MM | 340MM |
| :--- | :--- | :--- |
| OVERLAPPING <br> COVER PLATES | CUVP265 | CUVP340 |

Supplied as singles.

## Ducting and Accessories

The ducting is intended primarily for installation within the floor screed thickness, but it can also be cast direct into the structural slab, attached to the soffit with access through from the floor above or used for vertical service risers.

- Underfloor ducting is available in two sizes, $90 \mathrm{~mm} \times 35 \mathrm{~mm}$ and $60 \mathrm{~mm} \times 25 \mathrm{~mm}$. Comes in 12 metre packs and is white in colour.


## PVCu Ducting

|  | 3M length |
| :--- | :--- |
|  | SF88200 |
| $60 \times 25 \mathrm{MM}$ | SF88100 |
| $90 \times 35 \mathrm{MM}$ |  |

## Ducting Bends

|  | Part No. | Ducting | Angle | Mean Centre Line Radius |
| :---: | :---: | :---: | :---: | :---: |
| - | PVCu ducting horizontal bends |  |  |  |
|  | SF88144 | SF88100 | $90^{\circ}$ | 465mm |
|  | SF88145 | SF88100 | $45^{\circ}$ | 465 mm |
|  | SF88248 | SF88200 | $90^{\circ}$ | 450 mm |
|  | SF88249 | SF88200 | $45^{\circ}$ | 450 mm |
|  | PVCu ducting vertical bends |  |  |  |
|  | SF88142 | SF88100 | $90^{\circ}$ | 100 mm |
|  | SF88143 | SF88100 | $45^{\circ}$ | 100 mm |
|  | SF88246 | SF88200 | $90^{\circ}$ | 95 mm |
|  | SF88247 | SF88200 | $45^{\circ}$ | 95 mm |

Ducting Bends require the jointing sleeve to connect to the ducting.
Accessories


## Screed System

## Metal Ducting System

Metal Ducting Systems are offered as an alternative to PVCu systems.

- Provide greater cable protection
- Provides EMC Screening
- Manufactured from pre-galvanised sheet steel


## Metal Ducting



| Ducting Width Compartment | $\begin{aligned} & \text { 100MM } \\ & 1 \end{aligned}$ | $\begin{aligned} & \text { 225MM } \\ & 2 \end{aligned}$ | $\begin{aligned} & 225 \mathrm{MM} \\ & 3 \end{aligned}$ | $\begin{aligned} & 250 \mathrm{MM} \\ & 3 \end{aligned}$ | $\begin{aligned} & 275 \mathrm{MM} \\ & 3 \end{aligned}$ | $\begin{aligned} & 300 \mathrm{MM} \\ & 3 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ducting Height |  |  |  |  |  |  |
| 38MM | CUD100-38-1 | CUD225-38-2 | CUD225-38-3 | CUD250-38-3 | CUD275-38-3 | CUD300-38-3 |

Joint Sleeves

| Ducting Width | 100MM | 225MM | 250MM | 275MM | 300MM |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Ducting Height |  |  |  |  |  |
| 38MM | CUDJ100-38 | CUDJ225-38 | CUDJ250-38 | CUDJ275-38 | CUDJ300-38 |

## Fixing Clips

|  | Ducting Width | 100MM | 225MM | 250MM | 275MM | 300MM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Ducting Height |  |  |  |  |  |
|  | 38MM | CUDF100-38 | CUDF225-38 | CUDF250-38 | CUDF275-38 | CUDF300-38 |

Side Adaptor
Plates

| Side plate | CUBP200-01 | CUBP200-02 | CUBP200-03 | CUBP200-04 | CUBP200-08 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| APERTURE TYPE | BLANK BLANK | ROUND CONDUIT** | PVC | PVC | METAL DUCTING |
| APERTURE SIZE (MM) |  | 25/20 | $60 / 25$ | 90/35 | UP TO 100×38 |
| NO. PER PLATE |  | 2/2 | 2 | 1 |  |
| Side plate | CUBP265-01 | CUBP265-02 | CUBP265-03 | CUBP265-04 | CUBP265-08 |
| APERTURE TYPE | BLANK BLANK | ROUND CONDUIT** | PVC | PVC | METAL DUCTING |
| APERTURE SIZE (MM) |  | 25/20 | $60 / 25$ | 90/35 | UP TO 225×38 |
| NO. PER PLATE |  | 3/2 | 3 | 2 |  |
| Side plate | CUBP340-01 | CUBP340-02 | CUBP340-03 | CUBP340-04 | CUBP340-08 |
| APERTURE TYPE | BLANK BLANK | ROUND CONDUIT** | PVC | PVC | METAL DUCTING |
| APERTURE SIZE (MM) |  | 25/20 | $60 / 25$ | 90/35 | UP TO 300×38 |
| NO. PER PLATE |  | 4/4 | 4 | 3 |  |

See page 421 for information regards PVCu ducting, page 422 for metal ducting.

* Knockouts 20 mm and 25 mm .


## Accessory Plates

Accessory plates are common to most ranges，they will fit all Cablelink Plus Single Pan，Screed and Onix Plus ${ }^{\text {™ }}$ floorboxes．Standard Plates are for use with $100 \times 200 \mathrm{~mm}, 265 \times 265 \mathrm{~mm}$ and $340 \times 265 \mathrm{~mm}$ floorboxes．
Standard Plates are supplied in Light Grey（LGY）finish．

Serviced Power Plates


| Standard Part N | Compact Part No | Description |
| :---: | :---: | :---: |
| CXP10730＊${ }^{+}$ | CXPC10730＊† | 2G 13A Switch Socket Outlet |
| CXP10730NS＊＋ | CXPC10730NS＊† | 2G 13A Switch Socket Outlet Non－Standard（T Pin） |
| CXP10731＊＋ | CXPC10731＊＋ | 2G 13A Socket Outlet |
| CXP10731NS＊ | CXPC10731NS＊ | 2G 13A Socket Outlet Non－Standard（T Pin） |
| CXP10745 | CXPC10745＊ | 2G 13A Angled Socket Outlet－Power plate for CUB100 |
| CXP10735＊ | CXPC10735 | 2G 13A 30mA Passive RCD Switch Socket Outlet＊＊ |
| CXP10760 |  | 2G 13A Switch Socket Outlet－Side Wired（single earth） |
| CXP10720 |  | 3G 13A Socket Outlet |
| CXP10740 | CXPC10740 | 2G 16A 2P＋E German Socket Outlet（non UK）＊＊ |

For Clean Earth wiring－add suffix＇CE＇e．g CXP10730CE．Clean Earth switched power plates are identified with red rockers，unswitched with red sockets
${ }^{+}$Plates are supplied with the MK Electric 3－pin safety shutter．Compact Plates（power and data）are for use with $200 \times 200 \mathrm{~mm}$ bases only．
If 2 socket plates or a socket plate and wave plate are to be used then only CXP10745 and CXPC10745 socket plate can be used．
＊＊requires a 45 mm wiring space．

Unserviced Power
Plates

| Standard Part No． | Description |
| :--- | :--- |
| CXP20106 | 1G Accessory Plate with 60.3 mm fixing centres |
| CXP20107＊ | 2G accessory Plate with 120.6 mm fixing centres |

Recommend that a MK Electric Aspect，Edge or Logic Plus Socket Outlet is used．Can only be used in 4 module floorboxes．

Unserviced Data
Plates


CXP20201


CXP20215


CXP20301


CXP30201

| Standard Part No． |  | Compact Part No． |
| :--- | :--- | :--- |
| CXP20200 | CXPC20200 | $2 \times$ LJU6C Apertures |
| CXP20201＊$^{*}$ | CXPC20201＊ | $4 \times$ LJU6C Apertures |
| CXP20215 | CXPC20215 | $4 \times$ LJU6C Wave Apertures |
| CXP20205 | CXPC20205 | $4 \times$ Krone Apertures |
| CXP20301 | CXPC20301 | $6 \times$ LJU6C Apertures |
| CXP30501 | CXPC30501 | $2 \times$ Euro $50 \times 50 \mathrm{~mm}$ Apertures |
| CXP30503 |  | $1 \times$ Euro $150 \times 50 \mathrm{~mm}$ Aperture |
| CXP30502 | CXPC30502 | $2 \times 45 \times 45 \mathrm{~mm}$ Apertures |
| CXP20500 | CXPC20500 | $4 \times$ ST Fibre Connector Apertures |
| CXP30201 | CXPC30201 | Blank Plate |

[^43] Screed System

## Screed System Product Selection Table

| SCREED OUTLET BOX |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Base Size | $100 \times 200 \mathrm{~mm}$ | $200 \times 200 \mathrm{~mm}$ | $265 \times 265 \mathrm{~mm}$ | $340 \times 265$ mm |
| Number of Compartments | 1 | 2 | 3 | 4 |
| BASE $55-80 \mathrm{~mm}$ | CUB100UK-1 | CUB200UK-2 | CUB265UK-3 | CUB340UK-4 |
| 80-100mm | CUB100XUK-1 | CUB200XUK-2 | CUB265XUK-3 | CUB340XUK-4 |
| LID \& FRAME 8mm RECESS | CXL100-8GRY | CXL200-8GRY | CXL265-8GRY | CXL340-8GRY |
| ADAPTOR PLATE SIZE | N/A | 200 | 265 | 340 |
| SIDE PLATES AS STD | N/A | $2 \times$ CUBP200-03 | $2 \times$ CUBP265-03 | $2 \times$ CUBP340-04 |
| NO. / TYPE OF APERTURE ON SIDE PLATE | 20 \& 25MM CONDUIT DIRECTLY INTO BASE UNIT | $2 \mathrm{XPVC} 60 \times 25 \mathrm{~mm}$ | $3 \mathrm{XPVC} 60 \times 25 \mathrm{~mm}$ | $3 \mathrm{XPVC} 90 \times 35 \mathrm{~mm}$ |
| OPTIONAL SIDE PLATE ADAPTORS | N/A | CUBP200-01 | CUBP265-01 | CUBP340-01 |
|  | N/A | CUBP200-02 | CUBP265-02 | CUBP340-02 |
|  | N/A | CUBP200-03 | CUBP265-03 | CUBP340-03 |
|  | N/A | CUBP200-04 | CUBP265-04 | CUBP340-04 |
|  | N/A | N/A | CUBP265-08 | CUBP340-08 |


| JUNCTION BOX |  |  |  |
| :---: | :---: | :---: | :---: |
| Base Size | $200 \times 200$ mm | $265 \times 265$ mm | $340 \times 340 \mathrm{~mm}$ |
| Number of Compartments | 2 | 3 | 4 |
| BASE $\quad 55-80 \mathrm{~mm}$ | CUJ200UK | CUJ265UK | CUJ340UK |
| 80-110mm | CUJ200XUK | CUJ265XUK | CUJ340XUK |
| JUNCTION BOX FLY OVER INCLUDED | 2 WAY | 3 WAY | 3 WAY |
| LID SUPPLIED AS STANDARD | PLAIN FLAT | PLAIN FLAT | PLAIN FLAT |
| LID OPTIONS AVAILABLE |  |  |  |
| DEPTH $55-80 \mathrm{~mm}$ 8mm RECESS | CUJL200-8 | CUJL265-8 | CUJL340-8 |
| 12 mm RECESS | CUJL200-12 | CUJL265-12 | CUJL340-12 |
| DEPTH $80-110 \mathrm{~mm}$ 8mm RECESS | CUJL200X-8 | CUJL265X-8 | CUJL340X-8 |
| 12 mm RECESS | CUJL200X-12 | CUJL265X-12 | CUJL340X-12 |
| ADAPTOR PLATE SIZE | 200 | 265 | 340 |
| SIDE PLATES AS STANDARD | $4 \times$ CUBP200-003 | $4 \times$ CUBP265-03 | $4 \times$ CUBP340-04 |
| NO. / TYPE OF APERTURE ON SIDE PLATE | $2 \mathrm{XPVC} 60 \times 25 \mathrm{MM}$ | $3 \mathrm{XPVC} 60 \times 25 \mathrm{MM}$ | $3 \times$ PVC $90 \times 35 \mathrm{~mm}$ |
| OPTIONAL SIDE PLATE ADAPTORS | CUBP200-01 | CUBP265-01 | CUBP340-01 |
|  | CUBP200-02 | CUBP265-02 | CUBP340-02 |
|  | CUBP200-03 | CUBP265-03 | CUBP340-03 |
|  | CUBP200-04 | CUBP265-04 | CUBP340-04 |
|  |  | CUBP265-08 | CUBP340-08 |


| VERTICAL ACCESS BOX | METAL DUCTING |  |
| :--- | :--- | :--- |
| Size | 265 mm | 340 mm |
| No of Compartments | 2 | 3 |
| VERTICAL ACCESS BOX | CUV265 | CUV340 |
| COVER PLATES AS STANDARD | FLUSH | FLUSH |
| COVER PLATES OPTIONAL | CUVP265 | CUVP340 |


| VERTICAL ACCESS BOX | PVCu DUCTING |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :---: |
| Size | Shallow |  |  | Full Access |  |
| Number of Compartments | 2 | 3 | 2 | 3 |  |
| VERTICAL ACCESS BOX | SF88152 | SF88153 | SF88172 | SF88173 |  |
| COVER PLATES - OVERLAPPING | SF88180 | SF88181 | SF88188 | SF88189 |  |
| COVER PLATES - FLUSH | SF88176 | SF88177 | SF88184 | SF88185 |  |



# INTERACT OVERHEAD POWER 

## RANGE INTRODUCTION

Interact Overhead Power System is a powertrack catering for single, 3 phase or dual circuit applications suitable for standard, permanent live, uninterrupted or dedicated power supply up to 480V.

Interact is fast and simple to install and has the additional benefit of all standard tap-offs being designed to be 'fail safe' should any incompatible track/tap-off connections be made.

HOW TO SPECIFY
A 40A overhead powertrack system to cater for single , three phase or dual circuit applications. Snap fast crocodile joints to ensure fast and simple installation with provision for 300 mm socket spacing's. Key and colour coded tap-offs and sockets used to prevent cross pole contamination Snap fix suspension brackets to enable fast and simple installation without additional fitting tools.

FEATURES \& BENEFITS

PATENTED ‘SNAP FAST’ CROCODILE JOINTS
Ensures fast and simple installation
STRONG, RIGID BUT LIGHTWEIGHT DESIGN
Enables greater spans between fixing brackets for quick and easy installation

KEY CODED AND COLOUR CODED TAP-OFFS
Provides mechanical protection against cross pole contamination

COMPLIES WITH WIRING REGULATIONS
Complies with both the requirements of BS EN 61534 and BS 7671:2014 IET Wiring Regulations (17th Edition)

AVAILABLE IN 40A

5 YEAR GUARANTEE

## Interact Overhead Power

OVERHEAD POWER TRACK

- $\quad$ Strong and rigid construction to guarantee a robust installation and secure track and fittings suspension
- Lightweight structure enabling a faster installation and easier handling on site
- Available in a choice of 2 m and 4 m lengths to suit
- 500 mm socket outlet pitch as standard



## EXTENSIVE RANGE OF TAP-OFFS

- Comprehensive pre-wired range available, fused and unfused, $1 \mathrm{~m}, 3 \mathrm{~m}$ and 5 m lengths - other lengths available on special request, all designed to meet exact requirements
- All Interact Overhead tap-offs are key coded to eliminate incorrect connections being made
- In situations where incompatible connections are accidentally made, all standard tap-offs are designed to be 'fail safe' - eliminates potential health and safety risks



## HANGING BRACKETS

- Snap fix suspension brackets requiring no tools to fit, suspend the overhead track
- The rigidity of the Interact design enables greater spans between brackets to be possible
- Reduced installation time, fewer parts to order
- Brackets are available with optional $50 \mathrm{~mm} \times 50 \mathrm{~mm}$ trunking supports
- Caters for additional trunking support, reduces costs


## CROCODILE ‘SNAP FAST' JOINT

- Patented Crocodile 'snap fast' joints provide a fast and simple connection
- All Interact Overhead joints are key coded to eliminate incorrect connections being made
- Strong and rigid construction to guarantee a robust installation and secure track connections


## Power

40 Amp System


## Powertrack

| 2+PE | 3+PE | 4+PE | 5+PE | Dual Grey 5+PE |
| :--- | :--- | :--- | :--- | :--- |
| Length 2m |  | Pitch 500 mm 4 sockets |  |  |
| LB42053 | LB42054 | LB42055 | LB42056 | LB42056GRY |
| Length 4m | Pitch 500mm 8 sockets |  |  |  |
| LB44053 | LB44054 | LB44055 | LB44056 | LB44056GRY |

All overhead powertrack sockets do not contain shutters and are rated to IP2X.

Infeeds


| 2+PE | 3+PE | 4+PE | 5+PE | Dual Grey 5+PE |
| :--- | :--- | :--- | :--- | :--- |
| Standard |  |  |  |  |
| LF43 | LF44 | LF45 | LF46 | LF46GRY |
| Opposite End Feed |  |  |  |  |
| LF43 LH | LF44 LH | LF45 LH | LF46 LH | LF46GRY LH |

Terminal Capacity $=16 \mathrm{~mm}^{2}$
Opposite end feed suffix must be added when ordering where applicable.
Each opposite end feed comes with an end cap to close off the powertrack run.

## Flexible Interlinks

|  | 2+PE | 3+PE | 4+PE | 5+PE | Dual Grey 5+PE |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1m |  |  |  |  |
|  | 114310 | 114410 | 114510 | 114610 | LI4610GRY |
|  | 3m |  |  |  |  |
| - | L14330 | $\underline{14430}$ | $\underline{14530}$ | $\underline{14630}$ | LI4630GRY |

Tap-off Leads

(F) = Fused.

LSF Cable is supplied as standard. For PVC cable replace suffix 'C' with suffix 'PVC'. For Dual Grey system simply add suffix 'PVC'. Suffix must be added when ordering.
Polarity of tap-offs are configured to enable $L 4$ to be used as a continuous conductor for Emergency Line.
When using tap-offs ensure that the line is protected by an appropriately rated protective device.
Key codes shown are from the perspective of the powertrack socket with the keycode in the top right corner.
The tap-off key code will be a mirror image when viewed from underneath.

Other Components



## HANGMANN

## RANGE INTRODUCTION

Hangmann is a range of hanging service modules providing a portable and convenient means of distributing power, data and compressed air flow from overhead supplies.

Available as either a power module or combined power and compressed air module the units are made from a flame retardant grade of polyamide and are durable and resistant to chemicals.

FEATURES \& BENEFITS
ROBUST DESIGN
To suit demanding applications
SUSPENSION CHAIN
Provides easy positioning of unit
FLEXIBLE SOLUTION
Wide range of modules
IDEAL FOR GARAGES, WORKSHOPS AND FACTORIES

5 YEAR GUARANTEE

[^44]OVERHEAD POWER MAKES A SAFER WORK ENVIRONMENT


PRE-ASSEMBLED OPTIONS

- Ease of installation
- Simplified ordering

RANGE OF MODULES AND MOUNTING PLATES

- MK Commando products available
- Compressed air modules available
- Built in flexibility

ROBUST DESIGN

- Impact resistant
- Fire retardant
- Chemical resistant

SUITED FOR USE
IN 'TOUGH'
ENVIRONMENTS

GRAB HANDLE

- Hang tools
- Easy positioning of unit

MK 3 PIN SAFETY SHUTTER AS STANDARD

## Power Modules

| Sart No. | Description |
| :--- | :--- | :--- | :--- |

Power modules arrive on site as individual components and have to be assembled separately
Compressed Air Modules

|  | Part No. | Description |
| :--- | :--- | :--- | :--- |

## Mounting Plates and Accessories



| Part No. |  |
| :--- | :--- |
| SM49008 | 13A Socket Outlet |
| SM49009 | 13A Switch socket outlet |
| SM49011 | Mounting plate for $2 \times$ LJU6C modules (includes segregation back plate) |
| SM49012 | 130V 16A Straight socket - Yellow (K9400YEL) |
| SM49013 | 250 V 16A Straight socket - Blue (K9401BLU) |
| SM937895 | Mounting plate for BS EN60309-2 socket outlet, 60mm fixing centres |
| SM910101 | Blank mounting plate |
| SMCHAIN5 | Suspension chain - 5m length |
| SM42449 | Spring VHF80 80N |
| SM980911 | Balancer Unit |
| SM980922 | Locking balancer unit |
| Alternative congifurations, including data and circuit protection options are available via the MK Design Service. |  |

## Made

## In Britain



## Optimal USB Charging from MK

MK Electric's USB Integrated Sockets are designed to provide optimal charging efficiency through Dynamic Device Recognition; the ability to detect charging nuances in the device and its appetite for power. For the ultimate user experience, different devices from multiple manufacturers can be charged simultaneously.

USB outlets provide a total of 2A combined charging, even when only one outlet is engaged, and vertically stacked ports ensure free access when socket outlets are in use.

MK's USB Integrated Sockets come with quality, safety and reliability as standard.

## Technical

Wireless

| Echo |  |
| :--- | :---: |
| Wireless, batteryless, self-powered technology | $437-440$ |
| White |  |
| Logic Plus <br> Widest selection of wiring devices in one range | $441-484$ |

## Decorative

| Elements <br> Stylish wiring devices - Innovative and iconic | $497-525$ |
| :--- | :---: |
| Aspect <br> Range of slimline, screwless devices | $441-484$ |
| Edge |  |
| Function and style with very slim profile frontplate | $441-484$ |
| Albany Plus |  |
| Contemporary Wiring Devices | $441-484$ |

## Modular

| Grid Plus |  |
| :--- | :---: |
| Modular switching and monitoring system | $526-536$ |

## Lighting Controls

| Sensors <br> A range of energy saving and lighting management products | $485-491$ |
| :--- | :---: |
| Ceiling Accessories <br> Lampholders, pendant sets and ceiling switches | $492-494$ |
| Link <br> Plug-in connection and distribution system for lighting | $495-496$ |
| High Power Dimmer <br> Range of dimmers to control large lighting loads | $534-536$ |

Surface

| Metalclad Plus | $441-484$ |
| :--- | :---: |
| Tough，impact resistant surface mounted devicesy | 4 |

## Portable Power

| Duraplug | $538-540$ |
| :--- | :---: |
| Durable，strong and reliable accessories | 541 |
| Plugs and Adaptors |  |
| High quality plugs and adaptors |  |

## Ingress Protected

| Masterseal Plus <br> Comprehensive range of IP66 weatherproof devices | $542-553$ |
| :--- | :---: |
| Commando Safetyswitch <br> Impact resistant switches for indoors or outdoors | $554-555$ |
| Commando Plugs and Sockets <br> Comprehensive selection of industrial plugs and connectors | $556-567$ |
| Commando Combination Units <br> RCD protection with high impact PBT units | $568-573$ |



## CASE STUDY

## 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


## MK Echo™ Technical

## 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

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
OPERATING FREQUENCY
868.3 MHz

IP RATING
IP2XD
max. Installation altitude
2000 meters

## Dimensions

Transmitters: $86 \mathrm{~mm} \times 86 \mathrm{~mm}$
Fixing centres: 60.3 mm

## 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 ${ }^{\text {TM }}$ and Aspect type Transmitters can also be mounted using supplied adhesive pads

[^45]

## Description

Echo $^{\text {TM }}$ 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, as there is no need to run switching cables.

Self-Powered - Innovative patented technology to 'harvest' energy means zero maintenance as there are no batteries to change.

Ultimate Flexibility - Each receiver can be controlled by up to 32 switches/ transmitters.

## Features

- Wireless and Batteryless - using RF technology with ranges up to 30m indoors
- 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 ${ }^{\text {TM }}$ and Masterseal Plus ${ }^{\text {TM }}$ available
- 400w and 10AX receiver/ repeaters available to cover most installation needs
- Switch Receivers are capable of switching all lighting types
- Each receiver can be controlled by up to 32 switches/transmitters


## 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

K5420R (WHEN USED AS A RECEIVER)
VOLTAGE RATING
250 V a.c. 50 Hz
CURRENT RATINGS
10AX - No de-rating when used on standard
magnetic ballast fluorescent loads.

## TERMINALS

Terminal screw size: M3
Rated terminal screw torque: $\quad 0.5 \mathrm{Nm}$

## TERMINAL CAPACITY

$4 \times 1 \mathrm{~mm}^{2}$
$3 \times 1.5 \mathrm{~mm}^{2}$
$2 \times 2.5 \mathrm{~mm}^{2}$

## PHYSICAL

OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
max. Installation altitude
2000 meters


The 10AX Receiver/Repeater can function both as a 1 level repeater and as a 10AX Switch Receiver.

## Dimensions

10AX Switch Receiver/Repeater - K5420R
Length: 175.5 mm
Width: 50.3 mm
Height: 33.25 mm

## Transmitters，Receivers and Accessories

## Echo ${ }^{\text {TM }}$ Installer Guide

## 1．INTRODUCTION

The MK Echo ${ }^{\text {TM }}$ 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 ${ }^{T M}$ 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．

## 2．PRINCIPLES OF RADIO SIGNALS IN BUILDINGS

Echo ${ }^{\text {TM }}$ Transmitters send wireless transmissions to the Echo ${ }^{\text {TM }}$ 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， <br> 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 30 m range in corridors， <br> or up to 100 m in halls |
| :---: | :---: |
| Plasterboard walls／dry wood： | typically 30 m range，through 5 walls |
| Brick walls／aerated concrete： | typically 20 m range，through 3 walls |
| Ferro－concrete walls／ceilings： | typically 10 m range，through 1 ceiling |

[^46]
## 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 10 mm to 20 mm 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.


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 500 mm . However, Echo ${ }^{\text {TM }}$ 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 the repeater functionality built into switch receivers or a dedicated Repeater.

The 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.

## 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 Socket Outlets

## Standards and approvals

13A socket outlets comply with
BS 1363 Part 2:1995.
Replacement fuses to the 3 gang switchsocket outlets (Logic Plus only) comply with BS 1362:1973.

## TECHNICAL SPECIFICATION

## ELECTRICAL

voltage rating
250 V a.c.
CURRENT RATING
13A
(3 Gang Switchsocket 13A total)

## TERMINAL CAPACITY

Live, neutral \& earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$ (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
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
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 the latest edition of BS 7671 which should be referred to for guidance.

The products can be quickly installed as replacement for existing 13A 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 Socket Outlets

## Installation

1 gang switchsocket - view from rear
Top-facing, angled, backed-out terminals make wiring easier and quicker.



## FEATURES

- Moulded 'on' indicator flash on plastic switches will not rub off - totally safe
- Matching Metal rocker Switches (Edge ${ }^{\text {TM }}$ and Aspect only)
- Optional neon indicators in the switch rockers with $175^{\circ}$ 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
- 3 mm 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


## 2 Gang Switchsocket Outlet with Integrated Dual USB Charging Capability

## Standards and approvals

Logic Plus ${ }^{\text {rm }} 13$ A socket outlets and 2A USB charging outlets comply with BS 5733 and IEC 61558-2-16.
EMC Compatibility:
IEC 61000-6-1
IEC 61000-6-3
Products are CE marked and meet the requirements of the Low Voltage, EMC, RoHS and WEEE directives.

## TECHNICAL SPECIFICATION

13A SOCKET OUTLETS

## electrical

voltage rating
$220-240 \mathrm{~V}$
CURRENT RATING
13A
Combined total 2A drawn from USB outlets

## STANDBY POWER

150 mW
TERMINAL CAPACITY
Live, neutral \& earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$ (stranded)

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
MAX. INSTALLATION ALTITUDE
2000 metres

## Installation

Logic Plus ${ }^{\text {TM }}$ 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 damp.

## Cable management

Logic Plus ${ }^{\text {TM }}$ socket outlets can be mounted in a variety of MK trunking systems.

| BOX TYPES WITHOUT PATRESS |  |  |  |
| :---: | :---: | :---: | :---: |
| GANG | FLUSH | SURFACE <br> INSULATED | SURFACE <br> METAL |
| 2 GANG | DEPTH 35MM | DEPTH 40MM | DEPTH 41MM |
|  | 886 ZIC | K2172 WHI | K2212 ALM <br> K2214 ALM |



## Description

A range of socket outlets designed for ease of installation and having all the advantageous design features of the Logic Plus ${ }^{\text {m/ }}$ range. Dual USB charging outlets offer end users easy access to power for charging a variety of devices such as smart phones, tablets and cameras.

## FEATURES

- Moulded 'on' indicator flash on switches will not rub off - totally safe
- 3 pin operated safety shutter on 13A socket outlets
- USB 2.0 and 3.0 compatible
- Can charge a device at up to a full 2 A
- If only one device is connected to a USB outlet the total output current of 2 A is available from either outlet
- If two devices are connected to USB outlets the the total rated current of 2 A is divided between the two outlets
- Differing manufacturers devices can be charged simultaneously via the two USB outlets
- If the total charging current exceeds the rated level of $2 A$ then the device will enter a current limiting safety mode
- Electronically protected against an overload or short circuit on either USB outlet


## Dimensions (mm)



## - Aspect

## 2 Gang Switchsocket Outlet with Integrated Dual USB Charging Capability

## Standards and approvals

Aspect 13A socket outlets and 2A USB charging outlets comply with BS 5733 and IEC 61558-2-16.

EMC Compatibility:
IEC 61000-6-1
IEC 61000-6-3
Products are CE marked and meet the requirements of the Low Voltage, EMC, RoHS and WEEE directives.

## TECHNICAL SPECIFICATION

13A SOCKET OUTLETS

## ELECTRICAL

voltage rating
220-240V
CURRENT RATING
13A
Combined total 2A drawn from USB outlets
STANDBY POWER
150mW
TERMINAL CAPACITY
Live, neutral \& earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$ (stranded)

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
MAX. INSTALLATION ALTITUDE
2000 metres

## Installation

Aspect 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 damp.

## Cable management

Aspect socket outlets can be mounted in a variety of MK trunking systems.

| BOX TYPES WITHOUT PATRESS |  |
| :---: | :---: |
| GANG | FLUSH |
| 2 GANG | DEPTH 47MM |
|  | 878 ZIC |



## Description

A range of socket outlets designed for ease of installation and having all the advantageous design features of the Aspect range. Dual USB charging outlets offer end users easy access to power for charging a variety of devices such as smart phones, tablets and cameras.

## FEATURES

- Slim screwless frontplate design
- Matching metal rocker switches
- 3 pin operated safety shutter on 13A socket outlets
- USB 2.0 and 3.0 compatible
- Can charge a device at up to a full 2A
- If only one device is connected to a USB outlet the total output current of $2 A$ is available from either outlet
- If two devices are connected to USB outlets the the total rated current of 2 A is divided between the two outlets
- Differing manufacturers devices can be charged simultaneously via the two USB outlets
- If the total charging current exceeds the rated level of $2 A$ then the device will enter a current limiting safety mode
- Electronically protected against an overload or short circuit on either USB outlet
- USB outlets are designed to provide optimum charging compatibility across a wide range of devices
- Printed terminal markings on grey rear mouldings for clearer identification
- Top access, angled terminals make wiring easier and quicker
- 3 mm 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
- Backed out and captive terminal screws
- Dual earthed


## Dimensions (mm)



## 2 Gang Switchsocket Outlet with Integrated Dual USB Charging Capability

## Standards and approvals

Edge ${ }^{\text {TM }} 13$ A socket outlets and 2A USB charging outlets comply with BS 5733 and
IEC 61558-2-16.
EMC Compatibility:
IEC 61000-6-1
IEC 61000-6-3
Products are CE marked and meet the requirements of the Low Voltage, EMC, RoHS and WEEE directives.

## TECHNICAL SPECIFICATION

13A SOCKET OUTLETS

## ELECTRICAL

voltage rating
$220-240 \mathrm{~V}$
CURRENT RATING
13A
Combined total 2A drawn from USB outlets

## STANDBY POWER

150 mW
TERMINAL CAPACITY
Live, neutral \& earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$ (stranded)

## PHYSICAL

ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
MAX. INSTALLATION ALTITUDE
2000 metres

## Installation

Edge ${ }^{\text {TM }}$ 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 damp.

## Cable management

Edge ${ }^{\text {TM }}$ socket outlets can be mounted in a variety of MK trunking systems.

| BOX TYPES WITHOUT PATRESS |  |
| :---: | :---: |
| GANG | FLUSH |
| 2 GANG | DEPTH 47MM |
|  | 878 ZIC |



## Description

A range of socket outlets designed for ease of installation and having all the advantageous design features of the Edge ${ }^{T M}$ range. Dual USB charging outlets offer end users easy access to power for charging a variety of devices such as smart phones, tablets and cameras.

## FEATURES

- Matching metal rocker switches
- 3 pin operated safety shutter on 13A socket outlets
- USB 2.0 and 3.0 compatible
- Can charge a device at up to a full 2 A
- If only one device is connected to a USB outlet the total output current of $2 A$ is available from either outlet
- If two devices are connected to USB outlets the the total rated current of 2 A is divided between the two outlets
- Differing manufacturers devices can be charged simultaneously via the two USB outlets
- If the total charging current exceeds the rated level of $2 A$ then the device will enter a current limiting safety mode
- USB Outlets are designed to provide optimum charging compatibility across a wide range of devices
- Printed terminal markings on grey rear mouldings for clearer identification
- Top access, angled terminals make wiring easier and quicker
- 3 mm 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
- Backed out and captive terminal screws
- Dual earthed
- Electronically protected against an overload or short circuit on either USB outlet


## Dimensions (mm)



- Albany Plus ${ }^{\text {TM }}$


## 2 Gang Switchsocket Outlet with Integrated Dual USB Charging Capability

## Standards and approvals

Albany Plus ${ }^{\text {TM }} 13$ A socket outlets and 2A USB charging outlets comply with BS 5733 and IEC 61558-2-16.

EMC Compatibility:
IEC 61000-6-1
IEC 61000-6-3
Products are CE marked and meet the requirements of the Low Voltage, EMC, RoHS and WEEE directives.

## TECHNICAL SPECIFICATION

13A SOCKET OUTLETS

## ELECTRICAL

vOLTAGE RATING
220-240V
CURRENT RATING
13A
Combined total 2A drawn from USB outlets
STANDBY POWER
150mW
TERMINAL CAPACITY
Live, neutral \& earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$ (stranded)

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
MAX. INSTALLATION ALTITUDE
2000 metres

## Installation

Albany Plus ${ }^{\text {Tm }}$ 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 damp.

## Cable management

Albany Plus ${ }^{\text {TM }}$ socket outlets can be mounted in a variety of MK trunking systems.

| BOX TYPES WITHOUT PATRESS |  |  |  |
| :---: | :---: | :---: | :---: |
| GANG | FLUSH | SURFACE <br> INSULATED | SURFACE <br> METAL |
| 2 GANG | DEPTH 35MM | DEPTH 40MM | DEPTH 41MM |
|  | 886 ZIC | K2172 WHI | K2212ALM/ <br> K2214ALM |



## Description

A range of socket outlets designed for ease of installation and having all the advantageous design features of the Albany Plus ${ }^{\text {Tm }}$ range. Dual USB charging outlets offer end users easy access to power for charging a variety of devices such as smart phones, tablets and cameras.

## FEATURES

- Moulded 'on' indicator flash on switches will not rub off - totally safe
- 3 pin operated safety shutter on 13 A socket outlets
- USB 2.0 and 3.0 compatible
- Can charge a device at up to a full 2A
- If only one device is connected to a USB outlet the total output current of 2 A is available from either outlet
- If two devices are connected to USB outlets the the total rated current of 2 A is divided between the two outlets
- Differing manufacturers devices can be charged simultaneously via the two USB outlets
- If the total charging current exceeds the rated level of 2A then the device will enter a current limiting safety mode
- Electronically protected against an overload or short circuit on either USB outlet


## Dimensions (mm)

- USB outlets are designed to provide optimum charging compatibility across a wide range of devices
- Printed terminal markings on grey rear mouldings for clearer identification
- Top access, angled terminals make wiring easier and quicker
- 3 mm 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
- Backed out and captive terminal screws
- Dual earthed



## 2 Gang Switchsocket Outlet with Integrated

 Dual USB Charging Capability
## Standards and approvals

Metalclad Plus ${ }^{\text {m" }}$ 13A socket outlets and 2A USB charging outlets comply with BS 5733 and IEC 61558-2-16.

EMC Compatibility:
IEC 61000-6-1
IEC 61000-6-3
Products are CE marked and meet the requirements of the Low Voltage, EMC, RoHS and WEEE directives.


## TECHNICAL SPECIFICATION

13A SOCKET OUTLETS

## electrical

voltage rating
$220-240 \mathrm{~V}$
CURRENT RATING
13A
Combined total 2A drawn from USB outlets

## STANDBY POWER

150mW
TERMINAL CAPACITY
Live, neutral \& earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$ (stranded)

## PHYSICAL

ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
MAX. INSTALLATION ALTITUDE
2000 metres

## Installation

Metalclad Plus ${ }^{T M}$ 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 damp.

## Cable management

Metalclad Plus ${ }^{\text {™ }}$ socket outlets can be mounted in a variety of MK trunking systems.

| BOX TYPES WITHOUT PATRESS |  |  |
| :---: | :---: | :---: |
| GANG | FLUSH | SURFACE |
| 2 GANG | DEPTH <br> $35 M M$ | DEPTH 38MM |
|  | 886 ZIC | K830 ALM (without knockouts) <br> K897 ALM and K897 WHI <br> (with 8 $\times 20 \mathrm{~mm}$ knockouts) |

## Description

A range of socket outlets designed for ease of installation and having all the advantageous design features of the Metalclad Plus ${ }^{\text {TM }}$ range. Dual USB charging outlets offer end users easy access to power for charging a variety of devices such as smart phones, tablets and cameras.

## FEATURES

- Moulded 'on' indicator flash on switches will not rub off - totally safe
- 3 pin operated safety shutter on 13 A socket outlets
- USB 2.0 and 3.0 compatible
- Can charge a device at up to a full 2 A
- If only one device is connected to a USB outlet the total output current of 2 A is available from either outlet
- If two devices are connected to USB outlets the the total rated current of 2 A is divided between the two outlets
- Differing manufacturers devices can be charged simultaneously via the two USB outlets
- If the total charging current exceeds the rated level of 2A then the device will enter a current limiting safety mode
- Electronically protected against an overload or short circuit on either USB outlet


## Dimensions (mm)



- USB outlets are designed to provide optimum charging compatibility across a wide range of devices
- 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
- Backed out and captive terminal screws
- Metallic powder paint finish is corrosion and scratch resistant
- Dual earthed
- High impact resistance


## 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 DP Single Sockets comply with the requirements of the following standards:

BS 7288:1990
BS EN 50082-1:1998
Sentrysocket RCD SP Double Sockets also comply with the requirements of BS EN 61543:1996.

## TECHNICAL SPECIFICATION

ELECTRICAL
RATED VOLTAGE
240 V a.c.
CURRENT RATING
13A resistive
Rated tripping current $10 \mathrm{~mA} / 30 \mathrm{~mA}$

## TERMINAL CAPACITY

$3 \times 4 \mathrm{~mm}^{2}$ for 1 gang
$2 \times 4 \mathrm{~mm}^{2}$ for 2 gang

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
IP66 (K56301/K56231/K56233)
MAX. INSTALLATION ALTITUDE 2000 metres

Sentrysockets are not suitable for connection across two lines of a 127 V line to Neutral Voltage System

## Cable management

Logic Plus ${ }^{\text {TM }}$, Albany Plus ${ }^{\text {TM }}$ and Metalclad Plus ${ }^{\text {TM }}$ 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.


## 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
- Flexible and versatile in use
- Single Sockets have double pole switching, double sockets are single pole switching
- Masterseal Plus products are 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
- Double Socket products have an enhanced RF Immunity performance

Sentrysockets products can be wall or bench mounted. Do not mount or use as a trailing socket or where they maybe subject to excessive moisture or dampness.

## Dimensions (mm)

Single socket


Double socket


## 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:

## $\leq 200 \mathrm{~ms}$ AT RATED TRIP CURRENT <br> $\leq 40 \mathrm{~ms}$ AT $5 \times$ 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 disconnector. 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:
$\leq 200$ ms AT RATED TRIP CURRENT
$\leq 40 \mathrm{~ms}$ AT $5 \times$ RATED TRIP CURRENT
6. Reset the Sentrysocket as in step 2 above
7. Switch off the Mains Supply Switch Disconnector.
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 $\mathbf{2}$ to $\mathbf{8}$ 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
250 V a.c.
EARTH LEAKAGE
0.5 mA

## SUPPRESSION

$150 \mathrm{kHz}-30 \mathrm{MHz}$ (transients)
MAXIMUM ENERGY ABSORPTION
140 Joules L - N
140 Joules L - E
TERMINAL CAPACITY
$2 \times 6 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 1.5 \mathrm{~mm}^{2}$

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## 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 13A 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 the latest edition of BS 7671.

## 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
- Additional electrical safety from DP Switch, neutral 'make first', 'break last' feature
- 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.

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 filer 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 Filer 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.

Figure 1


## 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.

Figure 2b

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 anticlockwise 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 filer 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 2 b ), 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


## Round Pin Socket Outlets

Standards and approvals
Round pin socket outlets comply with BS 546:1950.

## TECHNICAL SPECIFICATION

## ELECTRICAL

VOLTAGE RATING
250 V a.c.

## TERMINAL CAPACITIES

2A sockets:
$7 \times 1 \mathrm{~mm}^{2}$
$4 \times 1.5 \mathrm{~mm}^{2}$
$2 \times 2.5 \mathrm{~mm}^{2}$
$1 \times 4 \mathrm{~mm}^{2}$

## 5A sockets:

$3 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$ (stranded)
15A sockets:
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$ (stranded)

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
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.
- Printed terminal markings on grey rear mouldings for clearer identification


# Wiring Devices Technical 

## Non UK Socket Outlets

## Standards and approvals

15A American sockets comply with SASO 2004：2003

16A 2P＋E German sockets comply with IEC 60884－1：2006

## TECHNICAL SPECIFICATION

## ELECTRICAL

15A AMERICAN
VOLTAGE RATING
127 V a．c．

## CURRENT RATING

15A

## TERMINAL CAPACITY

Live，neutral \＆earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4 \mathrm{~mm}^{2}$
$1 \times 6 \mathrm{~mm}^{2}$（stranded）
MAX．INSTALLATION ALTITUDE
2000 metres
16A 2P＋E GERMAN SOCKET
VOLTAGE RATING
250V a．c．
CURRENT RATING
16A
TERMINAL CAPACITY
Live，neutral \＆earth
$4 \times 1.5 \mathrm{~mm}^{2}$
$2 \times 2.5 \mathrm{~mm}^{2}$
$1 \times 4 \mathrm{~mm}^{2}$

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
MAX．INSTALLATION ALTITUDE
2000 metres

15A AMERICAN（Logic Plus＊）


| BOX TYPES |  |  |  |
| :---: | :---: | :---: | :---: |
| GANG | FLUSH | FLUSH <br> （FOR EXTRA WIRING SPACE） | SURFACE |
| 1 GANG | $861 Z$ IC | $866 Z I C$ | K2140WHI |
| 2 GANG | $862 Z I C$ | $886 Z I C$ | K2142WHI |

16A 2P＋E GERMAN（Logic Plus＊）


| BOX TYPES |  |  |
| :---: | :---: | :---: |
| GANG | FLUSH | SURFACE |
| 1 GANG | 861 ZIC | K2140WHI |
| 2 GANG | $862 Z I C$ | K2142WHI |

[^47]
## Three Pole Fan Isolators

## Standards and approvals

Comply with BS EN 60669-2-4:2005

## TECHNICAL SPECIFICATION

## ELECTRICAL

voltage rating
250 V a.c.
CURRENT RATING
10A
RATED CONDITIONAL SHORT
CIRCUIT CURRENT (Inc)
3000A
TERMINAL CAPACITY
$4 \times 1 \mathrm{~mm}^{2}$
$4 \times 1.5 \mathrm{~mm}^{2}$
$3 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4 \mathrm{~mm}^{2}$
$1 \times 6 \mathrm{~mm}^{2}$

## CONTACT GAP

4mm switch contact gap
RECOMMENDED SCPD
GE Power Controls TIA32M40 32A IEC269-2-1 Fuse-link

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## 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

Two pole switching for fan units without timers


Three pole switching for fan units incorporating timers


## Wiring Devices Technical －Logic Plus ${ }^{\text {TM }}$

## Shaver Socket Outlets

## Standards and approvals

Shaver socket outlets comply with BS 4573：1970 and IEC 60884－1：2006

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
$1 \times 4 \mathrm{~mm}^{2}$ ，or $2 \times 2.5 \mathrm{~mm}^{2}, 3 \times 1.5$ solid conductors

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
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 ${ }^{\text {TM }}$ range．

The shaver socket outlet accommodates the following plugs：
British 5 mm dia pins on 16.6 mm pitch（230V socket）to BS 4573：1970．
European 4 mm dia pins on 17 to 19 mm pitch（ 230 V socket）to IEC $83: 1975$ Standard C5．

Australian $6.5 \times 1.6$ flat blades each set at $30^{\circ}$ to the vertical on a nominal pitch of 13.7 mm （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 IET 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 5 mm dia pins on 16.6 mm pitch (230V socket) to BS 4573:1970.
- European 4 mm dia pins on 17 to 19 mm pitch (230V socket) to BS EN 50075
- Australian $6.5 \times 1.6$ flat blades each set at $30^{\circ}$ to the vertical on a nominal pitch of 13.7 mm (230V socket) AS/NZS 3112:2000
- American $6.6 \times 1.6$ flat horizontal blades on 12.7 mm pitch (115V socket) to UL498 / NEMA WD6.


## TECHNICAL SPECIFICATION

## ELECTRICAL

voltage rating
K701: 230 V a.c. Input (will operate at $220-250 \mathrm{~V}$ a.c.) K706: 127 V a.c. Input (will operate at $110-130 \mathrm{~V}$ a.c.) 230 V or 115 V 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 $1 \times 4 \mathrm{~mm}^{2}$ or
$2 \times 2.5 \mathrm{~mm}^{2}$ solid conductors

## PHYSICAL

ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## 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 the latest edition of BS 7671.

## FEATURES

- Top access terminal screws make wiring quicker and easier
- Automatic primary supply switching on insertion of plug
- Choice of 230 V or 115 V output socket positions
- Safety interlocked shutters to prevent insertion of two plugs simultaneously
- Only one size of screwdriver required for installation
- 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.

## 13A Connection Units, 20A Switches and Flex Outlets

## Standards and approvals

All Connection Units comply with BS 1363-4:1995.

All 20A DP Switches comply with BS EN 60669-1:1999.

Flex Outlet complies with BS EN 60670-22:2006.

Fuses comply with BS 1362:1973.

## TECHNICAL SPECIFICATION

## ELECTRICAL

VOLTAGE RATING
250V a.c.
CURRENT RATING
Connection Units: 13A
DP switches: 20A
Flex outlets: 20A
TERMINAL CAPACITY
Supply terminal:
$2 \times 6 \mathrm{~mm}^{2}$ stranded
$2 \times 4 \mathrm{~mm}^{2}$
$3 \times 2.5 \mathrm{~mm}^{2}$
Load terminals:
$2 \times 6 \mathrm{~mm}^{2}$ stranded
$2 \times 4 \mathrm{~mm}^{2}$
$3 \times 2.5 \mathrm{~mm}^{2}$
CORD GRIP CAPACITY
Connection units:
min: 2 core, 0.5 mm
max: 3 core, 1.5 mm
20A DP switches \& flex outlet plate:
min: 3 core, 1.5 mm
max: 3 core, 2.5 mm

## PHYSICAL

ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## 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 are positioned 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 $175^{\circ}$ 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.

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 IET 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.

## Wiring Devices Technical

## 13A Connection Units, 20A Switches and Flex Outlets

## FEATURES

- Optional indicators in the switch rockers with $175^{\circ}$ 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 onesize ( 4 mm ) screwdriver
- Backed out and captive terminal screws

[^48]

Supply and load cable cords cut and stripped to same length


Blanking plug for bottom outlet
 cord grip


Front outlet cord grip


[^49]
## 20A Key Operated Fire Alarm Isolator Switch

## TECHNICAL SPECIFICATION

## ELECTRICAL

VOLTAGE RATING
250 V a．c．
CURRENT RATING
20A

## TERMINAL CAPACITIES

Live，Neutral \＆Earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$

## PHYSICAL

ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## IP RATING

IP2XD
MAX．INSTALLATION ALTITUDE
2000 metres


## 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.

## 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
－Double Pole switching
－Only one size of screwdriver required for installation
－Printed terminal markings on grey rear of the switch moulding for clearer identification

[^50]
## High Current Switches and Cooker Control Units

## Standards and approvals

All DP switches in the range comply with BS EN 60669-1:1999.

All Cooker Control Units in the range comply with BS 4177:1992.

