LEWDEN

Palazzoli GROUP

18TH EDITION AMENDMENT 2 BS 7671:2018+A2:2022

Now included

- Consumer Units Pre-fitted with Surge Protection
- Round Knockout Consumer Units
- Rear Grommets
- AFDDs

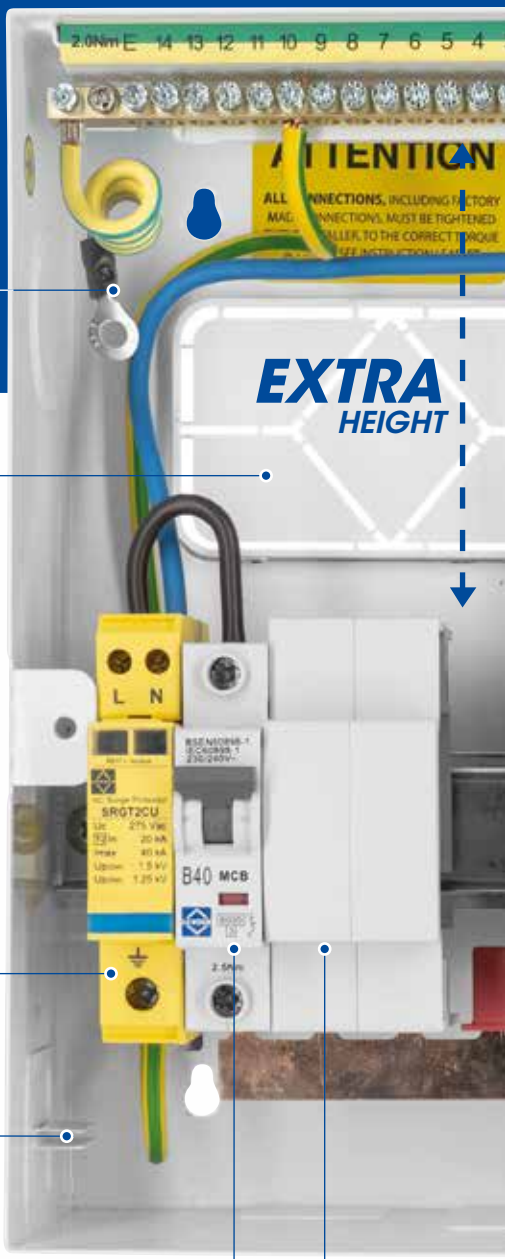
PRO CONSUMER UNITS & CIRCUIT PROTECTION

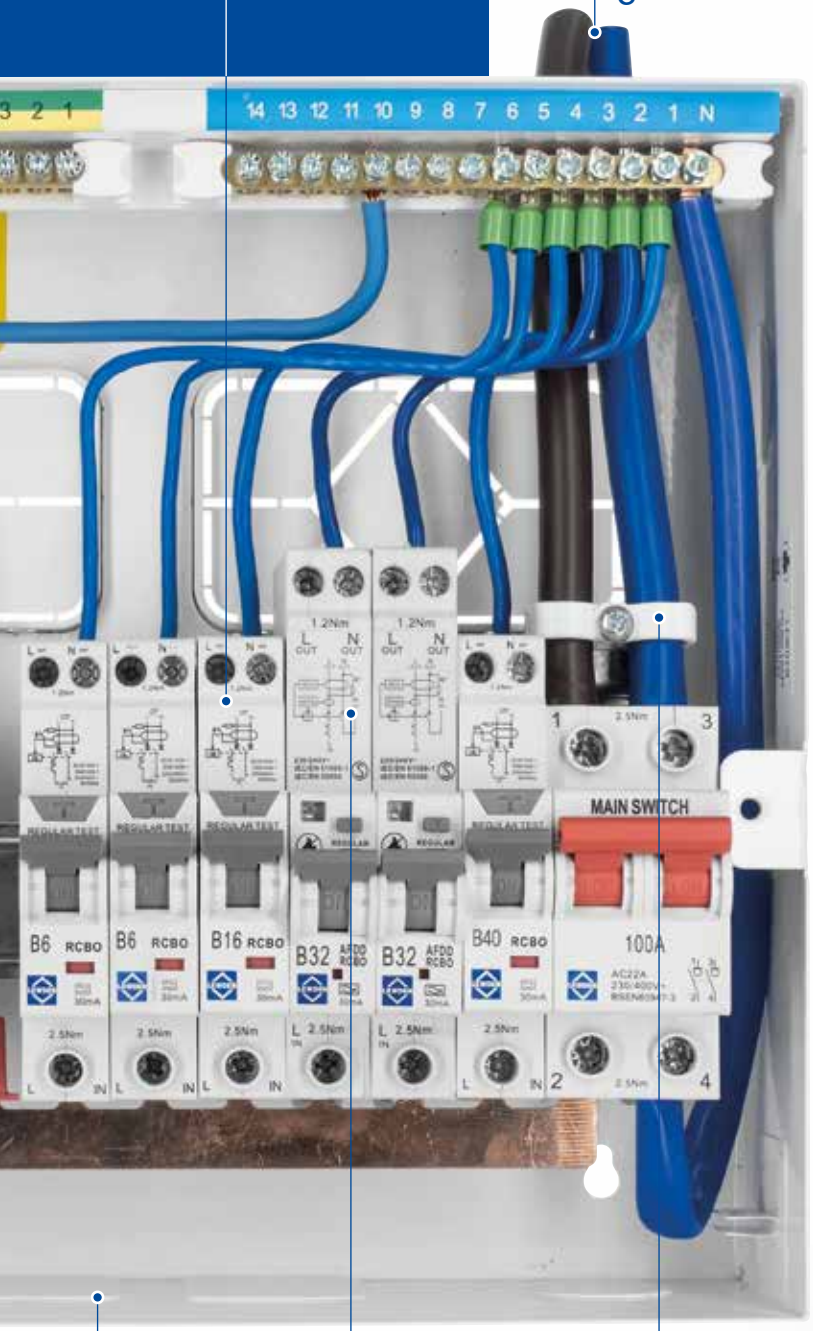
A comprehensive Consumer Unit & Circuit Protection range for residential installations

PRO

AN ATTRACTIVE RANGE OF EASY-TO-INSTALL CONSUMER UNITS

The latest enhancement to the Lewden range.
PRO offers a stylish, ergonomic, and non-obtrusive consumer unit design, paired with a comprehensive range of circuit protection devices and accessories to meet the needs of every installation.





Stylish design

- The wrap around front cover provides a clean and un-obtrusive finish.
- With extra wide 180° opening, it offers superior visibility of circuit protection devices, even when the consumer unit is mounted low down, and provides the perfect position to affix installation labelling.

Solid Construction

- Non-combustible steel enclosure finished in RAL9003 Signal white semi-gloss.
- Retained cover screws to prevent loss.
- Available with rectangular or circular knockouts for outgoing circuits on top and bottom faces.
- Rectangular knockouts on top and bottom faces to match popular mini trunking sizes.
- Circular knockouts on four sides provide flexibility for meter tails entry position.

Enclosure height

- Extra enclosure height provides generous wiring space for outgoing cabling during installation, as well as for future additions.

Devices

- A full and complete range of circuit protection devices including compact RCBOs with switched neutral, cater for all design arrangements.
- Type 2 surge protection can also easily be incorporated in any installation.
- Combined AFDD RCBO with switched neutral provides additional protection in a space saving single module.

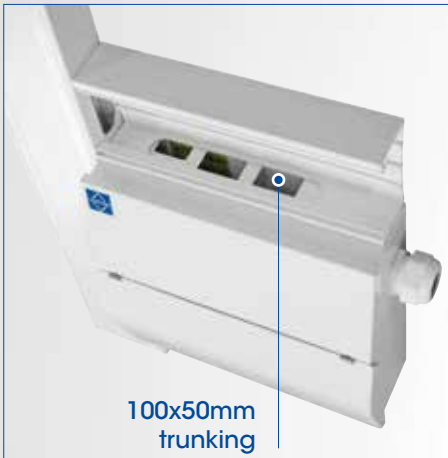
Accessories

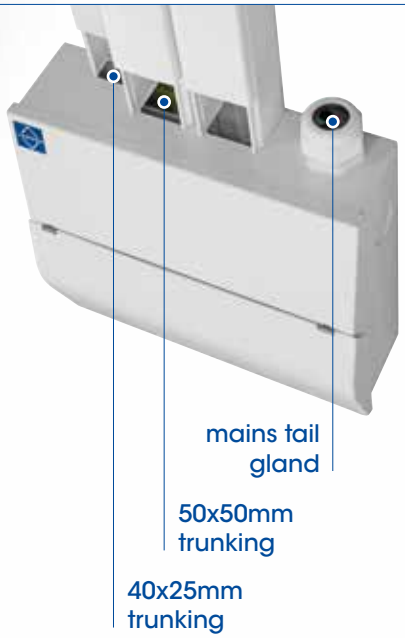
- Blind cable grommets for use in rectangular knockouts prevent cable chaffing and maintain IP4X ingress protection.
- An optional meter tails clamp provides additional strain relief to meter tails.
- A cover key lock option is also available on request, for installations requiring restricted access to the operation of devices in service.
- Full din rail mounting blanks offer a high level of protection against access to live parts, and cannot be removed whilst the front cover is fitted.
- Segmented rear grommets available in two knockout sizes to protect cables and limit the opening size to suit the number of cables.

The PRO Consumer units range is now available with the option of rectangular or circular knockouts across all enclosure sizes.

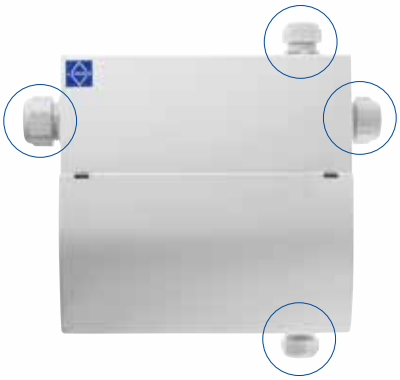
Rectangular knockouts are ideal for use with standard mini and maxi trunking sizes and provide maximum cable entry capacity.The rectangular knockout design with its unique pierceable cable grommet accessory provides the optimum solution for maintaining the IP rating for final circuit cable entering the enclosure. The new circular knockouts range provides complete flexibility for installing round cable glands, conduits, cable grommets and for terminating SWA final circuit cables.

Scan to view the PRO Enclosure Technical Knockouts Guide

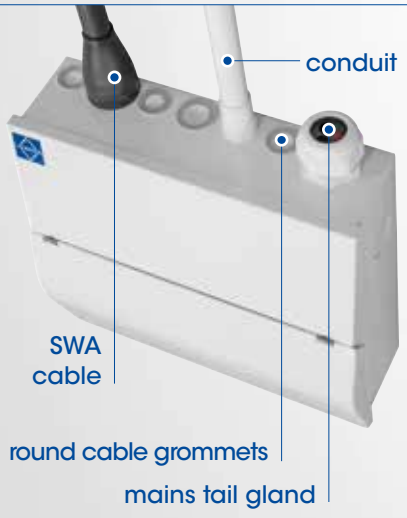




Rectangular knockouts provide up to 100% more cable entry capacity over round knockouts.

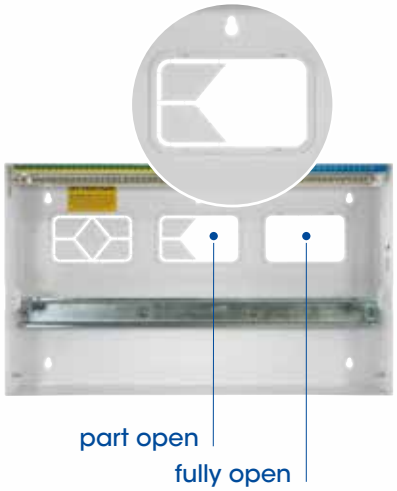


32 or 40mm knockouts are available on all sides of the enclosure to accommodate mains tail glands.



Available with circular knockouts in 20,25, & 32mm diameter.

All 20mm diameter knockouts are sufficiently spaced to allow on the opening to 25mm whilst still facilitating the full range of 25mm gland options.



Segmented rear grommets allow for the aperture size to be adjusted to suit the number of cables entering the enclosure.

IET Wiring Regulations BS7671 Amendment 2: 2022

Scan to view the complete Lewden Amendment 2 Technical Guide

Amendment 2 of BS7671 has introduced some fundamental changes which impact on the design and installation of a residential consumer unit. A summary of these changes is detailed below.

Arc Fault detection devices (AFDD) Regulation 421.1.7

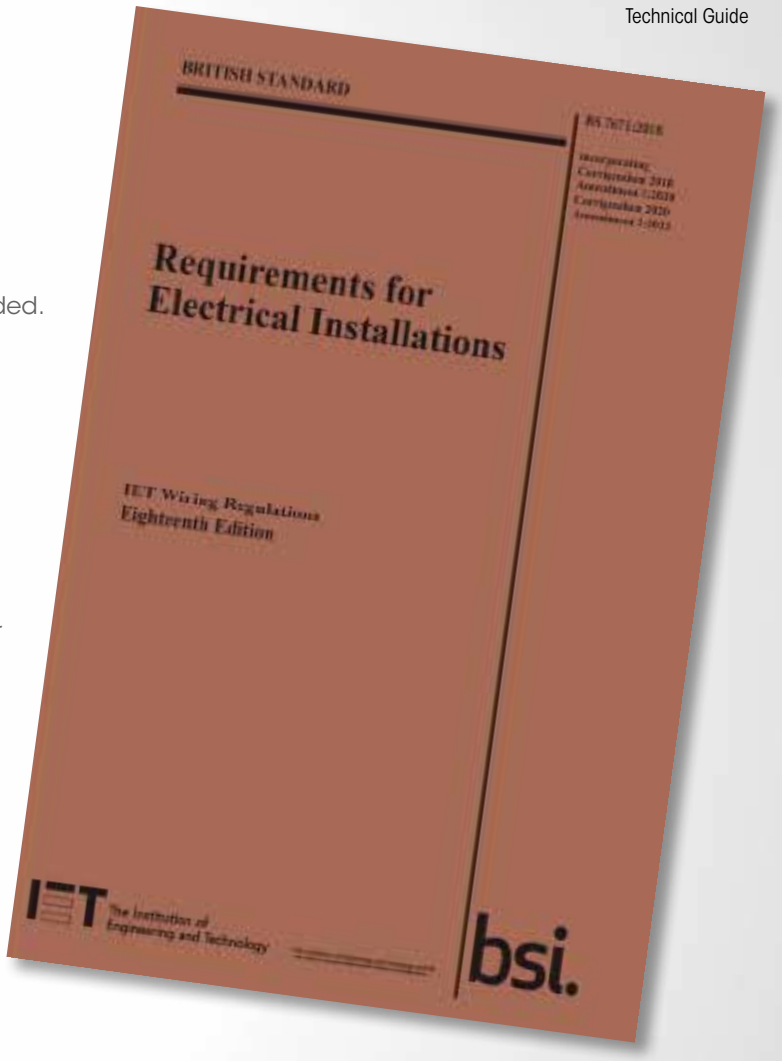
Within certain types of premises, protection against arcing faults is now a mandatory requirement for final circuits rated up to 32A supplying socket outlets. For all other premises, the use of AFDDs on final circuits rated up to 32A supplying socket outlets is recommended.

Surge Protection Devices (SPD): Section 443

Significant changes to 443.5 have resulted in the calculated risk assessment method for determining the requirement for SPD protection being deleted. Surge protection against indirect lightning strokes is now mandatory where consequences could result in injury or loss of life, loss of safety services, or financial or data loss. In all other cases, protection against indirect lightning strokes shall always be provided, unless the owner of the installation declares that it is not required due to any loss being accepted and tolerable.

Residual Current Devices (RCDs): Section 531.3.2

A new clause 531.3.2 (ii) reinforces the use of RCBOs in residential premises as a specific consideration for limiting the risk of unwanted tripping in final circuits.



Types of RCD: Regulation 531.3.3

Type AC RCDs are now only permitted for use on circuits serving fixed equipment where it is known that the load current cannot generate any dc component, for example electric heating appliances or simple filament lighting.

RCD testing: Section 643

Amendments to clauses 643.7 & 643.8 have simplified the requirements for testing RCDs within an installation irrespective (no capital I) of RCD type (excluding time delayed RCDs), testing is now only required to be conducted using an alternating test current (AC) at rated residual operating current (1 IΔn).

For a more in-depth review, see the Lewden guide to Amd 2 and its impact upon the design and installation of residential consumer units.

ARC FAULT DETECTION DEVICES

Electrical fires continue to be a significant issue within UK Installations. The Department for Communities and Local Government; Fire statistics 2017/18, identifies over 17,000 domestic fires within the UK, with approximately 12% starting within the electrical distribution system and up to 23% caused by faulty appliances and leads.

Since the 1980s, the use of MCBs to provide overcurrent protection and RCDs to provide residual current protection have reduced the risk and consequences of these types of electrical fires.
The introduction of Arc Fault Detection Devices (AFDDs) now offers an even more advanced level of protection in an installation, capable of identifying low level hazardous arcing faults that MCBs, RCDs and SPDs are not designed to detect or protect against.

AFDDs can also mitigate the risk fire caused by faults within the whole electrical Installation, both within the fixed wiring and the cabling of equipment connected to it.

The Lewden P4 series of combined AFDD & RCBO provides the highest degree of protection, safeguarding final circuits against the effects of:
- over current
- residual current
- arcing faults
- over voltage
- over voltage protection

AFDD

How does the AFDD work?

The integral AFDD uses microprocessor -based technology to continuously monitor the electrical circuit, identifying unintentional arcs caused by broken or damaged cables or poor connections. AFDD's can differentiate between "dangerous arcing" and "normal arcing" caused by the normal operation of equipment such as vacuum cleaners drills and electrical appliances and will disconnect the supply when identifying arcing faults.

Arc Fault Detection Devices

Key Features

The P4 Combined AFDD RCBO is designed for integration within the Lewden range of distribution boards and is fully interchangeable with the Lewden range of 6kA single module MCBs and RCBOs.

- Available in current ratings of 6-40A, incorporated within a single module width.
- The device combines a microprocessor based AFDD with a 1P+ Switched Neutral RCBO.
- Incorporating a 30mA type A RCD and a 6kA MCB.
- Suitable for use on TN-S, TN-C-S & TT network systems.
- The switched Neutral pole makes the device suitable as a means of double pole isolation, and is particularly appropriate for installations with TT Earthing Systems where it is necessary to disconnect all live conductors to achieve safe isolation of individual circuits (BS7671:2018 Regulation 462).

Fault identification

Following an electrical fault in the load circuit the P4 device will trip. Upon re-closing, the LED will flash in sequence to signify the reason for the last break of circuit.

Quality approved

To ensure commitment to safety and quality, the Lewden P4 Series Combined AFDD & RCBO has been independently laboratory tested and certified by Intertek, and bears the European safety 'S Mark'.

Intertek

The S mark is a voluntary certification scheme demonstrating that the product continually meets all relevant technical safety requirements, verified by regular inspections of the manufacturing facility by Intertek.

Scan to view the P4 Combined AFDD RCBO Technical Guide

What causes Arc Faults?

Unintentional arcing faults can occur due to several reasons, ranging from poor installation or accidental damage to cabling and equipment, to deterioration of the cable over time due to external factors. These faults can occur within the fixed cabling installation, or on portable equipment connected to the fixed wiring installation. Electrical arcing faults may be caused by (but not limited to):

1. Trapped damaged or crushed cables
2. Cable damage during installation or ongoing usage
3. Damage to wire insulation
4. Rodent damage
5. Loose connections