Cooker Connection Unit comply with
BS EN 60670-22:2006

## TECHNICAL SPECIFICATION

## ELECTRICAL

VOLTAGE RATING
250 V a.c.
CURRENT RATING
32A Switch
45A Cooker Control Unit
45A Cooker Connection Unit
50A Switch (Resistive Load)

## SWITCH

3 mm contact gap
Double pole operation -
except socket switch on Cooker Control Units
TERMINAL CAPACITY 50A SWITCHES
Cooker Control Units, and Cooker Connection Units:
$4 \times 4 \mathrm{~mm}^{2}$
$3 \times 6 \mathrm{~mm}^{2}$
$1 \times 10 \mathrm{~mm}^{2}$
$1 \times 16 \mathrm{~mm}^{2}$
TERMINAL CAPACITY, 32A SWITCH
$3 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4 \mathrm{~mm}^{2}$
$1 \times 6 \mathrm{~mm}^{2}$

## PHYSICAL

ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$


## 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
- Metal front plates available
- Positive double pole switching
- Replaceable neon indicators
- Toggle action switches
- Wide product choice

[^51]
## Plateswitches

## Standards and approvals

All MK plateswitches comply with BS EN 60669－1：1999．

## TECHNICAL SPECIFICATION

## ELECTRICAL

VOLTAGE RATING
250 V a．c．

## CURRENT RATING

10A－no derating when used on fluorescent
or inductive loads
20 A －no derating when used on fluorescent or inductive loads
Push／Retractive switch types are not intended for fluorescent loads．

## TERMINAL CAPACITY

$4 \times 1 \mathrm{~mm}^{2}$
$4 \times 1.5 \mathrm{~mm}^{2}$
$3 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4 \mathrm{~mm}^{2}$
$1 \times 6 \mathrm{~mm}^{2}$

## CONTACT GAP

3 mm switch contact gap

## PHYSICAL

ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
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 10A rating tested to 10,000 operations at 20A 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 25 mm deep box simplifies wiring．

## features

－Two way switches can be wired as one or two way
－Matching Grid switches available in 10 or 20A ratings
－ 3 mm switch contact gap
－Positive switch action
－Top access，backed out and captive terminal screws

－Neon locator available making switch easy to find in darkened rooms（Logic Plus ${ }^{\text {TM }}$ only）

## 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



## Dimmer Switches

## Standards and approvals

All CE marked Logic Plus ${ }^{\text {TM }}$ 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 IEC 60669-2-1 (LED Intelligent Dimmer only)
*Non-UK dimmer switches see note below

## TECHNICAL SPECIFICATION

## ELECTRICAL

MAINS SUPPLY VOLTAGE
230 V a.c. (Nominal)
220 V a.c. (Nominal, Non-UK) 220 V a.c. to 240 V a.c. (For LED Intelligent Dimmer)

## MAINS SUPPLY VOLTAGE RANGE

216 V a.c. to 253 V a.c.
200 V a.c. to 250 V a.c
198 V a.c. to 264 V a.c. (For LED Intelligent Dimmer)

## MAINS SUPPLY FREQUENCY

$50 \mathrm{~Hz} \pm 3 \mathrm{~Hz}$
$60 \mathrm{~Hz} \pm 3 \mathrm{~Hz}$

## TYPE OF LOADS

STANDARD DIMMERS
Fused GLS Tungsten Filament lamps only to BS EN 60064:1996 and BS EN 60432-1:2000, rated at $230 / 240 \mathrm{~V}$

INTELLIGENT DIMMERS AND
LED 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 (leading edge) and NOT only phase cut (trailing edge) type of dimmers.

Warning: These dimmer switches are not suitable for use with Fluorescent Lamps or Energy Saving Lamps.

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$0^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
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) LED Intelligent 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, 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 and LED 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 and LED 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 66069-2-1. Loads suitable for use with standard dimmer switches above are also suitable for use with this category of dimmer switch.
Only one Dimmer Switch can be used in a two-way switching circuit.

## Minimum Brightness Adjustment for LED Intelligent Dimmers

The light output of some LED lamps may appear to be too dim or invisible when the dimmer knob is at the minimum dim level. Follow the steps below to adjust the minimum brightness level. This feature is primarily for adjusting the minimum brightness level of the LED lamp although it can be used for other load types.

For a double gang dimmer, the light level of each gang has to be adjusted separately.

## Step 1 - Access To Programming Mode

1. Push the dimmer knob so that it is in OFF state.
2. Set the dimmer knob to minimum level.

Push to switch OFF

3. Turn on the dimmer and immediately rotate the knob 3 times in full rotary span within 5 seconds.

Push to switch ON


NOTE: Wait for 3 seconds, the lamp will then dim to minimun before automatically brightening to about $30 \%$ level. Turning/pushing the dimmer knob before the end of automatic brightening will end access to programming mode
4. Dimmer enters programming mode.

## Step 2 - Adjust Brightness Level and Exit Programming Mode

5. Rotate the dimmer knob anticlockwise to adjust the lamp to the desired brightness level.

NOTE: Some LED lamps may not work properly if the brightness level is set too low thus it is recommended to keep the brightness level of the lamp at a visible level. The dimmer will exit programming mode automatically without saving the new setting if there is no dimmer knob movement for 15 seconds. The dimmer will restore its factory default light level.


## Turn anticlockwise to adjust

 the brightness level.6. Confirm the new setting and exit programming mode by turning OFF the dimmer.

Push to switch OFF


## Step 3 - Success indication (Programming Complete)

7. The next time the dimmer is turned on the lamp will automatically brighten to the maximum level before dimming to the brightness level corresponds to the knob level.

# Wiring Devices Technical 

## Dimmer Switches

## FEATURES

## Intelligent and LED 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. In addition, LED Intelligent dimmer switches are suitable for dimmable LED bulbs for incandescent replacement.
- 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

| LOAD TYPES AND LOADINGS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DIMMER SERIES | DIMMER SIZE <br> (1 GANG) | RATING |  |  | MAX NO. OF TRANSFORMERS AND LEDS (TOTAL RATING MUST NOT EXCEED MAX.VA RATING OF DIMMER) |  |
|  |  | GLS AND MAINS VOLTAGE HALOGEN | ELECTRONIC OR WIRE WOUND LV TRANSFORMERS | LED | TRANSFORMERS | LEDS |
| INTELLIGENT DIMMER SWITCHES | single dimmer | 40-300W | 40-240W/VA | - | 4 | - |
|  | double dimmer | $2 \times 40-300 \mathrm{~W}$ | $2 \times 40-240 W / V A$ | - | 4 per dimmer | - |
|  | single dimmer | 60-500W | 60-400W/VA | - | 5 | - |
| STANDARD DIMMER SWITCHES | single dimmer | 40-250W | - | - | - | - |
|  | double dimmer | $2 \times 40-250 \mathrm{~W}$ | - | - | - | - |
|  | single dimmer | 65-450W | - | - | - | - |
| LED INTELLIGENT DIMMER SWITCHES | single dimmer | 40-300W | 40-240W/VA | 4-70W | 4 | 10 |
|  | double dimmer | $2 \times 40-300 \mathrm{~W}$ | $2 \times 40-240 W / V A$ | $2 \times 4-70 \mathrm{~W}$ | 4 per dimmer | 10 per dimmer |

Do not connect more than the maximum number of transformers stated for each dimmer.


Please note the dimmer may be substituted for any
Two-Way switches.
$\left.\begin{array}{|c|c|c|}\hline \text { OVERLOAD MANAGEMENT } \\ \hline 60-500 \mathrm{~W} \text { CIRCUIT } & 40-300 \mathrm{~W} \text { CIRCUIT } & \text { LED INTELLIGENT DIMMER } \\ \hline 60-500 \mathrm{~W} \text { nominal } & 40-300 \mathrm{~W} \text { nominal } & 40-300 \mathrm{~W} \text { nominal } \\ \hline \begin{array}{c}60-625 \mathrm{~W} \text { function without } \\ \text { dimming }\end{array} & \begin{array}{c}40-375 \mathrm{~W} \text { function without } \\ \text { dimming }\end{array} & \begin{array}{c}40-375 \mathrm{~W} \text { function without } \\ \text { dimming }\end{array} \\ \hline>625-750 \mathrm{~W} \text { dim to } 68 \mathrm{~V} \pm 8 \mathrm{~V} \\ \text { r.m.s. }\end{array} \quad \begin{array}{c}>375-500 \mathrm{~W} \text { dim to } 68 \mathrm{~V} \pm 8 \mathrm{~V} \\ \text { r.m.s. }\end{array} \quad \begin{array}{c}>375-600 \mathrm{~W} \text { dim to } \\ \text { minimum level }\end{array}\right]$

## Euro and LJU6C Data Frontplates

## Standards and approvals

BS 5733:2010


## Description

Frontplates used for mounting snapfit modules.

## FEATURES

- $1 \mathrm{G}, 2 \mathrm{G}$ and 3 G Euro frontplates
- 1G LJU6C Frontplate
- Accept industry standard (Euro) and LJU6C snapfit modules
- 1G Euro frontplate accepts 2 Euro modules, ( $50 \times 50 \mathrm{~mm}$ aperture)
- 2G Euro frontplate accepts 4 Euro modules, ( $100 \times 50 \mathrm{~mm}$ aperture)
- 3G Euro frontplate accepts 6 Euro Modules, (150x50mm aperture)
- 1G LJU6C frontplate accepts two LJU6C modules ( $27 \times 37 \mathrm{~mm}$ aperture)
- $1 / 2,1$ and 2 module Euro Blanks available
- 1 module LJU6C Blank available


# Wiring Devices Technical 

## Power Modules

## Standards and approvals

K5830: BS 1363 Part 2:1995
K5831: IEC 60884-1:2006
K5832: SASO 2204:2003
K5833: BS 546:1950
K5834: French National Standard 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 | 2A USB CHARGING MODULE |  |
| ELECTRICAL <br> VOLTAGE RATING 250 V a.c. <br> CURRENT RATING 13A <br> TERMINAL CAPACITY <br> Live, neutral \& earth $3 \times 2.5 \mathrm{~mm}^{2}$ <br> $3 \times 4 \mathrm{~mm}^{2}$ <br> $2 \times 6 \mathrm{~mm}^{2}$ (stranded) <br> PHYSICAL <br> AMBIENT OPERATING TEMPERATURE $-5^{\circ} \mathrm{C} \text { to }+40^{\circ} \mathrm{C}$ <br> IP RATING IP2XD <br> MAX. INSTALLATION ALTITUDE <br> 2000 metres | ELECTRICAL <br> VOLTAGE RATING 250 V a.c. <br> CURRENT RATING 5A <br> TERMINAL CAPACITY <br> Live, neutral \& earth <br> $3 \times 2.5 \mathrm{~mm}^{2}$ <br> $3 \times 4 \mathrm{~mm}^{2}$ <br> $2 \times 6 \mathrm{~mm}^{2}$ (stranded) <br> PHYSICAL <br> AMBIENT OPERATING TEMPERATURE <br> $-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$ <br> IP RATING <br> IP2XD <br> MAX. INSTALLATION <br> ALTITUDE <br> 2000 metres | ELECTRICAL <br> VOLTAGE RATING 250 V a.c. <br> CURRENT RATING 16A <br> TERMINAL CAPACITY <br> Live, neutral \& earth <br> $4 \times 1.5 \mathrm{~mm}^{2}$ <br> $2 \times 2.5 \mathrm{~mm}^{2}$ <br> $1 \times 4 \mathrm{~mm}^{2}$ <br> PHYSICAL <br> AMBIENT OPERATING TEMPERATURE $-5^{\circ} \mathrm{C} \text { to }+40^{\circ} \mathrm{C}$ <br> IP RATING IP2XD <br> MAX. INSTALLATION ALTITUDE <br> 2000 metres | ELECTRICAL <br> VOLTAGE RATING 250 V a.c. <br> CURRENT RATING 16A <br> TERMINAL CAPACITY <br> Live, neutral \& earth $3 \times 2.5 \mathrm{~mm}^{2}$ <br> $3 \times 4 \mathrm{~mm}^{2}$ <br> $1 \times 6 \mathrm{~mm}^{2}$ <br> PHYSICAL <br> AMBIENT OPERATING TEMPERATURE $-5^{\circ} \mathrm{C} \text { to }+40^{\circ} \mathrm{C}$ <br> IP RATING IP2XD <br> MAX. INSTALLATION ALTITUDE <br> 2000 metres | ELECTRICAL <br> VOLTAGE RATING 127V a.c. <br> CURRENT RATING 15A <br> TERMINAL CAPACITY <br> Live, neutral \& earth $3 \times 2.5 \mathrm{~mm}^{2}$ <br> $3 \times 4 \mathrm{~mm}^{2}$ <br> $1 \times 6 \mathrm{~mm}^{2}$ (stranded) <br> PHYSICAL <br> AMBIENT OPERATING TEMPERATURE $-5^{\circ} \mathrm{C} \text { to }+40^{\circ} \mathrm{C}$ <br> IP RATING IP2XD <br> MAX. INSTALLATION <br> ALTITUDE <br> 2000 metres | ELECTRICAL <br> INPUT <br> VOLTAGE RATING $220-240 \mathrm{~V}$ a.c. <br> FREQUENCY <br> $50-60 \mathrm{~Hz}$ <br> TERMINAL <br> CAPACITY <br> Live \& neutral <br> $3 \times 2.5 \mathrm{~mm}^{2}$ <br> PHYSICAL <br> AMBIENT <br> OPERATING <br> TEMPERATURE <br> $0^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$ <br> IP RATING <br> IP3xC <br> MAX. <br> INSTALLATION <br> ALTITUDE <br> 2000 metres | OUTPUT <br> VOLTAGE <br> RATING <br> $2 \times 5 \mathrm{~V}$ d.c. <br> max CURRENT <br> Combined total of 2A <br> CHARGING <br> SOCKETS <br> USB 2.0 Type A, USB 3.0 |

## Dimensions (mm)



K5830

| BOX TYPES | BOX TYPES |
| :---: | :---: |
| MINIMUM | MINIMUM |
| 35MM | $35 M M$ |
| EXTRA WIRING SPACE | EXTRA WIRING SPACE |
| 46 MM | 46 MM |

5A UK


K5833

16A German


K5831


16A French/ Belgian


K5834

| BOX TYPES |
| ---: |
| MINIMUM |
| $46 M M$ |

15
15A American


2A USB Charging Module


K5837

| MK EURO FRONT <br> PLATE THICKNESS | BOX TYPES |
| :---: | :---: |
| $>7 \mathrm{~mm}$ | Min 35 mm |
| $<7 \mathrm{~mm}$ | Min 46 mm |

## Wiring Devices Technical

## RJ45 Data Outlets

## Standards and approvals

ISO/IEC 11801
EN 50173
TIA 568
EN 41003


## Installation

- Maximum cable length 90 m .
- Cable bend radii, 40 mm during installation, 20 mm after installation.


## Description

Suitable for use in all LJU6C and Euro frontplates, available in the Logic Plus range, Cat $5 e$ and Cat 6 modules suitable for use in structured cabling distribution systems.

Installation details and wiring diagram illustrations


Euro and LJU6C modules are to be wired as follows



RJ45 Cat.5e LJU6C K5745


## 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

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## 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 LJ6UC front plates． BNC Euro modules with a 50Ohm crimp connector suitable for use with RG58， URM43，URM76 and Beldon 9907 type co－axial 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 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

## Telephone sockets

－Quick，simple and reliable IDC connectors
－Can be specified for all applications

## Data sockets

－Latest specification for high performance systems
－Wide range of data connectors available

For information on TV Satellite and
FM Modules see pages 471－473

## Wiring Devices Technical

## 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 | STRIPPED COLOUR | SOLID COLOUR |
| :--- | :--- | :--- |
| NO. | WIRE | 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 |

[^52]

K5887

## 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).
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, clauses 10.1, 10.3.

## Satellite TV sockets

BS 5733:2010 (where applicable).

## 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 $4-8 \mathrm{~mm}$ diameter, inner conductor $0.5-2 \mathrm{~mm}$ diameter

## INSERTION LOSS

Insertion loss data available on request
' $F$ ' TYPE SATELLITE SOCKET (K3525), CABLE SPECIFICATION
Co-axial cable: inner core diameter $-0.5-1.2 \mathrm{~mm}$
RJ11 (K4817), CABLE SPECIFICATION
Capable of taking 0.08 to $0.65 \mathrm{~mm}^{2}$ solid or stranded cable

## PHYSICAL

ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
MAX. INSTALLATION ALTITUDE
2000 metres


## 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 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 46-48.

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.

## 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 2000 V 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 downlead．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 50 V ，（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 downlead．

Conventional distribution system for TV and FM signals using a single aerial downlead．

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）．
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）．

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:
$5-65 \mathrm{MHz}$
$470-862 \mathrm{MHz}$

## Triplexer:

$5-65 \mathrm{MHz}$
$470-862 \mathrm{MHz}$
FM
Diplexer: 87.5-108MHz
Triplexer: $87.5-108 \mathrm{MHz}$
SAT
Diplexer: $\mathrm{n} / \mathrm{a}$
Triplexer: 950-2300MHz
TV/FM/DAB/SAT PRODUCTS FOR
DIGITAL RADIO
TV
Diplexer:
$5-65 \mathrm{MHz}$
$470-862 \mathrm{MHz}$
Triplexer:
$5-65 \mathrm{MHz}$
$470-862 \mathrm{MHz}$
FM/DAB
Diplexer: 87.5-230MHz
Triplexer: $87.5-230 \mathrm{MHz}$
SAT OR SAT1
Diplexer: n/a
Triplexer: $950-2300 \mathrm{MHz}$
SAT2
Diplexer: n/a
Triplexer: $5-2300 \mathrm{MHz}$


## 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 supplementry TV outlet for back-feed for further distribution

| 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 |

[^53]
## 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）

TV Co－axial cable stripping details


Screening braid to remain in place over the inner insulation


## Telephone Outlet Connection

Carefully strip 50 mm 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 2 G products both TV modules should be earthed）．

## Telephone Wiring

## Scheme

GREEN／white
BLUE／white
ORANGE／white
WHITE／orange
5 WHITE／blue
6 WHITE／green
Note：Main wire colour is shown in capitals


## - Logic Plus ${ }^{\text {TM }}$

## Combination Plates 2/4-gang Stacked Combination Plate

## 4 Gang Plate Description

The 4-gang 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.

## TECHNICAL SPECIFICATION

## FRONTPLATE

The frontplate complies with the mechanical strength requirements of BS 57332010.

SWITCHED SOCKET SPECIFICATION
Compliant to BS 1363 Part 2: 1995

## ELECTRICAL

VOLTAGE RATING
250 V a.c.
CURRENT RATING
13 Amp
TERMINAL CAPACITY
Live, Neutral \& Earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$ (standard)

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
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 35 mm deep, and for greater wiring space 854ZIC, which is 47 mm 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 IET 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


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 $4 \times 50 \mathrm{~mm}$ high by 25 mm wide Euro modules. ( $100 \mathrm{~mm} \times 50 \mathrm{~mm}$ aperture)

## 2 Gang Plate Description <br> The 2-gang 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 57332010.

SWITCHED SOCKET SPECIFICATION
Compliant to BS 1363 Part 2: 1995

## ELECTRICAL

VOLTAGE RATING
250V a.c.
CURRENT RATING
13 Amp
TERMINAL CAPACITY
Live, Neutral \& Earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$ (standard)
PHYSICAL
ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
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 35 mm deep, and for greater wiring space 854ZIC, which is 47 mm 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 IET 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


## Combination Plate

## Standards and approvals

All Aspect 13A socket outlets comply with BS 1363：Part 2：1995．

K24209 and K24210 comply with BS 5733：2010．

## TECHNICAL SPECIFICATION

## electrical

voltage rating
250 V a．c．
CURRENT RATING
13A
TERMINAL CAPACITY
Live，neutral \＆earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$（stranded）
（Dual earth terminals）

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
MAX．INSTALLATION ALTITUDE
2000 metres

| MOUNTING BOXES <br> Combination Plate <br> List Number |  |
| :---: | :---: |
| K24206 | 47mm <br> Mounting Box |
| K24207 | 870 ZIC |
| K24208 | 870 ZIC |
| K24209 | 868ZIC |
| K24210 | 858 ZIC |
|  | 869 ZIC |

Bespoke requirements can be achieved through the MK Design Service to deliver variation in colours，materials，finishes and markings．

Euro apertures can also be converted to grid－switch．For more information please visit www．mkelectric．co．uk or call 01268563720


## Description

A range of combination plates designed for ease of installation and having all the advantageous design features of the Aspect range．
These combination socket outlets provide interior designers and installers with a stylish and practical wiring device solution．The range also has larger euro module frontplates to house eight and twelve single euro modules without the inclusion of fixed socket outlets．The K24209 combination socket outlet，for example allows for the inclusion of up to eight single Euro 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 are designed 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
－For Aspect products，back boxes must be installed 10 mm sub flush to the wall surface
－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 frontplate 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，IET Wiring Regulations．

## - Aspect

## 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 17th Edition wiring regulations


## Installation

Aspect socket outlets can only be mounted on a wall. Do not mount or use as a trailing socket or where they may be subject to excessive moisture or dampness.
Install corresponding back box 10 mm sub flush to finished wall surface.
Aspect combination plates are supplied with clip on segregator.

Dimensions (mm)

K24206 and K24207


K24208


K24209


K24210


## Combination Plate

## Standards and approvals

All Edge 13A socket outlets comply with BS 1363：Part 2：1995．

K14209 and K14210 comply with BS 5733：2010．

## TECHNICAL SPECIFICATION

## ELECTRICAL

vOLTAGE RATING
250 V a．c．
CURRENT RATING
13A
TERMINAL CAPACITY
Live，neutral \＆earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$（stranded）
（Dual earth terminals）

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
MAX．INSTALLATION ALTITUDE
2000 metres

| MOUNTING BOXES <br> Combination <br> Plate <br> List Number <br> K14200 <br> Mounting Box |  | K7mm <br> Mounting Box |
| :---: | :---: | :---: |
| K14205 | K14201 | K14200 |
| K14100 | K14101 | K14207 |
| K14216 |  | K14102 |
| K14217 |  | 867 ZIC |
| K14208 |  | 867 ICIC |
| K14209 |  | 868 IC |
| K14210 |  | 869 IC |

Bespoke requirements can be achieved through the MK Design Service to deliver variation in colours，materials，finishes and markings．
Euro apertures can also be converted to grid－switch．For more information please visit www．mkelectric．co．uk or call 01268563720


## 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 range also has larger euro module frontplates to house eight and twelve single euro modules without the inclusion of fixed socket outlets．The K14100 combination socket outlet，for example allows for the inclusion of up to eight single Euro 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 are designed 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
－For Edge products，back boxes must be installed flush to the wall surface
－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 frontplate 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，IET Wiring Regulations．


Combination plates allow the use of a variety of power and data modules making them ideal for hotels．

## - Edge ${ }^{\text {TM }}$

## 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 17th Edition wiring regulations


## Installation

Edge socket outlets can be mounted on either a wall or suitable bench mounted trunking. Do not mount or use as a trailing socket or where they may be subject to excessive moisture or dampness.

## Dimensions (mm)

## K14216 and K14217



K14200


## K14209



K14210


K14205


## Key Operated Switchsocket Outlet

## Standards and approvals

All Edge 13A socket outlets comply with BS 1363：Part 2：1995．

## TECHNICAL SPECIFICATION

## ELECTRICAL

VOLTAGE RATING
250 V a．c．
CURRENT RATING
13A
TERMINAL CAPACITY
Live，neutral \＆earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4 \mathrm{~mm}^{2}$
$1 \times 6 \mathrm{~mm}^{2}$（stranded）
（Dual earth terminals）

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## IP RATING

IP2XD
MAX．INSTALLATION ALTITUDE 2000 metres


## Description

The Key Operated 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 47 mm deep mounting box is in position）．

## 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

[^54]
## - Edge ${ }^{\text {TM }}$

## Edge ${ }^{T M}$ 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 6 mm .

The recommended depth of boxes for the different types of wiring accessories are as follows:

| MOUNTING BOXES | Broduct |
| :---: | :---: |
| Socket Outlets | 35 mm |
| Lockable Socket | 47 mm |
| Lockable Switch | 47 mm |
| German style 2 pole + E <br> Socket Outlet mounted in <br> Euro Frame | 47 mm |
| Connection Units | 47 mm |
| Plateswitches | 35 mm |
| Grid System Switches* | 35 mm |
| Dimmer Switches | 35 mm |
| Telephone, Television and |  |
| Data Outlets |  |$\quad 35 \mathrm{~mm}$

*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 47 mm 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 3.5 mm is used.

## Aspect 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 front plate 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 1 mm between the distance the main body of the product is from the wall and that of the front plate．
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（ $<50 \mathrm{v}$ ）must not be mounted in the same Euro enclosures as equipment rated in excess of 50 v ．

## 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 2


FIGURE 3


FIGURE 4

Gently lever away from wall


Blade to be between notch in plate and ramp on support frame

FIGURE 5

## Decorative Technical: General information

## Earthing: All Metal Frontplate Products

To comply with the latest edition of the BS 7671 IET 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 |  |
| :---: | :---: | :---: |
| Albany Plus | K181 | K5821 |
| Aspect | K24181 | K5821 |
| Edge | K14181 | K5821 |

Or

| RANGE | PRODUCTS REQUIRED |  |  |
| :---: | :---: | :---: | :---: |
| Albany Plus | K182 | K5821 | $2 \times$ K186 |
| Aspect | K24182 | K5821 | $2 \times$ K186 |
| Edge | K14182 | K5821 | $2 \times$ K186 |

## Simple Fit Switching PIR Sensors

## TECHNICAL SPECIFICATION

## technology

PIR
MAXIMUM RECOMMENDED MOUNTING HEIGHT 1.8m to 3 m

## RANGE

Cone-shaped detection pattern,
6 m radius at 2.5 m mounting height


OPERATING VOLTAGE
AC220~240V/50Hz
RECOMMENDED CIRCUIT PROTECTION
16A

## MAXIMUM LOAD

6A or 600W fluorescent lightling load capacity

## PHOTOCELL

Approx. 5-1000 Lux
OFF DELAY
5 sec - 18min
COLOUR
White (RAL9010)

## MATERIAL/ABS

Flame retardant PC

## IP RATING

Surface Mount: IP44
Flush Mount:
IP44 (Sensor section only)
IP20 (Ceiling Board onwards)
K5017
DEPTH REQUIRED BEHIND CEILING
50 mm
WEIGHT
269g
Ma, Max 2000W

For a full range of corresponding products, see pages 63-66 in the product selector.


## 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. Providing cost effective presence detection for lighting control. Simple Fit dual mount sensors are easy to install and can deliver energy savings of up to $70 \%$ *

## FEATURES

- Presence detection by passive infrared
- Innovative dual mount system requires only one sensor for either flush or surface mount applications
- External programming dials enable quick adjustment of time and lux levels
- Off delay adjustable between 5 seconds and 18 minutes following the last observed movement after which the lights switch off
- PIR Lens provides 360 degree detection
- Detection Range of up to 6 m diameter at $25^{\circ} \mathrm{C}$ at 2.5 m mounting height
- Manual on / off override function
- Mounting Height: Recommended ceiling mount 1.8 m to 3 m
- Loading up to 6 Amps
- Ability to wire more than 1 sensor in parallel to a load
- Ability to switch volt free loads
- Lens mask included to mask out any areas of unwanted detection

K5017
Flush and Surface Ceiling Mount PIR Sensor in one

- For flush mount, spring clips enable ease of installation in ceilings with thickness between 5 mm and 20 mm
- Simple to switch between flush and surface options
- Surface mount can be fixed direct to the ceiling or on to a circular conduit or BESA box
- All screws and fixings supplied


## Dimensions (mm)

Flush Mount (Hole size 75 mm to 80 mm )


Surface Mount


## Sensors Technical

## Simple Fit Switching PIR Sensors

## TECHNICAL SPECIFICATION

## TECHNOLOGY

PIR
MAXIMUM RECOMMENDED MOUNTING HEIGHT 1.8 m to 3 m

## RANGE

Cone-shaped detection pattern,
6 m radius at 2.5 m mounting height


## OPERATING VOLTAGE

AC220~240V/50Hz
RECOMMENDED CIRCUIT PROTECTION 16A

MAXIMUM LOAD
6A or 1500W fluorescent/incadescent lightling 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
100 mm
WEIGHT
105 g 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. These one-box solutions are easy to install and commission, also no additional parts are required.

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 2.5 m mounting height (detection pattern is cone shaped).

## Dimensions

K5015



K5016


## Sensors Technical

## Superior Switching PIR Sensors

## TECHNICAL SPECIFICATION

```
TECHNOLOGY
PIR
```


## DETECTION RANGE

```
10 m Macro / 7m Micro at 2.5 m mounting height
```



## SWITCHING CAPACITY

10A (Tungsten 6A)

## PHOTOCELL RANGE (LUX)

Adjustable 10 to 1000 lux via K4098

## delay time range

Adjustable 5mins to 40 mins via K4098
IP RATING
IP4X
SUPPLY VOLTAGE
Mains 230V
TEMPERATURE RANGE
0-40 degrees

## ACCESSORIES

K4098 Infrared programming tool required to adjust sensor settings


K5030F


K5030SM

## Description

A range of high performance switching PIR sensors for dependable switching of lighting loads.

## FEATURES

- High definition lenses, performance optics and software are all optimised to provide class leading sensitivity and occupancy detection ensuring that the lights are always on when required
- Superior switching sensors include integral adjustable active photocells which will hold the lights off in occupied areas or switch them off at a given light level
- Superior switching sensors deliver highly sensitive micro detection diameter of 7 m within a 10 m macro detection diameter (When installed at a mounting height of 2.5 m )
- Colour coded connectors make superior switching sensors easy to install and reduce wiring faults
- The easy to use K4098 infrared programming tool simplifies sensor set up and commissioning


## Flush Mount



## Surface Mount



## Sensors Technical

## Superior PIRs for DALI or DSI Dimming

TECHNICAL SPECIFICATION<br>TECHNOLOGY<br>PIR<br>dETECTION RANGE<br>

## SWITCHING CAPACITY

10A (Tungsten 6A)
DIGITAL DIMMING
DALI or DSI (Auto detect)
ANALOGUE DIMMING
1-10V
PHOTOCELL RANGE (LUX)
Adjustable 100 to 1000 lux via K4098

## delay time range

Adjustable 5 mins to 40 mins via K4098
IP RATING
IP4X

## SUPPLY VOLTAGE

Mains 230V
TEMPERATURE RANGE
0-40 degrees

## ACCESSORIES

K4098 Infrared programming tool required to adjust sensor settings


K5040F


K5040SM

## Description

A range of high performance PIR sensors for dependable control of digital dimming lighting loads.

## FEATURES

- High definition lenses, performance optics and software are all optimised to provide class leading sensitivity and occupancy detection ensuring that the lights are always on when required
- Dimming sensors include integral photocells which will hold the lights off in occupied areas or switch them off at a given light level. Regulating photocells enable a constant light level to be maintained through digital dimming
- Superior PIR sensors deliver highly sensitive micro detection diameter of 7 m within a 10 m macro detection diameter (When installed at a mounting height of 2.5 m )
- Automatic detection of DALI and DSI digital dimming type luminaires reduces commissioning time and the potential for errors
- The easy to use K4098 infrared programming tool simplifies sensor set up and commissioning


## Flush Mount



## Surface Mount



## Sensors Technical

## Battenfit Switching PIR Sensor

## TECHNICAL SPECIFICATION

MAXIMUM RECOMIMENDED MOUNTING HEIGHT 5.0 m

## RANGE

Cone-shaped detection pattern,
diameter (at floor level) $=2.4 \times$ mounting height


## OFF DELAY

1 minute - 40mins
10 second walk test mode
PHOTOCELL
Adjustable 50-5000 lux
OPERATING VOLTAGE
230 V 5 Hz
recommended circuit protection
10 Amps
MAXIMUM LOAD
2A
COLOUR
White
MATERIAL
Flame retardant PC/ABS
WEIGHT
100 g
IP RATING
IP65
ACCESSORIES
K4098 Infrared programming tool required to adjust
sensor settings

Advanced presence detection by passive infrared (PIR) technology

Off delay in hours following the last observed movement after which lights switch off

Passive photocell holds lights off in bright ambient conditions. Active photocell has the capability to switch lights off in occupied areas

Detection pattern and range in meters under normal operating conditions

One Switch Manual input to turn luminaires on or off

Infrared programming enables easy commissioning and re-commissioning via K4058

IP65

## Dimensions (mm)




## Ultrasonic Sensors

TECHNICAL SPECIFICATION<br>operating voltage<br>230 V 5 Hz<br>maximum recommended mounting height 5 metres<br>\section*{SWITCH CAPACITY}<br>10 Amps - Incandescent lamps: 1500W max (230V)<br>TERMINAL CAPACITY<br>$2 \times 1.5 \mathrm{~mm}$ or $1 \times 2.5 \mathrm{~mm}$

## WEIGHT

148 g
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


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 76 mm 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 -25 mm


A sensor will fit to its own backplate or tc a standard 25 mm 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.

## Sensors Technical

## Hand-Held Programming Tools

TECHNICAL SPECIFICATION
TRANSMISSION METHOD
Infrared
RANGE
15 m approx
BATTERY
3Vdc CR2032 Lithium Button Cell
EXPECTED BATTERY LIFE
3 years
STORAGE TEMPPERATURE
-25으 to $+70^{\circ} \mathrm{C}$
OPERATING TEMPERATURE
$0^{\circ} \mathrm{C}$ to $40^{\circ} \mathrm{C}$
IP RATING
4 X
APPROVAL
CE
DIMENSIONS
K4058:87mm (H) $\times 40 \mathrm{~mm}$ (W) $\times 7 \mathrm{~mm}$ (D)
K4059:100mm (H) $\times 50 \mathrm{~mm}$ (W) $\times 7 \mathrm{~mm}$ (D)
WEIGHT
20 g approx


MK sensors* feature a range of programmable parameters which can be adjusted using a simple, low cost hand-held programming controller.
*Not including Simple fit

## FEATURES K4058

- 3 simple time-delay settings (5 minutes/10 minutes/20 minutes)
- Presence detection mode
- Absence detection mode
- Enable/disable photocell

Walk-test feature

## FEATURES K4059

- 4 simple time-delay settings (5 minutes/10 minutes/20 minutes/40 minutes)
- Presence detection mode
- Absence detection mode
- Enable/disable photocell
- Walk-test feature
- Set regulating light level - when used in conjunction with a suitable lux meter
- Restore button functionality - press \& hold reverts to factory default, short press reverts back to last configuration
- Lamp burn-in


# Ceiling Accessories Technical 

## Ceiling Switches

## Standards and approvals

3164WHI fully complies with the 17th Edition Wiring Regulations (BS 7671:2008 with respect to safety isolation for maintenance purpose. Conforms to BS EN 60669-1:1999

3151WHI, 3190WHI, K3191WHI, K3192WHI, K3131WHI, K2051WHI, K2056WHI, conform to BS EN 60669-1:1999

## TECHNICAL SPECIFICATION

## ELECTRICAL

voltage rating
250 V a.c.

## MAXIMUM RATING

See range details
Note: Switches do not have to be derated when used with resistive or fluorescent loads

## TERMINAL CAPACITY

K3131, 3190, K3191, K3192
$4 \times 1.0 \mathrm{~mm}^{2}$
$3 \times 1.5 \mathrm{~mm}^{2}$
3151
$4 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4.0 \mathrm{~mm}^{2}$
$1 \times 6 \mathrm{~mm}^{2}$
3164
$4 \times 4 \mathrm{~mm}^{2}$
$3 \times 6 \mathrm{~mm}^{2}$
$1 \times 10 \mathrm{~mm}^{2}$
$1 \times 16 \mathrm{~mm}^{2}$
K2051/K2056, Earth Terminal
$6 \times 1 \mathrm{~mm}^{2}$
$4 \times 1.5 \mathrm{~mm}^{2}$
$2 \times 2.5 \mathrm{~mm}^{2}$
$1 \times 4 \mathrm{~mm}^{2}$
$1 \times 6 \mathrm{~mm}^{2}$

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## IP RATING

IP3X
MAX. INSTALLATION ALTITUDE
2000 metres

## 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.


## 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 1.5 m minimum length, and with standard red cords are 2 m minimum length
- K3191, K3192 and K3131 have self locating feature when used with mounting block, to aid installation
- Ceiling switches with white cords and bangles are 2 m minimum length, and with red cords and bangles are 3 m minimum length
- 3164 WHI is fitted with mechanical OFF indicator
- 3164 has a full 3 mm contact gap
- 3164 may be surface mounted


## Dimensions (mm)

K3191WHI/ K3192WHI
Fixing centres


3151WHI Fixing centres 50.8



## K3131WHI

Fixing centres


K2056WHI


84

## Ceiling Accessories Technical

## 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 EN 50525 （H05V2V2－F）

## TECHNICAL SPECIFICATION

## electrical

LAMPHOLDERS AND BATTEN LAMPHOLDERS
VOLTAGE RATING
250 V a．c．

## MAXIMUM RATING

150 watts
TERMINAL CAPACITY
Live，neutral \＆earth
$3 \times 1.0 \mathrm{~mm}^{2}$
$2 \times 1.5 \mathrm{~mm}^{2}$
CEILING ROSES \＆BASE OF PRE－WIRED BATTEN LAMPHOLDERS
vOLTAGE RATING
250 V a．c．
MAXIMUM RATING
6 amps
TERMINAL CAPACITY
Live，neutral \＆earth
$4 \times 1.0 \mathrm{~mm}^{2}$
$3 \times 1.5 \mathrm{~mm}^{2}$
$1 \times 2.5 \mathrm{~mm}^{2}$

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## IP RATING

IP4X
MAX．INSTALLATION ALTITUDE
2000 metres

## Ceiling Rose

Pendant

## Description

The range includes ShockGuard ${ }^{\text {m }}$ SG type lampholders，pendant sets，batten lampholders and ceiling roses．

## Features

## ShockGuard ${ }^{\text {m＂}}$

－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（K1163WHI）available to give professional finish on damaged ceilings（for use with ceiling roses and pendant sets only）

## Dimensions（mm）

86
 Technical

## Lampholders and Shockguard type Lampholders

Dimensions (mm)


Standard Lampholder with protective skirt


Standard Lampholder


Standard Angled Batten Lampholder


Standard Batten Lampholder


SG Type Lampholder
with protective skirt


SG Type Lampholder


SG Type Angled 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 <br> RESISTANCE | MAX WORKING TEMP |
| :--- | :---: |
|  |  |
| T2 | Lamp cap temp |
|  | $210^{\circ} \mathrm{C}$ marked |
|  | BS 7895 and |
|  | BS EN 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.

## 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.

## 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 EN 61386-1:2008.

## 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
250 V a.c. 50 Hz

## CURRENT RATING

6 Amp
TERMINAL CAPACITY (ACCESSORIES)
Phase, neutral, earth \& 'loop in' terminals will each accept:

K3230, K4230 $-1 \times 0.75$ or $1 \times 1.00 \mathrm{~mm}$ conductors
K3220, K3212, K3240, K4220, K4214 and K4240 -
$5 \times 0.75,5 \times 1.00,4 \times 1.50,3 \times 2.50$ or $2 \times 4.00 \mathrm{~mm}^{2}$ conductors

## PHYSICAL

STATIC SUSPENSION LOAD
5kg max
AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
(not to exceed an average of more than $25^{\circ} \mathrm{C}$ 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 flex or low smoke zero halogen (LSF) insulated and sheathed flexible 0.75 mm 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 5 kg

| MOUNTING BOXES |  | Slush (dryline) | Flush (solid) |
| :---: | :---: | :---: | :---: |
|  | Surface | F3220/K3240 | K3220/K4220/K4240WHI |
| N/A | N/A |  |  |
| K4214 | K2160WHI | QFB1WHI | 861 ZIC |

## Dimensions



## Distribution Boxes

## Standards and approvals

BS 5733

## TECHNICAL SPECIFICATION

## EleCTRICAL

current rating
6 amps
TERMINAL CAPACITY
$3 \times 6 \mathrm{~mm}$ rated at 16 amps

## PHYSICAL

CONDUIT ENTRIES WITH SNAP FIT BLANKS
20 and 25 mm in top, bottom and back faces
Outlets to be wired as 1 or 2 banks

## AMBIENT OPERATING TEMPERATURE

$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
(not to exceed an average of more than $25^{\circ} \mathrm{C}$ in any
24 hour period)

## PRATING

IP2XD
MAX. INSTALLATION ALTITUDE
2000 metres

## 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



| DIMENSIONS (mm) |  |  |
| :---: | :---: | :---: |
|  | A | B |
| K4204 | 237 | 222 |
| K4206 | 335 | 222 |
| K4208 | 400 | 222 |
| K4210 | 465 | 222 |



## K4210 pictured

## Description

Distribution boxes consisting of an extruded aluminium body with V0 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 25 mm 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.

## Wiring Diagrams



## MK Elements Collection

## Installation

The MK Elements Collection products consist of the main product module, complete with its' support frame, plus a separate clip on frontplate. The product is mounted to the wall, after wiring, and the frontplate is clipped onto the frame. The frontplate is supplied separately to aid installation.

1. Ensure the depth of the back box is correct for the product and that it is fitted securely to the wall.
2. Install the cables in the normal way and, using the fixing screws supplied, mount the product, still minus its frontplate, to the wall. It is important the correct headed screws are used as any other may clash with the rear of the frontplate.
3. Do not over tighten the screws, so as to prevent damage or distortion to the product or support frame. Adjust so the frame or module sits squarely on the wall.
4. Care should be taken to ensure product features such as snap fits are not blocked during installation or decorating, preventing correct fitting of frontplates (for example plaster, tile grout, paint etc).
Fitting and removing the frontplate


## Fitting the frontplate

1. Locate the top and bottom hooks on the back of the frontplate into the holes on the top and bottom of the module.
2. Gently push along the top edge of the frontplate followed by the bottom edge.


## Removing the frontplate

1. Carefully insert a 4 mm screwdriver into the slots provided along the bottom edge frontplate.
2. Carefully twist the screwdriver and lift the frontplate away disengaging the snap fits.

Note: Ensure the correct frontplate is fitted to the correct module or frame

## Elements Collection

## Technical

## Electronic Switches

## Standards and approvals

All Elements electronic switches comply with IEC 60669-2-1

## TECHNICAL SPECIFICATION

## electrical

mains supply voltage
$220-240 \mathrm{~V}$ a.c. $50 / 6 \mathrm{~Hz}$
mains supply voltage range
198-264V a.c.
MAINS SUPPLY FREQUENCY
$50 / 60 \mathrm{~Hz} \pm 3 \mathrm{~Hz}$

## TERMINAL CAPACITY

All products
$4 \times 1 \mathrm{~mm}^{2}$
$4 \times 1.5 \mathrm{~mm}^{2}$
$3 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4 \mathrm{~mm}^{2}$
$1 \times 6 \mathrm{~mm}^{2}$

## PHYSICAL

operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP4X
max. installation altitude
2000 metres
To prevent damage to frontplates during installation it is recommended that a screwdriver with a blade width of 4 mm is used.


## Description

Elements Electronic Switches offer intuitive touch sensitive silent switching (except K34370) with LED displays, for a unique user experience.

## Features

- 16 standard finishes
- Many more customised combinations of standard colours, materials and finishes available
- Bespoke colours, materials and finishes available via the Design Service
- Touch sensitive electronic switch with LED display
- Standby light to assist location in low light level applications
- Soft start and off offers superior user experience and prolongs lamp life
- Available as 1 and 2 gang
- LED compatible (requires neutral)
- High power switches up to 10A or fluorescent load (10AX)
- Intelligent overload protection (not applicable to 10A switch)
- 2-way switching available


## Dimensions (mm)

MOUNTING BOX TYPE
The minimum depth required is 35 mm .
When using 2.5 mm cables the minimum box depth
required is 40 mm .


## Elements Collection

## Electronic Switches

| LOAD RATING AND TYPE |  |  |
| :---: | :---: | :---: |
| Description | K34371 \& K34372 (per gang) | K34370 |
| GLS/ Tungsten Filament, Mains Tungsten Halogen | $25-400 \mathrm{~W}$ | 25-2400W |
| Fluorescent tubes with ferro-magnetic ballast with power factor correction | *18-200VA | 18-1800W |
| Fluorescent with electronic ballast | *18-400VA | 18-540W |
| Low Energy PL-C and PL-S Fluorescent with Ferromagnetic ballast | *18-200VA | 18-750W |
| Low Energy PL-C and PL-S Fluorescent with electronic ballast | *18-400VA | *18-750W |
| Compact Fluorescent (CFL) | *5-200W | *5-750W |
| ELV Tungsten Halogen with Ferro-magnetic transformer or Dimmable Electronic Transformer | $\begin{gathered} \text { 50-400VA } \\ \text { (Refer to note 4) } \end{gathered}$ | $\begin{gathered} \text { 50-1500VA } \\ \text { (Refer to note 4) } \end{gathered}$ |
| ELV Tungsten Halogen with Non-dimmable Electronic Transformer | *25-400VA | $25-1500 \mathrm{VA}$ |
| Mains LED lamp for incandescent replacement | $\begin{gathered} * 4-150 \mathrm{~W} \\ \text { (Max. } 15 \text { lamps) } \end{gathered}$ | $\begin{gathered} * 4-500 \mathrm{~W} \\ \text { (Max. } 15 \text { lamps) } \end{gathered}$ |
| Ceiling Fan (Note: Not suitable for fan with remote controller function) | Not applicable | *1-2 Max. 250W |
| Ventilation Fan | *1-2 Max. 250W |  |
| Dimmable or non-dimmable LED Driver | (Max 10 *4-150W | (Max 10 LED-500W drivers only) |

## Note:

1. Do not use loads of different types on the same circuit.
2. Not suitable for use with any other load type.
3. *Neutral connection is required. It is recommended to connect neutral whenever possible when dimming LED lamps, to extend the load handling capability of the switch.
4. If neutral is connected to the switch then the minimum rating of the load can be reduced to 25 VA .

## Elements Collection

## Technical

## Electronic Dimmers

## Standards and approvals

All Elements electronic dimmers comply with IEC 60669-2-1

## TECHNICAL SPECIFICATION

## electrical

MAINS SUPPLY VOLTAGE
$220-240 \mathrm{~V}$ a.c. $50 / 6 \mathrm{~Hz}$

## TERMINAL CAPACITY

All products
$4 \times 1 \mathrm{~mm}^{2}$
$4 \times 1.5 \mathrm{~mm}^{2}$
$3 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4 \mathrm{~mm}^{2}$
$1 \times 6 \mathrm{~mm}^{2}$
For 1-10V control cable of K34499
$2 \times 0.75 \mathrm{~mm}^{2}$
$2 \times 1 \mathrm{~mm}^{2}$
$2 \times 1.5 \mathrm{~mm}^{2}$
$2 \times$ Cat 5e Cable

## PHYSICAL

OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP4X
MAX. INSTALLATION ALTITUDE
2000 metres
To prevent damage to frontplates during installation it is recommended that a screwdriver with a blade width of 4 mm is used

## MOUNTING BOX TYPE

The minimum depth required is 35 mm .
When using $2.5 \mathrm{~mm}^{2}$ cables the minimum box depth required is 40 mm


## Description

Elements Electronic Dimmers offer intuitive touch sensitive silent dimming with LED displays, for a unique user experience.

## Features

- 16 standard finishes
- Many more customised combinations of standard colours, materials and finishes available
- Bespoke colours, materials and finishes available via the Design Service
- Touch sensitive electronic dimmer with LED display
- LED Vapour trail follows users finger to indicate the power level
- Standby light to assist location in low light level applications

Dimensions (mm)


- Soft start and off offers superior user experience and prolongs lamp life
- When switched on lights return to last setting
- Available as 1 and 2 gang
- LED compatible
- Intelligent overload protection (not applicable to 1-10V dimmer)
- Leading edge and trailing edge dimmers available
- 2-way dimming available



## Electronic Dimmers

| LOAD RATING AND TYPE |  |  |
| :---: | :---: | :---: |
| Leading Edge Dimmers | K34100 | K34101 \& K34102 (per gang) |
| GLS/ Tungsten Filament, Mains Tungsten Halogen | $40-500 \mathrm{~W}$ | $40-300 \mathrm{~W}$ |
| Mains dimmable LED lamp for incandescent replacement | $6-150 \mathrm{~W}$ Max.12 lamps | $6-120 \mathrm{~W}$ Max. 12 lamps |
| ELV Tungsten Halogen with dimmable Ferro-magnetic transformer | $35-400 \mathrm{VA}$ | $35-240 \mathrm{VA}$ |
| Trailing Edge Dimmers | K34103 | K34104 \& K34105 (per gang) |
| GLS/ Tungsten filament, Mains Tungsten Halogen | $25-500 \mathrm{~W}$ | $25-300 \mathrm{~W}$ |
| ELV Tungsten Halogen with Dimmable Electronic Transformer | $35-500 \mathrm{VA}$ | $35-300 \mathrm{VA}$ |
| Dimmable LED Driver | (Max 5 LED drivers only) | (Max 5 LED drivers only) |

## Note:

1. Do not use loads of different types on the same circuit.
2. Not suitable for use with any other load type.
3. *Neutral connection is required. It is recommended to connect neutral whenever possible to extend the load handling capability of the dimmer.

| 1-10V Dimmer | K34499 |
| :---: | :---: |
| Rated Load | 6 AX |
| Maximum number of ballasts | 10 |

Neutral connection is mandatory on 1-10V Dimmer. Suitable for use with dimmable fluorescent or LED lighting which is driven by separate $0 / 1-10 \mathrm{~V}$ control gear.

Suitable for use with 0/1-10V analogue dimmable ballast operating in accordance with IEC60929 annex E.

## Elements Collection

## Technical

## Socket Outlets

## Standards and approvals

13A socket outlets comply with BS 1363 Part 2.


## Description

A range of socket outlets designed for ease of installation and having all the advantageous design features of the Elements Collection.

Sockets are available 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.
The products can be quickly installed as replacements for existing 13 Amp sockets or in new installations (if suitable mounting box is in position).

## Round pin sockets

A range of round pin sockets is also available.