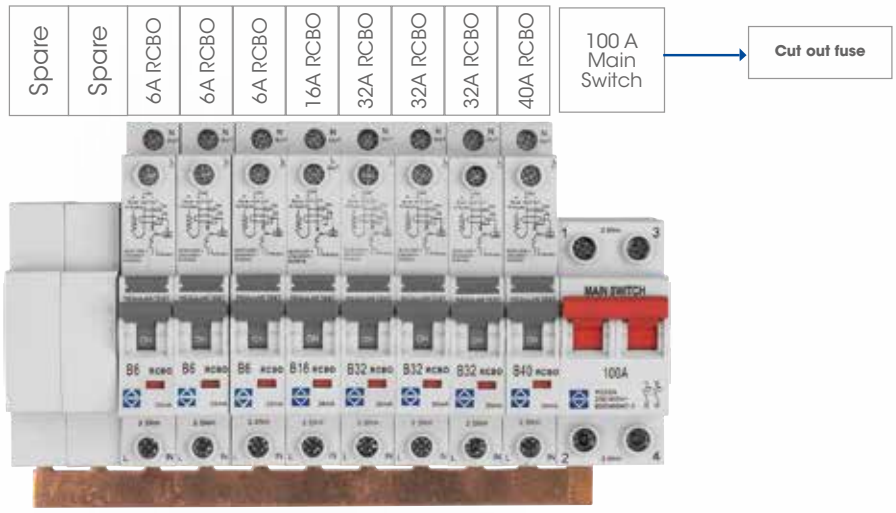
PRO RCBO Based Solution

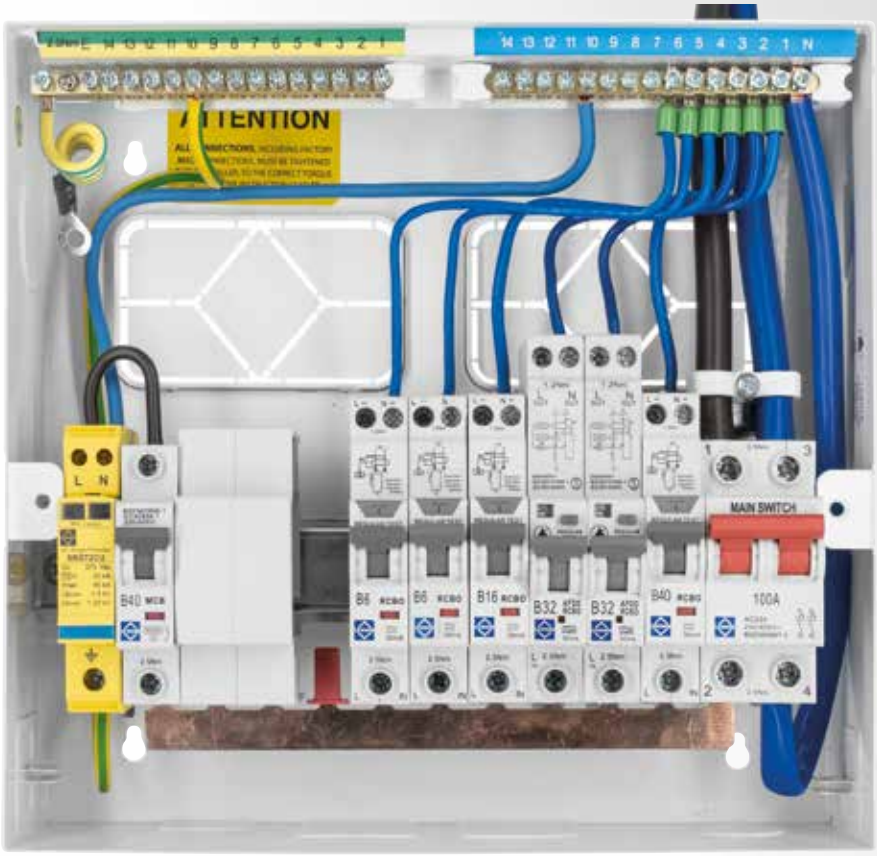
RCBO based solutions represent the best approach in providing maximum flexibility, division and control over final circuits, totally fulfilling the requirements of the wiring regulations in terms of providing ongoing diversity, upstream overload protection, and limiting the risk of nuisance tripping.
Our range of RCBO devices are available in various formats incorporating switched or unswitched neutral, compact height and combined AFDD.

Consumer Unit Type	Minimized inconvenience	Diversity Factor Free	Upstream Cut Out Fuse Compatibility		
			63A	80A	100A
RCBO Board	✓	✓	✓	✓	✓
63A Incomer RCCB Board	✗	✗	✓	✗	✗
80A Incomer RCCB Board	✗	✗	✓	✓	✗
100A Incomer RCCB Board	✗	✗	✓	✓	✓

BEST APPROACH

Utilising a consumer unit comprising a 100A rated main switch, and individual RCBOs on the outgoing circuits is considered the best approach to provide residual current and overload fault protection to each outgoing circuit as required by BS7671. Consideration to spare ways and future additions are automatically compensated for. Furthermore, by distributing load equipment across a greater number of individual RCBO circuits, this greatly assists in reducing the possibility of nuisance tripping, eliminating inconvenience caused by loss of supply to multiple circuits in the event of a residual current fault. With this method, the main switch and distribution bus bar are each rated to 100A, this being the maximum permissible cut out fuse rating installed by the supply authority to domestic properties.





RCBO Based Solution Incorporating Compact RCBOs/AFDD RCBOs and Surge Protection

1 RCBO Consumer Units

Incorporating a 100A DP Main Switch and busbar system ensures compatibility with DNO fuse ratings up to 100A. (BS7671 536.4 Overcurrent protection of RCCBs / AFDD RCBOs and Main Switches by upstream OCPD's).

2 Type A RCBOs as standard

Designed for use with load equipment that features electronic components (BS7671 531.3.3 Types of RCD).

3 Sub-division of circuits

RCBOs / AFDD RCBOs minimize the incovenience in the event of a fault and limit the risk of unwanted tripping by separating final circuits (BS7671 531.3.2 Unwanted tripping).

4 Using Individual RCBOs and AFDD RCBOs

Provides for optimum division of final circuits and minimizes inconvenience in the event of a fault (BS7671 314.1 (i) & (ii) Division of Installation).

5 Increased wiring space

Compact RCBOs maximise wiring room, making the installation quicker and neater, providing for a safer installation. (BS7671 132.12 Accessibility of electrical equipment).

6 Ease of testing

Compact RCBOs with double pole switching incorporate side by side output terminals for ease of testing and periodic inspection.

7 Faster to commission

Neutral pole switched RCBOs negate the need to disconnect the neutral lead during insulation resistance testing, speeding up the commissioning process.

8 Double pole isolation

Compact RCBOs and AFDD RCBOs incorporate a switched neutral which provides for safe isolation of individual circuits, and double pole isolation as required in TT systems and EV charging circuits.
(BS7671 537 - Isolation and Switching)

PRO RCBO Based Solution

BEST APPROACH

A comprehensive consumer unit range comprising a 100A DP main switch with overload and residual current protection provided on each individual final circuit by RCBOs. Distributing final circuits across individual RCBOs provides the best approach to fully meeting the requirements of BS7671.

- Supplied with 100A rated Mains Switch and distribution bus bar.
- Overcurrent and 30mA earth leakage fault protection combined in one device.
- Class A residual current protection as standard.
- 6kA Short circuit breaking capacity. Energy limiting class 3.
- B or C curve overcurrent trip options.
- Fully interchangeable switched and un-switched neutral pole RCBO options.
- Ratings from 6A to 50A.

RCBO Consumer Units with Surge Protection

- Configured with 100A DP Main Switch
- Type 2 Surge Protection Device Pre-installed & wired
- Arranged with 1 x Neutral & 1 x Earth bar

Knockout Arrangement	Part Number	Useable Ways	Enclosure Size (Modules)	Dimensional Drawings
□	PRO-MX04M	2 Ways + 1*	5	PRO1
	PRO-MX08MS	5 Ways	9	PRO2
	PRO-MX10MS	7 Ways	11	PRO3
	PRO-MX12MS	9 Ways	13	PRO4
	PRO-MX16MS	13 Ways	17	PRO5
	PRO-MX21MS	18 Ways	22	PRO6
○	PRO-R04M	2 Ways + 1*	5	PRO1
	PRO-R08MS	5 Ways	9	PRO2
	PRO-R10MS	7 Ways	11	PRO3
	PRO-R12MS	9 Ways	13	PRO4
	PRO-R16MS	13 Ways	17	PRO5
	PRO-R21MS	18 Ways	22	PRO6

Please note models MX04M & R04M do not feature pre-intergrated Surge Protection.
* +1 extra module included for the installation of a surge protection device.
For consumer units without a pre-intergrated surge device remove the suffix 's' from the part number.

AFDD RCBOs

- Combined AFDD & RCBO providing arc fault protection alongside over-current, residual current and over voltage protection.
- Class A 30mA RCD
- B Trip Curve, 6kA short circuit capacity
- Suitable for TN and TT Earthing systems
- Single module 18mm width, fully interchangeable with switched and unswitched neutral RCBOs and single pole MCBs.
- Double pole switching for complete isolation in the event of a fault.

Intertek

Part Number	Rated Current
P04-B06/30/1PNA	6A
P04-B10/30/1PNA	10A
P04-B16/30/1PNA	16A
P04-B20/30/1PNA	20A
P04-B32/30/1PNA	32A
P04-B40/30/1PNA	40A

- *+1 module dedicated to SPD and is not a useable way
- For accessory items please refer to page 19
- For dimensional drawings please refer to page 28 & 29

Compact RCBOs 30mA Switched Neutral

- Double pole switching for complete isolation in the event of a fault
- A switched neutral pole significantly reduces the installation and commissioning test time
- Compact 96mm height increases the available wiring space within the consumer unit
- Suitable for TN & TT earthing systems
- Particularly suited to installations where double pole isolation of individual circuits may be required; e.g. Distribution circuits on TT earthing systems, Electric vehicle charging circuits etc.
- 6kA short circuit capacity

Rated Current	Type A	
	B Trip Curve	C Trip Curve
6A	RCBO-B06/30/1PNA	RCBO-C06/30/1PNA
10A	RCBO-B10/30/1PNA	RCBO-C10/30/1PNA
16A	RCBO-B16/30/1PNA	RCBO-C16/30/1PNA
20A	RCBO-B20/30/1PNA	RCBO-C20/30/1PNA
32A	RCBO-B32/30/1PNA	RCBO-C32/30/1PNA
40A	RCBO-B40/30/1PNA	RCBO-C40/30/1PNA

RCBOs 30mA Un-Switched Neutral

- Single Pole switching
- Device height 113mm
- Suitable for TN Earthing systems
- Single pole RCBOs are suitable for use in TT network systems when used in conjunction with a DP main switch as the point of safe isolation
- 6kA short circuit capacity

Rated Current	Type A	
	B Trip Curve	C Trip Curve
6A	RCBO-06/30/SPA	RCBO-06/30/1M/CA
10A	RCBO-10/30/SPA	RCBO-10/30/1M/CA
16A	RCBO-16/30/SPA	RCBO-16/30/1M/CA
20A	RCBO-20/30/SPA	RCBO-20/30/1M/CA
32A	RCBO-32/30/SPA	RCBO-32/30/1M/CA
40A	RCBO-40/30/SPA	RCBO-40/30/1M/CA
50A	RCBO-50/30/SPA	RCBO-50/30/1M/CA

Surge Protection Kit

- Kit comprises Type 2 SPD, 40A B curve MCB & 6mm^2 connection cables
- Suitable for use in TN-C-S (PME) / TN-S / and TT networks
- Note: The MCB occupies one of the Consumer Units useable ways and the SPD occupies the +1 way