## Features

- 16 standard finishes
- Many more customised combinations of standard colours materials and finishes available
- Bespoke colours, materials and finishes available via the Design Service
- Products with LED locators and indicators available
- 3 pin operated shutter
- Printed terminal markings on grey rear mouldings for clearer identification
- Top access, angled terminals make wiring easier and quicker
- 3 mm 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
- Only one size of screwdriver required for installation
- Dual earth terminals for high integrity earthing are available
- Backed out and captive terminal screws


## Elements Collection

## 13 Amp Socket Outlets

## Standards and approvals

Elements 13A socket outlets comply with BS 1363 Part 2.

## TECHNICAL SPECIFICATION

## ELECTRICAL

VOLTAGE RATING
250 V a．c．
CURRENT RATING
13A
TERMINAL CAPACITY
Live，neutral \＆earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$（stranded）

## PHYSICAL

ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
MAX．INSTALLATION ALTITUDE
2000 metres

## Installation

Elements 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．

Dimensions（mm）


2 gang


| BOX TYPES |  |  |
| :---: | :---: | :---: |
|  | Flush | Flush（for extra wiring space） |
| 1 GANG | 866ZIC | 877ZIC |
| 2 GANG | $886 Z$ IC | 878ZIC |

## Elements Collection

## Technical

## 5 Amp Socket Outlets

## Standards and approvals

Round pin socket outlets comply with BS 546

## TECHNICAL SPECIFICATION

## ELECTRICAL

VOLTAGE RATING
250 V a.c.
TERMINAL CAPACITY
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$ (stranded)

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
max. INSTALLATION ALTITUDE
2000 metres

## Installation

Elements socket outlets can be wall or bench mounted - do not mount or use as a trailing socket or where they may be subjected to excessive moisture or dampness.

| BOX TYPES |  |
| :---: | :---: |
| Flush | Flush (for extra wiring space) |
| 866ZIC (35mm deep) | 877ZIC (46mm deep) |

## Description

A range of round pin socket outlets designed for ease of installation and having all the advantages and design features of the Elements Collection. These products can be quickly installed as replacements for existing socket outlets or in new installations.

## Features

- 16 standard finishes
- Many more customised combinations of standard colours, materials and finishes available
- Bespoke colours, materials and finishes available via the Design Service
- 3 mm minimum switch contact gap
- Only one size of screwdriver required for installation
- Round Pin Socket Outlets available in 16 standard finishes

Dimensions (mm)


## Elements Collection Technical

## Shaver/Toothbrush Supply Unit

## Standards and approvals

Shaver/Toothbrush supply units comply with BS EN 61558-2-5: 1998.

Accommodates plugs as follows:

- British 5 mm dia pins on 16.6 mm pitch (230V socket) to BS 4573:1970
- European 4 mm dia pins on 17 to 19 mm pitch (230V socket) to BS EN 50075
- Australian $6.5 \times 1.6$ flat blades each set at $30^{\circ}$ to the vertical on a nominal pitch of 13.7 mm (230V socket) AS/NZS 3112:2000
- American $6.6 \times 1.6$ flat horizontal blades on 12.7 mm pitch ( 115 V socket) to UL498/NEMA WD6


## TECHNICAL SPECIFICATION

## ELECTRICAL

voltage rating
230 V a.c. Input $50 / 60 \mathrm{~Hz}$
230 V or 115 V nominal outputs
CURRENt RAting
200mA max. (internal thermister trip current)

## MAXIMUM LOAD

20VA
No load voltage < 275V

## TERMINAL CAPACITIES

Each terminal will accommodate $1 \times 4 \mathrm{~mm}^{2}$ or
$2 \times 2.5 \mathrm{~mm}^{2}$ solid conductors*

## PHYSICAL

ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## 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 275 V . 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 115 V . 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.

## Description

Designed for ease of installation and having many of the advantageous design features of the Elements Collection.

May be used in bathrooms and washrooms but must only be installed in accordance with the latest edition of BS 7671.

## Features

- 16 standard finishes
- Many more customised combinations of standard colours, materials and finishes available
- Bespoke colours, materials and finishes available via the Design Service
- Top access terminal screws make wiring quicker and easier
- Automatic primary supply switching on insertion of plug
- Choice of 230 V or 115 V output socket positions


## Installation

Shaver/Toothbrush supply unit should be wall mounted.

## Dimensions (mm)

 simultaneously required for installation on rear case moulding protect transformer toothbrush chargers.

- Safety interlocked shutters to prevent insertion of two plugs
- Only one size of screwdriver
- Frontplate fixing screws retained
- Integral over current device to
- Suitable for use with electric

BOX TYPES
Flush mounting only
Metal box 878ZIC
(minimum metal mounting box depth is 47 mm )


## Elements Collection

## Technical

## Connection Units

## Standards and approvals

All Elements Connection Units comply with BS 1363 Part 4


## Description

A range of 13 A fused connection units designed for the connection of refrigerators, central heating boilers and other fixed appliances.

The range is designed for ease of installation and has all the advantageous design features of the Elements Collection.

## Fuse carriers

These are captive and are opened by a fast acting, worm-drive operated screwdriver for ease of replacement.

## Flex outlets

The products are equipped with very strong, push-fit cord grips making installation safe, quick and easy.

## Features

- 16 standard finishes
- Many more customised combinations of standard colours, materials and finishes available
- Bespoke colours, materials and finishes available via the Design Service
- Only one size of screwdriver required for installation
- Worm-drive operated fuse carriers for additional security
- Push-fit cord grips, for safer, quicker installation
- Additional electrical safety from neutral 'make first', 'break last' feature


## Elements Collection

## Connection Units

## Standards and approvals

All Elements Connection Units comply with BS 1363 Part 4

## TECHNICAL SPECIFICATION

## ELECTRICAL

VOLTAGE RATING
250 V a.c.
CURRENT RATING
13 Amp
TERMINAL CAPACITY
$3 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4 \mathrm{~mm}^{2}$
$1 \times 6 \mathrm{~mm}^{2}$ (stranded)
Flex outlet/cord grip capacities
Min. 2 Core, $0.5 \mathrm{~mm}^{2}$
Max. 3 Core, $1.5 \mathrm{~mm}^{2}$

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
With flex outlet
IP2XD
Without flex outlet
IP4X
MAX. INSTALLATION ALTITUDE
2000 metres

Dimensions (mm)


## Installation

Elements connection units can be wall or bench mounted.
Do not use on a trailing lead.

| BOX TYPES |  |
| :---: | :---: |
| Flush | Flush (for extra wiring space) |
| 866ZIC (35mm deep) | 877ZIC (46mm deep) |

## Changing Fuses

1. Unscrew the fuse carrier screw to partially eject the carrier.
2. Carefully lever (by screwdriver or finger) 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.

## Elements Collection

## Technical

## Grid Switch Modules

## Standards and approvals

All Elements switches comply with BS EN 60669-1:1999.

## TECHNICAL SPECIFICATION

## electrical

voltage rating
250 V a.c. 5 Hz

## CURRENT RATING

1way/2way - 10AX or 20AX versions available
All Push switches - 10A only
Intermediate - 20AX only
Double Pole - 20AX only
Centre Off - 10A only

## TERMINAL CAPACITY

All products
$4 \times 1 \mathrm{~mm}^{2}$
$4 \times 1.5 \mathrm{~mm}^{2}$
$3 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4 \mathrm{~mm}^{2}$
$1 \times 6 \mathrm{~mm}^{2}$

## CONTACT GAP

3mm switch contact gap
(Except K34900 and K34901)

## PHYSICAL

OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP4X
MAX. INSTALLATION ALTITUDE
2000 metres



## Description

Elements Modular Switches require a separate frontplate, when ordering ensure the appropriate module and frontplate is selected.

## Features

- 16 standard finishes
- Many more customised combinations of standard colours, materials and finishes available
- Bespoke colours, materials and finishes available via the Design Service
- Switch contacts with silver contacts on both surfaces for good continuity
- Positive switch action
- Only one size of screwdriver required for installation
- Backed out and captive terminal screws
- Locator versions available for low light level applications


## Dimensions (mm)



1 gang wide rocker


Sectional drawings show the furthest projections from the back of the frontplate (wall surface).

## Elements Collection Technical

## Grid Switch Modules

## 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


Dotted lines show alternative switch positions


## Note:

Switches featuring locators and indicators use LED illumination.
All switches fitted with a locator are intended to give a very low light output whilst the switch is turned off. The low level of power flowing in this circuit is compatible with the majority of installation requirements however, certain lamp types or installations using multiple intermediate switches on one circuit may require the use of a snubber capacitor. The recommended capacitor to use would be X2 rated $275 \mathrm{~V} 0.1 \mu \mathrm{~F}$.

Switches incorporating indicator or locator illumination must be disconnected before carrying out any site installation testing.

Shes fealurng locators and indicators use LED iluminaion.

## Elements Collection

## Technical

## Grid Frontplates

Frontplate Dimensions (mm)

1 module - K35131


2 module - K35132


3 module - K35133


4 module - K35134


## Elements Collection Technical

High Current Switches

## Standards and approvals

High Current switches comply with BS EN 60669－1

## TECHNICAL SPECIFICATION

## electrical

voltage rating
250 V a．c．

## CURRENT

32A Switch
50A Switch

## SWITCH

3 mm contact gap
Double pole operation
TERMINAL CAPACITY，50A SWITCHES
$4 \times 4 \mathrm{~mm}^{2}$
$3 \times 6 \mathrm{~mm}^{2}$
$1 \times 10 \mathrm{~mm}^{2}$
$1 \times 16 \mathrm{~mm}^{2}$
TERMINAL CAPACITY，32A SWITCHES
$3 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4 \mathrm{~mm}^{2}$
$1 \times 10 \mathrm{~mm}^{2}$
$1 \times 6 \mathrm{~mm}^{2}$

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
max．Installation altitude
2000 metres

Note：These switches are not recommended for switching large banks of PCs．

## Description

A range of switches harmonising with the Elements style，suitable for the switching of all domestic，commercial and industrial appliances where higher current ratings are required，i．e．cookers，heaters，commercial refrigeration units etc．

## Features

－ 16 standard finishes
－Positive double pole switching
－Many more customised combinations of standard colours， materials and finishes available
－Toggle action switches
－Replaceable neon indicators
－Bespoke colours，materials and finishes available via the Design Service

| BOX TYPES |  |  |
| :---: | :---: | :---: |
| Switches | Max．Cable Size | Flush |
| $32 A$ | $10 \mathrm{~mm}^{2}$ | 46 mm |
| 50 A | $16 \mathrm{~mm}^{2}$ | 46 mm |


| BOX REFERENCES |  |  |
| :---: | :---: | :---: |
| Flush Box depth | 32 A | 50 A |
| 46 mm | 877 ZIC | 877 ZIC |

Dimensions（mm）


## Elements Collection

## Technical

## Do Not Disturb / Make Up Room Switches

## Standards and approvals

All Elements switches comply with BS EN 60669-1:1999.

## TECHNICAL SPECIFICATION

## electrical

VOLTAGE RATING
250 V a.c. 50 Hz

## CURRENT RATING

10A

## TERMINAL CAPACITY

All products
$4 \times 1 \mathrm{~mm}^{2}$
$4 \times 1.5 \mathrm{~mm}^{2}$
$3 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4 \mathrm{~mm}^{2}$
$1 \times 6 \mathrm{~mm}^{2}$

## CONTACT GAP

K33900DND - Mini gap
K33885DND - Normal gap

## PHYSICAL

OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## IP RATING

IP4X
MAX. INSTALLATION ALTITUDE
2000 metres

| BOX TYPES |  |
| :---: | :---: |
|  | Flush |
| All switches | 861ZIC (25mm deep) |

## Description

The Elements Do Not Disturb / Make Up Room Switches have been developed along with a number of other products for hotels and hospitality venues, offering guests comfort and control.

## Features

- 16 standard finishes
- Many more customised combinations of standard colours, materials and finishes available
- Bespoke colours, materials and finishes available via the Design Service
- Switch contacts with silver contacts on both surfaces for good continuity
- Positive switch action
- Only one size of screwdriver required for installation
- Backed out and captive terminal screws


## Dimensions (mm)



Corridor Switch - Outside
"Bell Push/Indicator"


## Elements Collection

## Keycard Switch with Time Delay

## Standards and approvals

BS EN 60669-2-1

## TECHNICAL SPECIFICATION

## electrical

voltage rating
$220-240 \mathrm{~V}, 50 / 60 \mathrm{~Hz}$

## CURRENT RATING

10A
TERMINAL CAPACITY
$4 \times 1.5 \mathrm{~mm}^{2}$
$2 \times 2.5 \mathrm{~mm}^{2}$
$1 \times 4.0 \mathrm{~mm}^{2}$
$1 \times 6.0 \mathrm{~mm}^{2}$

## EARTH TERMINAL

$3 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4.0 \mathrm{~mm}^{2}$
$1 \times 6.0 \mathrm{~mm}^{2}$

## CONTACT GAP

Micro Gap

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$0^{\circ} \mathrm{C}$ to $+35^{\circ} \mathrm{C}$

## IP RATING

IP2X
MAX. INSTALLATION ALTITUDE 2000m

TIME DELAY (NON ADJUSTABLE) 30 seconds

## Description

The Elements Keycard Switch with Time Delay has been developed along with a number of other products for hotels and hospitality venues, offering guests comfort and control, whilst delivering energy efficiency by avoiding energy waste in unoccupied rooms.

The Keycard Switch has a fixed time delay; once the card is removed guests are not left in the dark.

## Features

- 16 standard finishes
- Many more customised combinations of standard colours, materials and finishes available
- 30 Second fixed time delay
- Bespoke colours, materials and finishes available via the Design Service

| BOX TYPES | Flush | Flush (for extra wiring space) |
| :---: | :---: | :---: |
| 1 Gang | 866ZIC (35mm deep) | 877 ZIC (46mm deep) |

## Dimensions (mm)



## Wiring Diagram



## Elements Collection

## Technical

## Euro Frontplates

## Standards and approvals

Euro frontplates comply with BS 5733:2010

## TECHNICAL SPECIFICATION

DIMENSIONS
HEIGHT
86 mm
WIDTH
1G 86 mm
2G 146 mm

## APERTURE DIMENSIONS

HEIGHT
50 mm
WIDTH
1G 1 module 25 mm
1G 2 module 50 mm
2G 4 module 100 mm

## Description

Frontplates for mounting Euro Modules.

## Features

- 16 standard finishes
- Many more customised combinations of standard colours, materials and finishes available
- Bespoke colours, materials and finishes available via the Design Service
- $1 G$ and $2 G$ frontplates
- Accepts industry standard Euro snapfit modules
- 1G Euro frontplate accepts 1 or 2 Euro modules
- 2G Euro frontplate accepts 4 Euro modules ( $100 \times 50 \mathrm{~mm}$ aperture)
- Euro $1 / 2$ module ( $12.5 \times 50 \mathrm{~mm}$ ) blank available
- Interchangeable modules clip into frontplate

Dimensions (mm)


2 gang, 4 module - K35114


## Power Modules

## Elements Collection

 Technical
## Standards and approvals

K5830：BS 1363 Part 2：1995
K5831：IEC 60884－1：2006
K5832：SASO 2204： 2003

K5833：BS 546： 1950
K5834：French National Standard 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 | 15A American | USB Charging Module |  |
| ELECTRICAL <br> VOLTAGE RATING 250 V a．c． | ELECTRICAL <br> VOLTAGE RATING 250 V a．c． | ELECTRICAL <br> VOLTAGE RATING 250V a．c． | ELECTRICAL <br> VOLTAGE RATING 127 V a．c． | ELECTRICAL |  |
|  |  |  |  | INPUT | OUTPUT |
|  |  |  |  | VOLTAGE RATING | VOLTAGE RATING |
| CURRENT RATING | CURRENT RATING 5A | CURRENT RATING 16A | CURRENT RATING 15A | 220－240V a．c． | $2 \times 5 \mathrm{~V}$ d．c．Max current |
| 13A |  |  |  | FREQUENCY | CHARGING SOCKETS |
| TERMINAL CAPACITY <br> Live，neutral \＆earth $\begin{aligned} & 3 \times 2.5 \mathrm{~mm}^{2} \\ & 3 \times 4 \mathrm{~mm}^{2} \\ & 2 \times 6 \mathrm{~mm}^{2} \text { (stranded) } \end{aligned}$ | TERMINAL CAPACITY <br> Live，neutral \＆earth $\begin{aligned} & 3 \times 2.5 \mathrm{~mm}^{2} \\ & 2 \times 4 \mathrm{~mm}^{2} \\ & 2 \times 6 \mathrm{~mm}^{2} \text { (stranded) } \end{aligned}$ | TERMINAL CAPACITY <br> Live，neutral \＆earth $4 \times 1.5 \mathrm{~mm}^{2}$ $2 \times 2.5 \mathrm{~mm}^{2}$ $1 \times 4 \mathrm{~mm}^{2}$ | TERMINAL CAPACITY <br> Live，neutral \＆earth $3 \times 2.5 \mathrm{~mm}^{2}$ <br> $2 \times 4 \mathrm{~mm}^{2}$ <br> $1 \times 6 \mathrm{~mm}^{2}$（stranded） | $50 / 60 \mathrm{~Hz}$ | USB 2.0 type A |
|  |  |  |  | RATED CURRENT | 2 A can be delivered in |
|  |  |  |  | 0．12A | total to either socket |
|  |  |  |  | TERMINAL CAPACITY | between the two． |
| PHYSICAL <br> AMBIENT OPERATING TEMPERATURE $-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$ | PHYSICAL <br> AMBIENT OPERATING TEMPERATURE $-5^{\circ} \mathrm{C} \text { to }+40^{\circ} \mathrm{C}$ | PHYSICAL <br> AMBIENT OPERATING TEMPERATURE $-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$ | PHYSICAL | Live \＆neutral $3 \times 2.5 \mathrm{~mm}^{2}$ | This module is not |
|  |  |  | AMBIENT OPERATING TEMPERATURE $-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$ | $2 \times 4 \mathrm{~mm}^{2}$ | limited to 1A from each socket outlet． |
| IP RATING IP2XD | IP RATING IP2XD | IP RATING IP2XD <br> MAX．INSTALLATION ALTITUDE <br> 2000 metres | IP RATING <br> IP2XD <br> MAX．INSTALLATION <br> ALTITUDE <br> 2000 metres | PHYSICAL |  |
| MAX．InStallation | MAX．INSTALLATION ALTITUDE 2000 metres |  |  | ambient operating temperature$0^{\circ} \mathrm{C} \text { to }+40^{\circ} \mathrm{C}$ |  |
| ALTITUDE <br> 2000 metres |  |  |  | IP RATING IP2XD |  |
|  |  |  |  | MAX．INSTALLATION ALTITUDE <br> 2000 metres |  |

## Dimensions（mm）

13A UK


5A UK


16A German


15A American


2A USB Charging Module


| K5837 |
| :---: |
| B0X TYPES |
| Minimum |
| 35 mm deep |
| Extra wiring space |
| 46 mm deep |

## Elements Collection

## Technical

## RJ45 Data Outlets

## Standards and approvals

ISO/IEC 11801
EN 50173
TIA 568
EN 41003

## Installation

- Maximum cable length 90 m .
- Cable bend radii, 40 mm during installation, 20 mm after installation.
- Maximum pull force 8.7 kg .
- Do not over tighten cable ties.
- Do not unwind the twists in the wire pairs by more than 13 mm 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


## Description

Suitable for use in all Euro modular frontplates, available in the Elements range,
Cat 5 e and Cat 6 modules suitable for use in structured cabling distribution systems.

## Euro modules are to be wired as follows

RJ45 Cat. 5 e
K5845-Euro


RJ45 Cat. 5
K5844-Euro Angled


RJ45 Cat. 6 Screened
K5846S - Euro


## Telephone, RJ11/12, BNC Data and Blank Modules

## Standards and approvals

Telephone sockets K5820 and K5821 comply with BS 6312:2.2

Data sockets K5801 comply with 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 4 GHz

## IMPEDANCE

BNC Connector - 50. nominal
TERMINATION TYPE
Telephone module - IDC
BNC module - Crimped connection

## PHYSICAL

ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## 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 front plates. BNC Euro modules with a 500 hm crimp connector suitable for use with RG58, URM43, URM76 and Beldon 9907 type co-axial 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 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


## Telephone sockets

- Quick, simple and reliable IDC connectors
- 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


## Elements Collection

## Technical

## Telephone and RJ11/12

Telephone Wiring Scheme

| PIN NO. | STRIPPED COLOUR WIRE |
| :---: | :---: |
| 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 (MASTER)


K5821 (SECONDARY)

First Socket Outlet Master
123456 $\underbrace{23} \underbrace{456}$

Extension Outlet Secondary


## RJ11/12 Wiring Scheme

| PIN NO. | STRIPPED <br> COLOUR WIRE | SOLID <br> 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 |



[^55]
## Elements Collection Technical

## Digital TV and Radio

## Standards and approvals

All TV outlets comply with BS 5733 and BS EN 50083 where applicable．

## TECHNICAL SPECIFICATION

## SINGLE OUTLETS

TV／FM IEC MALE OR FEMALE
DC－950MHz

## SATF－TYPE

DC－1．75GHz

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

TV
Diplexer：$\quad 5-65 \mathrm{MHz}$
$470-862 \mathrm{MHz}$
Triplexer：$\quad 5-65 \mathrm{MHz}$
$470-862 \mathrm{MHz}$

## FM／DAB

Diplexer：$\quad 87.5-230 \mathrm{MHz}$
Triplexer：$\quad 87.5-230 \mathrm{MHz}$

## SAT OR SAT1

Diplexer：n／a
Triplexer：$\quad 950-2300 \mathrm{MHz}$

## SAT2

Diplexer：n／a
Triplexer：$\quad 5-2300 \mathrm{MHz}$

## Features

－Non Isolated
－Fully screened
－Earth terminal provided on TV modules


## Description

There is one range of diplexer and triplexer products，which is 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．

## Dimensions（mm）

Euro 1 module Euro 2 module Triplexer and Quadplexer


Note：Minimum box depth： 47 mm

## 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．）
TV Co－axial cable stripping details


## Elements Collection

## Technical

## TV/FM and Satellite Socket Outlets

## Installation (TV sockets)

## Product performance, systems compatibility

Isolated Outlets are intended for use where safety isolation (rated at 2000 V 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 downlead. 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 downlead.

Conventional distribution system for TV and FM signals using a single aerial downlead.

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).
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).
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).
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).

## Elements Collection Technical

## PIR Detector

## Standards and approvals

IEC60669-2-1

## TECHNICAL SPECIFICATION

## electrical

voltage rating
220-240V
current rating
10A
LOAD TYPE
Incandescent Light (resistive Load): 2300W

## hv halogen Lamps

1500 W

## Inductive Load

600VA

## ELECTRONICS BALLAST

$3 \times 58 \mathrm{~W}$ (max. inrush current 80A/20ms)

## CONTACT GAP

Micro gap
TERMINAL CAPACITY (SCREWLESS TERMINAL)
Stranded Cables
$1 \times 2.5 \mathrm{~mm}^{2}$
Solid Cables
$1 \times 2.5 \mathrm{~mm}^{2}$
$1 \times 4 \mathrm{~mm}^{2}$
EARTH TERMINAL (SCREW TERMINAL)
$4 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4.0 \mathrm{~mm}^{2}$
$2 \times 6.0 \mathrm{~mm}^{2}$

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$0^{\circ} \mathrm{C}$ to $+35^{\circ} \mathrm{C}$
MAX INSTALLATION ALTITUDE
2000 metres
IP RATING
IP2X

## Installation

For optimal detection and control sufficient distance (1M minimum) should be maintained between the PIR Detector and lighting fixtures in order to prevent undesirable motion detector switching. The optimal installation height is $0.8 \mathrm{M}-1.2 \mathrm{M}$. Installation in areas where excessive air movement occurs can cause false activations.

| BOX TYPES |  |  |
| :---: | :---: | :---: |
|  | Flush | Flush (for extra wiring space) |
| 1 GANG | $866 \mathrm{ZIC}(35 \mathrm{~mm})$ | $877 \mathrm{ZIC}(47 \mathrm{~mm})$ |

## Description

The Elements PIR Detector will deliver energy savings and lighting usage management in a wide range of applications. Offering effective and efficient detection for control of lighting, this stand alone solution is easy to install and program, with the additional benefit of variable time delay from 30 minutes to permanently on.

## Features

- 16 standard finishes
- Many more customized combinations of standard colours, materials and finishes available
- Bespoke colour materials and finishes available via the Design Service
- Detection range of 8 M
- Delivers energy saving by switching lights off when occupancy is not detected
- Offers safety and comfort by switching lights on when occupancy is detected
- Easy to install and program
- Time delay from 30 minutes to permanently on


## Frontplate and Module Installation



Dimensions (mm)


## Elements Collection

## Technical

## Echo ${ }^{\text {TM }}$ Transmitters

## Standards and approvals

BS EN 60669-1, BS EN 60669-2-1, ESTI EN 301 489-1 \& -3, ESTI EN 61000-6-2 ESTI EN 300 220-3, EN 60950-1

## TECHNICAL SPECIFICATION

## PHYSICAL

OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}+40^{\circ} \mathrm{C}$
OPERATING FREQUENCY:
868.3 MHz

IP RATING
IP2X
maX installation altitude 2000m

## Mounting Transmitters

- All transmitters can be mounted to any 1 gang back box
- All transmitters can be mounted directly to the wall surface


## Description

The Elements Echo Transmitters are part of an innovative range of entirely wireless, batteryless and self powered switches. The Elements Echo Transmitters communicate with Echo receivers to switch mains power. Elements Echo
Transmitters send an RF signal at 868.3 MHz , the unique feature of these transmitters is the signal transmission is made with no need for mains power or batteries.

## Features

- 16 standard finishes
- Many more customized combinations of standard colours, materials and finishes available
- Bespoke colour materials and finishes available via the Design Service
- Wireless and batteryless, using RF technology with ranges up to 30M in ideal conditions
- The transmitters are quick and easy to install with no need for cabling from the switch to the lighting circuit
- See the Echo range for available receivers

Frontplate and Module Installation


Dimensions (mm)


## Elements Collection

 Technical
## Roller Shutter / Blind Control

## Standards and approvals

IEC60669-1

## TECHNICAL SPECIFICATION

## electrical

voltage rating
250 VAC
CURRENT RATING
10A

## TERMINAL CAPACITY

Stranded Cables
$2 \times 2.5 \mathrm{~mm}^{2}$
$1 \times 4.0 \mathrm{~mm}^{2}$
Solid Cables
$2 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4.0 \mathrm{~mm}^{2}$
EARTH TERMINAL
$4 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4.0 \mathrm{~mm}^{2}$
$2 \times 6.0 \mathrm{~mm}^{2}$

## PHYSICAL

ambient operating temperature
$0^{\circ} \mathrm{C}$ to $+35^{\circ} \mathrm{C}$
IP RATING
IP2X
maX installation altitude
2000 metres

## Installation

For optimal performance ensure the product is orientated correctly.

| BOX TYPES |  |  |
| :---: | :---: | :---: |
|  | Flush | Flush (for extra wiring space) |
| 1 GANG | 866ZIC (35mm) | 877ZIC (47mm) |

## Description

The Elements Roller Shutter / Blind Control will operate a motor run device enabling the control of window coverings.

## Features

- 16 standard finishes
- Many more customized combinations of standard colours, materials and finishes available
- Bespoke colour materials and finishes available via the Design Service
- Easy to install


## Frontplate and Module Installation

 MODULE

ROCKER

Dimensions (mm)


## Elements Collection

## Technical

## Multimedia Plates

## Standards and approvals

All Elements 13A socket outlets comply with BS 1363: Part 2:1995.

K34209 and K34210 comply with BS 5733:2010.

## TECHNICAL SPECIFICATION

## ELECTRICAL

VOLTAGE RATING
250 V a.c.
CURRENT RATING
13A
TERMINAL CAPACITY
Live, neutral \& earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$ (stranded)

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
MAX. INSTALLATION ALTITUDE
2000 metres

| MOUNTING BOXES <br> Combination Plate <br> List Number |  |
| :---: | :---: |
| K34206 | 47mm <br> Mounting Box |
| K34207 | 870 ZIC |
| K34208 | 870 ZIC |
| K34209 | 868 ZIC |
| K34210 | 858 ZIC |

Bespoke requirements can be achieved through the MK Design Service to deliver variation in colours, materials, function, finishes and markings.
For more information please visit www.mkelectric.co.uk or call 01268563720


## Description

A range of multimedia plates designed for ease of installation and having all the advantageous design features of the Elements range.

These multimedia socket outlets provide interior designers and installers with a stylish and practical wiring device solution. The range also has larger Euro module frontplates to house eight and twelve single Euro modules without the inclusion of fixed socket outlets. The K34209 multimedia socket outlet, for example allows for the inclusion of up to eight single Euro 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 are designed for use with the multimedia 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 (products are supplied with clip on segregators)
- Back boxes must be installed 10 mm sub flush to the wall surface
- Mains operated products and extra low voltage modules must not be installed within the same frontplate aperture. Refer to BS 7671 for details
- When removing the fixing screws and frontplate from an installation to gain access to low voltage modules, please be aware that there will also be access to the mains supply


Multimedia plates allow the use of a variety of power and data modules making them ideal for hotels.

## Features

－ 3 pin operated safety shutter
－Printed terminal markings on grey rear mouldings for clearer identification
－Top access，angled terminals make wiring easier and quicker
－ 3 mm 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
－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 17th Edition wiring regulations


## Installation

Elements socket outlets can only be mounted on a wall．Do not mount or use as a trailing socket or where they may be subject to excessive moisture or dampness．

Install corresponding back box 10 mm sub flush to finished wall surface．
Elements multimedia plates are supplied with clip on segregator．

Dimensions（mm）

K34206 and K34207


K34208


K34209


K34210


## 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

## Accessory modules

Single non-isolated, TV/FM socket outlet, BS 3041-2:1977

Module Dimensions (mm)


Cord unit

[^56]
## 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.


## 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
- Manufactured from pre-galvanised steel to prevent corrosion
- Grid frame earth terminal has $16 \mathrm{~mm}^{2}$ cable capacity
- Backed out and captive terminal screws
- Up to 12 gang Logic Plus grid frontplates and up to 24 gang in decorative metal finish frontplates
- Top access terminal screws


## Modular Switching System

| FRONTPLATE DIMENSIONS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RANGE | MODULES | A | B | C | D |  |  |
| Logic Plus $^{\text {TM }}$ | $1,2,3,4,6,8,12$ | 86 | 146 | 206 | N／A |  |  |
| Aspect $^{*}$ | $1,2,3,4,6,8$ | 86 | 146 | N／A | N／A |  |  |
| Edge $^{\text {TM }}$ | $1,2,3,4,6,8,9,12,18,24$ | 86 | 146 | 206 | 267 |  |  |
| Albany Plus $^{\text {TM }}$ | $1,2,3,4,6,8,9,12,18,24$ | 86 | 146 | 206 | 267 |  |  |
| Metalclad Plus $^{\text {TM }}$ | $1,2,3,4,6,8,9,12,18,24$ | 86 | 146 | 206 | 267 |  |  |

＊Aspect 12 module front plate available through MK Design Service



12 module


18 module

## TECHNICAL SPECIFICATION

## electrical

SWITCHES
voltage rating 250 V a．c．

## CURRENT RATING

10 or 20 amps －no derating when used on fluorescent or inductive loads

## LOAD TYPE

No restriction

## TERMINAL CAPACITY

$4 \times 1 \mathrm{~mm}^{2}, 4 \times 1.5 \mathrm{~mm}^{2}, 4 \times 1 \mathrm{~mm}^{2}$ ， $3 \times 2.5 \mathrm{~mm}^{2}, 2 \times 4 \mathrm{~mm}^{2}, 1 \times 6 \mathrm{~mm}^{2}$

## INDICATOR UNITS

vOltage rating
24 V indicators
min．21V，max．36V
240 V indicators min．200V，max 250 V

TERMINAL CAPACITY
as switches

## BUZZER UNIT

voltage rating（nominal）
240 V a．c．
24 V a．c．
TERMINAL CAPACITY
as switches
FUSE UNIT
VOLTAGE RATING
250V
CURRENT RATING
13 amps
TERMINAL CAPACITY
$2 \times 4 \mathrm{~mm}^{2}$

CORD OUTLET
VOLTAGE RATING
250V
CURRENT RATING
16 amps

## TERMINAL CAPACITY

Supply－ $2 \times 4 \mathrm{~mm}^{2}$
Load $-1 \times 1.5 \mathrm{~mm}^{2}$ multi－strand

## DIMMERS

voltage rating
230 V a．c．， 50 Hz
LOAD RATING
For single dimmer installations K4500 min．40W／VA，max．
400W／320 VA
K4501 min．40W／VA，max．
220W／180 VA
K4511 min．40W／NA，max．
220W／180VA LED 4－70W
For multiple dimmer installation see Load Adjustment table，page 531

LOAD TYPES
K4500，K4501 tungsten filament （GLS）lamps
Low voltage lighting electronic or wire－wound transformers
K4511 Good quality LED lamps （10max）

## SOFT START

Raises from low to control knob setting in 1－3 secs，（increases
lamp life significantly）
TERMINAL CAPACITY
$1 \times 2.5 \mathrm{~mm}^{2}, 2 \times 1.5 \mathrm{~mm}^{2}$


24 module

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
Accessory modules
Single non-isolated, TV/FM socket outlet, BS 3041 Part 2: 1977

## TECHNICAL SPECIFICATION

## PHYSICAL (ALL PRODUCTS)

ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## 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 or low profile ranges (Edge ${ }^{\text {TM }}$ ).


## 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.

## 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.


## Modular Switching System

The simple installation process is shown below.
Spare labels and windows are available.


## TV/FM socket outlets

The TV outlet must not be mounted in the same enclosure as mains voltage exceeding 50 V .

## Printed Modules

A wide range of pre-printed switches are also available. See pages 194-201 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
230 V a.c. (Nominal)
mAINS SUPPLY VOLTAGE RANGE
216 V a.c. to 253 V a.c.
mains supply freauency
50Hz
TYPE OF LOADS
Intelligent Dimmers

## K4500, K4501

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.

K4511
Is suitable for use with good quality dimmable
LED lamps (10max). Due to market variability in LED lamp design it is advisable to check with lamp manufacturer to determine suitability. For best performance LED manufacturers lamps should not be mixed on one circuit

Note: Transformers must be suitable for dimming leading or trailing edge dimmers.

Warning: These dimmer switches are not suitable for use with Fluorescent Lamps or CFL Lamps.

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$0^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## IP RATING

IP4X
MAX. INSTALLATION ALTITUDE
2000 metres

## 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.

See Table 1 page 531.


## Description

## Intelligent Dimmer Switches

Dimmer Switches belonging to this category employ the latest, state of the art, micro-controller base electronic circuity 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 Lamps or CFL 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 over-heating 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
- Grid Plus dimmer switches which are rated for LED load types incorporate a minimum brightness adjustment. This setting may be performed without removing any fixing screws to account for LED load performance. Please refer to the relevant installation instructions on mkelectric.co.uk


## Grid Plus Dimmer Switches

| 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 | 1800 |
| 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 | 1440 |

K4511－No derating is required for LED load types．

| TABLE 2－OVERLOAD REACTION |  | 40－300W CIRCUIT |
| :---: | :---: | :---: | | COMMENTS |
| :---: |

## Dimensions



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 above．

## 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．

## Fluorescent Dimmer

MK Fluorescent dimmers are low voltage controllers that require only a single two－core wire connection to $1-10 \mathrm{~V}$ controllable ballast inputs．
The dimmer operates by applying a variable resistance to the ballast $1-10 \mathrm{~V}$ 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．

Minimum Brightness Adjustment for LED Intelligent Dimmers

The light output of some LED lamps may appear to be too dim or invisible when the dimmer knob is at the minimum dim level. Follow the steps below to adjust the minimum brightness level. This feature is primarily for adjusting the minimum brightness level of the LED lamp although it can be used for other load types.

For a double gang dimmer, the light level of each gang has to be adjusted separately.

## Step 1 - Access To Programming Mode

1. Push the dimmer knob so that it is in OFF state.
2. Set the dimmer knob to minimum level.

Push to switch OFF

3. Turn on the dimmer and immediately rotate the knob 3 times in full rotary span within 5 seconds.

Push to switch ON


NOTE: Wait for 3 seconds, the lamp will then dim to minimun before automatically brightening to about $30 \%$ level. Turning/pushing the dimmer knob before the end of automatic brightening will end access to programming mode
4. Dimmer enters programming mode.

## Step 2 - Adjust Brightness Level and Exit Programming Mode

5. Rotate the dimmer knob anticlockwise to adjust the lamp to the desired brightness level.

NOTE: Some LED lamps may not work properly if the brightness level is set too low thus it is recommended to keep the brightness level of the lamp at a visible level. The dimmer will exit programming mode automatically without saving the new setting if there is no dimmer knob movement for 15 seconds. The dimmer will restore its factory default light level.


Turn anticlockwise to adjust the brightness level.
6. Confirm the new setting and exit programming mode by turning OFF the dimmer.

Push to switch OFF


## Step 3 - Success indication (Programming Complete)

7. The next time the dimmer is turned on the lamp will automatically brighten to the maximum level before dimming to the brightness level corresponds to the knob level.

## MK LED Dimmer

by Honeywell

## 

 and
## LED Dimmer from MK Electric offers the widest

 lamp compatibility for a reliable dimming solution and allows the user to create ambience for comfortable surroundings.
## Product Specifications

- MK Electric is the first leading manufacturer to offer a LED dimming solution across its wiring devices range
- Available as a single or double dimmer, in MK Logic Plus and MK Grid Plus*
- MK Logic Plus product is rated 4 70W (300W/240VA)
- MK Grid Plus product is rated $4-70 W$ (220W/180VA)
- Compatible with tungsten filament, low voltage halogen and dimmable LED lamps
- Greater user control, with a minimum load adjustment control on dimmer switch
- Maximum 10 lamps per circuit
- Intelligent load protection will prevent lamp wattage exceeding rating of dimmer


## A Perfect Match

The MK LED Dimmer has been tested with leading lamp manufacturers and is compatible with tungsten filament, low voltage halogen and a wide range of dimmable LED lamps.


## Reduce Energy Costs

LED lighting technology delivers enhanced lamp endurance and energy savings. Dimmable LED lamps can increase energy savings, allowing you to reduce energy costs further.

## Achieve a Consistent Look

The MK LED Dimmer is available in a wide range of decorative finishes to compliment interior design styles. Matching wiring devices including sockets and switches are available to ensure a consistent look and feel.

Decorative LED Finish Selector

| Lacquered <br> Brushed Steel <br> (LBS) <br> Brushed <br> StainlessSteel <br> (BSS) <br> Polished <br> Chrome <br> (POC) <br> Silver Anodised <br> Aluminium <br> (SAA) <br> Chrome <br> (BRC) |
| :--- |

[^57]
# High Power Dimmer 

## Technical

## Standards and approvals

All High Power Dimmer modules comply with EN 60669-2-1

## TECHNICAL SPECIFICATION

## ELECTRICAL

MAINS SUPPLY
$220-240 \mathrm{~V} / 50 \mathrm{~Hz}$
$220 \mathrm{~V} / 60 \mathrm{~Hz}$
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

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## REDUCTION OF THE DIMIMER POWER

If this product is used in an ambient temperature exceeding $40^{\circ} \mathrm{C}$, 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.

Maximum Rated Load (W)


## Connection Diagram

Operating Mode
Selector Switch


## 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 100 m 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 $1 \mathrm{~kW} / 900 \mathrm{VA}$.

## 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.

## 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 $0-10 \mathrm{~V}$ and Gnd on the Master dimmer.

Example1: 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


Technical Hotline
+44 (0)1268 563720

## High Power Dimmer Technical

## K1400M



K1401M


# High Power Dimmer Technical 

## K1402M




## PRODUCT APPLICATION

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

## Plugs and Adaptors

## Standards and approvals

All 13 Amp Duraplug ${ }^{\circledR}$ 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 BS 546:1950.

| TECHNICAL SPECIFICATION |  |  |
| :---: | :---: | :---: |
| TERMINAL/CABLE SIZE |  |  |
| LIST NO. | MAXIMUM CABLE SIZE |  |
|  | OUTER DIAMETER OF CABLE (MM) | CONDUCTOR C.S.A. (MM2) |
| PF133 | 11.0 | 1.5 |
| P53 | 9.4 | 0.75 |
| P153 | 11.0 | 1.5 |



## Description

## 13 Amp plugs

All Duraplug ${ }^{\circledR} 13$ Amp plugs are supplied with 13 Amp fuses, and can be used on ring and radial circuits; however, alternative fuse ratings are available on special order

## Round pin plugs

Available unfused at 5 and 15 amp .

[^58]
## Lead Connectors，Extension Leads，Portable Sockets and Cable Couplers

## Standards and approvals

2 pin Duraplug ${ }^{\circledR}$ lead connectors comply with BS 5733：2010．

3 pin Duraplug ${ }^{\circledR}$ lead connectors comply with BS 5733：2010．

All 13A Duraplug ${ }^{\circledR}$ trailing socket outlets comply with BS 1363／A Part 2：1995．

15A Round pin Duraplug ${ }^{\circledR}$ trailing socket outlets comply with BS 5733：2010 and BS 546 for plug pin aperture and engagement face dimensions．

All 13A Duraplug ${ }^{\circledR}$ 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 EN 50525－2－11（H05VV－F）．

## TECHNICAL SPECIFICATION

## ELECTRICAL

voltage rating
250 V a．c．
CURRENT RATING
As＇Product range＇table
TERMINAL CAPACITIES
Lead connector $-1.0 \mathrm{~mm}^{2}$ conductor
Trailing／Portable socket $-1.5 \mathrm{~mm}^{2}$ conductor
MAX．CABLE CAPACITY
Lead connector－LCP102：2－core insulated cable with $1.0 \mathrm{~mm}^{2}$ conductors，LCP103： 3 －core insulated cable with $1.0 \mathrm{~mm}^{2}$ conductors． 11 mm overall diameter Trailing／Portable sockets－ 3 －core insulated cable with $1.5 \mathrm{~mm}^{2}$ conductors， 11 mm overall diameter

## PHYSICAL

ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
max．Installation altitude
2000 metres

## Installation

Duraplug ${ }^{\circledR}$ 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）．


## 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 250 v RMS and $0.15 \mu \mathrm{~F}$
Varistar（Transient Voltage Suppressor） has a more constant voltage 275 v ac

Clamping voltage＠40A：665v
Milliwatt constant： 800


## 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/Poly carbonate thermoplastic. BS 1363A Part 2:1995. <br> Colour white | 2 | $1.25 \mathrm{~mm}^{2}$ <HAR> 3 -core PVC insulated cable to BS EN 50525-2-11 (H05VV-F). <br> Colour white | Duraplug ${ }^{\circledR}$ Rubber cover type PF133. Colour white. | 13 |
| EXL135BLK | 13A 4-gang socket with fuse and neon, manufactured from high impact resistant ABS/Polycarbonate thermoplastic. BS 1363A Part 2:1995. <br> Colour black | 2 | $1.25 \mathrm{~mm}^{2}$ <HAR> 3 -core PVC insulated cable to BS EN 50525-2-11 (H05VV-F). <br> Colour black. | Duraplug ${ }^{\circledR}$ Rubber cover type PF133. Colour black. | 13 |
| EXL136WHI | 13A 4-gang socket with switch and neon, manufactured from high impact resistant ABS/Polycarbonate thermoplastic. BS 1363A Part 2:1995. Colour white. | 2 | $1.25 \mathrm{~mm}^{2}<\mathrm{HAR}>3$-core PVC insulated cable to BS EN 50525-2-11 (H05VV-F). <br> Colour white | Duraplug ${ }^{\circledR}$ Rubber cover type PF133. Colour white. | 13 |
| EXL136BLK | 13A 4-gang socket with switch and neon, manufactured from high impact resistant ABS/Polycarbonate thermoplastic. BS 1363A Part 2:1995. Colour black. | 2 | $1.25 \mathrm{~mm}^{2}$ <HAR> 3 -core PVC insulated cable to BS EN 50525-2-11 (H05VV-F). <br> Colour black | Duraplug ${ }^{\circledR}$ 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. BS 1363A Part 2:1995. <br> Colour white. | 2 | $1.25 \mathrm{~mm}^{2}<\mathrm{HAR}>3$-core PVC insulated cable to BS EN 50525-2-11 (H05VV-F). Colour white. | Duraplug ${ }^{\circledR}$ 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 BS 1363A Part 2:1995. <br> Colour black. | 2 | $1.25 \mathrm{~mm}^{2}<\mathrm{HAR}>3$-core PVC insulated cable to BS EN 50525-2-11 (H05VV-F). <br> Colour black | Duraplug ${ }^{\circledR}$ Rubber cover type PF133. Colour black. | 13 |

## Plugs and Adaptors Technical

## 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．The above plugs are third party approved and licensed by ASTA．

Round pin plugs comply with BS 546：1950．
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） |  |  | \(\left.\begin{array}{c}CONDUCTOR C．S．A． <br>


\left(\mathbf{m m}^{2}\right)\end{array}\right]\)| 646 | 11.0 | 1.5 |
| :---: | :---: | :---: |
| 647 | 11.0 | 1.5 |
| 655 | 11.0 | 0.5 |
| 502 | 8.7 | 0.75 |
| 505 | 9.4 | 1.5 |
| 515 | 11.0 | 0.5 |
| 639 | 8.7 | 0.75 |
| 641 | 9.4 | 1.5 |
| 643 | 11.0 |  |



## Description

## 13 Amp plugs

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

Non standard safety plug utilizing＂T＂shaped earth pin specifically for use with MK non standard sockets only，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．


## 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
250 V a.c.
CURRENT RAting
13A
TERMINAL CAPACITY
Live, neutral \& earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$ (standard)

## PHYSICAL

ambient operating temperature
$0^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP66
MAX. INSTALLATION ALTITUDE
2000 metres

## 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 ${ }^{\text {TM }}$ IP66 rating breakdown is as follows:


## 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.

## FEATURES

- IP66 protected to BS EN 60529:1992
- 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 on plug tops
- Improved catch eases opening and closing during use
- Manufactured from polycarbonate for impact protection
- 3 pin operated safety shutter on socket outlets
- 3 mm 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

| IP COMPARISON |  |  |
| :---: | :---: | :---: |
| IP56 | SOLID PROTECTION | LIQUID PROTECTION |
|  | Dust protected. <br> Ingress of dust is not entirely protected, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment. Complete protection against contact | Powerful jets of water against the enclosure from any direction shall have no harmful effects |
| IP66 | SOLID PROTECTION | LIQUID PROTECTION |
|  | Dust tight. <br> No ingress of dust, complete protection against contact | Powerful jets of water against the enclosure from any direction shall have no harmful effects |

[^59]
## 13 Amp Socket Outlets

Flush Mounting Bezels


K56502


K56503

Flush Mounting Bezel Cut-outs


## 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
230 V a.c.
SUPPLY FREQUENCY
50Hz
CURRENT RATING FOR SOCKET OUTLET (RESISTIVE) 13A

## TERMINAL CAPACITY

Supply Line, Neutral and Earth
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 4 \mathrm{~mm}^{2}$
$2 \times 6 \mathrm{~mm}^{2}$

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$0^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP66
max. Installation altitude
2000 metres

## 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.

## 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.


## 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.

## 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 on plug tops
- Improved catch eases opening and closing during use
- Manufactured from polycarbonate for impact protection
- 3 pin operated safety shutter on socket outlets
- Products are available in grey, black and white


## Dimensions



Fixing Dimensions


# Masterseal Plus ${ }^{\text {TM }}$ Technical 

## 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
30 mA
terminal capacity
1 Gang： $3 \times 4 \mathrm{~mm}^{2}$
2 Gang： $2 \times 4 \mathrm{~mm}^{2}$

## PHYSICAL

ambient operating temperature
$0^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP66
max．Installation altitude
2000 metres

## 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．


## Description

Sentrysocket provides a high level of protection for portable equipment when used in damp environments or outdoors．

## 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

## Dimensions（mm）

Single and double Sentrysockets are identical in size and shape．
The following dimensions apply


Masterseal Plus ${ }^{\text {TM }}$
Sentrysocket is suitable for surface mounting only．
－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 sensitives
－Products are available in grey，black and white

## Masterseal Plus ${ }^{\text {TM }}$

## Technical

## 16A 2P+E Socket Outlet (Non UK)

## Standards and approvals

Complies with IEC 60884-1:2006

## TECHNICAL SPECIFICATION

## ELECTRICAL

SUPPLY VOLTAGE
250 V a.c.
CURRENT RATING
16A

## TERMINAL CAPACITY

Supply Line, Neutral and Earth
$4 \times 1.5 \mathrm{~mm}^{2}$
$2 \times 2.5 \mathrm{~mm}^{2}$
$2 \times 4 \mathrm{~mm}^{2}$

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$0^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP66
max. Installation altitude
2000 metres


16A 2P + E German socket outlet is suitable for surface mounting only.

## FEATURES

- IP66 protected to BS EN 60529:1992
- 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 on plug tops
- Improved catch eases opening and closing during use
- Manufactured from polycarbonate for impact protection
- Products are available in grey, black and white


## Dimensions (mm)



## 13A Connection Units

## Standards and approvals

All Masterseal Plus ${ }^{T M}$ 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
250 V a．c．
CURRENT RATING
Connection units－ 13 amp
TERMINAL CAPACITY
Supply terminal
$2 \times 6 \mathrm{~mm}^{2}$ stranded
$3 \times 4 \mathrm{~mm}^{2}$
$3 \times 2.5 \mathrm{~mm}^{2}$
$3 \times 1.5 \mathrm{~mm}^{2}$
LOAD TERMINALS
$1 \times 1.5 \mathrm{~mm}^{2}$

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP66
MAX．INSTALLATION ALTITUDE
2000 metres

## Impact Resistance

All Masterseal Plus ${ }^{\text {TM }}$ products have an impact resistance equivalent to a 500 g object falling from a height of 40 cm ．

## Boxes

Rear entry back boxes are supplied for＇tamper proof＇surface mounted situations or flush mounting when used with Flush Mounting Bezels（K56502）．These boxes must also be used if cable or conduit enters the enclosure from the rear．

## Installation

Masterseal Plus connection units can be wall or bench mounted．Do not use on a trailing lead．


## Description

Masterseal Plus ${ }^{\text {TM }}$ 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．

## FEATURES

－IP66 protected to BS EN 60529：1992
－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

Dimensions（mm）


Fixing Dimensions


## Switches

## Standards and approvals

Switches and enclosures comply with BS EN 60669-1:1999 and are IP66 for BS EN 60529:1992.

Switch modules comply with BS EN 60669-1:1999.

All products comply with or allow compliance with BS 7671:2008.

## TECHNICAL SPECIFICATION

## ELECTRICAL

SUPPLY VOLTAGE
250 V a.c.

## CURRENT RATING

10 or 20 amps - no derating when used on
fluorescent or inductive loads.

## LOAD TYPE

No resistriction

## PHYSICAL

ambient operating temperature
$0^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP66 (Grid Plus enclosures are IP56)
max. Installation altitude
2000 metres

## 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.

## Customer Configurable Grid <br> - 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.


## 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 Plus ${ }^{\text {TM }}$ is easy to install and the large rocker switches and clip in modules make it easy to use, even when wearing heavy gloves.

## FEATURES

- IP66 protected to BS EN 60529:1992
- 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 polycarbonate for impact protection
- Large, easy to use rocker switches
- Wide range of switch modules and accessories make Masterseal Plus ${ }^{\text {TM }}$ versatile
- Switch modules snap into position

Dimensions (mm)


Figure 1


## Euro Enclosure and Telephone and Data Modules

## Standards and approvals

Telephone sockets K5820 and K5821 comply with the following: BS 6312-2.

K5844/K5845/K5845s comply with: ISO/IEC 11801, EN 50173, TIA 568, and EN 41003.

K5887 complies with FCC68 and EN 41003.

## TECHNICAL SPECIFICATION

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$0^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP66
MAX. INSTALLATION ALTITUDE
2000 metres

## 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.


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 protected to BS EN 60529:1992
- 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 polycarbonate for impact protection
- Products are available in grey, white and black


# Masterseal Plus™ Technical 

## 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 or refer to the table on page 552.
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 5 mm 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. PVC Cable Entry (see Service Items) must only be used at the bottom cable entry of the enclosure.

NOTE: If using box coupler 56464 to join boxes use a suitable sealant to ensure full IP protection is maintained.

## 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 EWPLUS. 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.

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.

## Installation

11. Wire and fit the front plate. Ensure the seal is correctly located and the cables are not trapped or pinched.


$$
\text { Figure } 5
$$

## 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 55 mm in length. Do not trim the insulation on the three individual cables for the moment.
2. When using cables of 10 mm 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 6 mm diameter after pre-stressing.
4. Cables below 10 mm 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 10 mm of the conductor.
8. Ensure all conductors are connected to the appropriate terminals.

NOTE: Terminal screws must be securely tightened. Pull on each cable to ensure that the terminal screw has securely fixed the conductor.


Figure 7a


Figure $7 b$

## Testing

Test the completed installation in accordance with the latest edition of the IET 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.


Figure 6a

# Masterseal Plus ${ }^{\text {TM }}$ 

## Technical

## Polycarbonate Chemical Resistance Table

| REAGENT | CONCENTRATION | RESISTANCE |
| :---: | :---: | :---: |
| ACETIC ACID, AQUEOUS | 40 | $\square$ |
| ACETIC ACID, AQUEOUS | 5 | $\triangle$ |
| ACETONE |  | $\square$ |
| AMMONIA, AQUEOUS | 10 | $\square$ |
| benzene |  | $\square$ |
| BEVERAGES, ALCOHOLIC |  | $\triangle$ |
| BITUMEN |  | Not tested |
| bleaching lye, AQueous |  | $\square$ |
| BORIC ACID |  | $\triangle$ |
| BUTANOL |  | $\square$ |
| BUTTER |  | $\bullet$ |
| BUTYRIC ACID |  | $\square$ |
| CALCIUM CHLORIDE, AQUEOUS | 10 | $\triangle$ |
| CARBON TETRACHLORIDE |  | ■ |
| CHLORINE GAS |  | $\bullet$ |
| CHLORINE, AQUEOUS SOLUTION |  | ■ |
| CHLOROFORM |  | $\square$ |
| CITRIC ACID, AQUEOUS | 10 | $\triangle$ |
| COCONUT OIL |  | $\triangle$ |
| DIESEL FUEL |  | $\bullet$ |
| EDIBLE FATS |  | $\triangle$ |
| EDIBLE OILS |  | $\triangle$ |
| ETHANOL | 96 | $\triangle$ |
| ETHYLENE ACETATE |  | ■ |
| ETHYLENE ETHER |  | $\square$ |
| FORMALDEHYDE, AQUEOUS | 30 | - |
| FORMIC ACID, AQUEOUS | 40 | - |
| FREON, LIQUID |  | $\triangle$ |
| FRIGEN, LIQUID |  | $\triangle$ |
| FRUIT JUICES |  | $\triangle$ |
| FUEL OIL (HEATING) |  | $\bullet$ |
| GAS LIQUOR |  | Not tested |
| GLYCERINE |  | $\triangle$ |
| GLYCOL |  | $\triangle$ |
| GLYSANTINE, AQUEOUS | 40 | Not tested |
| HEXANE |  | $\triangle$ |
| HYDROCHLORIC ACID, AQUEOUS | 2 | ■ |
| HYDROFLUORIC ACID, AQUEOUS | 40 | - |
| HYDROGEN PEROXIDE, AQUEOUS | 10 | $\triangle$ |
| INK |  | $\triangle$ |
| IODINE TINCTURE, ALCOHOLIC |  | $\square$ |

Key

- Resistant
- Limited resistance
- Not resistant


## Polycarbonate Chemical Resistance Table

| REAGENT | CONCENTRATION | RESISTANCE |
| :---: | :---: | :---: |
| KEROSENE |  | $\square$ |
| LATIC ACID，AQUEOUS | 10 | $\triangle$ |
| LAVENDER OIL |  | Not tested |
| LINSEED OIL |  | Not tested |
| MACHINE OILS |  | $\square$ |
| MERCURY |  | $\triangle$ |
| METHANOL |  | $\square$ |
| METHYLENE CHLORIDE |  | $\square$ |
| MILK |  | $\triangle$ |
| MIINERAL OILS |  | $\triangle$ |
| NITRIC ACID，AQUEOUS | 2 | $\triangle$ |
| OLEIC ACID |  | $\triangle$ |
| OZONE |  | $\triangle$ |
| PARAFFIN OIL |  | $\triangle$ |
| PEPPERMINT OIL |  | Not tested |
| PERFUMES |  | ■ |
| PETROL（GASOLINE） |  | $\bullet$ |
| PHENOL，AQUEOUS |  | $\square$ |
| PHOSPHORIC ACID，AQUEOUS | 10 | ■ |
| POTASSIUM HYDROXIDE SOLUTION， AQUEOUS | 5 | ■ |
| POTASSIUM HYDROXIDE SOLUTION， AQUEOUS | 50 | ■ |
| ROSE OIL |  | $\bullet$ |
| SALT SOLUTION，HOUSEHOLD， AQUEOUS | 10 | $\triangle$ |
| SILICON OILS |  | $\triangle$ |
| SOAP SOLUTION，AQUEOUS |  | $\triangle$ |
| SODA SOLUTION，AQUEOUS | 10 | $\triangle$ |
| SODIUM HYDROXIDE SOLUTION， AQUEOUS | 10 | $\square$ |
| SODIUM，AQUEOUS | 10 | Not tested |
| SULPHUR |  | $\triangle$ |
| SULPHURIC ACID，AQUEOUS | 10 | $\triangle$ |
| TALLOW |  | $\triangle$ |
| TAR |  | $\triangle$ |
| TETRACHLOROETHENE |  | ■ |
| TOLUENE |  | $\square$ |
| TRICHLORETHANE |  | $\square$ |
| VASELINE |  | $\triangle$ |
| WATER |  | $\triangle$ |
| WATER，HOT（800C） |  | $\bullet$ |
| WAX，MELTED |  | Not tested |
| XYLENE |  | ■ |

Key
－Resistant
－Limited resistance
－Not resistant

NOTE：Caution is advised to ensure compatibility of cleaning agents used in the vicinity of Polycarbonate plastics，particularly if frequent cleaning is employed．

## Commando Safetyswitch Technical

K6725


| K6725 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { LIST } \\ & \text { NUMBER } \end{aligned}$ | $\begin{array}{\|l\|l\|} \hline \text { ITHE } \\ (A) \end{array}$ | $\underset{(\mathrm{AC} 23 \mathrm{~A})}{\mathrm{IE}}$ | $\begin{array}{\|c} \text { RATED } \\ \text { OPERATIONAL } \\ \text { POWER (KW) } \end{array}$ | $\begin{array}{\|c} \text { TERMINAL } \\ \text { CAPACITY } \\ \left(\text { MM }^{2}\right) \end{array}$ | $\begin{aligned} & \text { NO OF } \\ & \text { POLES } \end{aligned}$ | MAX. NUMBER OF ADDITIONAL AUXILIARY CONTACTS | ADDITIONALAUXILLARYCONTACT(NO)LISTNUMBER(NOTSUPPLIED) | ADDITIONALAUXILLARYCONTACT(NC)LISTNUMBER(NOTSUPPLIED) | DEGREE OF INGRESS PROTECTION | $\begin{aligned} & \text { ENCLOSURE } \\ & \text { SIZE (MM) } \end{aligned}$ |  |  | $\begin{aligned} & \text { CABLE } \\ & \text { ENTRY } \end{aligned}$ |  | FIXINGDIMENSIONS(MIM) |  |  |
|  |  |  |  |  |  |  |  |  |  | W | H | D | X | Y | A | B | G |
| K6725 | 25 | 20 | 11 | 1.5-4 | $\begin{gathered} 6(2 \times L 1, \\ 2 \times L 2 \& \\ 2 \times L 3) \end{gathered}$ | 2 | 6818 | 6819 | IP65 | 190 | 130 | 65 | $2 \times 025$ | $1 \times 016$ | 124 | 90 | 5 |
| K6725YEL | 25 | 20 | 11 | 1.5-4 |  | 2 | 6818 | 6819 | IP65 | 190 | 130 | 65 | $2 \times 025$ | $1 \times 016$ | 124 | 90 | 5 |

K6816


| K6816 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { LIST } \\ & \text { NUMBER } \end{aligned}$ | ITHE <br> (A) | $\underset{(\mathrm{AC} 23 \mathrm{~A})}{\mathrm{IE}}$ | RATED OPERATIONAL POWER (KW) | TERMINAL CAPACITY (MM2) | NO OF POLES | MAX. NUMBER OF ADDITIONAL AUXILIARY CONTACTS | ADDITIONAL <br> AUXILLARY <br> CONTACT <br> (NO) <br> LIST <br> NUMBER <br> (NOT <br> SUPPLIED) | $\begin{aligned} & \text { ADDITIONAL } \\ & \text { AUXILLARY } \\ & \text { CONTACT } \\ & \text { (NC) } \\ & \text { LIST } \\ & \text { NUMBER } \\ & \text { (NOT } \\ & \text { SUPPLIED) } \end{aligned}$ | DEGREE OF INGRESS PROTECTION | ENCLOSURESIZE (MN) |  |  | CABLE ENTRY |  | FIXING DIMENSIONS (MM) |  |  |
|  |  |  |  |  |  |  |  |  |  | W | H | D | X | Y | A | B | G |
| K6816 | 16 | 10 | 7.5 | 1.5-4 | $\begin{gathered} \stackrel{3}{(L 1, L 2}, \\ \& \mathrm{~L} 3) \end{gathered}$ | 1 | 6818 | 6819 | IP65 | 111 | 130 | 60 | 2xM25 | - | 64 | 90 | 5 |
| K6816YEL | 16 | 10 | 7.5 | 1.5-4 | $\begin{gathered} 3 \\ (\mathrm{~L} 1, \mathrm{~L} 2, \\ \text { L3 \& } \\ \text { AUX) } \end{gathered}$ | 1 | 6818 | 6819 | IP65 | 111 | 130 | 60 | $2 \times \varnothing 25$ | - | 64 | 90 | 5 |

## Commando Safetyswitch Technical

K6825


| K6825 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { LIST } \\ & \hline \end{aligned}$ | ITHE(A) | $\underset{\text { (AC23A) }}{\mathrm{IE}}$ | $\begin{array}{\|c\|} \text { RATED } \\ \text { OPERATIONAL } \\ \text { POWER (KW) } \end{array}$ | TERMINAL CAPACITY (M1M2) | $\begin{aligned} & \text { NO OF } \\ & \text { POLES } \end{aligned}$ | MAX. <br> NUMBER OF ADDITIONAL AUXILIARY CONTACTS | ADDITIONALAUXILLARYCONTACT(NO)LISTNUMBER(NOTSUPPLIED) | ADDITIONAL AUXILLARY CONTACT (NC) <br> LIST NUMBER (NOT SUPPLIED) | DEGREE OF INGRESS PROTECTION | $\begin{aligned} & \text { ENCLOSURE } \\ & \text { SIZE (MM) } \end{aligned}$ |  |  | CABLE <br> ENTRY |  | FIXINGDIMENSIONS(MMM) |  |  |
|  |  |  |  |  |  |  |  |  |  | W | H | D | X | Y | A | B | G |
| K6825 | 25 | 20 | 11 | 1.5-4 | $\begin{gathered} 3(\mathrm{~L} 1, \\ \mathrm{L} 2, \text {, } \\ \mathrm{L} 3) \end{gathered}$ | 1 | 6818 | 6819 | IP65 | 111 | 130 | 60 | 2 x M25 | - | 64 | 90 | 5 |
| K6825YEL | 25 | 20 | 11 | 1.5-4 | $\begin{gathered} 3(\mathrm{LL} 1, \\ \mathrm{L}, \mathrm{LS}^{2} \& \\ \text { AUX } \end{gathered}$ | 1 | 6818 | 6819 | IP65 | 111 | 130 | 60 | $2 \times \mathrm{M} 25$ | - | 64 | 90 | 5 |

K6840


| K6840 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { LIST } \\ & \text { NUMBER } \end{aligned}$ | $\underset{(A)}{\text { ITHE }}$ | $\underset{(\mathrm{AC} 23 \mathrm{~A})}{\mathrm{IE}}$ | $\begin{array}{\|c\|} \text { RATED } \\ \text { OPERATIONAL } \\ \text { POWER (KW) } \end{array}$ | TERMINAL CAPACITY (MM2) | NO OF POLES | MAX.NUMBER OFADDITIONALAUXILARYCONTACTS | ADDITIONALAUXILLARYCONTACT(NO)LISTNUMBER(NOTSUPPLIED) | $\begin{aligned} & \text { ADDITIONAL } \\ & \text { AUXILLARY } \\ & \text { CONTACT } \\ & \text { (NC) } \\ & \text { LIST } \\ & \text { NUMBER } \\ & \text { (NOT } \\ & \text { SUPPLIED) } \end{aligned}$ | DEGREE OF INGRESS PROTECTION | $\begin{aligned} & \text { ENCLOSURE } \\ & \text { SIZE (MM) } \end{aligned}$ |  |  | $\begin{aligned} & \text { CABLE } \\ & \text { ENTRY } \end{aligned}$ |  | FIXINGDIMENSIONS(MMM) |  |  |
|  |  |  |  |  |  |  |  |  |  | W | H | D | X | Y | A | B | G |
| K6840 | 40 | 25 | 11 | 1.5-10 | $\begin{gathered} 3 \\ (\mathrm{~L} 1, \mathrm{~L} 2, \\ \& \mathrm{~L} 3) \end{gathered}$ | 1 | 6818 | 6819 | IP65 | 138 | 165 | 68 | 2xM32 | 2xM16 | 90 | 127 | 5 |
| K6840YEL | 40 | 25 | 11 | 1.5-10 | $\begin{gathered} 3 \\ (\mathrm{~L} 1, \mathrm{~L} 2, \\ \text { L3 \& } \\ \text { AUX) } \end{gathered}$ | 1 | 6818 | 6819 | IP65 | 138 | 165 | 68 | $2 \times \mathrm{M} 32$ | 2xM16 | 90 | 127 | 5 |

## Commando Technical

## Plugs 16 and 32 Amp

## IP44 SPLASHPR00F



| AMPS | PIN． CONFIURATION | $\begin{aligned} & \text { 100-130V } \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ |  |  |  | TERMINAL CAPACITY＊ |  | ENS <br> IN MN |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST No 」 | LIST N0 |  | MIN | MAX |  | A | B | C |
| 16A | 2P＋E | K9000YEL | K9001BLU |  |  | 8.2 | 13 | 1－2．5 | 132.3 | 95.5 | 55.5 |
| 16A | $3 \mathrm{P}+\mathrm{E}$ |  | K9006BLU 6 | K9007RED | 6 | 8.9 | 15.5 | 1－2．5 | 132.3 | 95.5 | 61.5 |
| 16A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  | K9014BLU 9 | K9015RED | 6 | 10.1 | 17 | 1－2．5 | 132.3 | 95.5 | 67.5 |
| 32A | $2 \mathrm{P}+\mathrm{E}$ | K9032YEL 4 | K9033BLU 6 |  |  | 11.7 | 18 | 2．5－6 | 135.8 | 90 | 72.5 |
| 32A | $3 \mathrm{P}+\mathrm{E}$ |  | K9036BLU | K9037RED | 6 | 11.7 | 22 | 2．5－6 | 135.8 | 90 | 72.5 |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  | K9044BLU 9 | K9045RED | 6 | 14.2 | 22 | 2．5－6 | 141.8 | 95.8 | 79.7 |
| c）Earth Hour Position |  |  |  |  |  |  |  | ＊Flexible conductors |  |  |  |

Plugs 63 Amp
IP44 SPLASHPROOF


| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIURATION } \end{aligned}$ | $\begin{aligned} & 100-130 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{~Hz} \end{gathered}$ |  | CABLE <br> DIAMETER D MM |  | TERMINAL CAPACITY＊ MM $^{2}$ | DIMENSIONSIN MM |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO | LIST NO |  | MIN | MAX |  | A | B | C | D |
| 63A | 2P＋E | K9063BLU 6 |  |  |  | 16.5 | 36 | 6－16 | 102 | 180.8 | 247.3 | 36.4 |
| 63A | $3 \mathrm{P}+\mathrm{E}$ |  | K9066RED 6 |  |  | 16.5 | 36 | 6－16 | 102 | 180.8 | 247.3 | 36.4 |
| 63A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K9071RED | 6 | 16.5 | 36 | 6－16 | 102 | 180.8 | 247.3 | 36.4 |
| c）Earth Hour Position |  |  |  |  |  |  |  | ＊Flexible conductors |  |  |  |  |

## Plugs 16 and 32 Amp

## IP67 WATERTIGHT

| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIURATION } \end{aligned}$ | $\begin{aligned} & \text { 100-130V } \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ <br> LIST NO | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ |  | CABLE <br> DIAMETER D MM |  | $\begin{aligned} & \text { TERMINAL } \\ & \text { CAPACITY* } \\ & \text { MN }^{2} \end{aligned}$ | DIMENSIONS IN MM |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO |  | LIST NO |  | MIN | MAX |  | A | B | C |
| 16A | 2P＋E | K9023YEL 4 | K9024BLU 6 |  |  | 8.2 | 13 | 1－2．5 | 72 | 81.2 | 117.6 |
| 16A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K9025RED | 6 | 8.9 | 17 | 1－2．5 | 75.4 | 87.2 | 123.6 |
| 16A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K9026RED | 6 | 10.1 | 17 | 1－2．5 | 88 | 93.6 | 129.6 |
| 32A | $2 \mathrm{P}+\mathrm{E}$ |  | K9054BLU 6 |  |  | 11.7 | 18 | 2．5－6 | 92 | 97.2 | 142.6 |
| 32A | 3P＋E |  |  |  |  |  |  |  |  |  |  |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K9056RED |  | 14.2 | 22 | 2．5－6 | 98 | 102.9 | 148.3 |
| c．Earth Hour Position |  |  |  |  |  |  |  | ＊Flexible conductors |  |  |  |

## Commando Technical

## Plugs 63 Amp

## IP67 WATERTIGHT



Connectors 16， 32 and 63 Amp

## IP44 SPLASHPROOF



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIURATION } \end{aligned}$ | $\begin{gathered} \text { 100-130V } \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ |  | CABLE <br> DIAMETER D MM |  | $\begin{aligned} & \text { TERMINAL } \\ & \text { CAPACITY* } \\ & \text { MM }^{2} \end{aligned}$ | DIMENSIONS IN MM |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO ${ }^{\text {b }}$ | LIST NO | LIST NO |  | MIN | MAX |  | A | B |
| 16A | 2P＋E | K9100YEL 4 | K9101BLU 6 |  |  | 8.2 | 13 | 1－2．5 | 142 | 77.3 |
| 16A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K9107RED | 6 | 8.9 | 15.5 | 1－2．5 | 142 | 80.8 |
| 16A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K9115RED | 6 | 10.1 | 17 | 1－2．5 | 142 | 90 |
| 32A | $2 \mathrm{P}+\mathrm{E}$ | K9132YEL 4 | K9133BLU 6 |  |  | 11.7 | 18 | 2．5－6 | 148 | 92 |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  | K9143BLU 9 | K9144RED | 6 | 11.1 | 22 | 2．5－6 | 154 | 98.5 |
| 63A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K9170RED |  | 16.5 | 36 | 6－16 | 109.5 | 256 |
| c）Earth Hour Position |  |  |  |  |  |  |  | ＊Flexible conductors |  |  |

Connectors 63 Amp
IP44 SPLASHPROOF


| AMPS | PIN．CONFIURATION | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ |  |  |  | TERMINAL CAPACITY＊ |  | $\begin{aligned} & \text { IENSI } \\ & \text { NN MN } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST No く | LIST NO $\downarrow$ |  | MIN | MAX |  | A | B | C |
| 63A | $2 \mathrm{P}+\mathrm{E}$ | K9172BLU 6 |  |  | 16.5 | 36 | 6－16 | 109.5 | 256 | 36.4 |
| 63A | $3 \mathrm{P}+\mathrm{E}$ |  |  |  |  |  |  |  |  |  |
| 63A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  | K9170RED 6 |  | 16.5 | 36 | 6－16 | 109.5 | 256 | 36.4 |
| （c）Eart | Hour Position |  |  |  |  |  | ＊Flexible conductors |  |  |  |

## Commando Technical

Connectors 16 and 32 Amp

## IP67 WATERTIGHT



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{aligned} & 100-130 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | 380-415V <br> 50-60HZ <br> LIST NO |  | CABLE DIAMETER D MM |  | TERMINAL CAPACITY* $\mathrm{MM}^{2}$ | DIMENSIONS IN MM |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO |  |  | MIN | MAX |  | A | B |
| 16A | 2P+E | K9123YEL 4 | K9124BLU 6 |  |  | 8.2 | 13 | 1-2.5 | 151 | 80 |
| 16A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K9125RED | 6 | 8.9 | 17 | 1-2.5 | 168 | 88 |
| 16A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K9126RED | 6 | 10.1 | 21.5 | 1-2.5 | 170 | 97 |
| 32A | $2 \mathrm{P}+\mathrm{E}$ | K9155YEL 4 | K9156BLU 6 |  |  | 11.7 | 21.5 | 2.5-6 | 177 | 102 |
| 32A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K9157RED |  | 11.7 | 21.5 | 2.5-6 | 177 | 102 |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K9158RED |  | 14.2 | 21.5 | 2.5-6 | 182 | 109 |
| c) Earth Hour Position |  |  |  |  |  |  |  | *Flexible conductors |  |  |

## Connectors 63 Amp

## IP67 WATERTIGHT



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{aligned} & 100-130 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | CABLE DIAMETER D MM |  | TERMINAL CAPACITY* MM² | DIMENSIONS IN MM |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO | LIST NO く | LIST NO | MIN | MAX |  | A | B |
| 63A | $2 \mathrm{P}+\mathrm{E}$ | K9855YEL 4 | K9856BLU 6 |  | 14 | 41 | 4-16 | 286 | 111 |
| 63A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K9842RED 6 | 16.5 | 41 | 4-16 | 286 | 111 |
| 63A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K9852RED 6 | 16.5 | 41 | 4-16 | 286 | 111 |
| c) Earth Hour Position |  |  |  |  |  |  | *Flexible conductors |  |  |

Socket Outlets
Angled Surface Mounting 16 and 32 Amp
FITTED WITH CABLE ENTRY GLAND THREAD SIZE M48

## Commando Technical

IP44 SPLASHPROOF


| AMPS | PIN． CONFIURATION | $\begin{gathered} 100-130 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ |  | DIAME | ED MM | TERMINAL CAPACITY＊ |  |  |  | IME | 10 | IN |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO | LIST No く | LIST NO |  | MIN | MAX |  | A | B | C | D | E | F | G | H | 1 |
| 16A | $2 \mathrm{P}+\mathrm{E}$ | K9200YEL 4 | K9201BLU 6 |  |  | 8.2 | 13 | 1－2．5 | 138.7 | 99 | 20 | 71 | 58 | 34 | 5 | 35 | Ø19／26 |
| 16A | $3 \mathrm{P}+\mathrm{E}$ |  | K9206BLU | K9207RED | 6 | 8.9 | 15.5 | 1－2．5 | 138.7 | 101 | 20 | 71 | 58 | 34 | 5 | 35 | 019／26 |
| 16A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  | K9214BLU 9 | K9215RED | 6 | 10.1 | 17 | 1－2．5 | 139.7 | 105 | 20 | 71 | 58 | 34 | 5 | 35 | Ø19／26 |
| 32A | $2 \mathrm{P}+\mathrm{E}$ | K9232YEL 4 | K9233BLU 6 |  |  | 11.7 | 18 | 2．5－6 | 150.6 | 107 | 25 | 71 | 58 | 34 | 5 | 35 | Ø19／26 |
| 32A | $3 \mathrm{P}+\mathrm{E}$ |  | K9236BLU 9 | K9237RED | 6 | 11.7 | 22 | 2．5－6 | 150.6 | 107 | 25 | 71 | 58 | 34 | 5 | 35 | 019／26 |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  | K9240BLU 9 | K9241RED | 6 | 11.1 | 22 | 2．5－6 | 151.6 | 110 | 25 | 71 | 58 | 34 | 5 | 35 | 019／26 |
| c．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． <br> CONFIURATION | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | TERMINAL CAPACITY＊ $\mathrm{MM}^{2}$ | DIMENSIONS IN MM |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO し | LIST NO く |  | A | B | C | D |
| 63A | $2 \mathrm{P}+\mathrm{E}$ | K9274BLU |  | 6－16 | 300.8 | 165.4 | 274.5 | 135 |
| 63A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  | K9269RED | 6－16 | 300.8 | 166.1 | 275 | 135 |
| c）Earth Hour Position |  |  |  | ＊Flexible conductors |  |  |  |  |

Socket Outlets
Angled Surface
Mounting
63 Amp
IP67 WATERTIGHT


| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIURATION } \end{aligned}$ | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | TERMINAL CAPACITY＊ MM² | DIMENSIONS IN MM |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO | LIST NO |  | A | B | C | D |
| 63A | 2P＋E | K9857BLU |  | 6－16 | 300.8 | 165.4 | 274.5 | 135 |
| 63A | $3 \mathrm{P}+\mathrm{E}$ |  | K9858RED |  | 300.8 | 166.1 | 275 | 135 |
| 63A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  | K9859RED | 6－16 | 300.8 | 166.1 | 275 | 135 |
| （1）Earth Hour Position |  |  |  | ＊Flexible conductors |  |  |  |  |

## Socket Outlets

## Straight Panel Mounting 16 and 32 Amp

ALL FLANGES HAVE THE SAME FIXING CENTRES AND OUTSIDE DIMENSIONS TO ASSIST PANEL BUILDING．

## IP44 SPLASHPR00F



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIURATION } \end{aligned}$ | $\begin{gathered} 100-130 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | CABLE <br> DIAMETER D MM |  | TERMINAL CAPACITY＊ MM ${ }^{2}$ | DIMENSIONS IN MM |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO | LIST NO | LIST NO | MIN | MAX |  | A | B | C | D | E | F |
| 16A | $2 \mathrm{P}+\mathrm{E}$ | K9400YEL 4 | K9401BLU 6 |  | 8.2 | 13 | 1－2．5 | 70 | 56 | 41 | 20.9 | 50 | 83 |
| 32A | $2 \mathrm{P}+\mathrm{E}$ | K9432YEL 4 | K9433BLU 6 |  | 11.7 | 18 | 2．5－6 | 70 | 56 | 55 | 26.5 | 60.4 | 92 |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K9445RED 6 | 11.1 | 22 | 2．5－6 | 70 | 56 | 55 | 26.5 | 60.4 | 98.5 |
| c）Earth Hour Position |  |  |  |  |  |  | ＊Solid or Stranded conductors |  |  |  |  |  |  |

## Commando Technical

Socket Outlets
Angled Panel Mounting 16 and 32 Amp

## IP67 WATERTIGHT



| AMPS | PIN. | $\begin{aligned} & 100-130 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | CABLE <br> DIAMETER D MM |  | TERMINAL CAPACITY* MM² | DIMENSIONS IN MM |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO | LIST NO | LIST NO く | MIN | MAX |  | A | B | C | D | E | F | G |
| 16A | $2 \mathrm{P}+\mathrm{E}$ | K9802YEL 4 |  |  |  |  | 1-2.5 | 100 | 85 | 92 | 77 | 5 | 33.6 | 46.8 |
| (1) Ea | Hour Position |  |  |  |  |  | *Solid or Stranded conductors |  |  |  |  |  |  |  |

Socket Outlets
Angled Panel Mounting 16 and 32 Amp

IP44 SPLASHPR00F


| AMPS | PIN. | $\begin{aligned} & 100-130 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | CABLE <br> DIAMETER D MM |  | $\begin{aligned} & \text { TERMINAL } \\ & \text { CAPACITY* } \end{aligned}$ | DIMENSIONS IN MM |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO | LIST NO | MIN | MAX |  | A | B | C | D | E | F | G |
| 16A | 2P+E |  | K9771BLU 6 |  | 8.2 | 13 | 1-2.5 | 84 | 74 | 60 | 51.2 | 36 | 41 | 85.6 |
| (1) Earth Hour Position |  |  |  |  |  |  | *Solid or Stranded conductors |  |  |  |  |  |  |  |

## Commando Technical

## Switchsocket Outlets

Interlocked Angled Surface Mounting 16, 32 and 63 Amp
SWITCH CAN BE LOCKED IN OPEN OR CLOSED POSITION
IP44 SPLASHPROOF

16 amp and 32 amp
Will accept auxiliary contact eg. 6813 and 6814 M32/M25 conduite entry, with mounting for FL9 flange plate 63 amp M40 conduit entry with mounting for FL 13 flange plate Switch Utilisation Category AC 22A


| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ |  | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ |  | TERMINAL CAPACITY* $M^{2}{ }^{2}$ | DIMENSIONS IN MM |  |  | $\begin{aligned} & \text { FIXING } \\ & \text { CENTRES } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO |  | LIST NO |  |  | A | B | C |  |
| 16 | $3 \mathrm{P}+\mathrm{E}$ | K9601BLU | 9 |  |  | 1.5-10 | 125 | 198 | 135 | $91.5 \times 165$ |
| 16 | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ | K9607BLU | 9 |  |  | 1.5-10 | 125 | 198 | 135 | $91.5 \times 165$ |
| 32 | $3 \mathrm{P}+\mathrm{E}$ |  |  |  |  | 1.5-10 | 135 | 198 | 135 | $91.5 \times 165$ |
| 32 | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ | K9639BLU | 9 |  |  | 1.5-10 | 135 | 198 | 135 | $91.5 \times 165$ |
| 63 | $3 \mathrm{P}+\mathrm{E}$ |  |  | K9665RED |  | 6-25 | 183 | 228 | 165 | $91.5 \times 201$ |
| 63 | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  |  |  | 6-25 | 183 | 228 | 165 | $91.5 \times 201$ |
| (1) Earth Hour Position |  |  |  |  |  | *Solid or Stranded conductors |  |  |  |  |

## Switchsocket Outlets

Interlocked Angled Conduit Entry Surface Mounting
63 Amp
IP44 SPLASHPROOF


| AMPS | PIN.CONFiGURATION | 100-130V | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ <br> LIST NO | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ <br> LIST NO | $\begin{aligned} & \text { TERMINAL } \\ & \text { CAPACITY* } \\ & \text { MIN }^{2} \end{aligned}$ | DIMENSIONS IN MM |  |  | $\begin{aligned} & \text { FIXING } \\ & \text { CENTRES } \end{aligned}$ | $\begin{aligned} & \text { CONDUIT } \\ & \text { ENTRY } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO |  |  |  | A | B | C |  |  |
| 63 | $2 \mathrm{P}+\mathrm{E}$ |  | K9306BLU |  | 6-25 | 168 | 168 | 206 | $152 \times 132$ | $2 \times 32 \mathrm{~mm}$ |
| c) Earth Hour Position |  |  |  |  | *Solid or Stranded conductors |  |  |  |  |  |

## Commando Technical

Switchsocket Outlets
Interlocked Angled Surface Mounting 63 Amp

IP67 WATERTIGHT


| AMPS | PIN． CONFIG－ URATION | 100-130V | 200-250V | 380－415V | TERMINAL | DIMENSIONS IN MM |  |  | $\begin{aligned} & \text { FIXING } \\ & \text { CENTRES } \end{aligned}$ | $\begin{aligned} & \text { CONDUIT } \\ & \text { ENTRY } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST No－ | LIST No く | LIST No $\downarrow$ |  | A | B | C |  |  |
| 63A | 3P＋E |  |  | K9342RED 6 | 6－25 | 182 | 168 | 206 | $152 \times 132$ | $2 \times 32 \mathrm{~mm}$ |
| c）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 | PONFIG－ URATION | $\begin{aligned} & 100-130 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{~Hz} \end{gathered}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | CABLE DIAMETER |  | TERMINAL CAPACITY＊ $\mathrm{MM}^{2}$ | DIMENSIONS IN MM |  |  |  |  |  |  | TOP CONDUIT <br> ENTRY D | $\begin{aligned} & \text { REAR } \\ & \text { ENTRY G } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO く | LIST NO | MIN | MAX |  | B | C | C1 | E1 | F | H | 1 |  |  |
| 16A | $2 \mathrm{P}+\mathrm{E}$ |  | K9701BLU 6 |  | 8.2 | 14 | 1．5－10 | 66 | 75 | 54 | 72 | 5.5 | 110 | 30 | M20 | $\emptyset 23$ |
| 32A | $2 \mathrm{P}+\mathrm{E}$ |  | K9733BLU 6 |  | 11.7 | 19.5 | 1．5－10 | 85 | 111 | 72 | 94 | 5.5 | 153 | 33 | M25 | Ø29 |

## Commando Technical

## Socket Outlets <br> Loop in Surface Mounting <br> 16 and 32 Amp



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{aligned} & 100-130 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | CABLE ENTRY KNOCKOUTS | TERMINAL CAPACITY＊ $\mathrm{MM}^{2}$ | $\begin{aligned} & \text { FIXING } \\ & \text { CENTRES } \\ & \text { MM } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO | LIST NO |  |  |  |
| 32A | 2P＋E | K13232YEL 4 |  |  | $2 \times \emptyset 25$ top | $2 \times(2.5-10)$ | $90 \times 170$ |
| c）Earth Hour Position |  |  |  |  |  | ＊Solid or Stranded conductors |  |



| AMPS | PIN． | 100-130V | $200-250 \mathrm{~V}$ | $380-415 \mathrm{~V}$ | TERMINAL |  | IMENS | IN |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO く | LIST NO く |  | A | B | C | D |
| 16A | 2P＋E | K13300YEL | K13301BLU |  | 1－2．5 | 227.7 | 143.5 | 215 | 120 |
| 32A | $2 \mathrm{P}+\mathrm{E}$ |  | K13333BLU |  | 2．5－6 | 235.5 | 143.5 | 215 | 120 |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K13341RED | 2．5－6 | 235.5 | 143.5 | 215 | 120 |
| c．Earth Hour Position |  |  |  |  | ＊Solid or Stranded conductors |  |  |  |  |

## Switchsocket Outlets

 Interlocked Surface Mounting 16 and 32 Amp（SUITABLE FOR TOP ENTRY）

## IP44 SPLASHPR00F

Switch Utilisation Category AC 22A
Will accept auxiliary contacts 6813 and 6814
Switch can be locked in open or closed position．


| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{aligned} & \text { 100-130V } \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} \text { 200-250V } \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | CABLE ENTRY KNOCKOUTS | TERMINAL CAPACITY＊ | FIXING CENTRES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO く | LIST NO く |  |  |  |
| 16A | $3 P+E$ |  |  | K13607RED 6 | $2 \times 025$ top | 1．5－4 | $90 \times 170$ |
| 32A | $2 \mathrm{P}+\mathrm{E}$ | K13632YEL 4 |  |  | $2 \times \emptyset 25$ top | 2．5－10 | $90 \times 170$ |
| 32A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K13637RED 6 | $2 \times$ Ø 25 top | 2．5－10 | $90 \times 170$ |
| （1）Earth Hour Position |  |  |  |  |  | ＊Solid or Stranded conductors |  |



| AMPS | PIN． <br> CONFIG－ | $\begin{gathered} 100-130 V \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{aligned} & \text { 120/208- } \\ & 144 / 250 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & 200 / 346- \\ & 240 / 415 \mathrm{~V} \end{aligned}$ | DIMEN | ONS IN | TERMINAL CAPACITY＊ | CABLE ENTRY KNOCKOUTS | FIXING CENTRES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO く | LIST NO | LIST NO く | LIST NO く | A | B |  |  |  |
| 16A | $2 P+E$ | K73600YEL 4 | K73601BLU 6 |  |  |  | 228 | 128.5 | 1．5－4 | Ø20／25＋Ø25／32 top and bottom | $108 \times 165$ |
| 16A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  |  | K73603BLU 9 | K73615RED 6 | 229 | 142.5 | 1．5－4 | Ø20／25＋Ø25／32 top and bottom | $108 \times 165$ |
| 32A | $2 \mathrm{P}+\mathrm{E}$ |  | K73633BLU 6 |  |  |  | 235.5 | 148 | 2．5－10 | Ø20/25+Ø25/32 top and bottom | $108 \times 165$ |
| 32A | $3 P+E$ |  |  | K73637RED 6 |  |  | 235.5 | 148 | 2．5－10 | Ø20／25＋Ø25／32 top and bottom | $108 \times 165$ |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  |  | K73635BLU 9 | K73641RED 6 | 235.5 | 154.5 | 2．5－10 | Ø20／25＋Ø25／32 top and bottom | $108 \times 165$ |
| （1）Earth Hour Position |  |  |  |  |  |  |  |  | ＊Solid or Stranded conductors |  |  |

## Switchsocket Outlets <br> Interlocked Surface Mounting 63 Amp

| AMPS |  | $\begin{gathered} 100-130 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ |  | $\begin{array}{r} 200-250 \\ 50-60 \mathrm{H} \end{array}$ |  | $\begin{gathered} 380-4151 \\ 50-60 \mathrm{HZ} \end{gathered}$ |  | $\begin{aligned} & 120 / 208- \\ & 144 / 250 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & 200 / 346- \\ & 240 / 415 \mathrm{~V} \end{aligned}$ | $\underset{\text { MIM }}{\text { MIM }}$ |  | TERMINAL CAPACITY＊ MM ${ }^{2}$ | CABLE ENTRY KNOCKOUTS | $\begin{aligned} & \text { FIXING } \\ & \text { CENTRES } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO |  | LIST NO | $\checkmark$ | LIST NO | $\checkmark$ | LIST NO | LIST No く | A | B |  |  |  |
| 63A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  |  |  |  |  |  | K73643RED | 301 | 175 | 6－25 | $2 \times \emptyset 32 / 40$ top and bottom | $123 \times 225$ |
| （1）Earth Hour Position |  |  |  |  |  |  |  |  |  |  |  | ＊Solid or Stranded conductors |  |  |

## Switchsocket Outlets Interlocked Surface Mounting 16 and 32 Amp



IP67 WATERTIGHT

| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{gathered} \text { 100-130V } \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ |  | CABLE ENTRY KNOCKOUTS | $\begin{aligned} & \text { TERMINAL } \\ & \text { CAPACITY* } \\ & \text { MN }^{2} \end{aligned}$ | $\begin{aligned} & \text { FIXING } \\ & \text { CENTRES } \\ & \text { MN } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO | LIST NO |  |  |  |  |
| 16A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K13625RED | 6 | $2 \times \emptyset 25$ top | 1．5－4 | $90 \times 170$ |
| 32A | $2 \mathrm{P}+\mathrm{E}$ | K13653YEL 4 |  |  |  | $2 \times \emptyset 25$ top | 2．5－10 | $90 \times 170$ |
| 32A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K13655RED | 6 | $2 \times \emptyset 25$ top | 2．5－10 | $90 \times 170$ |
| c）Earth Hour Position |  |  |  |  |  |  | ＊Solid or Stranded conductors |  |



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{aligned} & 100-130 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{~Hz} \end{gathered}$ | $\begin{gathered} 200 / 346-240 / 415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | DIMENSIONS IN MM |  | TERMINAL CAPACITY＊ MM ${ }^{2}$ | CABLE ENTRY KNOCKOUTS | FIXING CENTRES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO く | LIST NO | A | B |  |  |  |
| 16A | $2 \mathrm{P}+\mathrm{E}$ | K73623YEL 4 | K73624BLU |  | 233 | 135 | 1．5－4 | Ø20／25＋Ø25／32 top and bottom | $108 \times 165$ |
| 16A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K73626RED 6 | 233 | 147 | 1．5－4 | Ø20／25＋Ø25／32 top and bottom | $108 \times 165$ |
| 32A | $2 \mathrm{P}+\mathrm{E}$ |  | K73654BLU |  | 241 | 153 | 2．5－10 | Ø20／25＋Ø25／32 top and bottom | $108 \times 165$ |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K73656RED 6 | 241 | 159 | 2．5－10 | Ø20／25＋Ø25／32 top and bottom | $108 \times 165$ |
| c）Earth Hour Position |  |  |  |  |  |  | ＊Solid or Stranded conductors |  |  |

Switchsocket Outlets Interlocked Surface Mounting 63 Amp


| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{gathered} 200 / 346-240 / 415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | DIME | IONS | TERMINAL CAPACITY＊ | CABLE ENTRY knockouts | $\begin{aligned} & \text { FIXING } \\ & \text { CENTRES } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO $\downarrow$ | A | B |  |  |  |
| 63A | $2 \mathrm{P}+\mathrm{E}$ | K73660BLU 6 |  | 312 | 185 | 6－25 | $\begin{gathered} 2 \times \varnothing 32 / 40 \\ \text { top and bottom } \end{gathered}$ | $123 \times 225$ |
| 63A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  | K73658RED 6 | 312 | 185 | 6－25 | $\begin{gathered} 2 \times \boxed{6} 2 / 40 \\ \text { top and bottom } \end{gathered}$ | $123 \times 225$ |
| c．Earth Hour Position |  |  |  |  |  | ＊Solid or Stranded conductors |  |  |

## Commando Technical

Socket Outlets
Surface Mounting
16 and 32 Amp Loop In Versions （SEE DIMENSIONS B）
Fitted with terminals for Loop In

## IP67 WATERTIGHT



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{aligned} & 100-130 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | TERMINAL CAPACITY＊ $\mathrm{MM}^{2}$ | CABLE ENTRY KNOCKOUTS | $\begin{aligned} & \text { FIXING } \\ & \text { CENTRES } \\ & \text { MM } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO | LIST NO | LIST NO |  |  |  |
| 32 | $2 \mathrm{P}+\mathrm{E}$ | K13053YEL 4 |  |  | $2 \times(2.5-10)$ | $2 \times \emptyset 25$ top | $90 \times 170$ |
| c）Earth Hour Position |  |  |  |  | ＊Solid or Stranded conductors |  |  |



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{aligned} & 100-130 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | TERMINAL CAPACITY $\mathrm{MIN}^{2}$ | DIMENSIONS IN MM |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO く |  | A | B | C | D |
| 16A | $2 \mathrm{P}+\mathrm{E}$ | K13323YEL | K13324BLU | 1－2．5 | 232.5 | 143.5 | 215 | 120 |
| 32A | $2 \mathrm{P}+\mathrm{E}$ |  | K13354BLU | 2．5－6 | 240.8 | 143.5 | 215 | 120 |
| c．Earth Hour Position |  |  |  | ＊Solid or Stranded conductors |  |  |  |  |

Commando CombitM Technical

Socket Outlets<br>Single Pre-wired with 30mA RCD 16 and 32 Amp

IP44 SPLASHPR00F



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{gathered} 100-130 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 200 / 346-240 / 415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{aligned} & \text { RCD } \\ & \text { TERMINAL } \\ & \text { CAPACITY* } \\ & \text { MW }^{*} \end{aligned}$ |  | $\begin{aligned} & \text { EARTH } \\ & \text { TERMINAL } \\ & \text { CAPACITY* }^{*} \\ & \text { MM }^{2} \end{aligned}$ |  | CABLE ENTRY KNOCKOUTS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO | LIST NO | LIST NO | MIN | MAX | MIN | MAX |  |
| 16A | 2P+E | K13413YEL 4 |  |  | 1.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top |
| 16A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K13415RED 6 | 1.5 | 35 | 2.5 | 25 | $2 \times \varnothing 25$ top |
| 16A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K13416RED 6 | 1.5 | 35 | 2.5 | 25 | $2 \times \varnothing 25$ top |
| 32A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K13434RED 6 | 2.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top |
| (1) Earth Hour Position |  |  |  |  | *Solid or Stranded conductors |  |  |  |  |



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{aligned} & \text { 100-130V } \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\underset{50-60 \mathrm{HZ}}{200 / 346-240 / 415 \mathrm{~V}}$ | DIME | sions | TERMINAL CAPACITY* | CABLE ENTRY KNOCKOUTS | FIXING CENTRES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO く | LIST NO | LIST NO | A | B |  |  |  |
| 16A | $2 \mathrm{P}+\mathrm{E}$ | K73413YEL 4 | K73414BLU 6 |  |  | 228 | 128.5 | 1.5-10 | Ø20/25+Ø25/32 top and bottom | $108 \times 165$ |
| 16A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K73415RED 6 |  | 228 | 135.5 | 1.5-10 | Ø20/25+ø25/32 top and bottom | $108 \times 165$ |
| 16A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  |  | K73416RED 6 | 229 | 142.5 | 1.5-10 | Ø20/25+ø25/32 top and bottom | 108×165 |
| 32A | $2 \mathrm{P}+\mathrm{E}$ |  | K73433BLU 6 |  |  | 235.5 | 148 | 1.5-10 | Ø20/25+ø25/32 top and bottom | 108×165 |
| 32A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K73434RED 6 |  | 235.5 | 148 | 1.5-10 | Ø20/25+Ø25/32 top and bottom | 108×165 |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  |  | K73435RED 6 | 235.5 | 154.5 | 1.5-10 | Ø20/25+ø25/32 top and bottom | $108 \times 165$ |
| c) Earth Hour Position |  |  |  |  |  |  |  | *Solid or Stranded conductors |  |  |

## Switchsocket Outlets Interlocked Pre－wired with 30mA RCD 16 and 32 Amp

IP44 SPLASHPROOF



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{aligned} & 100-130 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\underset{50-60 \mathrm{HZ}}{200 / 346-240 / 415 \mathrm{~V}}$ | R TER CAPA M | $\frac{\text { CD }}{\text { CINAL }}$ | $\begin{aligned} & \text { EA } \\ & \text { TER } \\ & \text { CAPA } \\ & \text { M } \end{aligned}$ | TH <br> INAL <br> CITY＊ <br> $\mathrm{M}^{2}$ | CABLE ENTRY KNOCKOUTS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO | LIST NO | MIN | MAX | MIN | MAX |  |
| 16A | $2 \mathrm{P}+\mathrm{E}$ | K13309YEL 4 |  |  | 1.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top |
| 16A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K13311RED 6 | 1.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top |
| 16A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K13312RED 6 | 1.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top |
| 32A | $2 \mathrm{P}+\mathrm{E}$ | K13342YEL 4 | K13343BLU 6 |  | 2.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top |
| 32A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K13344RED 6 | 2.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K13345RED 6 | 2.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top |
| c）Earth Hour Position |  |  |  |  | ＊Solid or Stranded conductors |  |  |  |  |