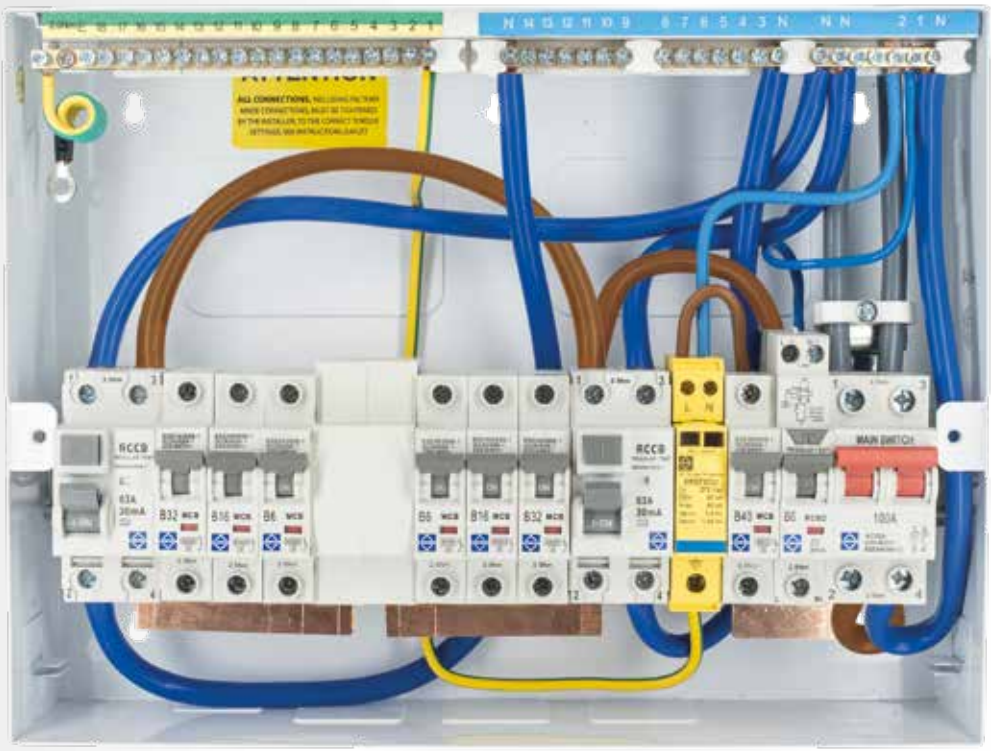
Part Number	Description
SRG1VCU-KIT	SRGT2CU + 40A MCB + Cable set for Lewden Consumer Units

Scan to access the CPD course on SPDs from our Lewden Academy

PRO Dual RCCB Based Solution

A comprehensive consumer unit range comprising a 100A DP main switch and MCBs arranged in two groups, with each group protected by a dedicated RCCB.

- Supplied with 'Flexi Cut' bus bar for easy management of outgoing MCBs assigned to each RCCB group.
- A high integrity bus bar allows for two additional outgoing MCB / RCBO circuits to be installed independently of the two RCCB protected groups.
- Arranged with 3 x Neutral & 1 x Earth bar.



1 Choice of RCCB ratings

Lewden offer a selection of RCCBs rated at 63A, 80A and 100A for coordination with the upstream OCPD (BS7671 536. 4.3.2 / 536.4.5 / 536.4.202).

2 Type A RCCBs as standard

Designed for use with load equipment that features electronic components (BS7671 531.3.3 Types of RCD).

3 Division of final circuits

Multiple Neutral Busbars with ample number of terminations allow for maximum flexibility when dividing MCBs across the two RCCB protected groups, and when incorporating high integrity circuits.

4 Sub-division of circuits

The "Flexi -Cut" Bus bar provides total flexibility in division of distribution MCBs across the two RCCBs, and can be easily adjusted to meet any high integrity configuration. (BS7671 314.1 Division of installation).

5 High integrity option

The Dual RCCBs Consumer unit is designed to allocate up to two useable ways for the installation of MCBs, RCBOs, AFDD RCBOs, connected directly to the Main Switch via the busbar provided. This offers total separation from the circuits divided across the two RCCBs and is ideal for Security or Fire Alarm equipment, or the incorporation of type 2 surge protection. (BS7671 531.3.2 Unwanted tripping).

6 Ease of assembly

Highly flexible internal cabling allows for RCCBs to be positioned easily to cater for the inclusion of high integrity distribution circuits, including the installation of surge protection.

Populated Dual RCCB

- Configured with 100A DP Main Switch, 2x 80A 30mA RCCBs, and 6x MCBs
- 1 Extra module included for the installation of surge protection*
- 4 spare ways

Knockout Arrangement	Part Number	Useable Ways	Enclosure Total Modules	RCCB 80A 30mA Type A	MCBs B Trip Curve			Dimensional Drawings
					6A	16A	32A	
□	PRO-PM10	10 Ways +1*	17	2	2	1	3	PRO5
○	PRO-RPM10	10Ways +1*	17	2	2	1	3	PRO5

Semi-Populated Dual RCCB

- Configured with 100A DP Main Switch, 2x 80A 30mA Class A RCCBs
- Includes interconnecting cables
- +1 Extra module included for the installation of surge protection*

Knockout Arrangement	Part Number	Useable Ways	Enclosure Size (Modules)	RCCB 80A 30mA Type A	Dimensional Drawings
□	PRO-MX12RRMFLEXIA	6 Ways +1*	13	2	PRO4
	PRO-MX16RRMFLEXIA	10 Ways +1*	17	2	PRO5
	PRO-MX21RRMFLEXIA	15 Ways +1*	22	2	PRO6
○	PRO-R12RRMFLEXIA	6Ways +1*	13	2	PRO4
	PRO-R16RRMFLEXIA	10Ways +1*	17	2	PRO5
	PRO-R21RRMFLEXIA	15Ways +1*	22	2	PRO6

Unpopulated Dual RCCB

- Configured with 100A DP Main Switch and interconnecting cables for 2 RCCBs. (RCCBs not included)
- Select appropriately rated RCCBs for the installation (63A, 80A, or 100A)
- +1 Extra module included for the installation of surge protection*

Knockout Arrangement	Part Number	Useable Ways	Enclosure Size (Modules)	Main Switch	RCCB Positions	Dimensional Drawings
□	PRO-MX12XXM	6 Ways +1*	13	1	2	PRO4
	PRO-MX16XXM	10 Ways +1*	17	1	2	PRO5
	PRO-MX21XXM	15 Ways +1*	22	1	2	PRO6
○	PRO-R12XXM	6Ways +1*	13	1	2	PRO4
	PRO-R16XXM	10Ways +1*	17	1	2	PRO5
	PRO-R21XXM	15Ways +1*	22	1	2	PRO6

- *+1 module dedicated to SPD and is not a useable way
- For circuit protection devices & accessory items see pages 19-21
- For dimensional drawings please refer to page 28 & 29

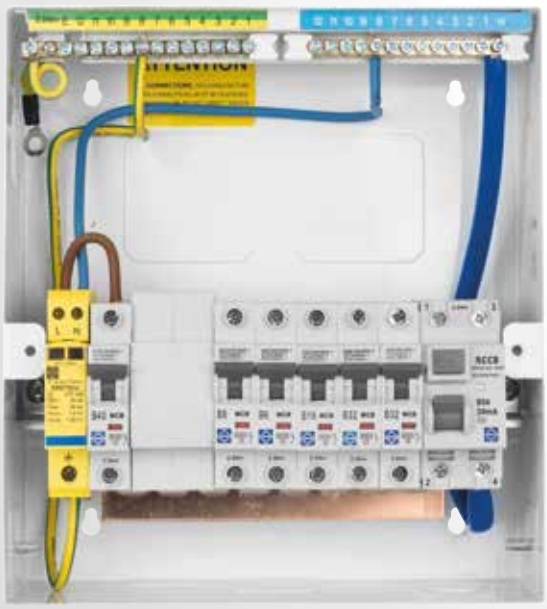
PRO Dual Tariff

Dual Tariff solutions essentially combine two separate RCBO based consumer units within one space saving enclosure. Arranged with two 100A rated main switches, they are primarily designed for installations that utilise two independent sets of meter tails operating on different electricity tariffs. They are particularly suited to the application of storage heater systems.

- Designed for use with single module RCBOs/ AFDD RCBOs.
- For applications where two main switches are required to isolate meter tails operating on different electricity tariffs.
- Supplied complete with two distribution comb bus bars and two neutral bars that allow maximum flexibility in the number of circuits that can be assigned to each main switch.

PRO RCCB Incomer & Garage Distribution

RCCB Incomer consumer units are Sub distribution boards, designed for applications such as workshops, garages, garden offices, and sheds where a small number of final distribution circuits are required.



Dual Tariff

- Configured with 2x 100A Main Switches and 2 distribution bus bars
- 2x Neutral bars & 1 x Earth bar
- Compatible with 6kA single pole MCBs and Switched or un-switched neutral RCBOs and AFDD RCBOs

Knockout Arrangement	Part Number	Useable Ways	Enclosure Size (Modules)	Main Switch	Dimensional Drawings
□	PRO-MX17DT	13 Ways	17	2	PRO5
	PRO-MX22DT	18 Ways	22	2	PRO6
○	PRO-R17DT	13 Ways	17	2	PRO5
	PRO-R22DT	18 Ways	22	2	PRO6

RCCB Incomer

- Configured with 30mA RCCB incomer
- 1 Extra module included for the installation of surge protection*
- Arranged with 1 x Neutral & 1 x Earth bar

Knockout Arrangement	Part Number	Useable Ways	Enclosure Size (Modules)	RCCB 30mA Type A	Dimensional Drawings
□	PRO-MX04R	2 Ways +1*	5	63A	PRO1
	PRO-MX08R	6 Ways +1*	9	63A	PRO2
	PRO-MX10R	8 Ways +1*	11	80A	PRO3
	PRO-MX12R	10 Ways +1*	13	80A	PRO4
○	PRO-R04R	2 Ways + 1*	5	63A	PRO1
	PRO-R08R	6 Ways + 1*	9	63A	PRO2
	PRO-R10R	8 Ways + 1*	11	80A	PRO3
	PRO-R12R	10 Ways + 1*	13	80A	PRO4

Garage Distribution

- Sub distribution consumer unit range comprising Main switch or RCCB incomer
- Complete with two MCBs

Knockout Arrangement	Part Number	Enclosure Size (Modules)	100A DP Main Switch	RCCB 63A 30mA Type A	MCBs B Trip Curve		Dimensional Drawings
					6A	16A	
□	PRO-MCGARAGE-MS	5	1	-	1	1	PRO1
	PRO-MCGARAGE-63	5	-	1	1	1	PRO1
○	PRO-RGARAGE-MS	5	1	-	1	1	PRO1
	PRO-RGARAGE-63	5	-	1	1	1	PRO1

- *+1 module dedicated to SPD and is not a useable way
- For circuit protection devices & accessory items see pages 19-21
- For dimensional drawings please refer to page 28 & 29

PRO Electric Vehicle Power Distribution Solution

A range of consumer units designed for residential retrofitting applications where EV charges are to be added to an existing installation. Available with the option of Type A or Type B RCCB's and 40A MCBs making them compatible with 7.2kW EV Chargers.