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{aligned} & \text { 100-130V } \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{~Hz} \end{gathered}$ | $\underbrace{200 / 346-240 / 415 \mathrm{~V}}_{50-60 \mathrm{~Hz}}$ |  | IONS $1 \mathrm{~m}$ | TERMINAL CAPACITY | CABLE ENTRY KNOCKOUTS | $\begin{aligned} & \text { FIXING } \\ & \text { CENTRES } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO く | LIST NO | LIST NO く | A | B |  |  |  |
| 16A | $2 \mathrm{P}+\mathrm{E}$ | K73309YEL 4 | K73310BLU 6 |  |  | 325 | 136.5 | 1．5－10 | Ø20／25＋ø25／32 top and bottom | $118 \times 261$ |
| 16A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K73311RED 6 |  | 325 | 143.5 | 1．5－10 | Ø20／25＋ø25／32 top and bottom | $118 \times 261$ |
| 16A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  |  | K73312RED 6 | 326 | 150.5 | 1．5－10 | Ø20／25＋ø25／32 top and bottom | $118 \times 261$ |
| 32A | $2 \mathrm{P}+\mathrm{E}$ | K73342YEL 4 | K73343BLU 6 |  |  | 333 | 156 | 1．5－10 | Ø20／25＋ø25／32 top and bottom | $118 \times 261$ |
| 32A | 3P＋E |  |  | K73344RED 6 |  | 333 | 156 | 1．5－10 | Ø20／25＋ø25／32 top and bottom | 118×261 |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  |  | K73345RED 6 | 333 | 162 | 1．5－10 | Ø20／25＋ø25／32 top and bottom | $118 \times 261$ |
| c．Earth Hour Position |  |  |  |  |  |  |  | ＊Solid or Stranded conductors |  |  |

# Commando Combi™ Technical 

## Switchsocket Outlets

 Interlocked Pre－wired with 30mA RCD 16 and 32 AmpIP67 WATERTIGHT



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{aligned} & \text { 100-130V } \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 200 / 346-240 / 41 \\ 50-60 \mathrm{HZ} \end{gathered}$ |  | $\begin{aligned} & \mathrm{R} \\ & \text { TERN } \\ & \text { CAPA } \\ & M \end{aligned}$ | $\begin{aligned} & \text { CD } \\ & \frac{1 N A L}{\text { CITY }^{*}} \\ & \mathrm{M}^{2} \end{aligned}$ | $\begin{gathered} \text { EA } \\ \text { TERN } \\ \text { CAPA } \end{gathered}$ | $\begin{aligned} & \text { TTH } \\ & \text { INAL } \\ & \text { CITY }^{*} \\ & \mathrm{M}^{2} \end{aligned}$ | CABLE ENTRY KNOCKOUTS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO | LIST NO | LIST NO ${ }^{\text {b }}$ |  | MIN | MAX | MIN | MaX |  |
| 16 | $2 \mathrm{P}+\mathrm{E}$ | K13713YEL 6 |  |  |  | 1.5 | 35 | 2.5 | 25 | $2 \times \varnothing 25$ top |
| 16 | $3 \mathrm{P}+\mathrm{E}$ |  |  | K13715RED | 6 | 1.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top |
| 16 | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K13716RED | 6 | 1.5 | 35 | 2.5 | 25 | $2 \times \varnothing 25$ top |
| 32 | $2 \mathrm{P}+\mathrm{E}$ |  | K13733BLU 6 |  |  | 2.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top |
| 32 | $3 \mathrm{P}+\mathrm{E}$ |  |  | K13734RED | 6 | 2.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top |
| c．Earth Hour Position |  |  |  |  |  | ＊Solid or Stranded conductors |  |  |  |  |



| AMPS | PIN． CONFIGURATION | $\begin{aligned} & 100-130 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{~Hz} \end{gathered}$ | $\left\lvert\, \begin{gathered} 200 / 346-240 / 415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}\right.$ |  | DIMENSIONS IN MIM |  | TERMINAL CAPACITY＊ $M^{\prime 2}{ }^{2}$ | CABLE ENTRY KNOCKOUTS | $\begin{aligned} & \text { FIXING } \\ & \text { GFNTRES } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST No く | LIST No く | LIST No b | LIST NO く |  | A | B |  |  |  |
| 16A | $2 \mathrm{P}+\mathrm{E}$ | K73713YEL 4 | K73714BLU 6 |  |  |  | 233 | 135 | 1．5－10 | $\emptyset 20 / 25+\emptyset 25 / 32$ top and bottom | $108 \times 165$ |
| 16A | $3 \mathrm{P}+\mathrm{E}$ |  | K73717BLU 9 | K73715RED 6 |  |  | 233 | 141 | 1．5－10 | Ø20／25＋Ø25／32 top and bottom | $108 \times 165$ |
| 16A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  |  | K73716RED | 6 | 233 | 147 | 1．5－10 | Ø20／25＋Ø25／32 top and bottom | $108 \times 165$ |
| 32A | $2 \mathrm{P}+\mathrm{E}$ | K73718YEL 4 | K73733BLU 6 |  |  |  | 241 | 153 | 1．5－10 | Ø20／25＋Ø25／32 top and bottom | 108×165 |
| 32A | $3 \mathrm{P}+\mathrm{E}$ |  | K73736BLU 9 | K73734RED 6 |  |  | 241 | 153 | 1．5－10 | $\begin{aligned} & \varnothing 20 / 25+\varnothing 25 / 32 \\ & \text { top and bottom } \end{aligned}$ | $108 \times 165$ |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  |  | K73735RED |  | 241 | 159 | 1．5－10 | $\emptyset 20 / 25+\emptyset 25 / 32$ <br> top and bottom | $108 \times 165$ |
| c）Earth Hour Position |  |  |  |  |  |  |  |  | ＊Solid or Stranded conductors |  |  |

## Switchsocket Outlets Interlocked Pre－wired with 30mA RCD 16 and 32 Amp

IP67 WATERTIGHT



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{aligned} & \text { 100-130V } \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\underset{50-60 \mathrm{HZ}}{200 / 346-240 / 415 \mathrm{~V}}$ | $\begin{aligned} & \text { RCD } \\ & \text { TERMINAL } \\ & \text { CAPACTY** } \\ & \text { MN }^{2} \end{aligned}$ |  | $\begin{aligned} & \text { EARTH } \\ & \text { TERMINAL } \\ & \text { CAPACITY* } \\ & \text { MIN² }^{2} \end{aligned}$ |  | CABLE ENTRY KNOCKOUTS | $\begin{aligned} & \text { FIXING } \\ & \text { CENTRES } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST No | LIST NO | LIST NO | MIN | MAX | MIN | MAX |  |  |
| 16 | $2 \mathrm{P}+\mathrm{E}$ | K13346YEL 6 | K13348BLU 6 |  | 1.5 | 35 | 2.5 | 25 | $2 \times$ Ø25 top | $100 \times 290$ |
| 16 | $3 \mathrm{P}+\mathrm{E}$ |  |  | K13350RED 6 | 1.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top | $100 \times 290$ |
| 16 | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K13351RED 6 | 1.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top | $100 \times 290$ |
| 32 | $2 \mathrm{P}+\mathrm{E}$ | K13347YEL 6 | K13349BLU 6 |  | 2.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top | $100 \times 290$ |
| 32 | $3 \mathrm{P}+\mathrm{E}$ |  |  | K13352RED 6 | 2.5 | 35 | 2.5 | 25 | $2 \times \emptyset 25$ top | $100 \times 290$ |
| 32 | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K13353RED 6 | 2.5 | 35 | 2.5 | 25 | $2 \times$ Ø25 top | $100 \times 290$ |
| （1）Earth Hour Position |  |  |  |  | ＊Solid or Stranded conductors |  |  |  |  |  |



| AMPS | $\begin{aligned} & \text { PIN. } \\ & \text { CONFIGURATION } \end{aligned}$ | $\begin{gathered} \text { 100-130V } \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\underset{50-60 \mathrm{HZ}}{200 / 346-240 / 415 \mathrm{~V}}$ |  |  | TERMINAL CAPACITY＊ | CABLE ENTRY KNOCKOUTS | FIXING CENTRES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO く | LIST NO く | LIST NO く | LIST NO く | A | B |  |  |  |
| 16A | $2 \mathrm{P}+\mathrm{E}$ | K73346YEL 4 | K73348BLU 6 |  |  | 330 | 143 | 1．5－10 | Ø20／25＋ø25／32 top and bottom | $118 \times 261$ |
| 16A | $3 \mathrm{P}+\mathrm{E}$ |  | K73354BLU 6 | K73350RED 6 |  | 330 | 149 | 1．5－10 | Ø20／25＋ø25／32 top and bottom | $118 \times 261$ |
| 16A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  |  | K73351RED 6 | 330 | 155 | 1．5－10 | Ø20／25＋ø25／32 top and bottom | $118 \times 261$ |
| 32A | $2 \mathrm{P}+\mathrm{E}$ | K73347YEL 4 | K73349BLU 6 |  |  | 338 | 161 | 1．5－10 | Ø20／25＋ø25／32 top and bottom | 118×261 |
| 32A | $3 \mathrm{P}+\mathrm{E}$ |  | K73355BLU 6 | K73352RED 6 |  | 338 | 161 | 1．5－10 | $\varnothing 20 / 25+\varnothing 25 / 32$ <br> top and bottom | $118 \times 261$ |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  |  | K73353RED 6 | 338 | 167 | 1．5－10 | $\varnothing 20 / 25+\varnothing 25 / 32$ <br> top and bottom | $118 \times 261$ |
| c）Earth Hour Position |  |  |  |  |  |  |  | ＊Solid or Stranded conductors |  |  |

Twin Surface Socket Outlet 16 and 32 Amp

IP44 SPLASHPR00F



| AMPS | PIN．CONFIG－URATION | $\begin{aligned} & 100-130 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{aligned} & 200-250 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | EARTH TERMINAL CAPACITY MM² |  | DIMENSIONS IN MM |  |  |  |  |  | CABLE ENTRY KNOCKOUTS |  |  | FIXING CENTRES |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO | LIST NO | MIN | MAX | A | D | E | G | I | J | H | K | L | BXF | C |
| 16A | 2P＋E | K73143YEL 4 | K73144BLU | 1.5 | 10 | 252 | 6 | 4.5 | 228 | 158.8 | 118.7 | $2 \times 040$ | $4 \times \emptyset 32$ | $4 \times 040$ | 200x210 | 160 |
| c）Earth Hour Position |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

# Twin Surface Socket Outlet with Individual 30mA RCD Protection 16 and 32 Amp 

IP44 SPLASHPR00F


| AMPS |  | $\begin{aligned} & \text { 100-130V } \\ & 50-60 \mathrm{HZ} \end{aligned}$ | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ | $\begin{aligned} & 380-415 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ | 200／346－ <br> 240／415V <br> 50－60HZ | $\begin{aligned} & \text { EARTH } \\ & \text { TERMMINAL } \\ & \text { CAPCITY } \\ & \text { MM }^{2} \end{aligned}$ |  | DIMENSIONS IN MM |  |  |  |  |  | CABLE ENTRY KNOCKOUTS |  |  | $\begin{aligned} & \text { FIXING } \\ & \text { CENTRES } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | LIST NO | LIST NO く | LIST NO | LIST NO | MIN | MAX | A | D | E | H | J | K | 1 | L | M | BXG | CXF |
| 16A | $2 \mathrm{P}+\mathrm{E}$ | K73173YEL 4 | K73174BLU 6 |  |  | 1.5 | 65 | 252 | 6 | 4.5 | 358 | 158.8 | 118.7 | $4 \times \emptyset 40$ | 4 x 032 | 4xØ40 | 200x340 | $160 \times 137$ |
| 16A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K73175RED 6 |  | 1.5 | 65 | 252 | 6 | 4.5 | 358 | 158 | 118.7 | $4 \times 040$ | 4 x 032 | 4x040 | $200 \times 340$ | $160 \times 137$ |
| 16A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  |  | K73176RED 6 | 1.5 | 65 | 252 | 6 | 4.5 | 358 | 160.1 | 118.7 | $4 \times 040$ | 4 x 032 | 4xØ40 | $200 \times 340$ | $160 \times 137$ |
| 32A | $2 \mathrm{P}+\mathrm{E}$ |  | K73184BLU 6 |  |  | 1.5 | 65 | 252 | 6 | 4.5 | 358 | 170.5 | 118.7 | $4 \times 040$ | 4 x 032 | 4x040 | $200 \times 340$ | $160 \times 137$ |
| 32A | $3 \mathrm{P}+\mathrm{E}$ |  |  | K73185RED 6 |  | 1.5 | 65 | 252 | 6 | 4.5 | 358 | 170.5 | 118.7 | $4 \times \emptyset 40$ | 4 x 032 | 4xø40 | $200 \times 340$ | $160 \times 137$ |
| 32A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  |  | K73186RED 6 | 1.5 | 65 | 252 | 6 | 4.5 | 358 | 171.1 | 118.7 | $4 \times \emptyset 40$ | 4 x Ø 32 | 4xø40 | $200 \times 340$ | $160 \times 137$ |
| c）Earth Hour Position |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Commando Combi™ Technical

Socket Outlets
Single Pre-wired with 30mA RCD 63 Amp

IP44 SPLASHPR00F


| AMPS | PIN.CONFIGRATION | $\begin{aligned} & 100-130 \mathrm{~V} \\ & 50-60 \mathrm{HZ} \end{aligned}$ <br> LIST NO | $\begin{gathered} 200-250 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ <br> LIST NO | $\begin{gathered} 380-415 \mathrm{~V} \\ 50-60 \mathrm{HZ} \end{gathered}$ <br> LIST NO | EARTH TERMINAL CAPACITY MIM2 |  | DIMENSIONS IN MM |  |  |  |  |  | CABLE ENTRY KNOCKOUTS |  |  | FIXING CENTRES |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | MIN | MaX | A | D | E | H | J | K | 1 | L | M | BXG | CXF |
| 63A | 2P+E |  | K73463BLU 6 |  | 1.5 | 65 | 252 | 6 | 4.5 | 358 | 177.9 | 118.7 | $4 \times Ø 40$ | 4 x 032 | 4x040 | $200 \times 340$ | $160 \times 137$ |
| 63A | $3 \mathrm{P}+\mathrm{N}+\mathrm{E}$ |  |  | K73465RED 6 | 1.5 | 65 | 252 | 6 | 4.5 | 358 | 177.9 | 118.7 | $4 \times \varnothing 40$ | 4 x 032 | 4xØ40 | $200 \times 340$ | $160 \times 137$ |



## PRODUCT APPLICATION

## DESIGN SERVICE TOOL

MK Electric has created a unique product configurator tool that enables interior designers to experiment with its MK Elements Collection on a tablet or laptop.

Selecting front plates to match interior finishes such as a black granite countertop or a metallic finish to blend with stainless steel appliances has never been easier. The tool allows designers to work with their clients to narrow that selection down to 2-3 just by having the ability to show the selected background
 or surroundings. When designs of customised light switches and sockets are cached on the device they can be stored for later use or emailed when designers are back online.

To find out more visit Designtool.mkelements.com

## Sentry Technical

## Circuit Protection

| Sentry <br> Consumer units and a wide variety of modular protection and control products | $576-604$ |
| :--- | :---: |
| Sentrysocket <br> RCD protected switchsockets with active and passive control circuits | $606-607$ |

## Metal Consumer Units and Enclosures

## Standards and approvals

All Sentry consumer units are designed to fully comply with the requirements of BS EN 61439-3.

## TECHNICAL SPECIFICATION

## ELECTRICAL

MAXIMUM CURRENT RATING
All Sentry consumer units have a maximum rating of 100 A except the 4 module range which is rated at 63 A

TERMINAL CAPACITY
$16 \mathrm{~mm}^{2}$ earth and neutral

## RATED FREQUENCY

50 Hz
RATED OPERATIONAL VOLTAGE
Consumer unit: 220-250V
RATED INSULATION VOLTAGE
Consumer unit: 300V
SHORT CIRCUIT WITHSTAND
16 kA 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(s) and suitable cables



## 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 Metal Consumer units allow for protected and unprotected ways with the circuits being split across up to 2 RCDs, whilst the labelling sheet allows for full identification of all circuits.

Sentry Metal Consumer units and enclosures are designed on a modular basis, with 4 to 21 module enclosures in the range, to accommodate a wide variety of MK modular protection and control products. Sentry Metal Consumer units provide a housing with facility for earthing the metal box.

The enclosures are provided with ample wiring space and cable entry points.

## Colours / finishes

All Sentry Metal Consumer units are colored in white (UV protected powder coated paint).
Certain models are provided with a pre-assembled split load arrangement with switch and up to 2 RCDs. The range is complemented by a versatile selection of small four module enclosures suitable for housing RCDs or other combinations of Sentry products.

All Sentry Metal Consumer Units have neutral and earth terminal bars with $16 \mathrm{~mm}^{2}$ 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 563720).

## features

- Attractive styling
- Modular design
- Suitable for most residential, commercial and light industrial applications
- Single, dual and RCD consumer units available for 17th Edition compliance
- Fully comply with British and European Harmonised Standards
- Available as an empty enclosure or prefitted with switch disconnector and up to 2 RCDs
- Custom build options available


## Sentry Technical

## TECHNICAL SPECIFICATION

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$ (not to exceed an average of more than $35^{\circ} \mathrm{C}$ in any 24 hour period

IP RATING
IP2XC
WEIGHTS
4 WAY: 1.9kg
8 WAY: 2.8 kg
12 WAY: 3.4 kg
16 WAY: 4.0 kg
21 WAY: 4.7 kg

| METAL CONSUMER UNITS |  |  |  |
| :---: | :---: | :---: | :---: |
| WAYS | DIMENSIONS |  |  |
|  | A | B | C |
|  | $\begin{aligned} & \text { OVERALL } \\ & \text { WIDTH } \end{aligned}$ | DISTANCE BETWEEN CENTRES OF FIXING HORIZONTAL | DISTANCE BETWEEN FIXING CENTRES VERTICALLY AS ORIENTATED IN THE DIAGRAMS |
| 4 | 144 | 85 | 147 |
| 8 | 238 | 168 | 147 |
| 12 | 310 | 240 | 147 |
| 16 | 382 | 308 | 147 |
| 21 | 472 | 400 | 147 |

Dimensions (mm)
Consumer unit


## Dimensions (mm)

## Knockout

See Cable Management Section for male bushed flanges to suit all knockouts.


## Consumer Units and Enclosures

## Standards and approvals

All Sentry consumer units are designed to fully comply with the requirements of BS EN 61439-3.

## 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

$16 \mathrm{~mm}^{2}$ earth and neutral
RATED FREQUENCY
50 Hz
RATED OPERATIONAL VOLTAGE
Consumer unit: 220-250V
2 module enclosure: 220-250V
4 module enclosure: $220-415 \mathrm{~V}$
rated insulation voltage
Consumer unit: 300V
2 module enclosure: 300V
4 module enclosure: 660 V
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 | 63 A |
| K5662s | 100 A Switch | 80 A |
| K5666s | 100 A Switch | 63 A |
| K5686s | 100 A Switch | 80 A |
| K5681s | 100 A Switch | 80 A |
| K5582s | 100 A Switch | 63 A |
| K5566s | 100A Switch | 63 A |
| K5586s | 100 A Switch | 80 A |
| K5581s | 100 A Switch | 80 A |




## 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 both surface metal and insulated 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.

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.

## Colours / finishes

All surface insulated consumer units have a textured magnolia cover and lid. The surface metal consumer units are white (powder coated paint). The flush bases are of galvanized steel.

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 16 mm 2 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 563720).

## 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 prefitted with switch disconnector and up to 3 RCDs
- Factory built options available


## Sentry Technical

## TECHNICAL SPECIFICATION

## ELECTRICAL（WEATHERPROOF ENCLOSURES ONLY）

MAXIMUM CURRENT RATING
5702 s 2 pole devices up to 100A
5704 s 4 pole devices up to 63A
Note：
5702s－Can accept up to 4 module ways with removal of moulded blanks．

5704 s－Can accept up to 8 module ways with removal of moulded blanks．

## TERMINAL CAPACITY

5702s： $4 \times 6 \mathrm{~mm}^{2}$ earth and neutral
$5704 \mathrm{~s}: 2 \times 6 \mathrm{~mm}^{2}$ and $6 \times 4 \mathrm{~mm}^{2}$ earth and neutral．
RATED OPERATIONAL VOLTAGE
$220-415 \mathrm{~V}$
RATED INSULATION VOLTAGE
660 V

## TECHNICAL SPECIFICATION

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$（not to exceed an average of more than $+35^{\circ} \mathrm{C}$ 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 | 2000 m |

## Dimensions（mm）

Note：Knockout details on following page

## Consumer unit



| SURFACE INSULATED K5604S／K5686S |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| UNIT | MODULES | DIMENSIONS |  |  |
|  |  | A | B | C |
| SURFACE <br> INSULATED | 4 | 140 | 70 | 156 |
|  | 8 | 234 | 164 | 156 |
|  | 12 | 306 | 236 | 156 |
|  | 16 | 378 | 308 | 156 |
|  | 21 | 468 | 398 | 156 |

## 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
240 V a.c.
OPERATING FREQUENCY
50 Hz

|  | 5560 S | 5500 S |
| :---: | :---: | :---: |
| RATED <br> OPERATIONAL <br> CURRENT LE | 63 A | 100 A |
| RATED DUTY | Uninterrupted | Uninterrupted |
| RATED MAKING <br> CAPACITY LC | 189 A rms | 300 rms |
| RATED SHORT <br> TIME <br> WITHSTAND <br> CURRENT LCW | 2 kA rms <br> for 1 sec | 2 kA rms <br> for 1 sec |
| RATED SHORT <br> CIRCUIT MAKING <br> CAPACITY LCM | 3 kA peak | 3 kA peak |
| RATED <br> CONDITIONAL <br> SHORT CIRCUIT <br> CURRENT | 6kA rms <br> prospective | 6 kA rms <br> prospective |

## PHYSICAL

ambient operating temperature
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
Front face IP3X, screw IP2X
TIGHTENING TORQUE
3Nm
MAX INSTALLATION ALTITUDE
2000 metres

| RATING SPECIFICATION |  |
| :---: | :---: |
| SWITCH DISCONNECTOR | RATING |
| 5500 s | 100 A |
| 5560 s | 63 A |



## 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 $50 \mathrm{~mm}^{2}$ for solid stranded conductors and $35 \mathrm{~mm}^{2}$ 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

Dimensions (mm)


44

## Miniature Circuit Breakers (MCBs)

## 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

voltage rating
$230 \mathrm{~V} / 400 \mathrm{~V}$ a.c.
OPERATING FREQUENCY
50 Hz
RATED SHORT CIRCUIT CAPACITY ICN
6000A
SERVICE SHORT CIRCUIT CAPACITY ICS 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
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
CALIBRATION TEMPERATURE
$+30^{\circ} \mathrm{C}$
IP RATING
Front face IP4X, screw IP2X
TERMINAL CAPACITY
$35 \mathrm{~mm}^{2}$
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 4 mm has been achieved. Sentry MCBs may therefore be used as single pole isolating switches where appropriate.

## Terminals

The Sentry MCB features tunnel terminals of $35 \mathrm{~mm}^{2}$ 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)

| RATING SPECIFICATION |  |
| :---: | :---: |
| TYPE B SINGLE POLE | RATING |
| 5903 s | 3 A |
| 5906 s | 6 A |
| 5910 s | 10 A |
| 5916 s | 16 A |
| 5920 s | 20 A |
| 5925 s | 25 A |
| 5932 s | 32 A |
| 5940 s | 40 A |
| 5945 s | 45 A |
| 5950 s | 50 A |
| TYPE C SINGLE POLE | RATING |
| 8703 s | 3 A |
| 8706 s | 6 A |
| 8710 s | 10 A |
| 8716 s | 16 A |
| 8720 s | 20 A |
| 8725 s | 25 A |
| 8732 s | 32 A |
| 8740 s | 40 A |
| 8750 s | 50 A |
|  |  |
|  |  |
|  |  |

## Description (continued)

## Operating characteristics <br> 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 30 A and 50 A 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)

## 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 $230 / 400 \mathrm{~V}$ a.c. 50 Hz , 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 $\mathrm{I}^{2} \mathrm{t}$ characteristics of the two devices. Discrimination will theoretically occur up to the level at which the value of the total operating $l^{2} t$ of the MCB is below the minimum pre-arcing $I^{2} t$ 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)


## Sentry Technical

## Tripping Characteristics Curve

$\nabla$ Limit specified in BS EN 60898 1: 2003
In: Rated Current
B TYPE:3A to 50A
C TYPE: 3A to 50A
Reference calbi. temp. $30^{\circ} \mathrm{C}$
Lower Limit as per Standard
U Upper Limit as per Standard


## Sentry Technical

## $I^{2} \mathrm{t}$ 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
230 V a.c.
OPERATING FREQUENCY
50Hz
RATED SHORT CIRCUIT CAPACITY ICN
6,000A
SERVICE SHORT CIRCUIT CAPACITY ICS
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
$-25^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
Front face IP4X, screw IP2X

## TERMINAL CAPACITY

Line in $25 \mathrm{~mm}^{2}$
Line and neutral out $25 \mathrm{~mm}^{2}$
tightening toraue
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 $25 \mathrm{~mm}^{2}$ 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. TYPE : | $\begin{aligned} & \text { LIST NO. } \\ & \text { TYPE C } \end{aligned}$ |
| 6A, 230V | 30 mA | 7932s | 8932s |
| 10A, 230V | 30 mA | 7933s | 8933s |
| 16A, 230V | 30 mA | 7934s | 8934s |
| 20A, 230V | 30 mA | 7935s | 8935s |
| 32A, 230V | 30 mA | 7936s | 8936s |
| 40A, 230V | 30 mA | 7937s |  |
| 45A, 230V | 30 mA | 7938s |  |
| 50A, 230V | 30 mA | 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 $16,000 \mathrm{~A}$.

## 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
$16-40 \mathrm{~A}=500 \mathrm{~A}$
$63-80 \mathrm{~A}=800 \mathrm{~A}$
Type AC
RATED SHORT-CIRCUIT CURRENT / INC
$16 \mathrm{~A}-40 \mathrm{~A}=6,000 \mathrm{~A}$ ( 100 A Fuse)
Rated residual short-circuit current /IAm: 16 -
$100 \mathrm{~A}=6,000 \mathrm{~A}$

## RATED VOLTAGES

2 pole devices, 230V
OPERATING VOLTAGES
2 pole devices, $230 \mathrm{~V}-100 \mathrm{~V}$ to 250 V

## TRIPPING TIME

1 x IAn ~300ms
$5 \times \mathrm{IAn} \sim 40 \mathrm{~ms}$

## PHYSICAL

ambient operating temperature
$-25^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## IP RATING

Front face after installation of enclosure IP40

## TERMINAL CAPACITY

Solid stranded - $1 \times 1.5-35 \mathrm{~mm}^{2}$ Flexible with ferrule $-1 \times 1.5-35 \mathrm{~mm}^{2}$

## 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 4 mm 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 RCBO | TRIPPING CURRENT | LISt No. |
| 16A | 30 mA | 7816 s |
| 32 A | 30 mA | 7832 s |
| 40 A | 30 mA | 7840 s |
| 63 A | 30 mA | 7860 s |
| 80 A | 30 mA | 7880 s |
| 63 A | 100 mA | 7560 s |
| 80 A | 100 mA | 7580 s |
| 63 A | 300 mA | 7660 s |
| 80 A | 30 mA | 7680 s |

## 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
0 = 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

$0.5 \times \mathrm{I} \Delta \mathrm{n} \quad$ RCD must not trip
$1.0 \times I \Delta n \quad R C D$ must trip within 300 mS
$5.0 \times \mathrm{I} \Delta \mathrm{n} \quad$ RCD must trip within 40 mS
Where I $\Delta \mathrm{n}$ 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
$16-40 \mathrm{~A}=500 \mathrm{~A}$
$63-80 \mathrm{~A}=800 \mathrm{~A}$
$100 \mathrm{~A}=1000 \mathrm{~A}$
Type AC
RATED SHORT-CIRCUIT CURRENT / INC
$16 \mathrm{~A}-40 \mathrm{~A}=10,000 \mathrm{~A}$ ( 63 A Fuse)
$63 \mathrm{~A}-80 \mathrm{~A}=10,000 \mathrm{~A}$ (100A Fuse)
$100 \mathrm{~A}=10,000 \mathrm{~A}$ ( 125 A Fuse)
RATED RESIDUAL SHORT-CIRCUIT CURRENT /IAM
$16-100 \mathrm{~A}=10,000 \mathrm{~A}$

## RATED VOLTAGES

2 pole devices, 110 V and 230 V
4 pole devices, 230 V to 440 V
OPERATING VOLTAGES
2 pole devices, $110 \mathrm{~V}-100 \mathrm{~V}$ to 250 V
$230 \mathrm{~V}-100 \mathrm{~V}$ to 250 V
4 pole devices, $185 \mathrm{~V}-440 \mathrm{~V}$
TRIPPING TIME
$1 \times I \Delta \mathrm{n} \leq 300 \mathrm{~ms}$
$5 \times I \Delta n \leq 40 \mathrm{~ms}$
Time delay version
$1 \times I \Delta n-150-500 \mathrm{~ms}$
$5 \times I \Delta n-50-150 \mathrm{~ms}$

## PHYSICAL

ambient operating temperature
$-25^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## IP RATING

Front face after installation of enclosure IP40

## TERMINAL CAPACITY

Solid stranded - $1 \times 1.5-50 \mathrm{~mm}^{2}$ Flexible with ferrule $-1 \times 1.5-35 \mathrm{~mm}^{2}$

TIGHTENING TORQUE
3 Nm
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 100 A is available in a variety of tripping sensitivities.

When in the OFF position a contact gap of 4 mm 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 RCBO | TRIPPING CURRENT | LIST NO. |
| 16A, 110V | 10 mA | 6016s |
| 16A, 110V | 30 mA | 6416s |
| 16A, 230V | 10 mA | 6316s |
| 16A, 230V | 30 mA | 5716s |
| 32A, 110V | 30 mA | 6032 s |
| 32A, 230V | 30 mAs | 6730s |
| 40A, 230V | 30 mA | 5740s |
| 63A, 230V | 30 mA | 5760s |
| 63A, 230V | 100 mA | 6160s |
| 63A, 230V | 300 mA | 5860s |
| 80A, 230V | 30 mA | 5780s |
| 80A, 110V | 30 mA | 6080s |
| 80A, 230V | 300 mA | 5880s |
| 80A, 230V | 100 mA | 6180s |
| 100A, 230 V | 30 mA | 7700s |
| 100A, 230V | 100 mA | 6600s |
| 100A, 230V | 300 mA | 7800s |
| DOUBLE POLE, PULSATING D.C., FAULT CURRENT SENSITIVE, 2 MODULE |  |  |
| 16A, 230V | 10 mA | 6216s |
| 16A, 230V | 30 mA | 6716s |
| 32A, 230V | 30 mA | 6630s |
| 40A, 230V | 30 mA | 5640s |
| 63A, 230V | 30 mA | 5660s |
| TIME DELAYED, 2 MODULE |  |  |
| 80A, 230V | 100 mA | 6980s |
| 100A, 230V | 100 mA | 6400s |
| FOUR POLE, 4 MODULE |  |  |
| 25A, 230/400V | 30 mA | 6425s |
| 40A, 230/400V | 30 mA | 6440s |
| 40A, 230/400V | 100 mA | 6240s |
| 63A, 230/400V | 30 mA | 6463s |
| 63A, 230/400V | 100 mA | 6363s |
| 63A, 230/400V | 300 mA | 6263s |
| FOUR POLE, PULSATING D.C., <br> FAULT CURRENT SENSITIVE, 4 MODULE |  |  |
| 40A, 230/400V | 30 mA | 6640s |

## 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

10 mA 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 30 mA and where 110 V supply is being used.

30 mA 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 240 V 50 Hz could be between 80 and 240 mA , 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 300 mS at 30 mA and 40 mS at 150 mA . As the Sentry RCD typically operates well below these times, it clearly more than satisfies this requirement.
100 mA 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.

300 mA 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 500 mA 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 $R C D$ are as follows:

$$
Z_{s}(\max )=\frac{50}{I \Delta n}=\frac{50}{0.03}=16670 \mathrm{hms}
$$

| Rated Tripping Current of RCD | Maximum Permissible Earth Fault Loop <br> Impedance |
| :--- | :--- |
| 10 mA | 5000 Ohms |
| 30 mA | 1667 Ohms |
| 100 mA | 500 Ohms |
| 300 mA | 166 Ohms |

## 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 30 mA and that they must trip within 40 ms 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 50 Hz 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


## 5. Time Delayed RCDs $\varsigma$ 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 100 mA rated RCD situated upstream from a 30 mA 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 500 ms .

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
$+\quad=$ 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 <br> $0.5 \times 1 \Delta \mathrm{n} \quad$ RCD must not trip <br> $1.0 \times \mathrm{I} \Delta \mathrm{n} \quad$ RCD must trip within 300 mS <br> $5.0 \times \mathrm{I} \Delta \mathrm{n} \quad$ RCD must trip within 40 mS

Where I $\Delta \mathrm{n}$ is the RCD's rated tripping current in accordance with wiring regulations and product standard BS EN 61008.

For time delay RCD $1.0 \times \mathrm{I} \Delta \mathrm{n}$ RCD must trip between 130
500 mS .

Industrial 10kA Residual Current Devices (RCDs)
Dimensions (mm)


## Sentry Technical

## 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 | 6220 s |
| 20A, four pole | 3 module | 6420 s |
| 40A, four pole | 3 module | 7440 s |
| 63A, four pole | 3 module | 7463 s |



## 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.

They are suitable for mounting on a standard DIN rail and are therefore fully compatible with all Sentry Consumer Units and small enclosures. (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.

## Contactors

## TECHNICAL SPECIFICATION

All Contactor List Nos. are designed to operate at either 20, 40 or 63 amps continuous current (AC1-AC7b) 50 Hz and have a mechanical life of $1,000,000$ operations.

The coil voltages are $220 / 240 \mathrm{~V} 50 \mathrm{~Hz}$.

| LIST No. | 6220S | 6420S | 7440S | 7463S |
| :---: | :---: | :---: | :---: | :---: |
| DESCRIPTION | CONTACTOR |  |  |  |
| Contactor rating (Ith) | 20A | 20A | 40A | 63A |
| Includes manual override? | No | No | No | No |
| No. of poles (normally open only) | 2 | 4 | 4 | 4 |
| Width in 18 mm modules | 1 | 2 | 3 | 3 |
| Rated Voltage (V) <br> (i) Insulation (Ui) <br> (ii) Max. operating (Ue) | $\begin{aligned} & 400 \\ & 250 \end{aligned}$ | $\begin{aligned} & 500 \\ & 415 \end{aligned}$ | $\begin{aligned} & 500 \\ & 415 \end{aligned}$ | $\begin{aligned} & 500 \\ & 415 \end{aligned}$ |
| Average consumption of - inrush control circuit coil (VA) - closed | $\begin{aligned} & 15 \\ & 3.8 \end{aligned}$ | $\begin{aligned} & 34 \\ & 4.6 \end{aligned}$ | $\begin{gathered} 53 \\ 6.5 \end{gathered}$ | $\begin{aligned} & 53 \\ & 6.5 \end{aligned}$ |
| Terminal cable capacity (max.) Controls | $2 \times 2.5 \mathrm{~mm}^{2}$ flexible <br> $2 \times 1.5 \mathrm{~mm}^{2}$ rigid |  |  |  |
| Power | $2 \times 2.5 \mathrm{~mm}^{2}$ flexible <br> $2 \times 6 \mathrm{~mm}^{2}$ rigid |  | $2 \times 4 \mathrm{~mm}^{2}$ flexible <br> $2 \times 25 \mathrm{~mm}^{2}$ rigid |  |
| Torque for terminals | 1.2 Nm |  | 2.0 Nm |  |

## 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 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.

## FEATURES

- Compatible with all Sentry Consumer Units (single phase only) (excludes 5502s) and the following Sentry enclosures: 5504s, $5604 \mathrm{~s}, 5704 \mathrm{~s}, 5702 \mathrm{~s}$ (for single and three phase)
- Suitable for heating, lighting and ventilation circuits
- Choice of functions
- Ideal for use with REC supply off-peak tariffs


## Sentry Technical

## Contactors

## Terminal Layout

i) Contactor
a) The coil connections to control energisation should be made between terminals A1 and A2
b) One normally open main contact is between terminals 1 and 2
c) A second normally open main contact is between terminals 3 and 4
d) 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
Without Manual Override


## Sentry Technical

## 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, 230 V


3-phase circuit, 400 V (with neutral)


| SINGLE-PHASE 230V TABLE |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TYPE OF LIGHTING APPLICATION (AC5A AND AC5B CATEGORIES) | 6220S/6420S/ <br> MAXIMUM NO. OF LAMPS |  | 7440S <br> MAXIMUM NO. OF LAMPS |  | 7263S <br> MAXIMUM NO. OF LAMPS |  |
| INCANDESCENT AND HALOGEN LAMPS |  |  |  |  |  |  |
| 40W | 57 |  | 115 |  | 172 |  |
| 60W | 45 |  | 85 |  | 125 |  |
| 100W | 28 |  | 70 |  | 100 |  |
| HALOGEN LAMPS USED WITH TRANSFORMER |  |  |  |  |  |  |
| 60W | 14 |  | 27 |  | 40 |  |
| 80W | 12 |  | 23 |  | 35 |  |
| FLUORESCENT LAMP WITH STARTER (SINGLE FITTING WITH PARALLEL CORRECTION) |  |  |  |  |  |  |
| 15W | 20 |  | 40 |  | 60 |  |
| 20W | 20 |  | 40 |  | 60 |  |
| 40W | 20 |  | 40 |  | 60 |  |
| FLUORESCENT LAMP WITH STARTER (SINGLE FITTING NON-CORRECTED) |  |  |  |  |  |  |
| 15W | 30 |  | 70 |  | 100 |  |
| 20W | 30 |  | 70 |  | 100 |  |
| 40W | 28 |  | 70 |  | 100 |  |
| ELECTRONIC BALLAST (FLUORESCENT LAMP SINGLE SETTING) |  |  |  |  |  |  |
| 18W | 111 |  | 222 |  | 333 |  |
| 36W | 58 |  | 117 |  | 176 |  |
| ELECTRONIC COMPACT LAMP (LOW CONSUMPTION) |  |  |  |  |  |  |
| 7W | 200 |  | 400 |  | 600 |  |
| 11W | 120 |  | 240 |  | 360 |  |
| 15W | 88 |  | 176 |  | 264 |  |
| 20W | 66 |  | 132 |  | 200 |  |
| MOTORS - MAXIMUM POWER TYPE OF SMALL MOTOR APPLICATION (AC1 - AC7A CATEGORIES) |  |  |  |  |  |  |
| $220 / 240 \mathrm{~V}$ single phase with capacitor 400 V three phase motor | $\begin{aligned} & 1.2 \mathrm{~kW} \\ & 3.2 \mathrm{~kW} \end{aligned}$ |  | $\begin{gathered} 5.5 \mathrm{~kW} \\ 12.5 \mathrm{~kW} \end{gathered}$ |  | $\begin{aligned} & 8.5 \mathrm{~kW} \\ & 15 \mathrm{~kW} \end{aligned}$ |  |
| HEATING - MAXIMUM POWER TYPE OF SMALL HEATING APPLICATION (AC7B CATEGORY) |  |  |  |  |  |  |
| NUMBER OF OPERATING CYCLES | 230V SINGLE PH | 400V 3 PH | 230V SINGLE PH | 400V 3 PH | 230V SINGLE PH | 400 V 3 PH |
| 100,000 | 5.4 kW | 16 kW | 8.6 kW | 26 kW | 13.6kW | 41 kW |
| 150,000 | 4.6 kW | 14kW | 7.4kW | 22kW | 11.6 kW | 35 kW |
| 200,000 | 3.5 kW | 10kW | 5.6 kW | 17kW | 8.8 kW | 26.5 kW |
| 500,000 | 1.6 kW | 5 kW | 2.6 kW | 7.5 kW | 4kW | 12kW |
| 1,000,000 | 1.2kW | 3.5 kW | 1.9kW | 6 kW | 3 kW | 9kW |
| ELECTRICAL ENDURANCE |  |  |  |  |  |  |
| AC1 and AC7a categories | 250,000 operations |  |  |  |  |  |

## Sentry Technical

Contactors

Dimensions (mm)

6220s


6420s


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
$220 \mathrm{~V} / 240 \mathrm{~V}$ a.c. 50 Hz
SECONDARY VOLTAGE
8 V a.c.
RATED OUTPUT CURRENT
1A

## PHYSICAL

WIDTH
2 modules ( 36 mm )
TERMINAL CAPACITY
$1 \times 2.5 \mathrm{~mm}^{2}$
ambient operating temp
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$

## 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 230 V environment, i.e. inside a consumer unit, the cables used to connect the bell or chime to the transformer must have a 230 V rated voltage. If bell wire is used, suitable sleeving must be provided to increase its insulation rating to 230 V .

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 20 programming selections.

The 2 channel 2 module digital timeswitch (5732s) provides a facility for independent control of two circuits. A maximum of 20 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.

## Sentry Technical

| TECHNICAL SPECIFICATION |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ELECTROMECHANICAL | 5707S | 5724S | 5833S | 58078 | 5824 S |
| Supply voltage | 220-240V a.c. 50 Hz | $220-240 \mathrm{~V}$ a.c. 50 Hz | $220-240 \mathrm{~V}$ a.c. 50 Hz | $220-240 \mathrm{~V}$ a.c. $50-60 \mathrm{~Hz}$ | $220-240 \mathrm{~V}$ a.c. $50-60 \mathrm{~Hz}$ |
| Maximum power consumption | 1VA | 1VA | 1VA | 1VA | 1VA |
| Switching capacity per channel <br> - Resistive <br> - Inductive <br> - Fluorescent | $\begin{gathered} 16 \mathrm{~A} \\ 4 \mathrm{~A}(\operatorname{Cos} . \emptyset 0.6) \\ 1350 \mathrm{~W} \end{gathered}$ | $\begin{gathered} 16 \mathrm{~A} \\ 4 \mathrm{~A}(\operatorname{Cos} . \emptyset 0.6) \\ 1350 \mathrm{~W} \end{gathered}$ | $\begin{gathered} 16 \mathrm{~A} \\ 4 \mathrm{~A}(\operatorname{Cos} . \emptyset 0.6) \\ 1350 \mathrm{~W} \end{gathered}$ | $\begin{gathered} 16 \mathrm{~A} \\ 4 \mathrm{~A}(\operatorname{Cos.} .0 .6) \\ 1350 \mathrm{~W} \end{gathered}$ | $\begin{gathered} 16 \mathrm{~A} \\ 4 \mathrm{~A}(\operatorname{Cos.0} .0 .6) \\ 1350 \mathrm{~W} \end{gathered}$ |
| Switching arrangement | $1 \times \mathrm{c} / 0$ | $1 \times \mathrm{c} / 0$ | $1 \times \mathrm{n} / 0$ | $1 \times \mathrm{c} / 0$ | $1 \times \mathrm{c} / 0$ |
| No. of switching commands | 56 | 48 | 48 | 56 | 48 |
| Minimum programme time | 3hrs | 30mins | 30mins | 3hrs | 30mins |
| Operating temperature range | $-25^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}$ | $-25^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}$ | $-25^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}$ | $-20^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}$ | $-20^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}$ |
| Running reserve | - | - | - | *150hrs | *150hrs |
| Width of unit | 54 mm (3 mods) | 54 mm (3 mods) | 18 mm (1 mod) | 54 mm (3 mods) | 54 mm (3 mods) |
| Terminal capacity | $2 \times 2.5 \mathrm{~mm}^{2}$ | $2 \times 2.5 \mathrm{~mm}^{2}$ | $2 \times 4 \mathrm{~mm}^{2}$ | $2 \times 2.5 \mathrm{~mm}^{2}$ | $2 \times 2.5 \mathrm{~mm}^{2}$ |
| DIGITAL AND TIME DELAY | 57318 | 5732 S | 5733s |  |  |
| Supply voltage | $220-240 \mathrm{~V}$ a.c. $50-60 \mathrm{~Hz}$ | 220-240V a.c. $50-60 \mathrm{~Hz}$ | $220-240 \mathrm{~V}$ a.c. $50-60 \mathrm{~Hz}$ |  |  |
| Maximum power consumption | 5VA | 5 VA | 5VA |  |  |
| Switching capacity per channel <br> - Resistive <br> - Inductive <br> - Fluorescent | $\begin{gathered} 16 \mathrm{~A} \\ 8 \mathrm{~A}(\operatorname{Cos} . \emptyset 0.6) \\ 1000 \mathrm{~W} \end{gathered}$ | $\begin{gathered} 16 \mathrm{~A} \\ 8 \mathrm{~A}(\operatorname{Cos} .00 .6) \\ 1000 \mathrm{~W} \end{gathered}$ | $\begin{gathered} 16 \mathrm{~A} \\ 8 \mathrm{~A}(\operatorname{Cos} . \emptyset 0.6) \\ 1000 \mathrm{~W} \end{gathered}$ |  |  |
| Switching arrangement | $1 \times \mathrm{c} / 0$ | $2 \times \mathrm{c} / 0$ | $1 \times \mathrm{c} / 0$ |  |  |
| No. of switching commands | 50 | 50 | 50 |  |  |
| Programme options | - | - | R/H |  |  |
| Minimum programme time | 1 min | 1 min | 1 min |  |  |
| Operating temperature range | $-25^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}$ | $-25^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}$ | $-25^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}$ |  |  |
| Operating accuracy @ $20^{\circ} \mathrm{C}$ | $2.5 \mathrm{sec} / \mathrm{day}$ | $2.5 \mathrm{sec} /$ day | $2.5 \mathrm{sec} /$ day |  |  |
| Running reserve | 3 years from factory | 3 years from factory | 3 years from factory |  |  |
| Width of unit | 36 mm (2 mods) | 36 mm (2 mods) | 18 mm (1 mod) |  |  |
| Terminal capacity | $2 \times 2.5 \mathrm{~mm}^{2}$ | $2 \times 2.5 \mathrm{~mm}^{2}$ | $2 \times 4 \mathrm{~mm}^{2}$ |  |  |
| Summer/winter changeover | Yes | Yes | Yes |  |  |
| Neon indicator lamp load | - | - | - |  |  |

R/H = Random/holiday C/O = Changeover switch N/O = Normally open contact * $=$ after 140 hr charging time
Dimensions (mm)
$5707 \mathrm{~s} / 5724 \mathrm{~s} / 5807 \mathrm{~s} / 5824 \mathrm{~s}$


## 5833s



## Sentry Technical

Dimensions (mm)

5731s/5732s


5733s



## CASE STUDY

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


## Technical

## 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 DP Single Sockets comply with the requirements of the following standards:

BS 7288:1990
BS EN 50082-1:1998
Sentrysocket RCD SP Double Sockets also comply with the requirements of BS EN 61543:1996.

## TECHNICAL SPECIFICATION

ELECTRICAL
rated voltage
240 V a.c.
CURRENT RATING
13A resistive
Rated tripping current $10 \mathrm{~mA} / 30 \mathrm{~mA}$

## TERMINAL CAPACITY

$3 \times 4 \mathrm{~mm}^{2}$ for 1 gang
$2 \times 4 \mathrm{~mm}^{2}$ for 2 gang

## PHYSICAL

AMBIENT OPERATING TEMPERATURE
$-5^{\circ} \mathrm{C}$ to $+40^{\circ} \mathrm{C}$
IP RATING
IP2XD
IP66 (K56301/K56231/K56233)
MAX. INSTALLATION ALTITUDE 2000 metres

Sentrysockets are not suitable for connection across two lines of a 127 V line to Neutral Voltage System

## Cable management

Logic Plus ${ }^{\text {TM }}$, Albany Plus ${ }^{\text {TM }}$ and Metalclad Plus ${ }^{\text {TM }}$ 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. see pages 288-289 in the product selector.


## 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
- Flexible and versatile in use
- Single Sockets have double pole switching, double sockets are single pole switching
- Masterseal Plus products are 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
- Double Socket products have an enhanced RF Immunity performance

Sentrysockets products can be wall or bench mounted. Do not mount or use as a trailing socket or where they maybe subject to excessive moisture or dampness.

## Dimensions (mm)

Single socket


## Double socket



## 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:
$\leq 200 \mathrm{~ms}$ AT RATED TRIP CURRENT
$\leq 40 \mathrm{~ms}$ AT $5 \times$ 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 disconnector. 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:
$\leq \mathbf{2 0 0} \mathbf{~ m s ~ A T ~ R A T E D ~ T R I P ~ C U R R E N T ~}$
$\leq \mathbf{4 0} \mathrm{ms}$ AT $5 \times$ RATED TRIP CURRENT
6. Reset the Sentrysocket as in step 2 above
7. Switch off the Mains Supply Switch Disconnector.
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 $\mathbf{2}$ to $\mathbf{8}$ 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.

## Cable Management Technical

## Perimeter and Distribution

| Cable Management Introduction | 610-611 |
| :---: | :---: |
| Prestige 3D Dado and Skirting <br> Three compartment dado trunking system for compliance with Cat 6 structured cabling | 612-615 |
| Prestige 3D Antibac Blue <br> Antibacterial solution for power and data distribution in environments where hygeine is priority | 616 |
| Prestige 3D Compact <br> 3 compartment trunking with a smaller footprint for more confined installations | 617-621 |
| Prestige 2com <br> Two compartments provide maximum data capacity around radiused bends | 623-629 |
| Prestige Poles and Posts <br> Poles and Posts for supplying multi-services to work stations | 630-631 |
| Powerlink Plus <br> Busbar trunking system with flush fitting accessories | 632-639 |
| Pinnacle <br> Versatile angular bench trunking system | 640-644 |
| Premier <br> Integrated trunking system with snap fit mouldings | 645-649 |
| Norwich <br> Durable and popular trunking system | 650-654 |
| Ega Industrial Heavy duty trunking in a variety of sizes | 656-661 |
| Ega Cornice <br> Trunking for wall/ceiling junctions | 662-666 |

## Cable Management Technical

## Conduit and Mini

| Egatube Conduit  <br> High impact conduit with a comprehensive range of fittings $667-671$ <br> Ega Mini Trunking and Red Alert  <br> Wide selection of mini trunking profiles and fittings $672-674$ |
| :--- | :---: |

# Cable Management Technical 

 Technical}

## 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 <br> under normal climatic <br> conditions, BS 4678: <br> medium duty |
| :--- | :--- | :--- |
| Charpy notched impact strength | $25 \mathrm{~kJ} / \mathrm{m}^{2}$ |  |
|  | at yield | $34.62 \mathrm{~N} / \mathrm{mm}^{2}$ |
|  | at break | $42.00 \mathrm{~N} / \mathrm{mm}^{2}$ |

## 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 $650^{\circ} \mathrm{C}$.

## 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 | $55 \times 10-6 /{ }^{\circ} \mathrm{C}$ <br> $(5 \mathrm{~mm} / 3000 \mathrm{~mm}$ with a <br> temperature rise of $\left.25^{\circ} \mathrm{C}\right)$ |
| :--- | :--- |
| Operating temperatures | $-5^{\circ}$ to $60^{\circ} \mathrm{C}$ |
| Vicat softening point | $81^{\circ} \mathrm{C}$ |
| Thermal conductivity | $0.19 \mathrm{w} / \mathrm{mk}$ |

## 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 keytones, aromatics and hydrocarbons.

## Electrical

PVCu is non-conductive.

| Dielectric strength | $40 \mathrm{kV} / \mathrm{mm}$ in DBP |
| :--- | :--- |
|  | $17 \mathrm{kV} / \mathrm{mm}$ in tx oil |
| Resistivity | $1014 \Omega \mathrm{ohm}$ |

## 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 $-5^{\circ} \mathrm{C}$, 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 / AI) 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 $+60^{\circ} \mathrm{C}$.
Coefficient of linear expansion $23 \times 10-6$ per ${ }^{\circ} \mathrm{C}$.
$1 \mathrm{~mm} / \mathrm{m}$ for 40 degree rise.

## Maintenance

Resistant to staining. Wipe with soapy water (neutral $5 / 7$ ph value).

## Electrical Properties

Resistance to $0.03 \mathrm{ohm} \mathrm{mm}{ }^{2} / \mathrm{m}$.

## 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

|  |  | $20^{\circ} \mathrm{C}$ | $60^{\circ} \mathrm{C}$ |
| :---: | :---: | :---: | :---: |
| acetaldehyde | 40\％aq．solution | － | ■ |
| acetic acid | 60\％aq．solution | － | ■ |
| acetic anhydride |  | $\square$ | $\square$ |
| acetone | Traces | $\square$ | $\square$ |
| alcohol，ethyl | 40\％w／w water | $\Delta$ | － |
| alcohol，isopropyl |  | $\Delta$ | $\Delta$ |
| alcohol，menthyl | 6\％aq．solution | － | － |
|  | 100\％ | － | － |
| aliphatic hydrocarbons |  | － | － |
| aluminium chloride |  | － | $\triangle$ |
| aluminium hydroxide |  | $\triangle$ | $\triangle$ |
| ammonia | $\begin{aligned} & \text { 0,88S.G., aq. } \\ & \text { solution } \end{aligned}$ | － | － |
|  | Anhydrous gas | $\square$ | $\square$ |
| ammonium chloride |  | － | － |
| ammonium hydroxide |  | － | － |
| aniline |  | $\square$ | $\square$ |
| animal oils |  | － | A |
| aqua regia | Dilute | － | － |
|  | Concentrated | － | $\square$ |
| barium sulphate |  | － | － |
| beer |  | － |  |
| benzine |  | ■ | ■ |
| benzoyl chloride |  | $\square$ | $\square$ |
| borax |  | $\Delta$ | $\triangle$ |
| boric acid |  | － | － |
| brine |  | － | － |
| bromide | Traces，gas | － | － |
|  | 100\％（dry gas） | $\square$ | ■ |
|  | Liquid | $\square$ | $\square$ |
| calcium chloride | aq．solution | － | － |
|  | $20 \%$ in methyl alcohol | $\triangle$ |  |
| calcium hydroxide |  | － | － |
| calcium hypochlorite |  | $\Delta$ | $\triangle$ |
| carbon dioxide |  | $\Delta$ | $\triangle$ |
| carbonic acid |  | － | $\triangle$ |
| carbon monoxide |  | $\triangle$ | $\triangle$ |
| carbon tetrachloride |  | － | $\square$ |
| castor oil |  | － |  |
| chloric acid |  | － |  |
| chlorine | 100\％（dry gas） | － | － |
|  | 10\％（moist gas） | － |  |
| chlorne water Sal．solution |  | － | － |
|  |  | $\square$ | $\square$ |
| chrome allum |  | － | $\triangle$ |
| chromic acid | Plating solution | － | $\triangle$ |
| cider |  | － |  |
| citric acid |  | － | － |
| copper chloride |  | － | － |
| copper cyanide |  | － | － |


| CHEMICAL | CONCENTRATION | UNPLASTICISED PVC |  |
| :---: | :---: | :---: | :---: |
|  |  | $20^{\circ} \mathrm{C}$ | $60^{\circ} \mathrm{C}$ |
| copper nitrate |  | $\triangle$ | $\triangle$ |
| copper sulphate |  | $\triangle$ | $\triangle$ |
| cupric sulphate |  | $\triangle$ | $\triangle$ |
| cyclohexanone |  | $\square$ | $\square$ |
| detergent，synthetic All concentrations |  | $\triangle$ | $\triangle$ |
| developers， photographic |  | $\triangle$ | $\triangle$ |
| dextrin |  | $\triangle$ | $\triangle$ |
| dextrose |  | $\triangle$ | $\Delta$ |
| diazo salts |  | $\triangle$ | $\triangle$ |
| dichlorodifluoromethane |  | $\Delta$ |  |
| diethyl ether |  | ■ | ■ |
| emulsifiers | All concentrations | $\triangle$ | $\triangle$ |
| emulsions， photographic | emulsions， | $\triangle$ | $\triangle$ |
| ethyl acetate |  | $\square$ | ■ |
| ethylene glycol |  | $\triangle$ | $\triangle$ |
| ethylene oxide |  | $\square$ | $\square$ |
| fatty acids |  | $\triangle$ | $\triangle$ |
| ferric chloride |  | $\triangle$ | $\Delta$ |
| ferric nitrate |  | $\triangle$ | $\triangle$ |
| ferric sulphate |  | $\Delta$ | $\Delta$ |
| ferrous ammonium citrate |  | $\Delta$ | $\Delta$ |
| ferrous chloride |  | $\triangle$ | $\Delta$ |
| ferrous sulphate |  | $\Delta$ | $\triangle$ |
| fixing solution， photographic |  | $\triangle$ | $\triangle$ |
| fluorine |  | － | － |
| formaldehyde | 40\％w／w water | $\Delta$ | $\Delta$ |
| formic acid | 50\％solution | $\triangle$ | $\triangle$ |
|  | 100\％solution | $\Delta$ | $\square$ |
| fructose |  | $\triangle$ | $\Delta$ |
| fruit pulp |  | $\Delta$ | $\Delta$ |
| glucose |  | － | $\triangle$ |
| glycerol |  | $\triangle$ | $\Delta$ |
| grape sugar |  | $\triangle$ | $\Delta$ |
| heptane |  | $\Delta$ | $\Delta$ |
| hydrobromic acid | 100\％ | $\Delta$ | $\Delta$ |
| hydrochloric acid | 22\％aq．solution | $\triangle$ | $\triangle$ |
|  | Concentrated | $\Delta$ | $\triangle$ |
| hydrochloric acid | 40\％aq．solution | $\triangle$ | － |
|  | $60 \%$ aq．solution Concentrated | － | ■ |
| hydrogen bromide | Anhydrous | $\Delta$ | $\Delta$ |
| hydrogen chloride hydrogen flouride | Anhydrous | $\Delta$ | $\Delta$ |
|  | Anhydrous | $\Delta$ | $\Delta$ |
| hydrogen peroxide | 3\％（10vol） | $\triangle$ | $\triangle$ |
|  | 12\％（40vol） | $\triangle$ | － |
|  | 30\％（100vol） | － | $\wedge$ |
|  | 90\％and above | $\Delta$ |  |
| hydrogen sulphide |  | $\Delta$ | $\triangle$ |
| iodine | Solution in potassium iodine | ■ | $\square$ |
| lactic acid | 10\％aq．solution | $\Delta$ | $\Delta$ |
|  | 100\％ | － | － |
| lanoline |  | $\Delta$ | － |
| linoletic acid |  | $\Delta$ | $\triangle$ |
| linseed oil |  | $\Delta$ | $\Delta$ |
| magnesium hydroxide |  | $\Delta$ | $\Delta$ |
| maleic acid | 50\％aq．solution | $\triangle$ |  |
|  | Concentrated | $\triangle$ | － |
| metallic soaps（water soluble） |  | $\triangle$ | $\triangle$ |
| methyl bromide |  | $\square$ | $\square$ |
| methyl chloride |  | $\square$ | $\square$ |
| methyl cyclohexanone |  | $\square$ | $\square$ |
| methyl ethyl ketone |  | $\square$ | $\square$ |
| methyl isobutyl ketone |  | $\square$ | $\square$ |
| methylated spirit |  | $\triangle$ |  |
| methylene chloride |  | $\square$ | $\square$ |
| milk |  | $\triangle$ | $\Delta$ |
| mineral oil |  | $\Delta$ | $\triangle$ |
| mixed acids（sulphuric／nitric |  | 。 | ■ |
| Various proportions） |  | － | － |
| molasses |  | $\triangle$ | $\triangle$ |
| naphtha |  | $\triangle$ | $\triangle$ |
| naphtalene |  | $\square$ | $\square$ |
| nicotine |  | $\Delta$ | $\triangle$ |
| nitric acid | 5\％aq．solution | $\triangle$ |  |
|  | 50\％aq．solution | $\Delta$ | － |
| nitrobenzene <br> oleic acid |  | $\square$ | $\square$ |
|  |  | $\triangle$ | $\triangle$ |


| CHEMICAL | CONCENTRATION UNPLASTICISED PVC |  |
| :--- | :--- | :--- |
|  |  | $20^{\circ} \mathrm{C}$ |

# Prestige 3D Technical Dado \& Skirting 

## 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.

## 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 |  |
| :--- | :--- |
| MINIMUM STORAGE TEMPERATURE | $-5^{\circ} \mathrm{C}$ |
| MINIMUM INSTALLATION TEMPERATURE | $-5^{\circ} \mathrm{C}$ |
| MAXIMUM APPLICATION TEMPERATURE | $+60^{\circ} \mathrm{C}$ |

## IRE 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 1 Y in accordance with BS 476-7 Moulding material has achieved $650^{\circ} \mathrm{C}$ 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 3000 mm with a temperature rise of $25^{\circ} \mathrm{C}$.

## 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. See PVCu Chemical Resistance table on Page 611 for more information.

## ELECTRICAL

| PRESTIGE 3D TRUNKING IS NON-CONDUCTIVE |  |
| :--- | :---: |
| DIELECTRIC STRENGTH | $40 \mathrm{kV} / \mathrm{mm}$ in DBP |
|  | $17 \mathrm{kV} / \mathrm{mm}$ in tx oil |
| RESISTIVITY | $1014 \Omega \mathrm{~cm}$ |

## 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. *Classifications to BS EN 50085-1:2005 and BS EN 50085-2-1:2006 available on request

# Prestige 3D Technical - Dado \& Skirting 

## Data Trunking System

Dimensions (mm)
Profiles
Compartment CSA mm ${ }^{2}$
$1=1763$
$2=3828$
$3=1952$
Assembly
Dado $=1.58 \mathrm{~kg} / \mathrm{m}$
Skirting $=1.60 \mathrm{~kg} / \mathrm{m}$
Wall Thickness
$V P 100=1.7 \mathrm{~mm}$
$V P 110=1.7 \mathrm{~mm}$
VP115 $=1.7 \mathrm{~mm}$
VP180 $=2.0 \mathrm{~mm}$


## Component Selection Guide



| CABLE CAPACITY |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TYPE OF CONDUCTOR | SIZE | $\begin{aligned} & \text { CABLE } \\ & \text { FACTOR } \end{aligned}$ |  | IT 1 |  |  | $\begin{array}{r} \mathrm{COMP} \\ 45 \end{array}$ | $\begin{aligned} & \text { WIITH } \\ & \text { 0XX } \end{aligned}$ |  |  |
|  |  |  | FULL TERM CSA (MM²) |  |  |  |  |  |  |  |
|  |  |  | 1763 |  | 3828 |  | 610 |  | 1952 |  |
|  |  |  | TERM AT 45\% FILL (MM ${ }^{\text {a }}$ ) |  |  |  |  |  |  |  |
|  |  |  | 793 |  | 1722 |  | 274 |  | 878 |  |
| POWER CABLES |  |  | NUMBER OF CABLES AT 45\% FILL |  |  |  |  |  |  |  |
| PVC stranded | $1.5 \mathrm{~mm}^{2}$ | 8.6 | 92 |  | 200 |  | 31 |  | 102 |  |
|  | $2.5 \mathrm{~mm}^{2}$ | 12.6 | 62 |  | 136 |  | 21 |  | 69 |  |
|  | $4 \mathrm{~mm}^{2}$ | 16.6 | 47 |  | 103 |  | 16 |  | 52 |  |
|  | $6 \mathrm{~mm}^{2}$ | 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 | 5.5 mm dia. | 30.2 | 26 | 58 | 57 | 126 | 9 | 20 | 29 | 64 |
| Cat 5E STP | 6.0 mm dia. | 36.0 | 22 | 48 | 47 | 106 | 7 | 16 | 24 | 54 |
| Cat 6 UTP | 6.5 mm dia. | 42.2 | 18 | 41 | 40 | 90 | 6 | 14 | 20 | 46 |
| Cat 6 STP | 7.0 mm dia. | 49.0 | 16 | 35 | 35 | 78 | 5 | 12 | 17 | 39 |
| Cat6a | 8.0 mm dia | 64.0 | 12 | 27 | 26 | 59 | 4 | 9 | 13 | 30 |
| Cat 7 | 8.0 mm dia | 64.0 | 12 | 27 | 26 | 59 | 4 | 9 | 13 | 30 |

# Prestige 3D Technical －Dado \＆Skirting 

## Data Trunking System

## Component Selection Guide

END CAP
DADO－VP183WHI／CHA
SKIRTING－VP193WHI／CHA

Flat Angles and Tees


| FLAT ANGLES AND TEES DIMENSIONS（MM） |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LIST NO | DESCRIPTION | A | B | C | D |  |
| VP185WHI／CHA | Flat Angle | 218 mm | 170 mm |  |  |  |
| VP187WHI／CHA | Flat Tee | 202 mm | 170 mm | 235 mm | 170 mm |  |
| VP195WHI／CHA | Flat Angle Up | 218 mm | 170 mm |  |  |  |
| VP196WHI／CHA | Flat Angle Down | 270 mm | 170 mm |  |  |  |
| VP197WHI／CHA | Flat Tee Up | 202 mm | 170 mm | 235 mm | 170 mm |  |

Technical Hotline
＋44（0）1268 563720

## Prestige 3D Technical －Dado \＆Skirting

## Installing Prestige 3D

Figure shows minimum distance required for installing around corners


| $\|c\|$ | MINIMUM DISTANCE BETWEEN CORNERS（MM） |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | B | C | D | E | F | G | H | I | J | K |
| 47 | 47 | 128 | 56 | 35 | 56 | 24 | 104 | 104 | 184 | 147 |

# Prestige 3D Technical <br> －Antibac Blue 

## 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 patented fluorescence under UV light which glows bright 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．

## 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．
PERFORMANCE

| $\mid$ IMPACT |
| :--- |
| MINIMUM STORAGE TEMPERATURE |
| MINIMUM INSTALLATION TEMPERATURE |
| MAXIMUM APPLICATION TEMPERATURE |
| $5^{\circ} \mathrm{C}$ |$+60^{\circ} \mathrm{C}$.

## 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 1 Y in accordance with BS 476－7． Moulding material has achieved $650^{\circ} \mathrm{C}$ 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： 4 mm over every 3000 mm with a temperature rise of $25^{\circ} \mathrm{C}$ ．

## 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．See PVCu Chemical Resistance table on Page 611 for more information．
ELECTRICAL

| PRESTIGE 3D TRUNKING IS NON－CONDUCTIVE |  |
| :--- | :---: |
| DIELECTRIC STRENGTH | $40 \mathrm{kV} / \mathrm{mm}$ in DBP |
|  | $17 \mathrm{kV} / \mathrm{mm}$ in tx oil |
| RESISTIVITY | $1014 \Omega \mathrm{~cm}$ |

## 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 water and household detergent．The surface can be decorated with commercial paints if required．＊Classifications to BS EN 50085－1：2005 and BS EN 50085－2－1：2006 available on request．


## 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 $5 \mathrm{e}, 6$ 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

## 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 Cat $5 \mathrm{e}, 6$ 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 $100 \%$ recycled material ${ }^{*}$

[^60]
# Prestige 3D Technical －Compact 

## Data Trunking System

## Dimensions（mm）

PROFILES

Compartment CSA mm ${ }^{2}$
$1=742$
$2=1431$
＊$(X)=3035$

ASSEMBLY
Dado $=1.20 \mathrm{Kg} / \mathrm{m}$
Extended Dado $=1.35 \mathrm{Kg} / \mathrm{m}$

WALL THICKNESS
VCT100 $=1.7 \mathrm{~mm}$
VCT110 $=1.7 \mathrm{~mm}$
$V C T 120=1.7 \mathrm{~mm}$
VCT140 $=2.0 \mathrm{~mm}$
VCT160 $=2.0 \mathrm{~mm}$


Dado

# Prestige 3D Technical - Compact 

## Data Trunking System

## Component Selection Guide



Flat Angles and Tees


| FABRICATED ANGLES AND TEES DIMENSIONS (MM) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LIST NO | DESCRIPTION | A | B | C | D |  |
| VCT145WHI | Flat Angle 140 (Dado) | 190 mm | 140 mm |  |  |  |
| VCT147WHI | Flat Tee 140 (Dado) | 200 mm | 140 mm | 235 mm | 140 mm |  |
| VCT165WHI | Flat Angle - Up 160 (Extended Dado) | 215 mm | 160 mm |  |  |  |
| VCT166WHI | Flat Angle - Down 160 (Extended Dado) | 215 mm | 160 mm |  |  |  |
| VCT167WHI | Flat Tee - Up 160 (Extended Dado) | 220 mm | 160 mm | 235 mm | 140 mm |  |



# Prestige 3D Technical <br> <br> - Compact 

 <br> <br> - Compact}

## Installing Prestige 3D Compact

Figure shows minimum distance required for installing around corners


| $\|c\|$ | MINIMUM DISTANCE BETWEEN CORNERS (MM) |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | B | C | D | E | F | G | H | I | J | K |
| 47 | 47 | 116 | 56 | 35 | 56 | 24 | 92 | 92 | 172 | 147 |

Technical Hotline +44 (0)1268 563720

## Prestige 3D Technical

## Data Trunking System

Screening Assembly (optional)



## 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 $5 \mathrm{e}, 6$ and 7 compatibility.

PRESTIGE COMPACT


PRESTIGE 3D DADO AND SKIRTING



## PRODUCT APPLICATION

## PRESTIGE 3D DADO CABLE MANAGEMENT

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 $100 \%$ 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.

## Data Trunking System

## Standards and Approvals

The Prestige 2com trunking is a symmetrical two compartment system offering a Cat 7 flexible solution to routing data cabling whilst maintaining a slow bend radius of 50 mm , 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.

## OUTLETS

The system is designed to accommodate the complementary range of Logic Plus switches and sockets. Other MK wiring devices may also be used.
Classifications to BS EN 50085-1:2005 and BS EN 50085-2-1:2006 available on request.

[^61]

## Description

The Prestige 2com trunking is a symmetrical two compartment system offering a Cat 7 flexible solution to routing data cabling whilst maintaining a slow bend radius of 50 mm , 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.

## FEATURES

- System bend radius 50 mm 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 ( $2 \times$ 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, 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)s
- All extrusions manufactured from $100 \%$ recycled material*


## Technical

## Data Trunking System

Dimensions (mm)


| CABLE CAPACITY |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TYPE OF CONDUCTOR | SIZE | $\begin{aligned} & \text { CABLE } \\ & \text { FACTOR } \end{aligned}$ | COMPARTMENT 1 |  | COMPARTMENT 1 WITH 25 MM BACK BOX |  | COMPARTMENT 1 WITH 35MM BACK BOX |  | COMPARTMENT 1 <br> EXT CORNER 50MM DATA BEND |  |
|  |  |  | Full Term CSA 100\% Fill (MM ${ }^{2}$ ) |  |  |  |  |  |  |  |
|  |  |  | 4466 |  | 2236 |  | 1633 |  | 3132 |  |
|  |  |  | TERM AT 45\% FILL (MM ${ }^{2}$ ) |  |  |  |  |  |  |  |
|  |  |  | 2009 |  | 1006 |  | 734 |  | 1409 |  |
| POWER CABLES |  |  | NUMBER OF CABLES AT 45\% FILL |  |  |  |  |  |  |  |
| PVC stranded | $1.5 \mathrm{~mm}^{2}$ | 8.6 | 233 |  | 116 |  | 85 |  | 163 |  |
|  | $2.5 \mathrm{~mm}^{2}$ | 12.6 | 159 |  | 79 |  | 58 |  | 111 |  |
|  | $4 \mathrm{~mm}^{2}$ | 16.6 | 121 |  | 60 |  | 44 |  | 84 |  |
|  | $6 \mathrm{~mm}^{2}$ | 21.2 | 94 |  | 47 |  | 34 |  | 66 |  |
| DATA CABLES |  |  | NUMBER OF CABLES AT 45\% FILL (A) AND FULL CAPACITY (B) |  |  |  |  |  |  |  |
|  |  |  | A | B | A | B | A | B | A | B |
| Cat 5E UTP | 5.5 mm dia. | 30.2 | 66 | 147 | 33 | 74 | 24 | 54 | 46 | 103 |
| Cat 5E STP | 6.0 mm dia. | 36.0 | 55 | 124 | 27 | 62 | 20 | 45 | 39 | 87 |
| Cat 6 UTP | 6.5 mm dia. | 42.2 | 47 | 105 | 23 | 52 | 17 | 38 | 33 | 74 |
| Cat 6 STP | 7.0 mm dia. | 49.0 | 41 | 91 | 20 | 45 | 14 | 33 | 28 | 63 |
| Cat7 | 8.0 mm dia. | 64 | 12 | 27 | 26 | 59 | 4 | 9 | 13 | 30 |

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
 FLAT TEE standard trunking profiles.

## Data Trunking System

## Component Selection Guide



## Prestige 2Com

## Technical

## 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 350 mm diameter fine tungsten tipped blade （100T 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 $5.5 \mathrm{~mm} \varnothing$ 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 01268563720.

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．


## Prestige 2Com Technical

## 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 5 mm for expansion in long runs

7 Fixings require washers and No． 8 Round or Pan head screws
（8）Fixings to be at 500 mm centres and also at points within 100 mm of each end
（9）Cut trunking to allow for mini trunking／conduit（9a） and box adaptor crossover bridge（9b）．


## Prestige 2Com

## Technical

## 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)


Data Trunking System


## Prestige Poles

 and Posts Technical
## 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.

## 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 BS 476 Part 7 and has achieved a Class $1 Y$.
Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695-2-1 at a severity of $650^{\circ} \mathrm{C}$

## IET WIRING REGULATIONS

Designed and manufactured to comply in all respects with BS 7671:2008 (IET Wiring Regulations 17th Edition: 2008)

## QUALITY ASSURANCE

The system is manufactured to BS EN ISO 9001

## * Based on 2008 consumption

 see pages 318-319 in the product selector.

## 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.


## Dimensions (mm)



Power Post Assembly

| DIMENSIONS |  |  |
| :---: | :---: | :---: |
| LIST NO | SIZE（OVERALL）MM | WEIGHT KG（EACH） |
| PPT650 | $650 \times 100 \times 100$ | 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 $-2 \times$ White \＆ 2 x Charcoal


Power Pole Assembly

| DIMENSIONS |  |  |
| :---: | :---: | :---: |
| LIST NO | SIZE（OVERALL）MM | WEIGHT KG（EACH） |
| PPA100 | $3600 \times 100 \times 100$ | 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．PPC20WHI．
Additional Dividing strip is available，List No．PPC10WHI．

## Technical

## Skirting and Dado Trunking System

## TECHNICAL SPECIFICATION

## ELECTRICAL

VOLTAGE RATING
$63 \mathrm{~A}, 250 \mathrm{~V}$ a.c.
VOLTAGE DROP
L to $\mathrm{N}=3.47 \mathrm{mV} /$ A/metre run
L to $\mathrm{E}=3.47 \mathrm{mV} / \mathrm{A} / \mathrm{metre}$ run
N to $\mathrm{E}=3.47 \mathrm{mV} / \mathrm{A} / \mathrm{metre}$ run
EARTH FAULT LOOP IMPEDANCE
L to $\mathrm{E}=3.47 \mathrm{~m} / \mathrm{m}$ 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 1 Y
Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695-2-1 at a severity of $650^{\circ} \mathrm{C}$

## IET WIRING REGULATIONS

Designed and manufactured to comply in all respects with BS 7671:2008 (IET Wiring Regulations 17th Edition: 2008)

## QUALITY ASSURANCE

The system is manufactured to BS EN ISO 9001
Tested to BS EN 61534-1:2011 \&
BS EN 61534-21:2006

## 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 $100 \%$ recycled material*


## 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．

CROSS SECTION THROUGH DADO TRUNKING


CROSS SECTION
THROUGH SKIRTING AND
DADO TRUNKING


| WALL THICKNESS |  |
| :---: | :---: |
| Trunking base | 2.4 mm |
| Centre compartment cover | 2.5 mm |
| Curved cover | 1.5 mm |


| WEIGHT（KG） |  |  |  |
| :---: | :---: | :---: | :---: |
| TYPE |  | NUMBER OF <br> COMPARTMENTS <br> WITH SCREENING |  |
|  | 1 | 2 |  |
| Dado trunking without busbar <br> （K1903） | 2.4 | 3.0 | 3.6 |
| Dado trunking with busbar <br> （K1963） | 3.0 | 3.6 | 4.2 |


| POWERLINK PLUS CABLE CAPACITY |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TYPE OF CONDUCTOR | SIZE | $\begin{aligned} & \text { CABLE } \\ & \text { FACTOR } \end{aligned}$ |  | $\text { NT } 1$ | COMPARTMENT 2 （WITH BUSBAR） | COMPARTMENT 2 （WITH BUSBAR） |  |  |
|  |  |  | Full Term CSA 100\％Fill（MM ${ }^{\text {2 }}$ ） |  |  |  |  |  |
|  |  |  | 943 |  | 2968 | 2528 | 1044 |  |
|  |  |  | TERM AT 45\％FILL（MM ${ }^{\text {2 }}$ ） |  |  |  |  |  |
|  |  |  | 424 |  | 1335 | 1137 | 469 |  |
| POWER CABLES |  |  | NUMBER OF CABLES AT 45\％FILL |  |  |  |  |  |
| PVC stranded | $1.5 \mathrm{~mm}^{2}$ | 8.6 | 49 |  | 155 | 132 | 54 |  |
|  | $2.5 \mathrm{~mm}^{2}$ | 12.6 | 33 |  | 105 | 90 | 37 |  |
|  | $4 \mathrm{~mm}^{2}$ | 16.6 | 25 |  | 80 | 68 | 28 |  |
|  | $6 \mathrm{~mm}^{2}$ | 21.2 | 20 |  | 62 | 53 | 22 |  |
| DATA CABLES |  |  | NUMBER OF CABLES AT 45\％FILL（A）AND FULL CAPACITY（B） |  |  |  |  |  |
|  |  |  | A | B | A B | A B | A | B |
| Cat 5E UTP | 5.5 mm dia． | 30.2 | 14 | 31 | $44-98$ | $0 \quad 0$ | 15 | 34 |
| Cat 6 UTP | 6.5 mm dia． | 42.2 | 10 | 22 | $31 \quad 70$ | $0 \quad 0$ | 11 | 24 |
| Cat 6 STP | 7.0 mm dia． | 49.0 | 8 | 19 | $27 \quad 60$ | $0 \quad 0$ | 9 | 21 |

Powerlink Plus

## Technical

## Skirting and Dado Trunking System

## Components

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 |
| DADO | 270 | 170 |
| SKIRTING | 270 | 170 |

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 TEE | A | B |
| DADO | 270 | 170 |



# Powerlink Plus Technical 

## Skirting and Dado Trunking System

## Component Selection Guide



## Technical

## 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）Pre cut slots and circular holes at 100 mm centres permit fixing holes to be drilled and a wallplug with screw inserted after the surface track has been positioned．
（4）When fixing trunking use bushes provided and No． 8 wood screws．
（5）Ensure trunking base is secured within 100 mm from the end and a maximum of 500 mm apart on either side along the length．

6 Check levels frequently－particularly at corners．
（7）Debur all cut ends using a file or a sharp knife．
（8）For mini trunking adaptors drill a 20 mm diameter hole through the wall of the centre compartment using drill guide．Insert the tunnel and fix with two screws provided．
（9）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 85 mm from the busbar at the required position．Install cable link（1919）to the busbar and snap fit cable crossing barrier（K1937CHA） over cables．
（10）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．




# Powerlink Plus Technical 

Skirting and Dado Trunking System


## Powerlink Plus

## Technical

## 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 500 mm max，top and bottom and within 150 mm 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）Internal and external corners－Connect the lengths of busbar using the cable link assembly（1919）and secure trunking using the screws provided．


## Skirting and Dado Trunking System

(17) 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.
(18) 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.
(19) Outer Covers - For central covers and end cap retainers, leave a gap of $8-10 \mathrm{~mm}$ and snap fit onto trunking.
(20) Snap fit end caps then other trims after fitting all central and outer covers.


## Bench and Shelf Trunking

## 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 1 Y．

Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695－2－1 at a severity of $650^{\circ} \mathrm{C}$ ．

## IET WIRING REGULATIONS

Designed and manufactured to comply in all respects with BS 7671：2008（IET Wiring Regulations 17th Edition：2008）

## QUALITY ASSURANCE

The system is manufactured to BS EN ISO 9001
Classifications to BS EN 50085－1：2005 and
BS EN 50085－2－1：2006 available on request

## 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 onepiece 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 $100 \%$ recycled material＊


Description
Pinnacle is an angular bench trunking system ideally suited for distributing LV electrical and communication services in laboratories，schools，workshops and other applications where the service contacts are mounted on or above desks and benches．


## Bench and Shelf Trunking

Dimensions (mm)


VERSION 1 PTS


VERSION 2 PTS


VERSION 3 PTD

| POWERLINK PLUS CABLE CAPACITY |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TYPE OFCONDUCTOR | SIZE | $\begin{aligned} & \text { CABLE } \\ & \text { FACTOR } \end{aligned}$ | COMP | MENT | $\begin{gathered} \text { COMPART } \\ \text { WITH } 2 \\ \text { BACK } \end{gathered}$ | $\frac{\text { ENT }}{\substack{\text { MN } \\ \text { D }}}$ | COMPAR WITH BAC | $\frac{\text { IENT } 1}{\text { MN }} \begin{aligned} & 1 \\ & \text { DX } \end{aligned}$ |  | MENT |
|  |  |  | Full Term CSA 100\% Fill ( $\mathrm{MM}^{2}$ ) |  |  |  |  |  |  |  |
|  |  |  | 4510 |  | 2499 |  | 1857 |  | 460 |  |
|  |  |  | TERM AT 45\% FILL (MM ${ }^{2}$ ) |  |  |  |  |  |  |  |
|  |  |  | 2029 |  | 1124 |  | 835 |  | 207 |  |
| POWER CABLES |  |  | NUMBER OF CABLES AT 45\% FILL |  |  |  |  |  |  |  |
| PVC stranded | $1.5 \mathrm{~mm}^{2}$ | 8.6 | 235 |  | 130 |  | 97 |  | 24 |  |
|  | $2.5 \mathrm{~mm}^{2}$ | 12.6 | 161 |  | 89 |  | 66 |  | 16 |  |
|  | $4 \mathrm{~mm}^{2}$ | 16.6 | 122 |  | 67 |  | 50 |  | 12 |  |
|  | $6 \mathrm{~mm}^{2}$ | 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 |
| Cat 5E UTP | 5.5 mm dia. | 30.2 | 67 | 149 | 37 | 82 | 27 | 61 | 6 | 15 |
| Cat 5E STP | 6.0 mm dia. | 36.0 | 56 | 125 | 31 | 69 | 23 | 51 | 5 | 12 |
| Cat 6 UTP | 6.5 mm dia. | 42.2 | 48 | 106 | 26 | 59 | 19 | 44 | 4 | 10 |
| Cat 6 STP | 7.0 mm dia. | 49.0 | 41 | 92 | 22 | 51 | 17 | 37 | 4 | 9 |



EXTERNAL CORNER
PECLWHI

COUPLER SET
PCWH

ER


## 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 25 mm hole using the drill base centres in the trunking and inserting a conduit gland.
(2) Holes of 20 mm 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, 250 mm maximum along the length with the first and last fixing not more than 50 mm from the end of each length. Drill trunking with 6 mm 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.


Technical Hotline +44 (0)1268 563720

## Pinnacle Technical

Cable Retainer without central divider installed.
(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 600 mm centres maximum and within 100 mm 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.

## Pinnacle Technical

## COVERS

(11) S 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 13 mm 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.


## Integrated Trunking

## 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 $650^{\circ} \mathrm{C}$

## IET WIRING REGULATIONS

Designed and manufactured to comply in all respects with BS 7671：2008（IET Wiring Regulations 17th Edition：2008）

## QUALITY ASSURANCE

The system is manufactured to BS EN ISO 9001
Classifications to BS EN 50085－1：2005 and
BS EN 50085－2－1：2006 available on request

## FEATURES

－Wide range of integrated components maximise versatility in application
－Simple，clean lines
－Easy to assemble and install
－Data bend option 32 mm radius
－High impact resistance and durability
－Tapered joints provide complete protection at junctions masking cut ends
－Clip on covers provide continuous access for wiring modifications
－All extrusions manufactured from $100 \%$ recycled material＊



## Description

Premier is an integrated PVCu trunking system for general cable distribution．A comprehensive range of tees，angles 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．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．


[^62]Integrated Trunking


| PREMIER CABLE CAPACITY |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TYPE OF CONDUCTOR | SIZE | CABLE <br> FACTOR | NCT | 050 | NCT | 7550 | NCT7 | 7575 | NCT | 040 | NCT1 | 1050 | NCT1 | 1010 | NCT WI 25 BACK | $\begin{aligned} & 1040 \\ & \text { TH } \\ & \text { VMOX } \\ & \text { BOOX } \end{aligned}$ | $\begin{gathered} \text { NCT1 } \\ \text { WI } \\ 250 \\ \text { BACK } \end{gathered}$ |  | NCT W1 35 BACK |  | $\begin{gathered} \text { NCT1 } \\ \text { WI } \\ 251 \\ \text { BACK } \end{gathered}$ | $\begin{aligned} & 1010 \\ & \text { TH } \\ & \text { THW } \\ & \text { CBOX } \end{aligned}$ | NCT W 35 BAC | $\begin{aligned} & 1010 \\ & \text { TH } \\ & \text { SH0 } \\ & \text { CBOX } \end{aligned}$ |
|  |  |  | Full Term CSA 100\% Fill (MM ${ }^{2}$ ) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 30 |  | 475 |  | 30 |  |  | 41 | 87 | 25 | 10 |  | 18 |  |  |  | 65 |  |  |  |
|  |  |  | TERM AT 45\% FILL (MM ${ }^{\text {2 }}$ ) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 13 |  | 21 |  | 13 |  |  | 18 | 39 | 26 | 48 |  | 83 |  |  |  | 29 |  |  |  |
| POWER CABLES |  |  | NuMber Of Cables at 45\% FILL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PVC stranded | $1.5 \mathrm{~mm}^{2}$ | 8.6 | 98 |  | 158 |  | 248 |  | 161 |  | 211 |  | 456 |  | 56 |  | 97 |  | 63 |  | 342 |  | 309 |  |
|  | $2.5 \mathrm{~mm}^{2}$ | 12.6 | 67 |  | 108 |  | 169 |  | 110 |  | 144 |  | 311 |  | 38 |  | 66 |  | 43 |  | 233 |  | 210 |  |
|  | $4 \mathrm{~mm}^{2}$ | 16.6 | 50 |  | 82 |  | 128 |  | 83 |  | 109 |  | 236 |  | 29 |  | 50 |  | 33 |  | 177 |  | 160 |  |
|  | $6 \mathrm{~mm}^{2}$ | 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 |
| Cat 5E UTP | 5.5 mm 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 |
| Cat 5E STP | 6.0 mm 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 |
| Cat 6 UTP | 6.5 mm 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 |
| Cat 6 STP | 7.0 mm 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:
$50 \times 50,75 \times 50$ and $75 \times 75 \mathrm{~mm}$ - general cable distribution.
$100 \times 40$ and $100 \times 50 \mathrm{~mm}$ - where mounting accessories are also required.
$100 \times 100 \mathrm{~mm}$ - where mounting accessories and/or generous cable distribution is required.

| ACCESSORIES |  |  |
| :---: | :---: | :---: |
|  | FOR USE WITH | LIST NO. |
| $\begin{aligned} & \text { ONE GANG } \\ & \text { ACCESSORY BOX } \\ & \text { AND FRAME } \end{aligned}$ | NCT1040, NCT1050, NCT1010 for power and ELV outlets requiring 25 mm deep box NCT1050/NCT1010 for power and ELV outlets requiring 35 mm deep box NCT1040, NCT1050, NCT1010 for power and ELV outlets requiring extra deep accessory space | VTS6025 |
|  |  | VTS6035 |
|  |  | VTS6000 |
| TWO GANG ACCESSORY BOX AND FRAME | NCT1040, NCT1050, NCT1010 for power and ELV outlets requiring 25 mm deep box NCT1050/NCT1010 for power and ELV outlets requiring 35 mm deep box NCT1040, NCT1050, NCT1010 for power and ELV outlets requiring extra deep accessory space | VTS7025 |
|  |  | VTS7035 |
|  |  | VTS7000 |
| THREE GANG ACCESSORY BOX | NCT1040, NCT1050, NCT1010 for power and ELV outlets requiring 28 mm deep box | VTS8028 |
| MINI TRUNKING ADAPTOR | Integrates Premier with YEA1, YEA2, YEA3 CMA1, CMA3, CMA4 Mini trunking fittings | NYT100 |

## Integrated Trunking



| PROFILE | END CAP |
| :---: | :---: |
| $50 \times 50$ | NEP5050 |
| $75 \times 50$ | NEP7550 |
| $75 \times 75$ | NEP7575 |
| $100 \times 40$ | NEP1040 |
| $100 \times 50$ | NEP1050 |
| $100 \times 100$ | NEP1010 |


| PROFILE | INT <br> CORNER | WITH DATA <br> CORNER |
| :---: | :---: | :---: |
| $50 \times 50$ | NAI5050 |  |
| $75 \times 50$ | NAI7550 |  |
| $75 \times 75$ | NAI7575 |  |
| $100 \times 40$ | NAl1040 |  |
| $100 \times 50$ | NAl1050 | NDAl1050 |
| $100 \times 100$ | NAl1010 |  |


| PROFILE | FLAT TEE | WITH DATA <br> CORNER |
| :---: | :---: | :---: |
| $50 \times 50$ | NTF5050 |  |
| $75 \times 50$ | NTF7550 |  |
| $75 \times 75$ | NTF7575 |  |
| $100 \times 40$ | NTF1040 |  |
| $100 \times 50$ | NTF1050 | NDTF1050 |
| $100 \times 100$ | NTF1010 |  |



Note: Diagram shows profile 1050

* Minimum distance


## Integrated 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）It may be advantageous to fit stop ends to trunking prior to installation．Where stop end could be subjected to lateral force the mounting clip should be solvent welded to the rail．
（2）Drill Trunking with oversized holes in positions and at maximum centre shown．
（3）Fix with dome head screws and fibre or rubber washers． Allow for expansion movement when tightening screws and between joints．
（4）Internal coupler should be used to ensure correct alignment． Clip the coupler to the end of the free trunking length，offer up to the fixed trunking and slide home．
（5）Minimum dimensions：
Trunking size mm Dimension A（mm）

| Trunking size mm | Dimension A（mm） |
| :--- | :--- |
| $50 \times 50$ | 100 |
| $75 \times 50$ | 100 |
| $75 \times 75$ | 130 |
| $100 \times 40$ | 90 |
| $100 \times 50$ | 100 |
| $100 \times 100$ | 210 |

## Fixing Centres（2）

For 50 mm wide trunking use hole A ．
For 100 mm wide trunking use holes $A$ and $B$ ．
For 75 mm wide trunking drill single fixing on the centre line．


100 mm


500 mm
00 mm

## 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 750 mm maximum centres on straight runs or within 100 mm of each end, corner or change of plane.
(10) Internal corners - measure distance into corner and cut trunking length 2 mm short.
(11) Wall plates should be used to maintain enclosure function of trunking.
(12) Leave a gap of 20 mm to allow fitting of joint cover moulding.

AT INTERNAL CORNERS, EXTERNAL CORNERS, FLAT ANGLES AND FLAT TEES, LEAVE GAPS BETWEEN LIDS AND THE END TRUNKING BODY AS SHOWN BELOW:

|  | $50 \times 50$ | $75 \times 50$ | $75 \times 75$ | $100 \times 40$ | $100 \times 50$ | $100 \times 100$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{A}$ | 62 | 62 | 87 | 52 | 62 | 140 |
| FLAT TEE | $\mathbf{B}$ | 74 | 99 | 99 | 124 | 124 | 124 |
|  | $\mathbf{C}$ | 65 | 90 | 90 | 115 | 115 | 115 |
| INTERNAL CORNER | $\mathbf{D}$ | 62 | 62 | 87 | 52 | 62 | 140 |
| FLAT ANGLE | $\mathbf{E}$ | 66 | 90 | 90 | 115 | 115 | 140 |



## Trunking

TECHNICAL SPECIFICATION<br>MATERIALS<br>PVCu materials used in the manufacture of MK products are self extinguishing non-flame propagating in accordance with BS 4678 Part 4.<br>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.<br>Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695-2-1 at a severity of $650^{\circ} \mathrm{C}$<br>\section*{IET WIRING REGULATIONS}<br>Designed and manufactured to comply in all respects with BS 7671:2008 (IET Wiring Regulations 17th Edition: 2008)<br>\section*{QUALITY ASSURANCE}<br>The system is manufactured to BS EN ISO 9001

Classifications to BS EN 50085-1:2005 and
BS EN 50085-2-1:2006 available on request

## 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 $100 \%$ recycled material*



## Description

Norwich trunking is available in two depths with one or two compartments for wall or ceiling mounting.

The standard version is 40 mm deep with a 25 mm 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

## Trunking

Dimensions（mm）


| PREMIER CABLE CAPACITY |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TYPE OF CONDUCTOR | SIZE | $\begin{aligned} & \text { CABLE } \\ & \text { FACTOR } \end{aligned}$ | $\underset{(1)}{\text { NBI }}$ |  | NBT | 3TC | $\begin{gathered} \text { NBT: } \\ (4 \end{gathered}$ |  |  |  | $\begin{gathered} \text { NBT } \\ (5 \end{gathered}$ |  |  |  |
|  |  |  | Full Term CSA 100\％Fill（MM ${ }^{\text {2 }}$ ） |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | 180 |  | 38 |  | 13 |  |  |  | 70 |  |  |  |
|  |  |  | TERM AT 45\％FILL（MM ${ }^{\text {2 }}$ ） |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | 81 |  | 17 | 2 | 62 |  |  |  | 31 |  |  |  |
| POWER CABLES |  |  | NUMBER OF CABLES AT 45\％FILL |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} \text { PVC } \\ \text { stranded } \end{gathered}$ | $1.5 \mathrm{~mm}^{2}$ | 8.6 | 94 |  | 20 |  | 72 |  | 168 |  | 36 |  | 128 |  |
|  | $2.5 \mathrm{~mm}^{2}$ | 12.6 | 64 |  | 13 |  | 49 |  | 115 |  | 25 |  | 87 |  |
|  | $4 \mathrm{~mm}^{2}$ | 16.6 | 48 |  | 10 |  | 37 |  | 87 |  | 19 |  | 66 |  |
|  | $6 \mathrm{~mm}^{2}$ | 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 |
| Cat 5E UTP | 5.5 mm dia． | 30.2 | 26 | 59 | 5 | 12 | 20 | 45 | 48 | 106 | 10 | 23 | 36 | 81 |
| Cat 5E STP | 6.0 mm dia． | 36.0 | 22 | 50 | 4 | 10 | 17 | 38 | 40 | 89 | 8 | 19 | 30 | 68 |
| Cat 6 UTP | 6.5 mm dia． | 42.2 | 19 | 42 | 4 | 9 | 14 | 32 | 34 | 76 | 7 | 16 | 26 | 58 |
| Cat 6 STP | 7.0 mm 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

## flat tee



FLAT ANGLE


EXTERNAL CORNER


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 500 mm centres along its entire length and not more than 100 mm 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 50 mm . 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 6 mm 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




## PRODUCT APPLICATION

## ECHO SWITCH (TRANSMITTER)

$E^{2}{ }^{T M}$ is an innovative range of entirely wireless, batteryless and self-powered switches and controls. Being wireless offers fantastic benefits, including instant installation and location flexibility. This reduces disruption and cost as there is no need to channel walls and run switching cables.


## Ega Industrial

## Technical

## Industrial Trunking

## 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 $650^{\circ} \mathrm{C}$

## IET WIRING REGULATIONS

Designed and manufactured to comply in all respects
with BS 7671:2008 (IET Wiring Regulations 17th
Edition: 2008)

## QUALITY ASSURANCE

The system is manufactured to BS EN ISO 9001
Classifications to BS 4678-4:1982 available on request

## 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 $100 \%$ recycled material*

Specified sizes, pages 346-347.


## 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 $50 \times 50 \mathrm{~mm}$ to $150 \times 150 \mathrm{~mm}$ 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.