- Suitable for use with 7.2kW residential EV chargers.
- 63A 30mA RCCBs available in Type A and B, providing isolation of both Live conductors.
- Available pre-fitted with T2 SPD.
- Meets the requirements of Section 722 of BS7671.

1 Choice of RCCB Type

BS7671 requires protection against DC fault currents in excess of 6mA, achieved either by the installation of an upstream Type B RCD (722.531.3.101(i)), or where the EV chargers incorporates a suitable internal Residual Current Detection Device (RCD-DD), a Type A RCD can be utilised (722.531.3.101(ii)).

2 RCD selection

BS7671 requires the use of an RCD which disconnects all live conductors (722.531.3.1) with a rated residual operation current not exceeding 30mA. (722.531.3.101).

3 Protection against overcurrent

BS7671 requires that each charging point is supplied individually by a suitable overcurrent device (722.533.101). Each EV distribution board incorporates a 40A C Curve MCB, to take into account any derating factors on the installation.

4 Optional surge protection

Available pre-fitted with a Type 2 Surge protector suitable for use in TN-C-S (PME), TNS and TT network systems.

40A with Type A RCCB

Knockout Arrangement	Part Number	Description	Enclosure Size (Modules)	Dimensional Drawing
◯	**PRO-REV40A**	- 40A 6kA B Curve MCB - 63A 2P 30mA Type A RCCB	5	PRO1

40A with Type A RCCB & Surge Protection

Knockout Arrangement	Part Number	Description	Enclosure Size (Modules)	Dimensional Drawing
◯	**PRO-REV40AS**	- 40A 6kA B Curve MCB - 63A 2P 30mA Type A RCCB - Type 2 SPD	5	PRO1

40A with Type B RCCB

Knockout Arrangement	Part Number	Description	Enclosure Size (Modules)	Dimensional Drawing
◯	**PRO-REV40B**	- 40A 6kA B Curve MCB - 63A 2P 30mA Type B RCCB	5	PRO1

40A with Type B RCCB & Surge Protection

Knockout Arrangement	Part Number	Description	Enclosure Size (Modules)	Dimensional Drawing
◯	**PRO-REV40BS**	- 40A 6kA B Curve MCB - 63A 2P 30mA Type B RCCB - Type 2 SPD	9	PRO2

PRO Empty Modular Enclosures

- Supplied complete with single phase distribution busbar and neutral cable to allow for distribution set up via a DP main switch (GMS1002P main switch not included)
- 1 Neutral and 1 Earth bar

Knockout Arrangement	Part Number	Enclosure Size (Modules)	Dimensional Drawings
□	PRO-MC05ENC	5	PRO1
	PRO-MC09ENC	9	PRO2
	PRO-MC11ENC	11	PRO3
	PRO-MC13ENC	13	PRO4
	PRO-MC17ENC	17	PRO5
	PRO-MC22ENC	22	PRO6
○	PRO-R05ENC	5	PRO1
	PRO-R09ENC	9	PRO2
	PRO-R11ENC	11	PRO3
	PRO-R13ENC	13	PRO4
	PRO-R17ENC	17	PRO5
	PRO-R22ENC	22	PRO6

Dual Row Modular Enclosure

- 2 rows of 16 modules (Neutral & earth bar above each row)
- Supplied with busbars and interconnecting cables to accommodate main switch & up to 30 RCBOs
- Detachable un-drilled gland plates top & bottom

Part Number	Enclosure Size (Modules)	Dimensional Drawings
QFS-MC32ENC	32	QFS 1

Component Enclosure

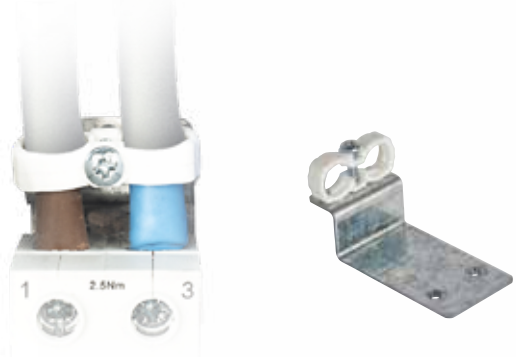
- Ideal for housing singular devices such as main switches, SPD's and RCCB's
- The enclosures base features fully open sided access along with a centrally positioned DIN rail, providing optimum mounting space for up to 5 modules, with equal cabling distance both above and below the mounted device
- Particularly suited to applications where additional wiring room and installation access are advantageous
- A 3-way earth bar suitable for conductors up to 25 mm^2 is also provided

Part Number	Enclosure Size (Modules)	Dimensional Drawings
5MODMC	5	QFS 2

- *+1 module dedicated to SPD and is not a useable way
- For circuit protection devices & accessory items see pages 19-21
- For dimensional drawings please refer to page 28-30

Consumer Units Accessories

Pierceable cable grommets	
Small	Large
CUGR-4025	CUGR-5050
40mm x 25mm (Pack of 10)	50mm x 50mm (Pack of 10)



Mains Tail Clamp

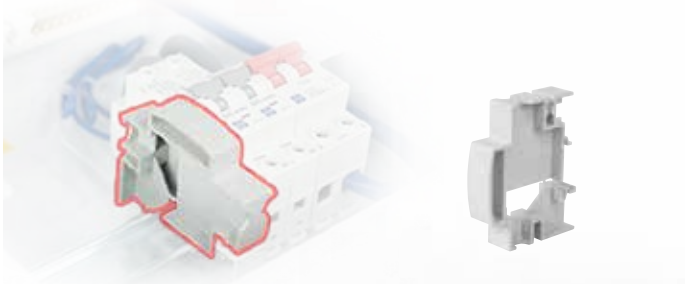
MTC

1 in each pack

Padlock for MCBs, RCCBs and RCBOs

MCBLOCK

3 keys, Yellow Hazard Indicator



Multi-Function DIN rail blank

MFDRB

1 in each pack

Blanking strip

CU-BL

2 Blanking strips of 6 ways in each pack

Cable grommets for rear knockouts - 100 x 60mm

CUGR-LR

Pack of 3

Cable grommets for rear knockouts - 60 x 60mm

CUGR-SR

Pack of 4

- Small, large and rear cable grommets not applicable to 5MODMC and QFS-MC32ENC
- MTC not applicable to Component Enclosures

Circuit Protection Devices

Main Switch

- 100A DP 2 module width
- Terminal capacity 50mm²

Part Number	Rated Current	Rated Voltage	Switch Configuration	Utilisation Category
GMS1002P	100A	230/400VAC 50/60Hz	Double Pole	AC22A

RCCB Class A

- Suitable for use on pure AC and where pulsating DC exists up to 6mA
- Type A devices are also suitable for AC applications
- 6kA Short circuit withstand

Part Number	Rated Current	Tripping Threshold	Total Modules
63/30/2A	63A	30mA	2
80/30/2A	80A	30mA	2
100/30/2A	100A	30mA	2
100/100/2SA*	100A Selective (S type)	100mA Time delayed	2

*Where a metal consumer unit is installed in a TT system, the main switch can be replaced by a 100A 100mA - S type (time delayed) RCCB

RCCB Class B

- 2 pole, 4 module for 230V applications
- 4 pole, 4 module for 400V applications
- Suitable for use on pure AC, pulsating DC, smooth DC & high frequency 10Hz<1kHz
- Type B devices are also suitable for type AC, A & F applications

Part Number	Rated Current	Number Of Poles	Tripping Threshold	Total Modules
63/30/2B	63A	2P	30mA	4
63/30/4B	63A	4P	30mA	4

*Can be installed in 5MODMC enclosure

Miniature Circuit Breakers Single Pole

- 6kA Short circuit breaking capacity.
- B or C curve overcurrent trip options
- Ratings from 6A to 50A
- Fully interchangeable with switched and unswitched neutral RCBO options

Rated Current	B Trip Curve	C Trip Curve
6	G06-1B06	G06-1C06
10	G06-1B10	G06-1C10
16	G06-1B16	G06-1C16
20	G06-1B20	G06-1C20
32	G06-1B32	G06-1C32
40	G06-1B40	G06-1C40
50	G06-1B50	G06-1C50

RCBOs 30mA Un-Switched Neutral

- Single Pole switching
- Device height 113mm
- Suitable for TN Earthing systems
- Single pole RCBOs are suitable for use in TT network systems when used in conjunction with a DP main switch as the point of safe isolation
- 6kA short circuit capacity

Rated Current	Type A	
	B Trip Curve	C Trip Curve
6A	RCBO-06/30/SPA	RCBO-06/30/1M/CA
10A	RCBO-10/30/SPA	RCBO-10/30/1M/CA
16A	RCBO-16/30/SPA	RCBO-16/30/1M/CA
20A	RCBO-20/30/SPA	RCBO-20/30/1M/CA
32A	RCBO-32/30/SPA	RCBO-32/30/1M/CA
40A	RCBO-40/30/SPA	RCBO-40/30/1M/CA
50A	RCBO-50/30/SPA	RCBO-50/30/1M/CA

Compact RCBOs 30mA Switched Neutral

- Compact 96mm Height increases the avaliable wiring space within the consumer unit
- Switched Neutral pole (Fully Interchangeable)
- 30mA Class A
- Ratings from 6A to 40A
- 6kA short circuit capacity

Rated Current	Compact Height Switched Neutral	
	B Trip Curve	C Trip Curve
6	RCBO-B06/30/1PNA	RCBO-C06/30/1PNA
10	RCBO-B10/30/1PNA	RCBO-C10/30/1PNA
16	RCBO-B16/30/1PNA	RCBO-C16/30/1PNA
20	RCBO-B20/30/1PNA	RCBO-C20/30/1PNA
32	RCBO-B32/30/1PNA	RCBO-C32/30/1PNA
40	RCBO-B40/30/1PNA	RCBO-C40/30/1PNA
50	-	-

AFDD RCBOs

- Combined AFDD & RCBO providing Arc Fault protection alongside over-current, residual current and over voltage protection
- Class A 30mA RCD
- B Trip Curve, 6kA short circuit capacity
- Suitable for TN and TT Earthing systems
- Single module 18mm width, fully interchangeable with switched and unswitched neutral RCBOs and single pole MCBs.
- Switched neutral pole

Intertek

Part Number	Rated Current
P04-B06/30/1PNA	6A
P04-B10/30/1PNA	10A
P04-B16/30/1PNA	16A
P04-B20/30/1PNA	20A
P04-B32/30/1PNA	32A
P04-B40/30/1PNA	40A

Control Devices

Bell Transformer

- To be used in conjunction with a 6A primary MCB
- User selectable secondary voltages of 4-8-12-16-24 VAC
- Rated output current 1A @ 8V

Scan to download the technical datasheets for these products

Part Number	Power Rating	Primary voltage	Secondary Voltage tappings	Insulation Class	Total Modules
BT	8VA	230VAC 50Hz	4-8-12-16-24 VAC	II	2

Note: Max output current will vary according to secondary tapping voltage selected.

Contactors

- 230V AC DIN rail mounting Contactors suitable for residential applications
- 230 AC coil rating
- Normally Open poles (closed on energisation)

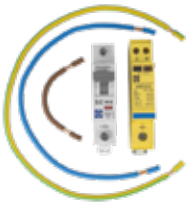
Part Number	Rated Current	Poles	Module Number
IC20	20A	2	1
IC24/4	24A	4	2
IC40/2	40A	2	2
IC63/4	63A	4	3

Time Switches

- 230V 50Hz DIN rail mounting time switches
- Voltage free output contact
- 16A (Resistive) Load rating

Part Number	Module Number	Description
DTC	2	7 Day / 1 Channel / 8 on - 8 off timed events
TC1M	1	24hr / 15 min segments
TCS	1	Staircase timer 30 sec to 20 min timed delay off

Surge Protection Devices



Surge Protection Kit

- Kit comprises Type 2 SPD, 40A B curve MCB & 6mm² connection cables
- Suitable for use in TN-C-S (PME) / TN-S / and TT networks
- Note: The MCB occupies one of the Consumer Units useable ways and the SPD occupies the +1 way

Scan to access the CPD course on SPDs from our Lewden Academy

Part Number	Description
SRG1VCU-KIT	SRGT2CU + 40A MCB + Cable set for Lewden Consumer Units

Single Phase SPDs

- Suitable for use in TN-C-S (PME) / TNS / TT network systems
- SRG1V1G features a volt free signaling changeover contact & twin earth terminals
- SRGT2CU requires 40A MCB which utilizes one of the consumer unit outgoing ways
- SRGT2CU - Compact design for consumer units
- IEC61643-11

Scan to access the CPD course on SPDs from our Lewden Academy

Part Number	Type	Voltage Protection Level (Up) L/N	Nominal discharge current (In/Imax) 8/20 µs	Max continuous operating voltage (Uc)	Lightning impulse current (I imp / I total) 10/350 µs	Config.	Total Modules
SRGT2CU	Type 2	<1.5kV	20/40kA	275 VAC	-	1+1 (Connection Type CT2)	1
SRG1V1G*	Type 2	1.25kV	20/40kA	275 VAC	-		2
SRG1123*	Type 1&2	1.3kV	20/50kA	280 VAC	12.5/25kA		2

* Can be installed in 5MODMC enclosure.

Single Phase Retrofit Surge Protection - Type 2

- For installations where surge protection cannot be accommodated within the existing consumer unit
- Available in either metal or insulated weatherproof ABS enclosures
- Utilizes SRGT2CU type 2 single phase surge arrester
- Suitable for use in TN-C-S (PME) / TNS / TT network systems

Part Number	Description	Dimensional Drawings
SRG1VCU-RM	IP20, Steel enclosure c/w Main Switch, 40A MCB and SRGT2CU	QFS 2
SRG1VCU-RP	IP55, Plastic Enclosure c/w Main Switch, 40A MCB and SRGT2CU	-

Sub Distribution

100A DP metal fused switch

- Main switch or RCCB incomer options
- Supplied complete with 63A, 80A, and 100A gG fuses IEC60269-2 (BS88-2) Ø22x58mm
- Easily configurable for top or bottom entry of incoming supply cables
- 3 way Earth bar 25mm²

Part Number	Rated Current	Rated voltage	Incomer	Dimensional Drawings
FS6380100	100A	230VAC	Main Switch 100A DP	QFS 2
FR6380100	100A	230VAC	RCCB 100mA class A (Time Delayed)	QFS 2

80A domestic service fused switch

- Double Pole Switch
- Insulated Thermosetting Polymer Enclosure
- Supplied complete with 80A type ME fuse and cable duct

Part Number	Rated Current	Rated voltage	Utilisation Category	Fuse	Dimensional Drawings
MSF	80A	230VAC 50Hz	AC21	IEC60269-3 (BS88-3)	MSF

Part Numbers	Descriptions
MSF-CD	MSF100(CD) cable duct for MSF1

Replacement fuses for FS6380100

Part Numbers	Rating	Type	Breaking Capacity	Standard
F063A	63A	22x58mm Cylindrical, General Purpose Gg	120kA , 500 VAC	IEC60269-2
F080A	80A			
F100A	100A			

Replacement fuses for MSF

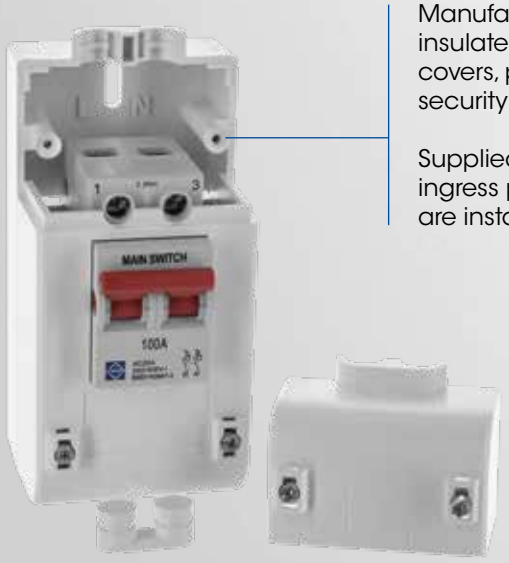
Part Numbers	Rating	Type	Breaking Capacity	Standard
ME080A	80A	ME, General Purpose Gg	33kA 415VAC	BS88-3 IEC60269-3

• For dimensional drawings refer to page 30-31

Electricity Isolation

NEW

Provides for electrical isolation between the DNO kWh meter and consumer unit or distribution board.
The isolation switch permits the supply to the installation to be interrupted without withdrawing the DNO cut out fuse.
Available as either an empty enclosure or with integrated main switch.



Manufactured from durable ABS material, the insulated enclosure features two separate interlocking covers, permitting the installation and separate security sealing of supply and load conductors.

Supplied complete with cable entry plugs to maintain ingress protection when DNO service head and meter are installed prior to consumer unit installation.

Covers can be sealed either by steel wire ≤Ø3mm with lead crimp, or flat plastic zip tie ≤4mm width.

Electricity Isolator Switch

- Available in 2 module enclosure complete with 100A DP Main Switch, or in 4 module enclosure complete with 100A 4P Main Switch.
- Ingress rating IP20 IK07
- Designed for use with 16mm² & 25mm² double insulated meter tails type 6181Y

Part Number	Enclosure modules	Main Switch	Dimensional Drawings
SLM2-MS	2	100A DP	SLM2
SLM4-MS	4	100A 4P	SLM4

Electricity Isolator Switch Enclosure

- Available in both 2 module and 4 module enclosure sizes.
- Designed for use with 16mm² & 25mm² double insulated meter tails type 6181Y
- Ingress rating IP20 IK07

Part Number	Enclosure modules	Main Switch	Dimensional Drawings
SLM2	2	-	SLM2
SLM4	4	-	SLM4

• For dimensional drawings please refer to page 31

TP&N Distribution board Type B **Range**

A comprehensive distribution board range for modern commercial & industrial installations

TP&N Distribution Boards

The complete solution to managing the distribution of electricity in commercial premises such as offices, warehouses, factories, schools, hospitals etc.

Lewden distribution boards provide the flexibility required allowing engineers to design a functional distribution system that protects the electrical installation in a compact, modern enclosure. Each board has been designed to save space and provide quick and easy connection.

Each Board has an all steel construction finished with a powder coated finish to RAL 9003, white.

Now included in the range:

AFDD/RCBO
6kA Multi-pole MCBs
Surge Extension Boxes

and more!

Main features

- Heavy gauge (1.2mm) robust & modular steel construction, suitable for wall mounting
- Allows compliance with BS7671:2008 - 2018+A2:2022 + Amendment 3:2015
- Optimal cabling space
- Rigid construction prevents distortion
- Lockable hinged access door for safety and security
- Removable top and bottom gland plates
- Powder coated texture finish to RAL 9003 white

Scan to discover our **TP&N Distribution Board Brochure**

ATTRACTIVE AND ERGONOMIC PROFILE DESIGNED FOR COMMERCIAL PREMISES

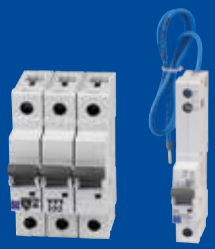
- Designed & Engineered in the UK
- Compliant to BS EN 61439-3:2012
- Supplied unpopulated for maximum design flexibility
- Compatible with the Lewden 6kA & 10kA circuit protection range
- Four modular sizes available: 4, 8, 12 & 16 TP outgoing ways

Included in the range

TP&N DISTRIBUTION BOARDS

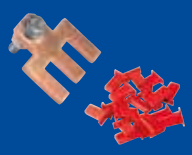
INCOMERS

SURGE PROTECTION



CIRCUIT PROTECTION 10kA

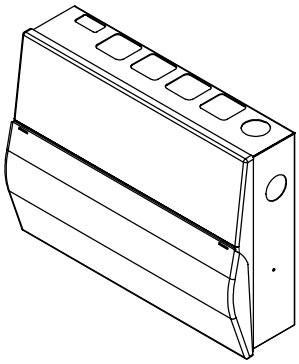
CIRCUIT PROTECTION 6kA

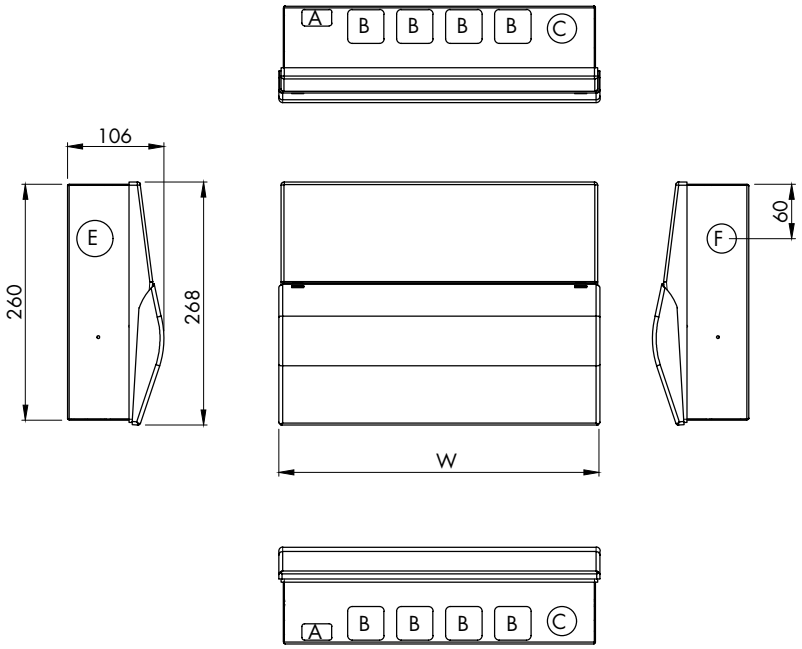


ACCESSORIES

DIMENSIONAL **DRAWINGS**

PRO

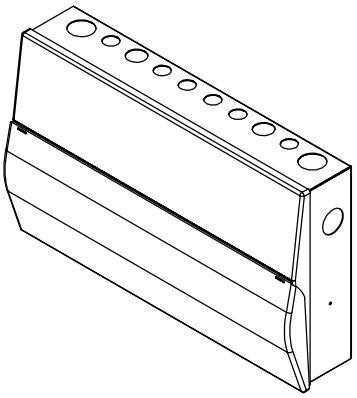




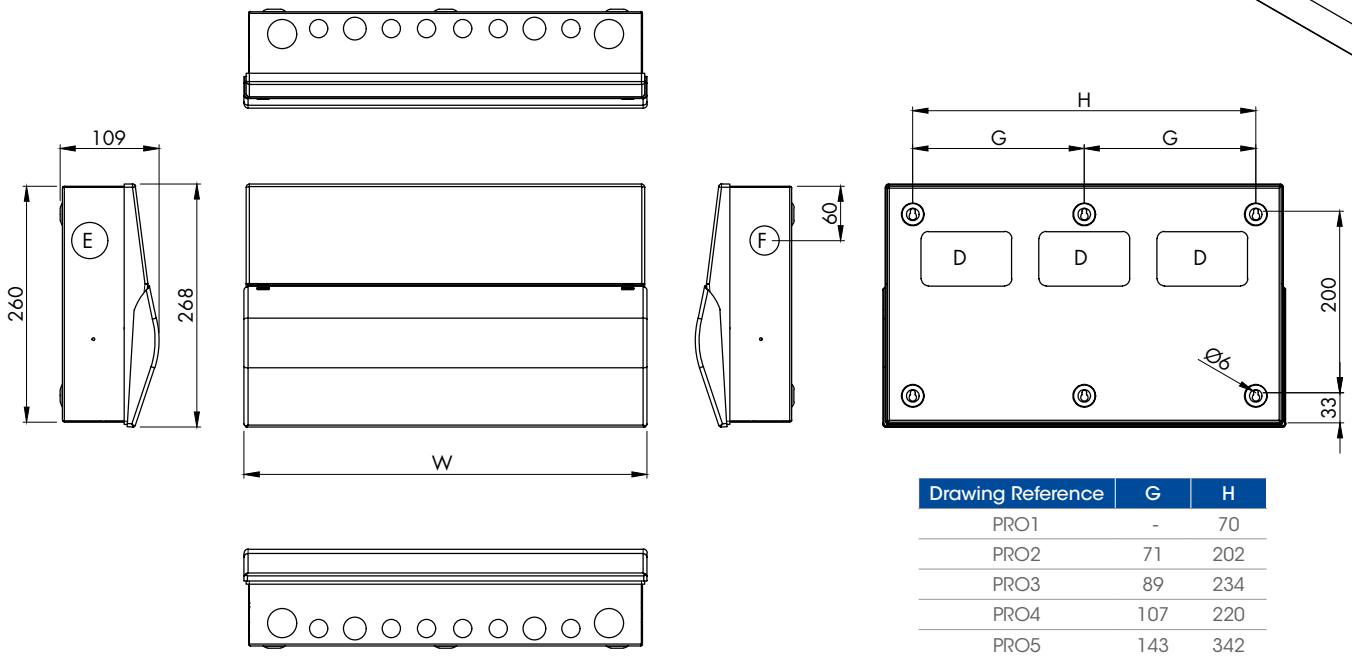
Drawing Reference	G	H
PRO1	-	70
PRO2	71	202
PRO3	89	234
PRO4	107	220
PRO5	143	342
PRO6	188	432

Drawing Ref	Part Number	Enclosure Total modules	Enclosure Width W (mm)	Knockouts Top & Bottom faces		Knockouts Rear face			Knockouts Left face			Knockouts Right face		
				Size	Qty	Ref	Size	Qty	Ref	Size	Qty	Ref	Size	Qty
PRO1	PRO-MX04M PRO-MXO4R PRO-MCGARAGE-MS PRO-MCGARAGE-63 PRO-MC05ENC	5	136	33x18	2	D	60x60	1	E	Ø32	1	F	Ø25	1
PRO2	PRO-MX08M PRO-MX08R PRO-MC09ENC	9	210	33x18 40x37 Ø32	1 1 1	D	60x60	2	E	Ø40	1	F	Ø32	1
PRO3	PRO-MX10M PRO-MX10R PRO-MC11ENC	11	244	33x18 40x37 Ø32	1 1 1	D	60x60	2	E	Ø40	1	F	Ø32	1
PRO4	PRO-MX12M PRO-MX12R PRO-MX12XXM PRO-MX12RRMFLEXIA PRO-MC13ENC	13	281	33x18 40x37 Ø32	1 2 1	D	100x60	2	E	Ø40	1	F	Ø32	1
PRO5	PRO-MX16M PRO-MX16XXM PRO-MX16RRMFLEXIA PRO-MC17ENC	17	353	33x18 40x37 Ø32	1 4 1	D	100x60	2	E	Ø40	1	F	Ø32	1
PRO6	PRO-MX21M PRO-MX21XXM PRO-MX21RRMFLEXIA PRO-MC22ENC	22	443	33x18 40x37 Ø32	1 5 1	D	100x60	3	E	Ø40	1	F	Ø32	1

DIMENSIONAL **DRAWINGS**



PRO



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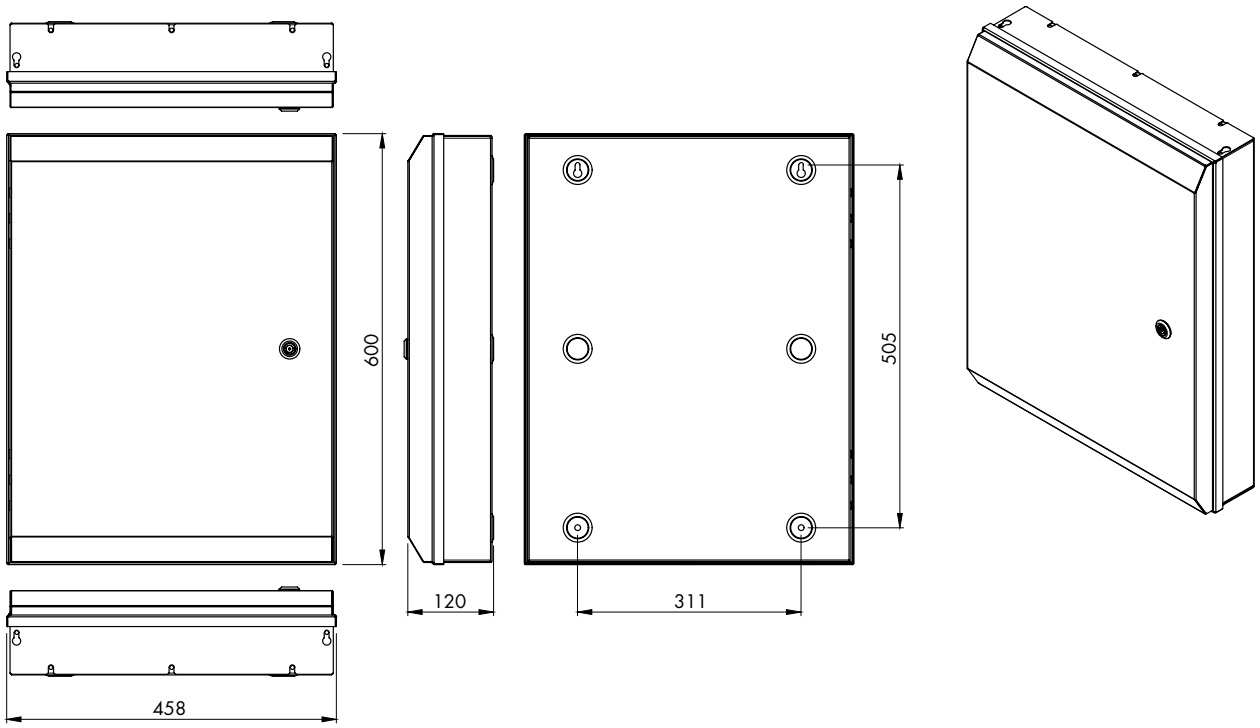
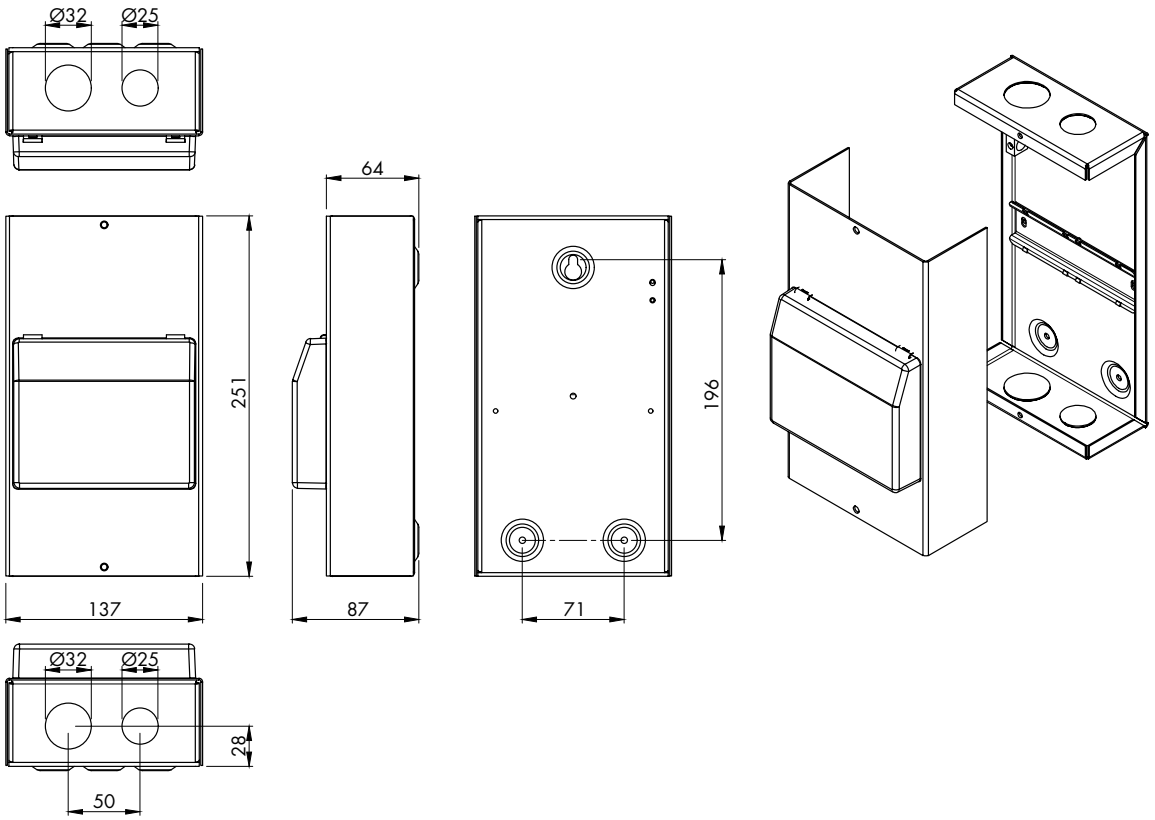
				Size	Qty	Ref	Size	Qty	Ref	Size	Qty	Ref	Size	Qty
PRO1	PRO-R04M PRO-RO4R PRO-RGARAGE-MS PRO-RGARAGE-63 PRO-R05ENC	5	136	Ø20 Ø25	2 1	D	60x60	1	E	Ø32	1	F	Ø25	1
PRO2	PRO-R08M PRO-R08R PRO-R09ENC	9	210	Ø20 Ø25 Ø32	3 1 1	D	60x60	2	E	Ø40	1	F	Ø32	1
PRO3	PRO-R10M PRO-R10R PRO-R11ENC	11	244	Ø20 Ø25 Ø32	3 2 1	D	60x60	2	E	Ø40	1	F	Ø32	1
PRO4	PRO-R12M PRO-R12R PRO-R12XXM PRO-R12RRMFLEXIA PRO-R13ENC	13	281	Ø20 Ø25 Ø32	4 2 1	D	100x60	2	E	Ø40	1	F	Ø32	1
PRO5	PRO-R16M PRO-R16XXM PRO-R16RRMFLEXIA PRO-R17ENC	17	353	Ø20 Ø25 Ø32	4 2 2	D	100x60	2	E	Ø40	1	F	Ø32	1
PRO6	PRO-R21M PRO-R21XXM PRO-R21RRMFLEXIA PRO-R22ENC	22	443	Ø20 Ø25 Ø32	6 2 2	D	100x60	3	E	Ø40	1	F	Ø32	1