## Ega Industrial Technical

## Industrial Trunking

| EGA INDUSTRIAL CABLE CAPACITY |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TYPE OF CONDUCTOR | SIZE | CABLE <br> FACTOR |  |  |  |  |  |  |  | T4 |  |  | CL |  |  |  |  |  |  |  |
|  |  |  | Full Term CSA 100\% Fill ( $\mathrm{mm}^{2}$ ) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | 08 |  |  |  |  |  |  |  |  |  |  |
|  |  |  | Term at 45\% Fill ( $\mathrm{mm}^{2}$ ) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | 83 |  | 78 |  |  |  |  |  |  |  |  |
| Power Cables |  |  | Number of Cables at 45\% Fill |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PVC Stranded | $1.5 \mathrm{~mm}^{2}$ | 8.6 | 111 |  | 173 |  | 267 |  | 230 |  | 357 |  | 485 |  | 546 |  | 741 |  | 1128 |  |
|  | $2.5 \mathrm{~mm}^{2}$ | 12.6 | 76 |  | 118 |  | 182 |  | 157 |  | 244 |  | 331 |  | 373 |  | 506 |  | 770 |  |
|  | $4 \mathrm{~mm}^{2}$ | 16.6 | 57 |  | 89 |  | 138 |  | 119 |  | 185 |  | 251 |  | 283 |  | 384 |  | 584 |  |
|  | $6 \mathrm{~mm}^{2}$ | 21.2 | 45 |  | 70 |  | $108$ |  | 93 |  | 145 |  | 196 |  | 221 |  | 300 |  | 457 |  |
| 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 |
| Cat5E UTP | 5.5 mm dia. | 30.2 | 31 | 70 | 49 | 109 | 76 | 169 | 65 | 145 | 101 | 226 | 138 | 306 | 155 | 345 | 211 | 469 | 321 | 714 |
| Cat5E STP | 6.0 mm dia. | 36.0 | 26 | 59 | 41 | 92 | 63 | 142 | 55 | 122 | 85 | 190 | 115 | 257 | 130 | 290 | 177 | 393 | 269 | 599 |
| Cat6 UTP | 6.5 mm dia. | 42.2 | 22 | 50 | 35 | 78 | 54 | 121 | 46 | 104 | 72 | 162 | 98 | 219 | 111 | 247 | 151 | 335 | 229 | 511 |
| Cat6 STP | 7.0 mm dia. | 49.0 | 19 | 43 | 30 | 67 | 46 | 104 | 40 | 89 | 62 | 139 | 85 | 189 | 95 | 213 | 130 | 289 | 198 | 440 |

# Ega Industrial <br> <br> Technical 

 <br> <br> Technical}

## 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 CORNER (FAI)


EXTERNAL CORNER (FAE)


Dimensions

| LIST. NO. | COMPONENTS DIMENSIONS (mm) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CLT/ | A | B | E | F | G | H |
| CLT1 | ${ }^{*} 100$ | ${ }^{*} 90$ | ${ }^{*} 80$ | ${ }^{*} 125$ | ${ }^{*} 65$ | ${ }^{*} 100$ |
| CLT2 | ${ }^{*} 150$ | ${ }^{*} 115$ | 115 | 110 | 60 | ${ }^{*} 150$ |
| CLT3 | ${ }^{*} 150$ | ${ }^{*} 115$ | ${ }^{*} 115$ | 150 | 75 | ${ }^{*} 150$ |
| CLT4 | 220 | 160 | 160 | 110 | 60 | 220 |
| CLT5 | 250 | 175 | 175 | 150 | 75 | 250 |
| CLT6 | 250 | 175 | 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


# Ega Industrial Technical 

## 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 | $\mathbf{X ( m m )}$ |
| :---: | :---: | :---: |
| CLT1 | FAI1 | 125 |
| CLT2 | FAI2 | 110 |
| CLT3 | FAI3 | 150 |
| CLT4 | FAI4 | 110 |
| CLT5 | FAl5 | 150 |
| CLT6 | FAI6 | 175 |
| CLT7 | FAI7 | 165 |
| CLT8 | FAI8 | 215 |
| CLT9 | FAl9 | 265 |


| PROFILE | FLAT ANGLE |  | $\mathbf{Z}(\mathbf{m m})$ |
| :---: | :---: | :---: | :---: |
|  | 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 | $\mathbf{W}(\mathbf{m m})$ |
| :---: | :---: | :---: |
| 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 |  | $\mathrm{Y}(\mathbf{m m})$ |
| :---: | :---: | :---: | :---: |
|  | MOULDED | FABRICATED |  |
| CLF1 |  | 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 |

# Ega Industrial Technical 

## 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．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 100 mm 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．


## Industrial Trunking

## Joining fittings

（7）Drill trunking with a 7.2 mm 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 7.2 mm ，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．


# Ega Cornice 

## Technical

## Cornice Trunking

## 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 $650^{\circ} \mathrm{C}$

## IET WIRING REGULATIONS

Designed and manufactured to comply in all respects
with BS 7671:2008 (IET Wiring Regulations 17th
Edition: 2008)

## QUALITY ASSURANCE

The system is manufactured to BS EN ISO 9001
Classifications to BS EN 50085-1:2005 and
BS EN 50085-2-1:2006 available on request

## 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 $100 \%$ recycled material*


# Ega Cornice Technical 

Dimensions（mm）


## Component Selection Guide（dimensions in mm）



## Ega Cornice

## Technical

## 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 500 mm 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 25 mm or less must be drilled and the cable should be looped through the aperture as shown. A cable retraining 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


Technical Hotline ＋44（0）1268 563720

## 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 5 mm must be left between base sections to allow for expansion．The cover must overlap this joint by a minimum of 50 mm ．

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 25 mm minimum，along the line of the trunking in order to enable cover removal．

## External Corner



3
Joint Cover


Mini Trunking
Adaptor



## Egatube Conduit Technical

## Conduit and fittings

## 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 $650^{\circ} \mathrm{C}$

## IET WIRING REGULATIONS

Designed and manufactured to comply in all respects with BS 7671:2008 (IET Wiring Regulations 17th Edition: 2008)

## QUALITY ASSURANCE

The system is manufactured to BS EN ISO 9001
Classifications to BS EN 61389-1:2008 and
BS EN 61386-21:2004 available on request
521.11.201 WIRING SYSTEMS IN ESCAPE ROUTES

Conduit systems - MK recommends the usage of standard metallic saddles and bars when using conduit in escape routes

Trunking systems - MK recommends the use of existing metallic cable retention systems when using trunking in escape routes

## 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
- 2 grades of round conduit to suit various site conditions
- All extrusions manufactured from $100 \%$ recycled material*



## Description

Egatube high impact PVCu conduit offers a cost effective solution for both new and refurbishment contracts.

The conduit is available in oval sections ( 6 sizes), in 2 grades of round section ( 6 sizes of each) and as a flexible corrugated version (3 sizes).

The wide range of fittings and ancillary products means that almost any installation can be specified for with confidence.

Egatube 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.

# Egatube Conduit Technical 

## 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． <br> NO． | SIZE <br> mm |  | WALL <br> THICKNESS <br> mm | WEIGHT <br> KG／M | CROSS <br> SECTION AREA <br> $\mathbf{m m}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 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． <br> NO． | DIAMETER <br> mm | WEIGHT <br> KG／M | CROSS <br> SECTION AREA <br> $\mathbf{m m}^{2}$ |
| :---: | :---: | :---: | :---: |
| EF1 | 16 | 0.05 | 107 |
| EF2 | 20 | 0.064 | 189 |
| EF3 | 25 | 0.094 | 308 |

Standard lengths 50 metre coils．

## RECTANGULAR CHANNELLING <br> （REF REC）



Used for switch drops and general domestic installations mainly in carcass situations．

| LIST． <br> NO． | SIZE <br> mm |  | WALL <br> THICKNESS <br> mm | WEIGHT <br> 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 |

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 $-5^{\circ} \mathrm{C}$ to $+60^{\circ} \mathrm{C}$ ．
Complies with BS EN 61386 Part 1 Heavy Impact．

| LIST． <br> NO． | OUTSIDE <br> DIAMETER <br> $\mathbf{m m}$ | WALL <br> THICKNESS <br> mm | WEIGHT <br> KG／M | CROSS <br> SECTION AREA <br> $\mathbf{m m}^{2}$ |
| :---: | :---: | :---: | :---: | :---: |
| 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 length 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 $-5^{\circ} \mathrm{C}$ to $+60^{\circ} \mathrm{C}$ ．
Complies with BS EN 61386 Part 1 Medium Impact

| LIST． <br> NO． | OUTSIDE <br> DIAMETER <br> mm | WALL <br> THICKNESS <br> mm | WEIGHT <br> KG／M | CROSS <br> SECTION AREA <br> $\mathbf{m m}^{2}$ |
| :---: | :---: | :---: | :---: | :---: |
| 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 length 3 metres．

## Technical

## Conduit and fittings

## Cable Capacities of Conduit

## 17th Edition of the IET 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 $90^{\circ}$ 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.


# Egatube Conduit Technical 

## Conduit and fittings

| TABLE A2 |  |
| :---: | :---: |
| CONDUIT TERMS FOR SHORT STRAIGHT RUNS |  |
| CONDUIT DIA（mm） | TERM |
| 16 | 290 |
| 20 | 460 |
| 25 | 800 |
| 32 | 1400 |
| 38 | 1900 |
| 50 | 3500 |


| TABLE A1 |  |  |
| :---: | :---: | :---: |
| CABLE TERMS FOR SHORT STRAIGHT RUNS |  |  |
| TYPE OF <br> CONDUCTOR | CONDUCTOR CROSS－ <br> SECTIONAL AREA（mm²） | TERM |
| Solid | 1 | 22 |
|  | 1.5 | 27 |
|  | 2.5 | 39 |
|  | 1.5 | 31 |
|  | 2.5 | 43 |
|  | 4 | 58 |
|  | 6 | 88 |
|  | 10 | 146 |
|  | 16 | 202 |
|  | 25 | 385 |

## CAPACITY EXAMPLE

NUMBER OF CABLES FOR A 3．0 METRE RUN WITH THREE BENDS


CONDUIT 20 mm dia．
（Term 182）Table A4
CABLE SOLID $2.5 \mathrm{~mm}^{2}$（3 qty）
（Term 30）Table A3
CABLE STRANDED $4.0 \mathrm{~mm}^{2}$（2 qty）
（Term 43）Table A3
Term total $-(30+30+30)+(43+43)=176$
The conduit size is satisfactory（Term 182）to accommodate the cables shown（Term 176）．

| TABLE A3 |  |  |
| :--- | :---: | :---: |
| CABLE TERMS FOR LONG STRAIGHT RUNS，OR RUNS <br> INCORPORATE BENDS |  |  |
| TYPE OF CONDUCTOR | CONDUCTOR <br> CROSS－SECTIONAL <br> AREA（mm²） | TERM |
| Solid or Stranded Conductor | 1 | 16 |
| Solid or Stranded Conductor | 1.5 | 22 |
| Solid or Stranded Conductor | 2.5 | 30 |
| Solid or Stranded Conductor | 4 | 43 |
| Solid or Stranded Conductor | 6 | 58 |
| Solid or Stranded Conductor | 10 | 105 |
| Solid or Stranded Conductor | 16 | 145 |
| Solid or Stranded Conductor | 25 | 217 |


| TABLE A4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CONDUIT TERMS FOR LONG STRAIGHT RUNS，OR RUNS INCORPORATING BENDS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LENGTH OF <br> 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 | COVERED BY TABLES A1 AND A2 |  |  |  | 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 |  |  |  |  |  |  |  |  |

# Egatube Conduit <br> <br> Technical 

 <br> <br> Technical}

## 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 RECTANGULAR | ROUND | OVAL | CUT-OUTS IN BACK | CORNER |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ESU61 | flush | 1 | - | - | DI | 1 | - |
| ESU81 | flush | 1 | - | ABCEFGHJ | - | - | - |
| ESU8ML | flush | 1 | - | ABCEFGHJ | - | 1 | - |
| ESU82ML | flush | 2 | - | ABCDEFGHJ | 1 | 2 | - |
| ESU92ML | flush | 2 | - | BCDEGHJ | 1 | 2 | - |
| ESU9ML | flush | 1 | - | BCEGHJ | - | 1 | - |
| ESU241 | surface | 1 | 1 | D | - | 2 | round |
| ESU242 | surface | 2 | AFI | D | - | 2 | round |
| ESU261 | surface | 1 | - | D | - | 1 | square |
| ESU262 | surface | 2 | - | D | - | - | square |
| ESU281 | surface | 1 | - | 1 | - | 1 | square |
| ESU282 | surface | 2 | 1 | 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 <br> SIZE (mm) | MAXIMUM DISTANCE BETWEEN <br> SUPPORTS (M) |  |
| :---: | :---: | :---: |
| HORIZONTAL | VERTICAL |  |
| Exceeding 16 but not <br> exceeding 25 | 0.75 | 1.00 |
| Exceeding 25 but not <br> exceeding 40 | 1.5 | 1.75 |
| Exceeding 40 | 2.75 | 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 225 mm 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 $25^{\circ} \mathrm{C}$ would cause an increase of 5 mm 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 19 mm from one end. Conduit is secured into this end of about 75 mm long which is a sliding fit over the other conduit. The other conduit is inserted about 50 mm into the coupler leaving it free to move 25 mm 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

## Light fittings

When considering the use of totally enclosed lighting fittings, remember that the IET Wiring Regulations restrict the use of PVCu boxes to loads of 3 kg and a temperature of $60^{\circ} \mathrm{C}$. 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 $60^{\circ} \mathrm{C}$.

## 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 Trunking Technical 

## 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 IET Wiring Regulations．

Ega Mini Trunking systems are Class 1Y for spread of flame when tested in accordance with BS 476 Part 7.

521．200 Wiring systems in escape routes．
Trunking systems－MK recommends the use of existing metallic cable retention systems when using trunking in escape routes．

## 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 1 Y．

Moulding material has been tested by a UKAS accredited laboratory and conforms with IEC 695－2－1 at a severity of $650^{\circ} \mathrm{C}$ ．

## IET WIRING REGULATIONS

Designed and manufactured to comply in all respects with BS 7671：2008（IET Wiring Regulations 17th Edition：2008）

QUALITY ASSURANCE
The system is manufactured to BS EN ISO 9001
Classifications to BS EN 50085－1：2005 and
BS EN 50085－2－1：2006 available on request


## 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 $100 \%$ recycled material＊

## 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.


## 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.


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.


## 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 $3 \mathrm{~kg} @ 60^{\circ} \mathrm{C}$ 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.

| INTERNAL CORNER (90 ${ }^{\circ}$ ) YAI |  |
| :---: | :---: |
| LIST NO | B |
| YAI7 | 50 mm |




| EXTERNAL CORNER (90 ${ }^{\circ}$ ) YAE |  |
| :---: | :---: |
| LIST NO | A |
| YAE7 | 80 mm |



## Technical

## Ega Mini, Communication and Red Alert Trunking



| EGA MINI AND RED ALERT CABLE CAPACITY |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TYPE OF CONDUCTOR | $\begin{aligned} & \text { SIZE } \\ & \text { FACTOR } \end{aligned}$ | CABLE | $\begin{aligned} & \text { YT } \\ & \text { SP } \end{aligned}$ |  | $\begin{array}{r\|} \hline \text { YT } \\ \text { SP } \\ \text { YT2 } \end{array}$ | $\begin{aligned} & 2 / \\ & \text { F2 } \\ & \text { RED } \end{aligned}$ |  |  |  |  | $\begin{aligned} & \text { ZT } \\ & \text { (ea } \\ & \text { cm } \end{aligned}$ |  | YT | $\begin{aligned} & 4 / \\ & F 4 \end{aligned}$ | $\begin{aligned} & \text { ZT } \\ & \text { (ear } \\ & \text { cmp } \end{aligned}$ |  |  |  | YT |  |  |  |  |  |
|  |  |  | FULL TERM CSA 100\% FILL (mm²) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | 15 |  | 27 |  | 23 |  | 45 |  | 22 |  | 79 | 5 | 38 |  | 13 |  | 94 |  | 12 |  |  |  |
|  |  |  | TERM AT 45\% FILL ( $\mathrm{mm}^{2}$ ) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | 69 |  | 12 |  | 10 |  | 20 |  | 10 |  |  | 7 | 17 |  |  |  | 42 |  | 57 |  |  |  |
| POWER CABLES |  |  | NUMBER OF CABLES AT 45\% FILL |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PVC | $1.5 \mathrm{~mm}^{2}$ | 8.6 | 8 |  | 14 |  | 12 |  | 23 |  | 11 |  | 41 |  | 20 |  | 68 |  | 49 |  | 66 |  | 106 |  |
| Stranded | $2.5 \mathrm{~mm}^{2}$ | 12.6 | 5 |  | 9 |  | 8 |  | 16 |  | 7 |  | 28 |  | 13 |  | 46 |  | 33 |  | 45 |  | 72 |  |
|  | $4 \mathrm{~mm}^{2}$ | 16.6 | 4 |  | 7 |  | 6 |  | 12 |  | 6 |  | 21 |  | 10 |  | 35 |  | 25 |  | 34 |  | 55 |  |
|  | $6 \mathrm{~mm}^{2}$ | 21.2 | 3 |  | 5 |  | 4 |  | 9 |  | 4 |  | 16 |  | 8 |  | 27 |  | 20 |  | 26 |  | 43 |  |
| DATA CABLES |  |  | NUMBER OF CABLES AT 45\% FILL (A) AND FULL CAPACITY (B) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | A | A B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B |
| Cat5E UTP | 5.5 mm 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 | 6.0 mm 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 | 6.5 mm 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 | 7.0 mm 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 | SIZEFACTOR | CABLE | CMT1 / SMT1 | CMT3 / SMT3 | CMT4 / SMT4 |
|  |  |  | FULL TERM CSA 100\% FILL (mm²) |  |  |
|  |  |  | 44 | 102 | 156 |
|  |  |  | TERM AT 45\% FILL (mm²) |  |  |
|  |  |  | 19 | 45 | 70 |
| POWER CABLES |  |  | NUMBER OF CABLES AT 45\% FILL |  |  |
| PVC | $1.5 \mathrm{~mm}^{2}$ | 8.6 | 8.6 | 5 | 8 |
| Stranded | $2.5 \mathrm{~mm}^{2}$ | 12.6 | 1 | 3 | 5 |
|  | $4 \mathrm{~mm}^{2}$ | 16.6 | 1 | 2 | 4 |
|  | $6 \mathrm{~mm}^{2}$ | 21.2 | 0 | 2 | 3 |

## Dimensions (mm)



CMT4 / SMT4

# Interact Underfloor Technical 

Interact Underfloor Power

## Typical Floor Layout



Dimensions


Elevating fixing brackets should be positioned within 300 mm from either end of a track run and either side of all joints.

## Minimum support requirement:

3.6 metre length $=4$ brackets equally spaced
2.4 metre length $=3$ brackets equally spaced
1.2 metre length = 2 brackets equally spaced


## Technical

## Interact Underfloor Power

## Standards and Approvals

Underfloor 63A - complies with BS EN 61534:2011
Manufactured within ISO 9000-9002 environment.

| TECHNICAL SPECIFICATION |  |  |
| :---: | :---: | :---: |
| ELECTRICAL SPECIFICATION | 63A |  |
| Rated Current | 63 | A |
| Rated Voltage | 480 | V |
| Frequency | 50/60 | Hz |
| Conditional Short Circuit Rating | 16 | kA |
| Resistance per Copper Conductor (At ambient temperature $20^{\circ} \mathrm{C}$ ) | 1.3 | $\mathrm{m} \Omega / \mathrm{m}$ |
| Impedance per Copper Conductor (At ambient temperature $20^{\circ} \mathrm{C}$ ) | 1.3 | $\mathrm{m} \Omega / \mathrm{m}$ |
| VOLT DROPS (FULL LOAD, CONCENTRATED AT ONE END) (LINE + NEUTRAL) |  |  |
| Powertrack | 2.9 | $\mathrm{mV} / \mathrm{A} / \mathrm{m}$ |
| Feed Unit | 0.6 | mV/A |
| Tap-off Connection | 1.6 | mV/A |
| $+4 \mathrm{~mm}^{2}$ Cable | 10 | $\mathrm{mV} / \mathrm{A} / \mathrm{m}$ |
| + $2.5 \mathrm{~mm}^{2}$ Cable | 18 | $\mathrm{mV} / \mathrm{A} / \mathrm{m}$ |
| Joint | 0.6 | mV/A |
| Flexible interlink Unit | 0.8 | $\mathrm{mV} / \mathrm{A}$ |
| + $10 \mathrm{~mm}^{2}$ Cable | 4.0 | $\mathrm{mV} / \mathrm{A} / \mathrm{m}$ |
| EARTH FAULT LOOP IMPEDANCE |  |  |
| Line Conductor | 1.5 | $\mathrm{m} \Omega / \mathrm{m}$ |
| EARTH |  |  |
| - Case | 1.0 | $\mathrm{m} \Omega / \mathrm{m}$ |
| - Copper | 1.5 | $\mathrm{m} \Omega / \mathrm{m}$ |
| - Copper + Case | 0.75 | $\mathrm{m} \Omega / \mathrm{m}$ |
| Feed Unit (Line + Earth) | 0.6 | $\mathrm{m} \Omega$ |
| Tap-off Connection (Line + Earth) | 3.1 | $\mathrm{m} \Omega$ |
| + 4mm² Cable R1 + R2 | 10 | $\mathrm{m} \Omega / \mathrm{m}$ |
| + 2.5mm ${ }^{2}$ Cable R1 + R2 | 18 | $\mathrm{m} \Omega / \mathrm{m}$ |
| Joint (Line + Earth) | 0.6 | $\mathrm{m} \Omega$ |
| Flexible Interlink Unit (Line + Earth) | 0.8 | $\mathrm{m} \Omega$ |
| + 10mm ${ }^{2}$ Cable R1 + R2 | 3.7 | $\mathrm{m} \Omega / \mathrm{m}$ |


| MECHANICAL DATA | 63A |  |
| :---: | :---: | :---: |
| Max. No. of Copper Conductors | 5 |  |
| Conductor Cross Section Area (Nominal) | 14.4 | $\mathrm{mm}^{2}$ |
| Powertrack Casing Copper Equivalent (Where Casing is Protective Earth) | 14.5 | mm² |
| Cable Termination Capacity | 16 | $\mathrm{mm}^{2}$ |
| Tap-off Cable 32A | 4.0 | $\mathrm{mm}^{2}$ |
| Tap-off Cable 13A | 2.5 | $\mathrm{mm}^{2}$ |
| Tap-off Conduit Sizes | 16/20 | Ømm |
| Flexible Interlink Cable | 10 | $\mathrm{mm}^{2}$ |
| Flexible Interlink Conduit | 25 | Ømm |
| Integral Feed Conduit Entry | $1 \times 25$ | Ømm |
| Feed Conduit Entry | $2 \times 25$ | Ømm |
| IP Rating | 4X |  |
| MATERIALS SPECIFICATION |  |  |
| Powertrack Casing, Feeds and Brackets | Galvanised Steel |  |
| Conductors | High Conductivity Copper |  |
| Dust cover |  |  |
| Powertrack Insulators | 63 A - Polyamide and polyester |  |
|  | Polycarbonate Sockets / Tap-off |  |
|  | Plug / Joint |  |
| Mouldings | Polycarbonate |  |
| Shutter | Acetal |  |
| Tap-off/Interlink Flexible Conduit | Galvanised Steel |  |
| Tap-off Cable (Singles in Conduit) | LSF cable to BS 7211 (PVC Cable to BS 6004 available on request) |  |
| Tap-off Cable (Multi-core) | Multi-core cable to BS 6500 \& BS 7211 LSF cable standard (PVC cable available on request) |  |
| TAP-OFF PINS |  |  |
| - Line, Neutral \& Copper Earth | Copper and Phosphorous Bronze, tin plated |  |
| - Casing Earth | Brass, tin plated |  |
| Flexible Interlink Cable | 10mm² cable to BS 6231 |  |

3 m tap off is actually $2.7 / 2.8 \mathrm{~m}$ fully stretched, shortened by $0.1-0.2 \mathrm{~m}$ of slack to ensure it remains flexible when wired to a module.

## Cablelink Plus Modular Floorbox

## Standards and Approvals

The Cablelink Plus Modular floorbox supports compliance with the latest edition of the IET Wiring Regulations（BS 7671）and to BS EN 50085 Part 1 and BS EN 50085 Part 2－2．

## TECHNICAL SPECIFICATION

## MATERIALS

PLASTIC COMPONENTS
Manufactured from UL94 V2 rated nylon．
METAL COMPONENTS
Manufactured from pre－galvanised steel．
Accessory plates are powdercoated or colour coated．
RAL COLOURS
Grey（GRY）$=$ RAL 7011

## Feature benefits

－Tested to EN 50085－2－2 to accept 5000N load
－Quick release blades ensure a fast and simple installation
－Designed to support Cat 6 \＆Cat 7 structured cabling systems
－Self closing lid in accordance with IEC 61534－22
－Wide range of power and data accessories available to meet all requirements
－Quality，reliability and safety come as standard
－Provision of RCD protection supports compliance with the 17th Edition Wiring Regulations
－ 5 year guarantee

## Installation

Cablelink Plus Modular boxes should not be installed in the following situations：
－Where protruding electrical cables are likely to cause a safety hazard
－In passageways，especially where trolleys or other vehicles may be used
－On escape routes，as this may impede the evacuation of the occupants from the building
－Where the cleaning methods employed result in the formation of pools of liquid or soaking of the floor surface
－Desks，chairs，shelving，filing cabinets should not be positioned on the floorbox as this will interfere with opening the lid

## Load Testing

Load Testing of floorboxes to BS EN 50085 Part 2－2（Clauses 10．5．103 and 10．5．104）．
The floorboxes have been tested to and comply with the loading requirements of BS EN 50085 Part 2－2（Cable trunking systems and cable ducting systems for electrical installations Part 2－2：Particular requirements for cable trunking systems and cable ducting systems intended for mounting underfloor，flushfloor，or onfloor）．

There are two loading criteria for the floorboxes－one with a point loading to replicate foot traffic for example，and the other，with a large plate to replicate hand trucks／trollies and heavier larger loads．For both loading criteria the maximum allowable deflection under load is 6 mm and the maximum permanent deflection after the load has been removed is 3 mm ．The loading position is the centre of the lid．

The Lid Deflection（loading）graph shows that the maximum point loading classification achieved is 3 kN and the maximum large plate loading classification achieved is 5 kN ．

The Permanent Deflection graph shows the permanent deflection from the test wheel loading at 3 kN is 0.55 mm and large plate loading at 5 kN is 0.4 mm ． This is well within the maximum allowable deflection of 3.0 mm ．

Lid Deflection－Cablelink Plus $265 \times 265 \mathrm{~mm}$ Frame Assembly


Permanent Deflection After Removal of Load－Cablelink Plus $265 \times 265 m m$ Frame


## Cablelink Plus Modular

## Technical

## Cablelink Plus Modular Floorbox

Floorbox: Tile and Frame and Floor Tile Cut-Out Dimensions for 3 and 4 Modules Box


MAXIMUM DEPTH (mm)


| DIMENSIONS (mm) |  |  |
| :---: | :---: | :---: |
|  | 3 MODULE | 4 MODULE |
| A | 287 | 362 |
| B | 287 | 287 |
| C $^{\star}$ | 266 | 341 |
| D $^{\star}$ | 266 | 266 |

* Tile cut out general tolerance $=+1.5 \mathrm{~mm}$.

The table below shows the sizes required for the carpet lid infill for the Cablelink Plus Modular floorboxes.

|  | 265X265m |  | $340 \times 265 \mathrm{~mm}$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  | X | Y | X | Y |
| Carpet Infill (mm) | 251 | 219 | 326 | 219 |

## Cablelink Plus Module Dimensions

CRM11750


CRM11730


Knockouts

|  | END KNOCKOUT <br> (CONDUUT ENTRY) |  | SIDE KNOCKOUT <br> (INTERLINK) |
| :---: | :---: | :---: | :---: |
| Power | 20 mm | 25 mm | 20 mm |
| Non-Power | 1 | - | 2 |
| $6 \times$ LJUCC Only <br> (CRM21301) | - | 1 | 2 |

## Cat 6 and Cat 7 Compatibility

With the introduction of Cat 6 and Cat 7 data cabling the orientation and depth of many data outlets has changed resulting in the need for greater backbox depths and wiring space to accommodate these longer data outlet. No longer is a 35 mm wiring space sufficient to ensure data terminations can be made to the manufacturer's recommendations to prevent transmission losses. As a result MK has introduced 45 mm wiring space for the Cablelink Plus floorbox systems (as well as for the Prestige 3D wall trunking system). This easily accommodates the longer Cat 6 and Cat 7 data outlets and leaves sufficient space for the data cable to run underneath it.

## Cablelink Plus Modular Floorbox

## Installing Modules into the Cablelink Plus Modular Floorbox

To install a module into the Cablelink Plus Modular floorbox, firstly ensure the sliding bracket is pushed towards the centre of the module.
(1) Lower the opposite end into the box and push the tab firmly into the slot in the ladder at the height the module should be positioned.

The other end is then lowered down so that the tab on the sliding bracket is level with the same slot on the other side of the frame.

(2)
Holding the module with the built in handles, the sliding bracket is then pushed outwards so that the tab engages with the correct slot.

A screw is then used to fix the sliding bracket in place.
Fix the retaining clips to each end of each module and frame.
The module is now secure. The procedure is reversed in order to remove a module.

## Dual Earth Sockets and High integrity Earthing ${ }^{\dagger}$

Modern offices, schools, universities, laboratories etc, are heavy users of IT, computing and electronic equipment. As most of this equipment is fitted with a filter mechanism to protect data and data transmission against RFI and power surges, small earth leakages emanating from this equipment introduces a current onto the Circuit Protective Conductor (CPC) effectively turning this into a functional earth.

Should the CPC be broken, any equipment downstream of the break is no longer connected to earth. If a fault now occurs in this equipment, the CPC could rise to the mains potential and the fault transferred to other equipment on the circuit. The implicit risks to equipment, data and most importantly users in this situation are dealt with in the 17th Edition of the IET Wiring Regulations ${ }^{\dagger}$, and have led MK Electric to introduce Dual Earth Sockets.

Dual Earth Sockets allow the designer and installer to maintain the earth integrity of the system, in accordance with the 17th Edition of the IET Wiring Regulations ${ }^{\dagger}$ is intended to maintain at all times the CPC to ensure safety.


## Clean Earth Sockets

Clean Earth Sockets allow the designer and installer to introduce a protective conductor connecting sensitive equipment i.e. a computer, directly to the main earth.

This reduces the possibility of 'noise' occurring on the protective conductor through induced voltages from other equipment, and hence can have benefits in maintaining data and data transmission integrity.

## Earthing on Data modules for Modular Raised

Earthing studs are provided on all Unserviced data modules to enable a reliable connection to earth to be made. Earthing Kit CX-10 is recommended for use to ensure the earthing cable is connected correctly.

## Cablelink Plus Modular

## Technical

## Serviced Power Modules

- Modules are available Left Hand and Right Hand to achieve a 'staggered' arrangement
- 'Staggered' arrangement ensures strain relief clearance for moulded plug tops
- Add 'RH' suffix for Right Hand Module, e.g CRM11730RH
- When four socket outlets are required, order CRM11750 'staggered' arrangement is built in

3 Compartment Boxes


OR


## Installing Cablelink Plus Modular Floorbox - Blades

- Quick release blades to secure firmly in position for a "fit and forget" installation
- No tools required for faster installation
- Self adjusting blades - ensures floorbox remains secure throughout service life
- Fixes to floor thicknesses of $15-50 \mathrm{~mm}$

BLADE QUICK RELEASE MECHANISM


MOULDED FRAME

# Cablelink Plus Single Pan Technical 

## Cablelink Plus Single Pan

## Standards and Approvals

The Cablelink Plus Single Pan Box supports compliance with the latest edition of the IET Wiring Regulations (BS 7671) and to BS EN 50085 Part 1 and EN 50085 Part 2-2.

Additionally the floorboxes also comply with IEC 60670 Parts 1 and 23.

## TECHNICAL SPECIFICATION

## MATERIALS

PLASTIC COMPONENTS
Manufactured from UL94 V2 rated nylon.
METAL COMPONENTS
Manufactured from pre-galvanised steel. Accessory plates are powdercoated or colour coated.

RAL COLOURS
Grey $(G R Y)=$ RAL 7011

## Feature benefits

- Tested to BS EN 50085-2-2 to accept 5000N Ioad
- Designed to support Cat 6 and Cat 7 structured cabling systems
- 70 mm pan depth has been designed for those applications with shallow voids
- Self closing lid in accordance with IEC 61534-22
- Quality, reliability and safety come as standard
- Provision of RCD protection supports compliance with the 17th Edition Wiring Regulations
- 5 year guarantee


## Installation

Cablelink Plus Single Pan boxes should not be installed in the following situations:

- Where protruding electrical cables are likely to cause a safety hazard
- In passageways, especially where trolleys or other vehicles may be used
- On escape routes, as this may impede the evacuation of the occupants from the building
- Where the cleaning methods employed result in the formation of pools of liquid or soaking of the floor surface
- Desks, chairs, shelving, filing cabinets should not be positioned on the floorbox as this will interfere with opening the lid


## Cat 6 and Cat 7 Compatibility

With the introduction of Cat 6 and Cat 7 data cabling the orientation and depth of many data outlets has changed resulting in the need for greater backbox depths and wiring space to accommodate these longer data outlet. No longer is a 35 mm wiring space sufficient to ensure data terminations can be made to the manufacturer's recommendations to prevent transmission losses. As a result MK has introduced 45mm wiring space for the Cablelink Plus floorbox systems (as well as for the Prestige 3D wall trunking system.) This easily accommodates the longer Cat 6 and Cat 7 data outlets and leaves sufficient space for the data cable to run underneath it.

## Load Testing

Load Testing of Floorboxes to BS EN 50085 Part 2-2 (Clauses 10.5.103 and 10.5.104).
The floorboxes have been tested to and comply with the loading requirements of EN 50085 Part 2-2 (Cable trunking systems and cable ducting systems for electrical installations Part 2-2: Particular requirements for cable trunking systems and cable ducting systems intended for mounting underfloor, flushfloor, or onfloor).

There are two loading criteria for the floorboxes - one with a point loading to replicate foot traffic for example, and the other, with a large plate to replicate fork trucks and heavier larger loads for example. For both loading criteria the maximum allowable deflection under load is 6 mm and the maximum permanent deflection after the load has been removed is 3 mm .

The Lid Deflection (loading) graph shows that the maximum point loading classification achieved is 3 kN and the maximum large plate loading classification achieved is 5 kN .

The Permanent Deflection graph shows the permanent deflection from the test wheel loading at 3 kN is 0.55 mm and large plate loading at 5 kN is 0.4 mm . This is well within the maximum allowable deflection of 3.0 mm . The loading position is the centre of the lid

Lid Deflection - Cablelink Plus 265x265mm Frame Assembly


Permanent Deflection After Removal of Load - Cablelink Plus 265x265mm Frame


## Cablelink Plus

 Single Pan Technical
## Cablelink Plus Single Pan

## Floorbox: Tile and Frame and Floor Tile Cut-Out Dimensions



| DIMENSIONS (mm) |  |  |  |
| :---: | :---: | :---: | :---: |
|  | CRB100 | CRB265 | CRB340 |
| A | 130 | 287 | 287 |
| B | 222 | 287 | 362 |
| C* | 115 | 275 | 275 |
| D* | 206 | 272 | 350 |

* General tolerance $=+1.5 \mathrm{~mm}$.

The table below shows the sizes required for the carpet lid infill for the Cablelink Plus Single Pan Floorboxes.

| DIMENSIONS (mm) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | CRB100 |  | CRB265 |  |
|  | X | Y | X | Y |
|  | 93 | 152 | 251 | 219 |

## Knockouts

1 compartment box is supplied with 20 and 25 mm knockouts. 3 and 4 compartment box is supplied with $2 \times 20 \mathrm{~mm}, 1 \times 25 \mathrm{~mm}$, $1 \times 32 \mathrm{~mm}$ knockouts respectively, per compartment.

[^63]
(1) Wiring Space. Please see table below for dimensions.
(2) This dimension assumes a floor covering thickness of 8.0 mm . A thinner covering will reduce this dimension accordingly.

## Plug Top Clearances

| DIMENSIONS (mm) |  | 70mm B0X | 95mm B0X |
| :---: | :---: | :---: | :---: |
| 1 | Wiring Space | 35 | 45 |
| 2 | Plug Top Clearance | 31 | 46 |

## Plate Dimensions (mm)



## Dual Earth Sockets and High integrity Earthing ${ }^{\dagger}$

Modern offices, schools, universities, laboratories etc, are heavy users of IT, computing and electronic equipment. As most of this equipment is fitted with a filter mechanism to protect data and data transmission against RFI and power surges, small earth leakages emanating from this equipment introduces a current onto the Circuit Protective Conductor (CPC) effectively turning this into a functional earth.

Should the CPC be broken, any equipment downstream of the break is no longer connected to earth. If a fault now occurs in this equipment, the CPC could rise to the mains potential and the fault transferred to other equipment on the circuit. The implicit risks to equipment, data and most importantly users in this situation are dealt with in the 17th Edition of the IET Wiring Regulations, and have led MK Electric to introduce Dual Earth Sockets.

Dual Earth Sockets allow the designer and installer to maintain the earth integrity of the system, in accordance with the 17th Edition of the IET Wiring Regulations is intended to maintain at all times the CPC to ensure safety.

## Clean Earth Sockets

Clean Earth Sockets allow the designer \& installer to introduce a protective conductor connecting sensitive equipment i.e. a computer, directly to the main earth.

This reduces the possibility of 'noise' occurring on the protective conductor through induced voltages from other equipment, and hence can have benefits in maintaining data and data transmission integrity.

## Grommets

## FEATURE BENEFITS

- Rotary and split lid variations available to meet all requirements
- One touch self-adjusting mechanism for a fast, simple and secure installation
- Available in $5^{\prime \prime}$ and $8^{8 \prime}$, grey for flexibility of use
- 5 year guarantee

| GROMMET TECHNICAL DIMENSIONS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { LIST } \\ & \text { NO. } \end{aligned}$ | DESCRIPTION | DIAMETER | OVERALL DEPTH | FLOOR TILE | CUT-OUT | KNOCKOUT | ACCESSORY CUT-OUT |
| GR500 | Simple Access Grommet | 142 mm | 50 mm | All | $127 \mathrm{~mm}(+/-1 \mathrm{~mm})$ |  |  |
| GR510 | Secure Access Grommet | 142 mm | 60mm | $30-50 \mathrm{~mm}$ | 127 mm ( $+/-1.5 \mathrm{~mm}$ ) |  |  |
| GR100 | Split Lid Grommet | 142 mm | 60 mm | $30-50 \mathrm{~mm}$ | 127 mm ( $+/-1.5 \mathrm{~mm}$ ) |  |  |
| GR200 | Power Grommet BS 1363 MK SSO | 142 mm | 85 mm | $30-50 \mathrm{~mm}$ | $127 \mathrm{~mm}(+/-1.5 \mathrm{~mm})$ | $20 \mathrm{~mm} \times 3$ |  |
| GR201 | Power Grommet MK Non-Std SSO | 142 mm | 85 mm | $30-50 \mathrm{~mm}$ | 127 mm ( $+/-1.5 \mathrm{~mm}$ ) | $20 \mathrm{~mm} \times 3$ |  |
| GR5050 | $50 \mathrm{~mm} \times 50 \mathrm{~mm}$ Accessory Grommet | 142 mm | 85 mm | 30-50mm | $127 \mathrm{~mm}(+/-1.5 \mathrm{~mm})$ |  | $50 \mathrm{~mm} \times 50 \mathrm{~mm}$ Euro frame fitted |
| GR800 | $2 \times$ LJU6C Grommet | 142 mm | 85 mm | $30-50 \mathrm{~mm}$ | 127 mm ( $+/-1.5 \mathrm{~mm}$ ) |  | $36.7 \mathrm{~mm} \times 22.2 \mathrm{~mm}$ |
| GR850 | Simple Access Grommet | 233 mm | 85 mm | $30-50 \mathrm{~mm}$ | 209 mm ( $+/-1.5 \mathrm{~mm}$ ) |  |  |
| GR855 | Secure Access Grommet | 233 mm | 85 mm | $30-50 \mathrm{~mm}$ | $209 \mathrm{~mm}(+/-1.5 \mathrm{~mm})$ |  |  |

## DeskPod ${ }^{\text {TM }}$

## Standards and Approvals

The DeskPod ${ }^{T M}$ range is designed \& tested to BS 5733 (General requirements for electrical accessories). The sockets are designed and tested to BS 1363 Part 2 (Specification for 13A switched and unswitched socket-outlets).

DeskPod ${ }^{T M}$ is designed to be used in electrical installations to BS 7671 and, with certain restrictions, in installations complying with BS 6396. Further information regarding BS 6396 is given below.

BS 6396:2002: Electrical systems in office furniture and office screens - specification MK can supply desk modules that may be used in installations complying to BS 6396.

## TECHNICAL SPECIFICATION

## MATERIALS

MAIN HOUSING
Anodised aluminium extrusion.

## MOULDINGS

High impact, flame retardant grade of polycarbonate.
INTERNAL WIRING
Single cables insulated in low smoke, low fume grade of material to BS 7211 .

POWER LEADS
Multicore flexible cable to BS 6500. Insulation PVC (low smoke and fume available on request).

## FEATURE BENEFITS

- Custom designed and versatile to suit all requirements
- Choice of factory fitted sockets
- Ease of installation - available with pre-wired tap-offs
- Breadth and flexibility of range to suit all specifications
- Manufactured from anodised aluminium and polycarbonate - chemical, colour fade, impact resistant and flame retardent
- Quality, reliability and safety come as standard
- Provision of RCD protection supports compliance with the 17th Edition Wiring Regulations
- 5 year guarantee


### 3.15A and 5A

3.15A \& 5A fuses $5 \times 20 \mathrm{~mm}$ to BS EN 60127-2:2003 time lag, high breaking current

## General

The following restrictions are placed on these desk modules:

- Maximum current rating $=13 \mathrm{~A}$ and maximum voltage rating $=250 \mathrm{~V}$ ac
- The supply cord must connect to the permanent electrical installation via a standard 13A plug to BS 1363-1
- All sockets, connected to a single supply, must be protected as follows:


## Up to 4 sockets



Up to 6 sockets


- No more than six sockets can be connected to a single supply
- No single item of equipment having a rated voltage greater than 250 V and rated current greater than 5A must be connected to the desk module
- The desk module must be connected to an electrical supply that has a protective (Earth) conductor

The completed installation must be inspected and tested for:

- Continuity and polarity of the conductors
- Insulation resistance
- Earth continuity

Details of the tests are given in the installation instructions. These tests must be carried out whenever the system is reconfigured.

It is recommended that the installation is periodically maintained, inspected and tested. For full details of the requirements for the rest of the installation refer to BS 6396.

## Dimensions

The nominal length of each configuration can be estimated using the dimensions shown in the custom design section of this brochure. eg: Part number DP P4010.


## Fixing Centres



Bracket retracted (B)/Screw fixing pitch (/)
$=$ Nominal length (L) - 17 mm
(Bracket extended)
E.g. DP P4010 $=405-17 \mathrm{~mm}=388 \mathrm{~mm}$

## Onix Plus ${ }^{T M}$ Floorboxes

## Standards and Approvals

These products are designed to withstand heavier than normal traffic loading as found in office buildings. The Onix Plus ${ }^{\text {m" }}$ range supports compliance with the requirements of the 17th Edition of the IET Wiring Regulations (BS 7671) and to BS EN 50085 Part 1 and EN 50085-2-2. Additionally the floorboxes also comply with IEC 60670 Parts 1 and 23.

## TECHNICAL SPECIFICATION

## materials

BOX LID AND FRAMES
Lid, load plate and frame manufactured in stainless steel. Cord Outlet mouldings are manufactured from a UL94 V2 rated nylon.

## POWER GROMIMET

Service outlet is die cast aluminium, brass or nickel plated brass. The base unit is pre-galvanised steel. Plastic parts are polycarbonate.

## RAL COLOURS

Grey (GRY) $=$ RAL 7011
Beige (BEG) = RAL 1019

## FEATURE BENEFITS

- Wet washable and IP44 when not in use
- Tested to EN 50085-2-2 to accept 10,000N Ioad (5,000N load for Onix Plus Grommet)
- Selection of lid recess depths available, allowing for various floor depths
- Designed to support Cat 6 structured cabling systems
- Wide range of power and data accessories available to meet all requirements
- Quality, reliability and safety come as standard
- Provision of RCD protection supports compliance with the 17th Edition of the IET Wiring Regulations (BS 7671)
- 5 year guarantee


## Wet Wash Test

The plain lid and the centre Snorkel outlet lids have an Ingress Protection rating of IP44, according to BS EN 60529:1992

## Centre Cord Outlet Restrictions

This applies to the Snorkel Cord Outlet lid.

For a full range of corresponding products, see pages 403-411 in the product selector.

[^64]CENTRE CORD OUTLET EDGE CORD OUTLET BLANK LID


BLANK LID


## Lid Recess Dimensions

The dimensions in the table provide the sizes for the floor covering insert for the lid.

| DIMENSION (mm) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BOX SIZE | A | B | C | D | E |  |
| $200 \times 200 \mathrm{~mm}$ | 183 | 183 | 102 | 31 | 45 |  |
| $265 \times 265 \mathrm{~mm}$ | 248 | 248 | 102 | 63 | 45 |  |
| $340 \times 340 \mathrm{~mm}$ | 323 | 323 | 102 | 101 | 45 |  |

Note: Due to the weight of the lid and floor covering, a tile lifter, not the cord outlets, should be used to lift these lids.

## Screed Depth Table - for Snorkel Lid with Flush Accessories

| WIRING SPACE <br> $(\mathbf{m m})$ | FLOOR TILE THICKNESS <br> - INCLUDING ADHESIVE <br> $(\mathbf{m m})$ | MINIMUM SCREED <br> DEPTH (mm) | MINIMUM <br> FINISHED FLOOR <br> DEPTH (mm) |
| :---: | :---: | :---: | :---: |
| 25 | 15 | 85 | 100 |
| 25 | 20 | 80 | 100 |
| 25 | 25 | 75 | 100 |
| 25 | 30 | 70 | 100 |
| 35 | 15 | 95 | 110 |
| 35 | 20 | 90 | 110 |
| 35 | 25 | 85 | 110 |
| 35 | 30 | 80 | 110 |
| 45 | 15 | 105 | 120 |
| 45 | 20 | 105 | 120 |
| 45 | 25 | 95 | 120 |
| 45 | 30 | 90 | 120 |

- Decide Wiring Space required: $25 \mathrm{~mm}, 35 \mathrm{~mm}$ or 45 mm
- Decided Floor Tile Thickness. (This must align with the lid depth choice)
- Read across to determine the minimum screed depth and subsequent finish floor thickness
Note: When using the wave plate (CXP20215 / CXPC20215) or ST fibre plate (CXP20500 / CXPC20500) the minimum screed depth and minimum finished floor depth must be increased by 15 mm . This will result in restrictions when utilising a 45 mm wiring space.



## Onix Plus ${ }^{\text {TM }}$ Floorboxes and Power Grommets

## Load Testing

Load Testing of Floorboxes to BS EN 50085 Part 2-2 (Clauses 10.5.103 and 10.5.104).

The floorboxes have been tested to and comply with the loading requirements of BS EN 50085 Part 2-2 (Cable trunking systems and cable ducting systems for electrical installations Part 2-2: Particular requirements for cable trunking systems and cable ducting systems intended for mounting underfloor, flushfloor, or onfloor).

There are two loading criteria for the floorboxes - one with a point loading to replicate foot traffic for example, and the other, with a large plate to replicate fork trucks and heavier larger loads for example. For both loading criteria the maximum allowable deflection under load is 6 mm and the maximum permanent deflection after the load has been removed is 3 mm .
The loading position is the centre of the lid.
The Lid Deflection (loading) graph shows that the maximum test wheel loading classification achieved is 3 kN and the maximum large plate loading classification achieved is 10 kN .

The Permanent Deflection graph shows the permanent deflection from the test wheel loading at 3 kN is 0.8 mm and large plate loading at 10 kN is 1.65 mm . This is well within the maximum allowable deflection of 3.0 mm .

Note: This test data specifically refers to the $265 \times 265 \mathrm{~mm}$ sized cord outlet box assembly. The other floorbox sizes also comply with the required test criteria. Declarations of conformity are available on request for the entire range.

Lid Deflection - Onix Plus Cord Outlet Lid 265x265mm


Permanent Deflection After Removal of Load

- Onix Plus 265x265mm Cord Cap Lid



## Metal Power Grommet Dimensions

The Metal Power Grommet is designed to be used in conjunction with the Screed Base Unit, part number NXGB100-1 or NXGB100X-1, depending on the depth of the screed.
Onix Grommets are designed to be IP44 rated when the lid is closed, allowing the floor to be washed.


| BASE UNIT | NXGB100-1 | NXGB100X-1 |
| :---: | :---: | :---: |
| Screed Depth $(\mathrm{mm})$ | $55-80 \mathrm{~mm}$ | $80-110 \mathrm{~mm}$ |

## Onix Plus ${ }^{\text {TM }}$ Floorboxes and Power Grommets

## Installation of Snorkel Lid

The base unit is fixed to the slab and the ducts or conduits are fed into the base using the appropriate side entry plate.(2) The disposable screed cover is fitted to prevent the ingress of screed through the top. All areas of the box which may be susceptible to screed ingress should be sealed.
(3) The Lid frame should be assembled and fitted after the disposable screed lid has been removed and the gasket can now be fitted.
(4) The lid is supplied with an earth lead and must be bonded to earth for all power applications. As the lid is only installed when the floor covering is laid there is less chance the surface finish of the lid will be damaged.
(5) A floor covering insert is required for the lid recess. The dimensions for the insert are given in the Lid Recess Dimensions section see page 685.
(6) Sealing compounds are required for products that are for use in wet wash environments.
(7) The bases are supplied with 35 mm wiring space, but with the option to reduce to 25 mm or increase to 45 mm with the Cuba-1 height adjustment kit.


## How to Install the Gasket



Identify the gaskets

The wider gasket is used in the
frame and the narrower gasket is used on the lid. The gaskets are designed to sit next to one another, not one on top of the other.


Identify the gaskets

Butt the other end of the gasket to the start to ensure a good join. This also ensures the gasket is not stretched unduly.

Continue fitting the gasket around the edge of the lid keeping the corners as close to $90^{\circ}$ as possible, until complete.
(2) Ensure gasket is clean

Ensure both lid and frame are dry, clean and free from oily deposits and debris such as grout and screed.

If replacing the gaskets ensure all traces of existing gasket and adhesive have been removed. An alcohol wipe will aid the removal of the adhesive backing.


Fitting frame gasket Start the frame gasket as close to the inner edge as possible, approximately half way along the length. Ensure the gasket runs underneath the Earth bonding cable. Do not run the gasket past the first corner at this stage.


Ensure gasket is straight The gasket must have
no twists in it. Any twists will result in the gasket not fitting and functioning correctly.

Fitting
frame
gasket
Butt the end
of the gasket to the start to ensure a good join. This also ensures the gasket is not stretched unduly.

the lid as close to the outer edge as possible, approximately half way along the length. Ensure the gasket runs underneath the Earth bonding cable. Do not run the gasket past the first corner at this stage.

around the inner edge of the frame, ensuring the gasket runs to the outside of the screw hole, until complete.

## Onix Plus ${ }^{\text {TM }}$ Floorboxes and Power Grommets

## Screed Depth - 25mm, 35mm and 45mm Wiring Space



## Installation of Metal Power Grommets

(1) The Screed Base Unit, is laid onto the concrete slab. There are two Screed Bases available depending on the screed depth.

- Screed depth between 55 mm and 80 mm use NXGB100-1
- Screed depth between 80 mm and 110 mm use NXGB100X-1

A metal plate supplied with the Screed Base Unit to keep the screed out of the interior of the box.

After screeding the mounting plate is fitted and the floor covering is laid.
(2) The grommet top is installed after the floor covering is laid. The lid is simply screwed into position until tight with the floor.