DIMENSIONAL **DRAWINGS**

QFS 1

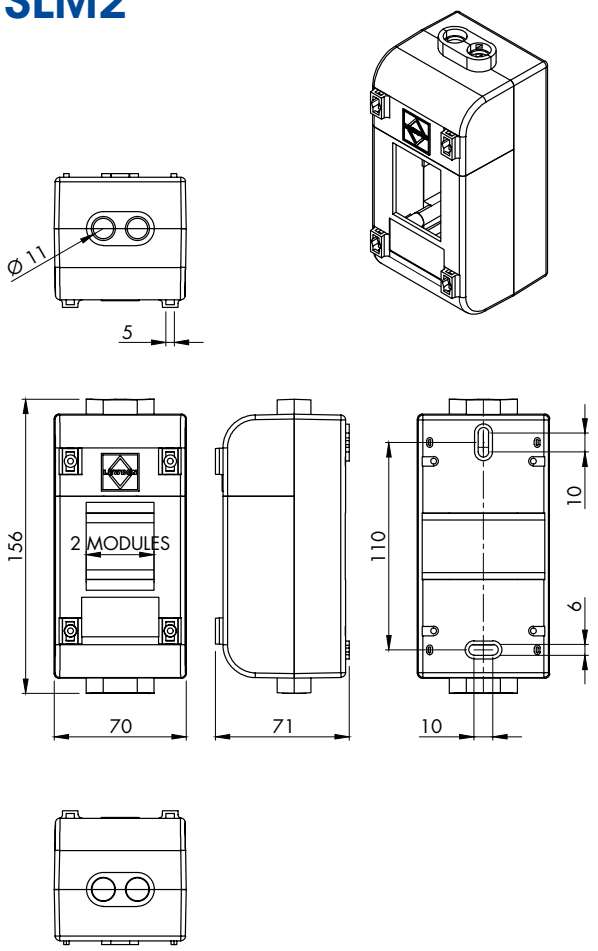


QFS 2

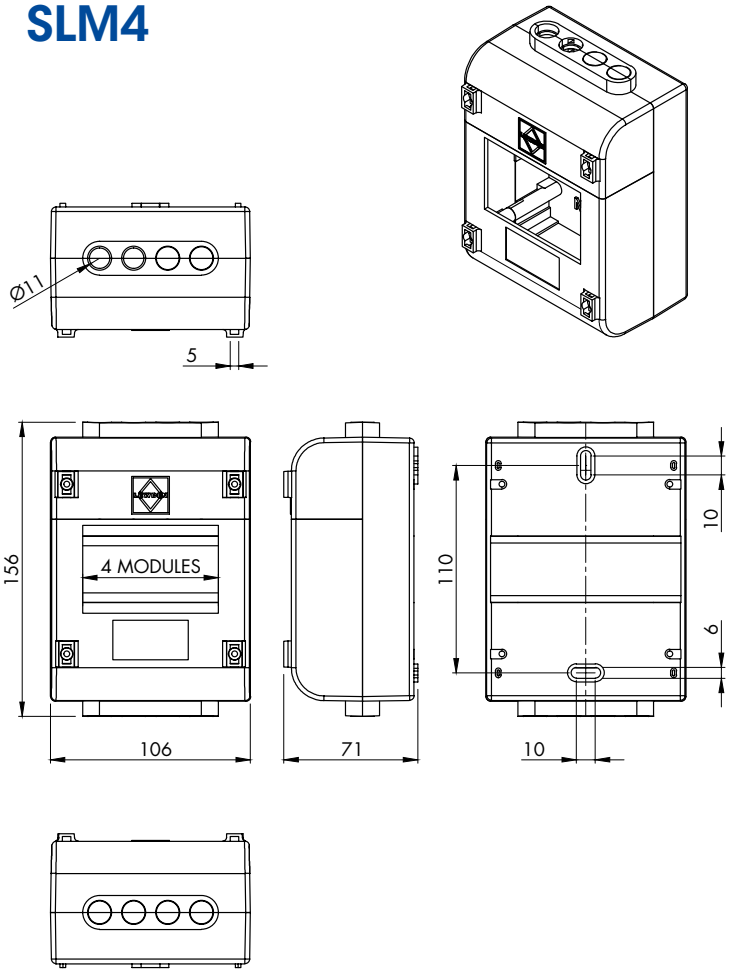


DIMENSIONAL **DRAWINGS**

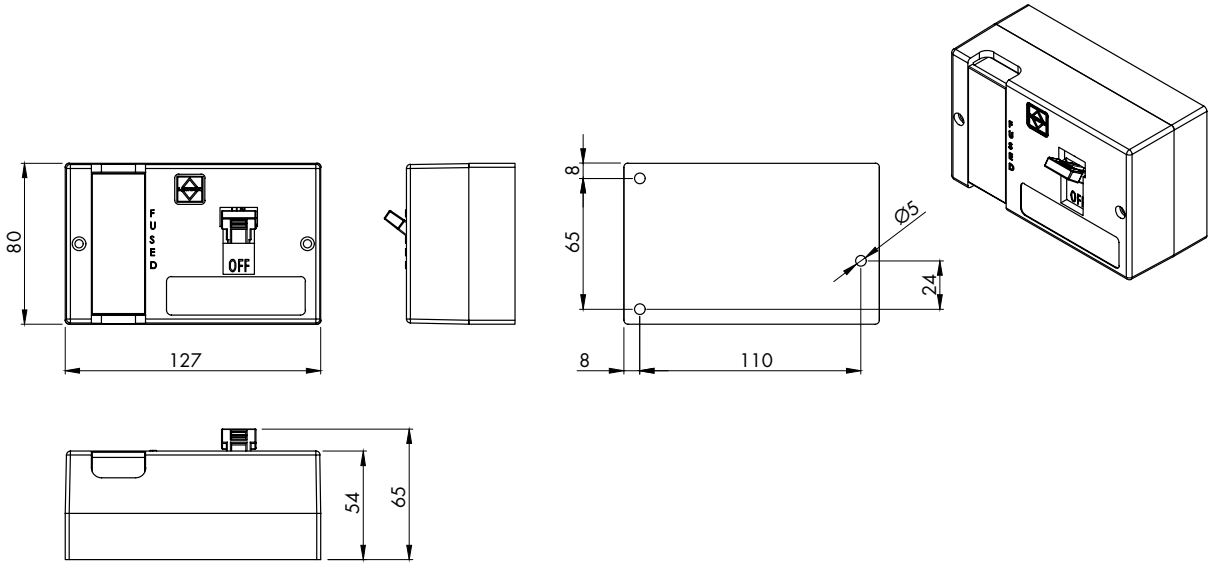
SLM2



SLM4



MSF



LEWDEN

Palazzoli
GROUP

For more information contact your local Lewden Regional Sales Managers & agents

Rob Haworth
(+44) 7973 838465

Chris Smith
(+44) 7919 922910

Steven Main
(+44) 7436 228387

Kate Knox
(+44) 7515 559 552

Jodie Williams
(+44) 7843 148215

Tony Howard
(+44) 7973 334647

Richard Cotton
(+44) 7399 521126

Tim Ketterer
(+44) 7557 655045

Lee Mallett
(+44) 7736 694876

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LEWDEN LTD
Unit 4, Bradbury Drive,
Springwood Industrial Estate,
Braintree
Essex
CM7 2SD

Tel.: +44 (0) 1376 336 200
sales@lewden.co.uk

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