## Cat 6 Compatibility

With Cat 6 data cabling the orientation and depth of many data outlets has changed, resulting in the need for greater backbox depths and wiring space to accommodate these longer data outlet. No longer is a 35 mm wiring space sufficient to ensure data terminations can be made to the manufacturer's recommendations to prevent transmission losses. 45 mm wiring space for the Cablelink Plus floorbox system is available.

## Cablelink Plus Screed System

## Standards and Approvals

Cablelink Plus Screed System range complies with the relevant requirements of the latest edition of 17th Edition of the IET Wiring Regulation (BS 7671) and to BS EN 50085 Part 1 and BS EN 50085 Part 2-2. Additionally the floorboxes also comply with IEC 60670
Parts 1 and 23. The metal used complies to the requirements of BS EN 10327:2004

## FEATURE BENEFITS

- Tested to BS EN 50085-2-2 to accept 5000N Ioad
- The system incorporates numerous design features to ensure a fast and simple installation
- Designed to support Cat 6 \& Cat 6A structured cabling systems
- Suitable for screeded depth from 55 mm to 110 mm (Height adjustment kits and floor coverings must be used)
- Minimum finished floor thickness (including carpet, tile etc) is 74 mm , with a 35 mm wiring space. Can be reduced to 64 mm if a 25 mm wiring space can be utilised. (A CUBA-1 adjustment kit must be used)
- Floorboxes are IP2X rated in accordance with BS EN 50085-1
- Choice of 1, 2, 3 or 4 compartment floorboxes
- Self Closing lid in accordance with IEC 61534-22
- Wide range of power and data accessories available to meet all requirements
- PVCu ducting manufactured from $100 \%$ recycled material*
- Quality, reliability and safety come as standard
- Provision of RCD protection supports compliance to the 17th Edition of the IET Wiring Regulation (BS 7671)
- 5 year guarantee


## TOP TIPS

- Distance between two junction boxes must not exceed 6 metres
- Service Outlet Boxes - fixed only on branch ducts and not on header ducts. Fixing service boxes on the header ducts affects cable capacity and constricts the header
- Workstations - locate over Service Outlet Boxes so that it does not interfere with normal office traffic


## Layout

In order that the installation may exhibit the desired flexibility, the ducting is usually laid out on either a Grid, Fishbone or a Comb Pattern of single, double or triple runs.

A Grid Pattern is widely used in areas where the occupants require the highest degree of flexibility in reorganising work areas. Capacity can be increased by returning individual ring mains through different runs of duct which in itself allows easier installation.

The Fishbone Pattern is ideal for a medium sized area where lesser boxes are required.

The Comb Pattern is the most economical way of installation where least duct is used. The comb pattern is suited for medium to small office areas.


Grid pattern


Fishbone pattern


Comb pattern

| Header Runs | $\boxtimes$ Universal Junction Box |  |
| :--- | :--- | :--- |
| $\square$ | Service Outlet Box | $=$ Branch Runs |
| $\square$ | Vertical Access Box |  |

For a full range of corresponding products,
see pages 413-424 in the product selector.

# Cablelink Plus Screed <br> <br> Technical 

 <br> <br> Technical}

## Cablelink Plus Screed System

## Cable Capacity Guide

The cable factor table below is based on the 17th Edition of the IET Wiring Regulation (BS 7671) and must be regarded only as a guideline. Care should be taken in selecting adequate trunking sections taking into consideration the number and size of cables involved and construction of the junction box. It is recommended that the initial design of trunking installations include adequate provision for future wiring. To determine the size of the trunking required, multiply the quantities of each size of conductor and appropriate factor from Table A and compare the total with the capacity unit figure in the appropriate Table B.

| TABLE A - CABLE FACTORS |  |  |
| :---: | :---: | :---: |
| CABLE TYPE | CSA | CABLE FACTOR |
| POWER CABLES |  |  |
| PVC Stranded | $1.5 \mathrm{~mm}^{2}$ | 8.6 |
|  | $2.5 \mathrm{~mm}^{2}$ | 12.6 |
|  | $4 \mathrm{~mm}^{2}$ | 16.6 |
|  | $6 \mathrm{~mm}^{2}$ | 21.2 |
|  | $10 \mathrm{~mm}^{2}$ | 35.3 |
|  | $16 \mathrm{~mm}^{2}$ | 47.8 |
|  | $25 \mathrm{~mm}^{2}$ | 73.9 |
| Twin \& Earth | $2.5 \mathrm{~mm}^{2}$ | 86 |
|  | $4 \mathrm{~mm}^{2}$ | 99 |
|  | $6 \mathrm{~mm}^{2}$ | 148 |
| DATA CABLES |  |  |
| Cat 5E UTP | 5.5 mm dia | 30.2 |
| Cat 5E STP | 6.0 mm dia | 36 |
| Cat 6 UTP | 6.5 mm dia | 42.2 |
| Cat 6 STP | 7.0 mm dia | 49 |
| Cat 6A | 8.0 mm dia | 64 |

## Sample calculation

To estimate the total number of cables that can be accommodated with a $100 \times 38 \mathrm{~mm}$ ducting:

Step 1 Pick the factor from Table B corresponding to $100 \times 38=1563$

Step 2 Select the size of the cable that needs to be pulled through the trunking and its corresponding factor from Table A e.g. $4 \mathrm{~mm}^{2}$ stranded $=16.6$

Step 3 No. of cables = Value from (Table B / Table A) e.g. 1563/16.6 = 94 Cables.

TOP TIPS

- The number and location of boxes will depend on the end user requirements
- If the furniture layout is available, a floor box should be considered for each workstation or desk
- If the final furniture layout is not available as a general guide the minimum recommended distribution is one floor box for every $10 \mathrm{~m}^{2}$, and the maximum being one floor box per $4 \mathrm{~m}^{2}$

| TABLE B - METAL SCREED DUCTING CABLING CAPACITY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| SIZE <br> (MM) | COMPARTMENT <br> SIZE | CAPACITY <br> $\mathbf{1 0 0 \%}$ | CAPACITY <br> (45\% FILL) |  |
| $100 \times 38$ | $100 \times 38(1$ comp) | 3474 | 1563 |  |
| $225 \times 38$ | $112 \times 25(2 \mathrm{comp})$ | 3940 | 1773 |  |
| $250 \times 38$ | $75 \times 38(3$ comp) | 2613 | 1176 |  |
| $275 \times 38$ | $91 \times 38(3$ comp) | 2909 | 1309 |  |
| $300 \times 38$ | $100 \times 38(1$ comp) | 3206 | 1443 |  |

Cablelink Plus Screed System ducting complies with BS EN 50085-1:2005 and BS EN 50085-2-2:2008.

The above table gives the available capacity units on 45\% factor applied to the internal wiring area.

Carpet Cut out Dimensions


The table below shows the sizes required for the carpet lid infill and carpet tile cut out for the Cablelink Plus Screed Floorboxes.

| LID LIST <br> NUMBER | CARPET LID INFILL <br> DIMENSIONS <br> $(\mathrm{mm})$ |  |
| :---: | :---: | :---: |
|  | A | B |
| CXL100 | 152 | 93 |
| CXL265 | 219 | 251 |
| CXL340 | 219 | 326 |
| CUJL200 | 188 | 188 |
| CUJL265 | 253 | 253 |
| CUJL240 | 328 | 328 |


| BASE LIST <br> NUMBER | BOX CARPET CUT <br> OUT DIMENSIONS <br> $(\mathrm{mm})$ |  |
| :---: | :---: | :---: |
| CUB100 | 100 | 100 |
| CUB265 | 265 | 265 |
| CUB340 | 340 | 340 |
| CUJ200 | 200 | 200 |
| CUJ265 | 265 | 265 |
| CUJ240 | 340 | 340 |


| DUCTING CABLE CAPACITY - DATA CABLES |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| DUCTING CAPACITY mm² | 60MM DUCTING |  | 90MM DUCTING |  |
|  | 1025 |  | 2300 |  |
| NOMINAL CABLE DIAMETER mm² | NUMBER OF CABLES |  |  |  |
|  | 60mm DUCTING |  | 90mm DUCTING |  |
|  | @ $50 \%$ | @75\% | @ $50 \%$ | @75\% |
| 5.5 | 17 | 25 | 38 | 57 |
| 6 | 14 | 21 | 32 | 48 |
| 6.5 | 12 | 18 | 27 | 41 |
| 7 | 10 | 15 | 23 | 35 |
| 8 | 8 | 12 | 17 | 26 |

## Cablelink Plus Screed System

Cablelink Plus Screed Service Box

| Materials | UL94 V2 rated nylon, Pre-galvanised <br> steel. |
| :--- | :--- |
| Strength | The floor outlet boxes are capable of <br> resisting minor accidental loading when <br> rigidly supported under the outer rim of <br> the cover frame. |
| The outer casing of the floor outlet box is |  |
| Fire | manufactured from metal and is non- <br> combustible. The 8mm recess frame and <br> lid assembly is made from UL94 V2 rated <br> nylon the 12mm recess frame and lid <br> assembly is manufactured from metal and <br> is non corrosive. |
| Chemical resistance | Non corrosive. |
| Water absorption | The floor outlet boxes are for use in <br> situations where the cleaning method <br> used does not result in the formation <br> of pools of liquid or soaking of the floor <br> surface. |
| Ambient Temperature |  |

Average not to exceed $35^{\circ} \mathrm{C}$ in any 24 hour period.
RAL Colours
Grey $(G R Y)=$ RAL 7011

## PVCu Ducting and Accessories:

| Manufacture | Duct straight lengths are extruded from $100 \%$ <br> recycled PVCu. Fittings are formed by injection <br> moulding*. |
| :--- | :--- |
| Appearance | All PVCu duct and accessories are normally <br> smooth, matt white finish. |
| Strength | Heavy gauge, medium impact resistance <br> under normal conditions. |
| Fire | Non flame propagating. Class 1 spread of <br> flame. |
| Chemical resistance | Non-corrosive and not affected by sea water. <br> Excellent resistance to mineral acids, alkalis <br> and detergents but liable to attack from |
| Solvents such as alcohol, ketones, aromatics |  |
| and hydrocarbons. |  |

Metal Duct and Accessories

Material
Standard thickness 1.2 mm . Standard 1 mm available on request.
Standard length $\quad 2.44$ metres.
No. of compartments 1,2 or 3 compartments.
Standard depth $\quad 38 \mathrm{~mm}$ (Different depths are available on request).

Couplers have to be ordered separately.
Pre-cut lengths can be arranged, subject to price confirmation and availability.

# Cablelink Plus Screed <br> <br> Technical 

 <br> <br> Technical}

## Cablelink Plus Screed System

## Installation Guide for Underfloor Duct System

The structural floor slabs on which the underfloor ducts and boxes are to be laid must be reasonably level and smooth．Humps and protruding cement must be levelled to ensure the ducts being laid will maintain the minimum screed thickness of 25 mm over the ducts．It is recommended that a layer of green screed be laid on the structural slab beneath the underfloor ducts to prevent air gaps and vacuum while screeding．
（1）The floor slab where junction and service outlet boxes are to be laid should be marked out．The appropriate duct entry plates should be fastened to the boxes．

Ducts should be laid in straight lines between points of junction boxes and parallel to known base lines on each floor．Changes in direction of ducts should be made with junction boxes．

Use steel fixing clips to secure the ducts on to the floor slab prior to screeding．The intervals between two saddles should not exceed a maximum of 2 metres．

All joints in ducts and terminations of ducts in junction boxes／ vertical access boxes should be made water tight with approved type sealing compound．Precaution should be exercised during construction to prevent damage to the ducts system and to ensure that the ducts and vertical boxes are free of water，dirt，debris or any other obstruction which may impede and／or damage the cables during pulling in．
（2）Junction and service outlet boxes should be properly covered with the disposable lids and taped to ensure no cement gets into the boxes during screeding．

After screeding the disposable screed cover is removed and the cable installation can begin．
（3）If extra space is required under the accessory mounting tray then height adjuster kits can be used．The cables can now be installed and the services terminated．

Note：The bases are supplied with 35 mm wiring space，with the option to reduce to 25 mm or increase to 45 mm with a height adjustment kit－part number CUBA－1 see page 417
（4）The frame and lid assembly can now be fitted．Ensure the ratchet release is set to the lock position and align these with the ratchets in the accessory tray．
（5）Apply gentle pressure until the frame is securely seated in the box and against the finished floor e．g．carpet or vinyl．
（6）If the frame and lid assembly requires to be removed or rotated to ease cable egress then the ratchet releases should be rotated to the unlock position and the frame can be lifted out of the floorbox．The assembly can then be rotated and fixed as before．

Note：The lid should be completely removed from the frame before attempting to release the frame．
（7）Attention must be paid to ensure there is both sufficient wiring depth and plug top clearance for the particular cables／plugs being used in each installation．


Ratchet Release Lock Position


## Cablelink Plus Screed System

## Screed Depth－25mm，35mm and 45mm Wiring Space

This graph enables the specifier／installer to determine which depth the screed（plus floor covering）must be in order to achieve a certain accessory wiring space and plug top clearance within the floorbox．For example if the specifier requires a 35 mm standard wiring depth and a 45 mm plug top clearance then the graph shows that an 82 mm screed（plus 8 mm non－compressible floor covering）depth is required．Alternatively，if the depth is fixed， at 90 mm for example，then by having a 45 mm wiring space the resulting plug top clearance will be 43 mm ．If additional plug top clearance is required then the wiring depth can be reduced to 35 mm or even 25 mm providing a plug top clearance of 53 mm or 63 mm respectively．Care must be taken to ensure there is sufficient wiring depth and plug top clearance for each individual installation．All these dimensions are based upon the floor covering being 8 mm thick when fully compressed．If the floor covering is thicker or thinner then the screed depth must be reduced or increased as appropriate．When no floor covering is to be used the minimum screed depth with a 25 mm wiring space is 64 mm ．For screed depths greater than 105 mm ，service boxes are provided with fixed wiring spaces of $75 \mathrm{~mm}, 100 \mathrm{~mm}, 125 \mathrm{~mm}$ and 150 mm respectively．

## Vertical Access Boxes：Metal Ducting



| LIST NUMBER | TO SUIT BOX | COVER PLATE DIMS |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | A（mm） | B（mm） |  |
| FLUSH COVER PLATE（SUPPLIED A STANDARD） |  |  |  |  |
| n／a | CUV265 | 265 | 90 |  |
| n／a | CUV340 | 340 | 90 |  |
| OVERLAPPING COVER PLATE |  |  |  |  |
| CUVP265 | CUV265 | 285 | 100 |  |
| CUVP340 | CUV340 | 360 | 100 |  |


| LIST NUMBER | BOX DIMENSIONS（mm） |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | C | $\mathbf{D}$ | $\mathbf{E}$ | $\mathbf{F}$ |
| CUV265 | 265 | 85 | 50 | 200 |
| CUV340 | 340 | 85 | 50 | 200 |

## Vertical Access Boxes：PVC Ducting



| LIST NUMBER | TYPE | DIMENSIONS（mm） |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | A | B | C | D | E |
| SHALLOW ACCESS |  |  |  |  |  |  |
| SF88152 | Twin | 260 | 170 | 50 | 110 | 100 |
| SF88153 | Triple | 370 | 170 | 50 | 110 | 100 |
| FULL ACCESS |  |  |  |  |  |  |
| SF88172 | Twin | 260 | 270 | 50 | 110 | 100 |
| SF88173 | Triple | 370 | 270 | 50 | 110 | 100 |

Cover Plates

| LIST | TYPE | DIMS（mm） |  | $\begin{aligned} & \text { LIST } \\ & \text { NUMBER } \end{aligned}$ | TYPE | DIMS（mm） |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | A | B |  |  | A | B |
| OVERLAPPING SHALLOW ACCESS |  |  |  | FLUSH SHALLOW ACCESS |  |  |  |
| SF88180 | Twin | 280 | 80 | SF88176 | Twin | 260 | 70 |
| SF88181 | Triple | 390 | 80 | SF88177 | Triple | 370 | 70 |
| OVERLAPPING FULL ACCESS |  |  |  | FLUSH FULL ACCESS |  |  |  |
| SF88188 | Twin | 280 | 180 | SF88184 | Twin | 260 | 170 |
| SF88189 | Triple | 390 | 180 | SF88185 | Triple | 370 | 170 |

# Cablelink Plus Screed <br> <br> Technical 

 <br> <br> Technical}

## Cablelink Plus Screed System

## Load Testing

Load Testing of Floorboxes to BS EN 50085 Part 2-2 (Clauses 10.5.103 and 10.5.104).

The floorboxes have been tested to and comply with the loading requirements of BS EN 50085 Part 2-2 (Cable trunking systems and cable ducting systems for electrical installations Part 2-2: Particular requirements for cable trunking systems and cable ducting systems intended for mounting underfloor, flushfloor, or onfloor).

There are two loading criteria for the floorboxes - one with a point loading to replicate foot traffic for example, and the other, with a large plate to replicate fork trucks and heavier larger loads for example. For both loading criteria the maximum allowable deflection under load is 6 mm and the maximum permanent deflection after the load has been removed is 3 mm .

The Lid Deflection (loading) graph shows that the maximum point loading classification achieved is 3 kN and the maximum large plate loading classification achieved is 5 kN .

The Permanent Deflection graph shows the permanent deflection from the test wheel loading at 2 kN is 0.3 mm and large plate loading at 5 kN is 0.4 mm . This is well within the maximum allowable deflection of 3.0 mm .

Note: This test data specifically refers to the $265 \times 265 \mathrm{~mm}$ sized floorbox frame assembly. The other floorbox sizes also comply with the required test criteria. Declarations of conformity are available on request for the entire range.

## Cat 6 Compatibility

With Cat 6 \& Cat 6A data cabling the orientation and depth of many data outlets has changed resulting in the need for greater backbox depths and wiring space to accommodate these longer data outlet. No longer is a 35 mm wiring space sufficient to ensure data terminations can be made to the manufacturer's recommendations to prevent transmission losses.

45 mm wiring space for the Cablelink Plus floorbox system is available. This easily accommodates the longer Cat 6 \& Cat 6A data outlets and leaves sufficient space for the data cable to run underneath it.

Lid Deflection - Cablelink Plus $265 \times 265 \mathrm{~mm}$ Frame Assembly


Permanent Deflection After Removal of Load - Cablelink Plus $265 \times 265 \mathrm{~mm}$ Frame


## Interact Overhead Power

## Dimensions



Showing Internal Track

## Suspended Loads

The load that can be suspended from the overhead powertrack is dependent on the distance between the supports. Loads should be evenly distributed between hanging brackets. The maximum deflection should not be greater than 1/300.

The spacing between the powertrack ceiling brackets should not exceed 4 metres. The guidelines below should be followed when deciding on the number of ceiling brackets required.

The rods should be of suitable size to carry the combined weight of the track plus the suspended load.
Joints between two lengths of track should be no greater than 500mm from a hanging bracket.


Note: These values are for edge mounted track only. Flat mounted track should not be used for load suspension.

| 40A POWER TRACK WEIGHT |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| LENGTH M | NUMBER OF COPPER CONDUCTORS |  |  |  |
|  | $2+$ PE | $3+$ PE | $4+$ PE | $5+$ PE (\& DUAL GREY) |
| 2 | 3.1 Kg | 3.36 Kg | 3.61 Kg | 3.87 Kg |
| 4 | 5.72 Kg | 6.22 Kg | 6.73 Kg | 7.23 Kg |

# Interact Overhead 

## Technical

Interact Overhead Power

## Standards and Approvals

Manufactured within ISO 9000 environment.

| TECHNICAL SPECIFICATION |  |  |
| :---: | :---: | :---: |
| ELECTRICAL CHARACTERISTICS | OVERHEAD |  |
| Rated Current | 40 | A |
| Rated Voltage | 480 | V |
| Frequency | 50/60 | Hz |
| Conditional Short Circuit Rating | 16 | kA |
| Resistance per Copper Conductor (At ambient temperature $20^{\circ} \mathrm{C}$ ) | 1.3 | $\mathrm{m} \Omega / \mathrm{m}$ |
| Impedance per Copper Conductor (At ambient temperature $20^{\circ} \mathrm{C}$ ) | 1.3 | $\mathrm{m} \Omega / \mathrm{m}$ |
| VOLT DROPS (FULL LOAD, CONCENTRATED AT ONE END) |  |  |
| Powertrack (Line + Neutral) | 2.9 | $\mathrm{mV} / \mathrm{A} / \mathrm{m}$ |
| Feed Unit | 0.3 | $\mathrm{mV} / \mathrm{A}$ |
| Tap-off Connection | 1.6 | mV/A |
| + $2.5 \mathrm{~mm}^{2}$ Cable | 18 | $\mathrm{mV} / \mathrm{A} / \mathrm{m}$ |
| Joint | 0.3 | mV/A |
| Flexible Interlink Unit | 0.8 | mV/A |
| + $6 \mathrm{~mm}^{2} \mathrm{Cable}$ | 7.0 | $\mathrm{mV} / \mathrm{A} / \mathrm{m}$ |
| MECHANICAL DATA |  |  |
| Max. No. of Copper Conductors | 5 |  |
| Conductor Cross Section Area Nominal | 14.4 | $\mathrm{mm}^{2}$ |
| Powertrack Casing Copper Equivalent (Where Casing is Protective Earth) | 12.0 | mm ${ }^{2}$ |
| Cable Termination Capacity | 10 | mm ${ }^{2}$ |
| Tap-off Cable | 2.5 | $\mathrm{mm}^{2}$ |
| Flexible Interlink Cable | 6 | $\mathrm{mm}^{2}$ |
| Flexible Interlink Conduit | 25 | Ømm |
| Feed Conduit Entry | 20 | Ømm |
| IP Rating | 2X |  |


| MATERIALS SPECIFICATION |  |
| :--- | :--- |
| Powertrack Casing, Feeds and Brackets | Galvanised Steel |
| Conductors | High Conductivity Copper |
| Powertrack Insulators | 40A Polyamide and <br> Polyester |
| Sockets/Tap-off Plug/Joint Mouldings | Polycarbonate |
| Interlink Flexible Conduit | Galvanised Steel <br> Tap-off Cable <br> TAP-OFF PINS <br> - Line, Neutral \& Copper Earth <br> and BS 7211. LSF Cable <br> standard. |
| - Casing Earth | Copper and Phosphorous <br> Bronze, tin plated |
| Flexible Interlink Cable | Brass, tin plated |


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| K24330POC | 1 | 128 |
| K24330SAG | 1 | 128 |
| K24330TC0 | 1 | 128 |
| K24330TIR | 1 | 128 |

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| K24334TC0 | 1 | 109 |
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| K24334WHI | 1 | 109 |
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| K24336BRC | 1 | 107 |
| K24336BSS | 1 | 107 |
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| K24521POC | 1 | 108 |
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| K24522LBK | 1 | 108 |
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| K24780ABSB | 1 | 103 |


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| K24781PBR | 1 | 103 |
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| K24971LBKB | 1 | 104 |
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| K34101GP0 | 1 | 79 |
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| K34101NCH | 1 | 79 |
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| K34103MBS | 1 | 79 | K34206GPS | 1 | 74 |
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| K34103NDH | 1 | 79 | K34206NBO | 1 | 74 |
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| K34103SCW | 1 | 79 | K34206NDW | 1 | 74 |
| K34103SNS | 1 | 79 | K34206SBP | 1 | 74 |
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| K34104GPJ | 1 | 79 | K34206SNS | 1 | 74 |
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| K34105GIW | 1 | 80 | K34207SCW | 1 | 74 |
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| K34105NDW | 1 | 80 | K34208NCH | 1 | 74 |
| K34105SBP | 1 | 80 | K34208NDH | 1 | 74 |
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| K34209GIW | 1 | 75 |
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| K34337NSNS | 1 | 77 |
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| K34343NCH | 1 | 73 |
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| K34347NNCH | 1 | 72 |
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| K34347NSCW | 1 | 72 |
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| 7932s | 1 | 280 |
| 7933s | 1 | 280 |
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## EX-OR

## RANGE INTRODUCTION

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 \& 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 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 \& 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 LIGHTSPOT HD - STAND-ALONE
LIGHTING CONTROL BY PRESENCE DETECTION AND DAYLIGHT HARVESTING

Ex-Or LightSpot HD 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 \& BENEFITS

EFFECTIVE ENVIRONMENTAL AND MONEY-SAVING SOLUTION
HIGH DEFINITION LENSES AND PERFORMANCE OPTICS PROVIDE CLASS LEADING SENSITIVITY

EASY TO INSTALL, EASY TO COMMISSION AND EASY TO USE.


EX-OR SCENESELECT - ARCHITECTURAL SCENESETTING 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 \& BENEFITS

FLEXIBILITY IN DESIGN
INCREASED LAMP LIFE AND ENERGY SAVINGS
EASE OF INSTALLATION AND CONFIGURATION

## HONEYWELL DOORBELLS

## RANGE INTRODUCTION

Honeywell doorbells represent the next generation in technology for the home doorbells that not only adapt to suit your home, but have the capability to grow with your family as needs and habits evolve.

By taking Friedland's 60 year heritage of creating the best doorbells in the world, and adding Honeywell's expertise and track record in innovation, we've designed a range of truly revolutionary doorbells from the ground up that are not only stunning and incredibly reliable, but also completely change the definition of what a doorbell is capable of.

Honeywell doorbells are different because of their intuitive design and flexibility. They grow with your family, adapting to your home and lifestyle through a range of clever, customisable features so you're always able to control how you use them.

FEATURES \& BENEFITS
PLUG IN DOORBELLS
PORTABLE DOORBELLS
HOME \& GARDEN KITS
FRONT \& BACK DOOR KITS



Never miss a visitor or delivery
$\checkmark$ Portable doorbells can be taken with you anywhere around the home and garden
$\checkmark$ Wireless range of up to 200 m means your doorbell will always work, wherever you place it
$\checkmark$ Link two doorbells together to boost the wireless range from 200 m up to 400 m


Compact size, rich sound
$\checkmark$ Crystal clear sound quality that can be heard throughout the home and garden
$\checkmark$ A maximum volume of 90 dB gives an audible range of up to 100 m
$\checkmark$ Choose from up to 8 melodies
$\checkmark$ Customise with your own melodies


Visual alerts
$\checkmark$ The unique halo light and LED strobe features provide visual alerts - great in loud environments, when sleep or mute mode is activated
$\checkmark$ Customisable halo light with 7 colours to choose from
$\checkmark$ Nightlight mode guides your way in the dark with a soft comforting glow


Revolutionary design
$\checkmark$ Compact size and stunning design seamlessly fits in with your décor
$\checkmark$ Neutral colours of white and grey complement any room
$\checkmark$ The USB charging feature means you can still charge your phone or tablet without unplugging your doorbell


Disturbance free
$\checkmark$ Sleep mode mutes the sound for 3, 6, 9 or 12 hours, so you can relax free of any disturbance
$\checkmark$ Use mute mode to silence the doorbell until you turn the sound back on again
$\checkmark$ Easily adjust the volume to suit your family or mood


## Peace of mind

$\checkmark$ Connect alarm accessories to your doorbell with Honeywell ActivLink ${ }^{\text {TM }}$, to build a simple home alarm system for your family
$\checkmark$ LED confidence light clearly indicates that your doorbell push is working
$\checkmark$ Press three times quickly, and our secret knock function plays a different melody, so you know if it's a family member or friend at the door

## HONEYWELL HEATING CONTROLS

## RANGE INTRODUCTION

Honeywell domestic heating and combustion controls offer you the ultimate flexibility in time, temperature, gas and water control.

Our product range is designed to provide the homeowner with the best in comfort, energy and health solutions and lifestyle through a range of clever, customisable features so you're always able to control how you use them.


Time Control
A series of one and two channel time controllers with independent heating and hot water control and three switching times per channel per day for up to seven days programming on some models


Room Temperature Control We provide an extensive range of room temperature control devices, so whether your requirement is for room thermostats, thermostatic radiator valves, frost thermostats or pipe and cylinder thermostats, Honeywell has the solution for you.

Connected Heating Control We offer a full range of heating control products that can be controlled via a smartphone or tablet.


Multi Zone Heating Control
The evohome multi-zone heating system allows the control of up to 12 heating zones and hot water.


Combined Time \& Temperature Control 7 day or 1 day combined time and temperature control of domestic heating systems is possible with our range of programmable thermostats

Flow Control


We provide products that control the flow of water in both domestic and commercial heating systems but also products that control both pressure and temperature in potable water circulation systems.

## PRODUCT GUARANTEE

The Company undertakes to replace or repair Products at its discretion should they become defective within the following periods:

| PRODUCT GUARANTEE |  |
| :--- | :---: |
| MK ELECTRO / MECHANICAL | 20 YEARS |
| ELEMENTS ELECTRO / MECHANICAL | 20 YEARS |
| ELEMENTS ELECTRONIC | 5 YEARS |
| MK SENSORS | 2 YEARS |
| USB INTEGRATED SOCKET | 5 YEARS |
| ECHO | 2 YEARS |
| COMMANDO | 10 YEARS |
| MK ELECTRONIC | 10 YEARS |
| CIRCUIT PROTECTION | 10 YEARS |
| POWER DISTRIBUTION SYSTEMS | 5 YEARS |
| CABLE MANAGEMENT | 10 YEARS |

Solely as a result of faulty materials and or workmanship. Understandably if the product has not been installed or maintained in accordance with the Company's instructions, has not been used appropriately or if any attempt has been made to rectify, dismantle or alter the product in any way the Guarantee will be invalidated.

This Guarantee states the Company's entire liability. It does not extend to cover consequential loss or damage or installation costs arising from the defective product This Guarantee does not restrict or infringe the normal statutory or other rights of the consumer.


## Statement of Intent

The sale of non UK wiring devices within British Standard territories is not prohibited but, as a responsible UK manufacturer MK Electric has a duty to ensure that such products are installed safely and correctly.

As non UK products fall outside of the standards specified within the wiring regulations, additional measures need to be taken to ensure a safe and suitable installation is completed.

BS7671 IEE Wiring Regulations 17th Edition Amendment 3 (Part 5) provides guidance on how installers are to sign off installation of non UK products for total compliance.

Within the catalogue, non UK products are clearly identified in blue text at the end of the product
 description as exemplified below:

## Socket Outlets

127 V
FLUSH
15 AMP
(NON UK)


At the point of order, customers will be prompted to complete a mandatory form and no products will be sold until the information requested has been provided. This form can be obtained by visiting www.mkelectric.co.uk or by emailing mkorderenquiries@honeywell.com

For any further assistance please contact the Technical Sales \& Service Department on 01268563720.

## ABBREVIATIONS USED IN THIS CATALOGUE

| 17ED | 17th Edition |
| :---: | :---: |
| ABS | Antique Brass |
| ALM | Aluminium |
| ALMW | Painted White Aluminium |
| ALU | Aluminium |
| AMB | Amber |
| B | Black Inserts |
| BLK | Black |
| BLU | Blue |
| BR | Boiler |
| BRC | Brushed Chrome |
| BRO | Brown |
| BRS | Brass (Ancillary Products Only) |
| BSS | Brushed Stainless Steel |
| CE | Clean Earth |
| CH | Cooker Hood |
| CK | Marked 'Cooker' |
| CLR | Clear |
| CM | Coffee Machine |
| DAB | Digital Audio Broadcast |
| DBZ | Desert Bronze |
| DW | Dishwasher |
| EL | Marked 'EMG LTG' (Grid Plus Only |
| FF | Fridge Freezer |
| FG | Fridge |
| FN | Fan |
| FZ | Freezer |
| GIW | Glass Effect Ice White |
| GLAA | Glass, Aluminium |
| GLAB | Glass, Black |
| GLAG | Glass, Green |
| GLAGA | Glass, Grooved Aluminium |
| GPJ | Glass Effect Polished Jade |
| GPO | Glass Effect Polished Onyx |
| GPS | Glass Effect Polished Stone |
| GRA | Graphite |
| GRY | Grey |
| HB | Hob |
| HR | Heater |
| IG | Intumescent Gasket |
| IH | Immersion Heater |
| KO | Tamperproof Screw |
| L | Neon Locator / Luminous |
| LBK | Lustrous Black |
| LBS | Lacquered Brushed Steel |
| LIV | Lustrous Ivory |
| LSF | Low Smoke and Fume |
| LV | Low Voltage |


| M | Master (High Power Dimmer) |
| :---: | :---: |
| MAG | Magnolia |
| MBB | Metallic Brushed Bronze |
| MBS | Metallic Brushed Steel |
| MCI | Metallic Cast Iron |
| MET | Metal |
| MSP | Metallic Satin Platinum |
| MST | Metallic Satin Titanium |
| MW | Microwave |
| N | Neon |
| NBO | Natural British Oak |
| NCH | Natural Cream Hide |
| NDH | Natural Dark Hide |
| NDW | Natural Dark Wenge |
| NIP | Nickle Plated |
| ORG | Orange |
| OV | Oven |
| P | Marked 'Press' |
| PBR | Polished Brass |
| PBZ | Polished Bronze (Ancillary Products only) |
| PCR | Polished Chrome |
| PH | Plinth Heater |
| POC | Polished Chrome |
| RED | Red |
| S | Slave (High Power Dimmer) |
| SAG | Satin Gold |
| SBP | Synthetic Beach Pebble |
| SCW | Synthetic Chalk White |
| SNS | Synthetic Natural Stone |
| SH | Marked 'Shower' |
| TCO | Textured Copper |
| TD | Tumble Dryer |
| TIR | Textured Iron |
| W | With Window |
| W | White Inserts |
| WC | Wine Cooler |
| WD | Waste Disposal |
| WDA | Warming Drawer |
| WDR | Washer Dryer |
| WH | Water Heater |
| WHI | White |
| WHI | Porcelain White (Decorative Only) |
| WL | Worktop Lighting |
| WM | Washing Machine |
| YEL | Yellow |
| ZIC | Zinc Plated LV |

[^65]
## Standard Conditions of Sale

All previous issues are cancelled.

## General

The "Seller" means Novar ED\&S Limited Seller supplies the Good
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 established between the Seller, and the Buyer. All orders hereafter made by the Buyer shall be deemed to be mad

## Acceptance of Order

No contract for the sale of goods ("the Goods") shal be concluded until either the Seller sends or otherwise communicates to the Buyer its acceptance of the Buyer's is the on the delivery to the Buyer of the Goods, whiche is the earlier. The Buyer acknowledges that there are no Buyer to enter into the contract (which expression shal 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 Goo 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 shal 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 Samples

## Samples <br> 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 buk and not so as to constitute a sale by sample. The Buyer shall 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 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 Buyer in damages or otherwise for non-delivery or late delivery Buy the Goods or any of them for whatever reson late delivery loss consequential or otherwise arising there from. The Selle loss consequ rab 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 Good 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 pay packing and carriage on all orders having a nett value of $£ 250$ (exc.VAT) or over and the Goods wil 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) nett value will be consigned by parcel post up to 5 kg 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 $£ 50$ ( $x$ 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 othe party's instructions and/or recommendations for use. If any . shall bring to the attention of his purchaser all instructions and or recommendations for use packed with the Goods or which

## ras 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 be sent to the Seller within 14 days of the date chewn mo be sent on 7 .
 are required, and in the eve 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 isk and will only be accepted if packed in the original carton which in the Seller's opinion is in a saleable condition. Only

## Payments

For UK and Republic of Ireland sales, payment is due before the end of the month following despatch. Value Added Tax for K sales is payable and is calculated on the cash discounted alue of each invoice. If the Seller shall allow provisional credic 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 appening of any of the following events:
(a) failure by the Buyer to pay any sum due to the Seller within 4 days of the due date for payment
b) commencement of the winding up of the Buyer
c) any act, event or occurrence entitling any creditor of the Buyer to petition for the bankruptcy of the Buyer
(d) 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

## 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 particular purpose of the Goods or otherwise (notwithstanding any advice or representation to the Buyer, all liability in 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 in the Goods, or for any breach of this Agreement or of any duty owed to the Buyer in connection herewith, shall be further mited in the agregate to price of the Goods in question Nothing in these terms shall restrict the Seller's liability for death or personal iniury caused by the Seller's nealigence.

## 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 o the Seller hereunder.

## U.K. and Republic of Ireland Sales

For UK and Republic of Ireland sales risk of loss or damage o 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 ums due or owing to the Seller by the Buyer on any account ave 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 therwise 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 rom those of the Buyer and third parties and properly stored protected, insured and identified as the Seller's property, but he Buyer shall be entitled to resell and use the Goods in the rdinary 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 rust for the Seller and shall not be mixed with any other money or paid into any overdrawn bank account and shall be at all are proper in Goo me as proper the
 ais to the Sele ore都 suated and reposeess the Goods. The Buyer shall not pled rined and repossess heds. Buy ry the ny of the Goods wo the rights of the Selle if thou pollure the Buy Buyer to the Seller 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

## 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 relevan and 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

## .

## 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 the Contracts (Rights of Third Parties) Act 1999 to enforce 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

## Seller thinks fit. <br> 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 times when it is being set used, cleaned or maintained by person at work. An absence of safety or risk to health is to be disregarded insofar as the case in or in relation to wich it arises is shown to be one 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
2. 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 elates to those products detailed in the Seller's catalogue(s) or associated literature.
3. Information on the design, construction and installation of the Seller's products to ensure that so far as is easonably 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
5. In accordance with the provisions of the Act, the Buyer is therefore requested to take such steps as are necessary o 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

MK Trade Mark.
Registered in Great Britain and other countries 'MK' are the initials of 'Multy-Kontact' - a name coined to signify 'many points of contact' the salient feature of our pioneer spring grip socket patented in 1919

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visit www.mkelectric.co.uk for the latest version

## MK Electric Catalogue Rangefinder

| Product Range | Range | Technical | Data |
| :---: | :---: | :---: | :---: |
| Wiring Devices |  |  |  |
| Albany Plus | 167-188 | 441-484 |  |
| Ancillary Products | 218-223 | N/A |  |
| Aspect | 98-128 | 441-484 |  |
| Boxes | 211-217 | N/A |  |
| Ceiling Accessories | 53-56 | 492-494 |  |
| Commando Combination Units | 264-267 | 569-573 |  |
| Commando Modular Combi | 268-269 | N/A |  |
| Commando Plugs and Sockets | 254-263 | 556-568 |  |
| Commando Safetyswitch | 250-253 | 554-555 |  |
| Duraplug | 236-239 | 538-540 |  |
| Echo | 21-31 | 437-440 |  |
| Edge | 130-166 | 441-484 |  |
| Elements | 70-97 | 497-525 |  |
| Grid Plus | 189-207 | 526-532 |  |
| High Power Dimmer | 208-210 | 534-536 |  |
| Link | 58-62 | 495-496 |  |
| Logic Plus | 32-52 | 441-484 |  |
| Masterseal Plus | 242-249 | 542-553 |  |
| Metalclad Plus | 224-235 | 441-484 |  |
| Plugs and Adaptors | 240-241 | 541 |  |
| Sensors | 63-66 | 485-491 |  |
| Circuit Protection |  |  |  |
| Sentry | 271-286 | 576-604 |  |
| Sentrysocket | 288-289 | 606-607 |  |
| Cable Management |  |  |  |
| Ega Mini | 361-365 | 672-674 |  |
| Egatube | 346-360 | 656-671 |  |
| Norwich | 344-345 | 650-654 |  |
| Pinnacle | 332-337 | 640-644 |  |
| Poles \& Posts | 318-319 | 630-631 |  |
| Powerlink Plus | 321-331 | 632-639 |  |
| Premier | 338-343 | 645-649 |  |
| Prestige 2Com | 311-316 | 623-629 |  |
| Prestige 3D | 290-310 | 612-621 |  |
| Red Alert | 366-370 | 672-674 |  |
| Power Distribution Systems |  |  |  |
| Cablelink Plus Modular | 377-381 | 677-680 |  |
| Cablelink Plus Single Pan Box | 383-386 | 681-682 |  |
| Cablelink Plus Screed | 413-424 | 689-694 |  |
| DeskPod | 395-401 | 684 | ) |
| Grommets | 391-394 | 683 | PEFC* |
| Hangmann | 430-432 | N/A | PEFC/16-33-254 |
| Interact | 371-376 | 675-676 | ${ }^{\text {PEFCC Cortitied }}$ |
| Interact Overhead | 425-429 | 695-696 |  |
| Onix | 403-411 | 685-688 |  |
| Slab Boxes | 387-390 | N/A | mumporcosp |

## MK Electric

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Sales Fax 014296501
E-mail mkorders@honeywell.com Reference:UKMK003-0116-EN
www.mkelectric.co.uk


[^0]:    David M. Cote
    Chairman and CEO of Honeywell

[^1]:    *See individual ranges for exceptions

[^2]:    Source: MK commissioned report, 2008

[^3]:    ＊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

[^4]:    Product featured is a Superior PIR.

[^5]:    *Available with the option of either white or black inserts

[^6]:    MOUNTING BOXES
    46 mm
    DIMENSIONS
    $86 \times 86 \mathrm{~mm}$
    FIXING CENTRES
    60.3 mm

    BS EN 60669-2-4
    K4858 switchlock is suitable for this product

[^7]:    Mains operated products and extra low voltage modules must not be installed within the same

[^8]:    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

[^9]:    ＊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

[^10]:    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．

[^11]:    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 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.

[^12]:    NOTE
    Push switches are not
    designed for fluorescent loads.
    BS EN 60669-1:1999

[^13]:    These products are fully compatible with Labgear TV distribution systems and are approved for use in "Sky Homes" and "Homes On" specifications.

[^14]:    ＊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

[^15]:    MOUNTING BOXES
    FLUSH 35 mm
    866ZIC
    FLUSH 46 mm
    877ZIC (for extra wiring space)
    DIMENSIONS
    $86 \times 86 \mathrm{~mm}$
    FIXING CENTRES
    60.3 mm

    BS 1363-4:1995

[^16]:    NOTE
    Push switches are not
    designed for fluorescent loads
    BS EN 60669－1：1999

[^17]:    These products are fully compatible with Labgear TV distribution systems and are approved for use in "Sky Homes" and "Homes On" specifications.

[^18]:    BS EN 60669-2-1, 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, LED or with electronic/wire-wound transformers in low voltage lighting systems.
    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.

[^19]:    BS EN 60669-2-1, '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, 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 or LED loads.

[^20]:    BOX SUPPLIED WITH ACCESSORY
    ■ DEPENDENT UPON MODULES USED
    ＊WITH CONDUIT ENTRY KNOCKOUTS

[^21]:    NOTE：THE SIZE OF THE CABLE AND NATURE OF INSTALLATION SHOULD BE TAKEN INTO CONSIDERATION WHEN CHOOSING BOX DEPTH．

[^22]:    HOW TO SPECIFY
    A metal range of consumer unit and accessories (Switch's MCB's, RCD's \& RCBO's) designed to comply to the 17th Edition Amendment 3 of the wiring regulations (BS 7671:2008). Consumer unit doors must be top hinged to ensure the door is closed when the unit is not in use. The base, lid \& door of the
    consumer unit must be earthed to provide safe operation at all times. A floating busbar system to be employed to ensure maximum installation flexibility and acceptance of control devices. All consumer units must have a curved door to prevent dust collection and offer a unobtrusive appearance that blends into the environment. Backed out captive screws, removable DIN rails and sufficient wiring space are required to ensure ease of installation and maintenance.

[^23]:    HOW TO SPECIFY
    A range of 3 compartment Dado and Skirting manufactured from recycled PVCu, designed with a curved covers to compliment MK Logic Plus accessories. Cat 5e, 6 and 7 compliant on all Tees, Angles, Internal and External corners utilising data sweeps that ensure no loss of capacity without the need for bulky protruding covers. Products to have pre-punched bases and divider knockouts at 100 mm intervals to facilitate easy installation without the need for drilling and cutting.

[^24]:    Prestige 3D Antibac Blue organisms at start of test
    Prestige 3D Antibac Blue organisms after 24 hour period
    Logic Plus organisms at start of test
    －Logic Plus organisms after 24 hour period

[^25]:    * Carrier components do not require the antibacterial aclditive as they have no exposure once the installation is complete. As such, the staridard 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.

[^26]:    * Based on 2014 consumption

[^27]:    For plugging onto the busbars.
    Supplied complete with one
    accessory spacer and fixing screws.

[^28]:    Fitted with screw terminals for
    independent wiring.
    Supplied complete with one accessory spacer and fixing screws.

[^29]:    *Based on 2014 consumption.

[^30]:    HOW TO SPECIFY
    An modern integrated trunking system compliant with Cat 5e and 6. Manufactured from recycled PVCu and designed to compliment MK Logic Plus accessories. Clip on covers provide continuous access for wiring devices and aid assembly and installation. Internal and external corners eliminate the need to mitre corners whilst ensuring data bend radiuses. Internal cable dividers provide segregation of services and adaptors provide integration to minimum trunking for local distribution.

[^31]:    ＊Based on 2014 consumption．

[^32]:    HOW TO SPECIFY
    A range of mini trunking designed specifically for alarm circuit identification. Manufactured from recycled PVCu and available in $16 \mathrm{~mm} \times 16 \mathrm{~mm}$ to $40 \mathrm{~mm} \times 16 \mathrm{~mm}$ sizes. Clip on covers and accessories aid easy assembly and installation, whilst a wide range of accessories provide maximum versatility of installation.

[^33]:    * Based on 2014 consumption

[^34]:    Designed for use with cablelink plus modular, cablelink plus single pan floorboxes, slab boxes, grommets and deskpod

[^35]:    All 63A underfloor powertrack incorporate shutters and are rated to IP4X. Complies with the requirements of BS EN 61534.
    Track comes with the following slab mounting brackets: $1.2 \mathrm{~m}=1,2.4 \mathrm{~m}=1,3.6 \mathrm{~m}=2$

[^36]:    HOW TO SPECIFY
    A range of modular 2, 3 and 4 module floorboxes designed for robustness, maximum product life, easy installation and tested to EN50085-2-2.
    Product to utilise a "ladder" design to enable modules to be positioned and $100-124 \mathrm{~mm}$ heights with increased clearance for Cat $6 \& 6$ A patch leads, transformer plugs and audio visual applications. Product to have a self-closing lid with locking option available. Provision of RCD protection to support compliance to 17 th Edition Wiring Regulations.

[^37]:    All modules supplied set at 90 mm from top of lid to base of module．

[^38]:    There are 10 different configurations offered over 4 of our ranges - Logic Plus, Edge, Elements and Aspect.

[^39]:    HOW TO SPECIFY
    A range of 1, 2, 3 and 4 module Slab Boxes designed to be used on raised floor systems. Cable outlet via floor grommet products provide less obtrusive and aesthetically pleasing access to power and data services. "Products to feature" options for Cat 5E, 6 and fibre solutions with a wide range of power sockets and data plates and outlets. Side and end knockouts ensure fast and simple installation. Provision of RCD protection to support compliance to 17 th Edition Wiring Regulations.

[^40]:    * Data apertures are supplied as knockouts.

[^41]:    * Alternative circuit protection ratings available on request. All circuit protection devices are from the MK Sentry range. RCD's do not provide overcurrent protection

[^42]:    Refer to BS 6396 where appropriate.

[^43]:    ＊Data apertures are supplied as knockouts．
    Additional floor restrictions apply when using these plates－see page 411 for details
    Compact Plates（power and data）are for use with $200 \times 200 \mathrm{~mm}$ bases

[^44]:    HOW TO SPECIFY
    A range of robust hanging service modules that provide portable and convenient power, data and compressed air. Product to feature a suspension hook for fast and simple installation and be resistant to impact, fire and chemical damage. An additional grab handle should be available to provide easy positioning of the device and space for tool hanging.

[^45]:    For a full range of corresponding products,
    see pages 21-31 in the product selector.

[^46]:    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 100 m described above for Logic Plus ${ }^{T M}$ ，down to 30 m ．

[^47]:    Note：16A 2P＋E German Outlet：These products are NOT suitable for 25 mm deep boxes．
    ＊15A American Sockets and 16A 2P＋E German Sockets are also
    available in a modular format for MK decorative wiring device ranges．

[^48]:    Note: These switches are not recommended for switching large banks of PCs

[^49]:    Supply and non flexible load cables

[^50]:    Note：The lock fitted to these isolators is universal for all MK 20A Isolators in the range i．e．a common key profile．

    However，the keys are different to those used on all other MK Key Operated Switched Products， for added security．

[^51]:    Note: These switches are not recommended for switching large banks of PCs

[^52]:    Note: Main wire colour is shown in capitals

[^53]:    Minimum recommended box depth 32 mm
    Note: Edge mounted modular products require 46 mm box

[^54]:    Note：The lock fitted to each socket is universal．i．e．a common key profile． However，the keys are different to those used on MK Key Operated Fire Alarm Isolator Switches，for added security．

[^55]:    Note: Main wire colour is shown in capitals

[^56]:    For a full range of corresponding products, see pages 70-97 in the product selector.

[^57]:    *Grid Plus range is available in 14 colour options, with black or white inserts.
    The Module is designed to be used with MK Electric's decorative range of Aspect, Edge, Albany Plus cover plates

[^58]:    For a full range of corresponding products, see pages 236-239 in the product selector.

[^59]:    For a full range of corresponding products,
    see pages 242-249 in the product selector.

[^60]:    Based on 2014 consumption

[^61]:    * Based on 2014 consumption

[^62]:    ＊Based on 2014 consumption

[^63]:    ${ }^{\dagger}$ In the 17th Edition of the IET Wiring Regulations, these requirements are found in Regulation 543.7.

[^64]:    * The Snorkel cord outlet cannot be used in depths less than 100 mm .

[^65]:    1 Standard Carton Quantities are indicated by the number in the box after all product descriptions eg:

