elucian

CLICK®
Scolmore GROUP

Issue 1

Consumer Unit
Product Catalogue

www.scolmore.com

Get to know us

Elucian by Click® brings to market a comprehensive Consumer Unit and Circuit Protection range.

Following months of extensive research and consultation with contractors and installers, we developed a range of products that best suits their requirements and that are complaint with all the latest regulations.

Designed with the installer in mind, Elucian is an extensive range of metal consumer units that will cover a broad range of installations and offers a number of features and benefits that will enhance the products' convenience, flexibility and safety properties.

elucian

welcome

Keeping Up with **Regulations...**

The Elucian consumer units range has been designed to ensure compliance with BS 7671. Our engineers have considered how installers need to comply with the UK wiring regulation when installing consumer units in properties across the UK. The Elucian range has comprehensive options for every installation. These consist of Main Switch units, RCBO units, Split Load units and our Combination units.

Overload Protection

(536.4.3.2) & (536.4.202)

Overload protection must be considered when RCCBs have the ability to become overloaded due to the total amount of current being taken by the final circuits being offered protection.

The designer and installer must therefore select the correct rated device from the options we have made available; 63Amp, 80Amp or 100Amp. To make this process easer we have installed 80Amp devices as standard.

Types of RCD

(531.3.3)

Many different types of RCD exist. BS 7671 recognises types AC, A, F and B. Currently AC RCDs are recognised as acceptable for general purpose. However, if the installation has any DC components or frequency alterations due to connected loads one of the other types must be selected.

As most installations in the UK now have some DC components, it would be prudent to select a type A RCD that has the ability to work with DC fault current. We have produced type A RCDs only as they comply with the requirements of the AC type, and include added benefits of the DC threshold.

Overcurrent Protection

(Section 443) & (Section 553)

SPDs offer very effective protection against overvoltage. Section 443 covers the requirements for consideration when selecting SPDs in the electrical system. Section 533 confirms what types are required and where they must be installed within the electrical system.

We have designed our SPD consumer unit to incorporate a type 2 device. These devices offer protection from man-made overvoltages or lightning strikes within the vicinity of the installation.

Having SPDs installed adjacent to the main switch allows for compliance with the maximum cable length from the SPD to Earth.

Division of Installation

(Section 314)

This regulation set requires the designer and installer to ensure the installation is divided up as necessary to:

(i) Avoid danger and minimise inconvenience in the event of a fault.

(ii) Facilitate safe inspection, testing and maintenance.

(iii) Take account of hazards that may arise from the failure of a single circuit such as a lighting circuit.

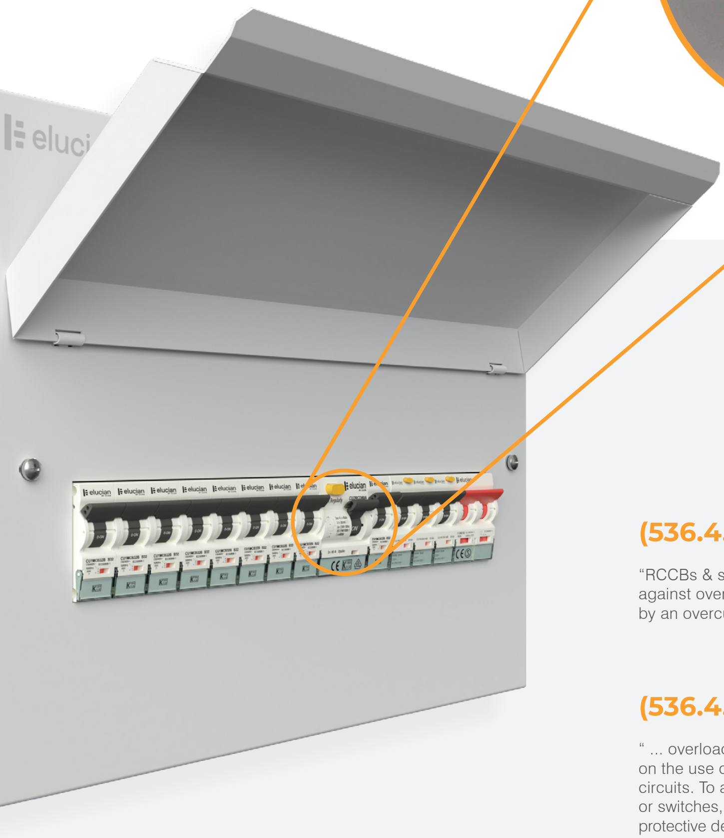
(iv) Reduce the possibility of unwanted tripping of RCDs due to excessive protective conductor current or due to fault.

(v) Mitigate the effects of electromagnetic disturbances.

(vi) Prevent the indirect energization of a circuit intended to be isolated.

Overload
Protection of RCDs...

These devices have the ability to be overloaded if the combined outgoing current from the final circuits is greater than the rating of the RCCB. Therefore, we provide an 80Amp device as standard with the ability to change this to a 100Amp, or reduce to a 63Amp if required.



(536.4.3.2)

“RCCBs & switches do not provide protection against overload, therefore they shall be protected by an overcurrent protective device.”

(536.4.202)

“ ... overload protection shall not solely be based on the use of diversity factors of the downstream circuits. To achieve overload protection of RCCBs or switches, the rated current of the over-current protective device (OCPD) shall be selected according to the manufacturers instructions”.

Comply with
the regs...

Regulations 536.4.3.2 and 536.4.202 require the designer to understand the loading profile of the RCCBs within the consumer unit. RCCBs will protect a number of outgoing circuits at the same time.

Method 1

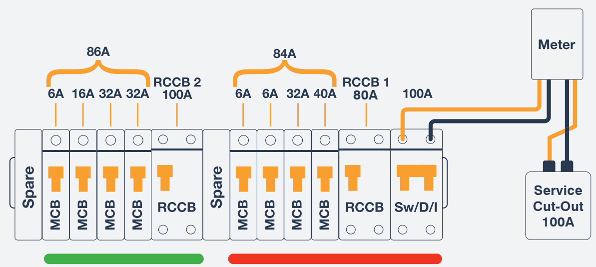
Ensure the full load of all final circuits being protected are less than the rating of the RCCB. The installer will need to consider diversity for the final circuits, but not use diversity as the sole factor for calculating the total current downstream of the device.

Method 2

Ensure the main protective device is of a size to limit the total amount of amps upstream of the devices.

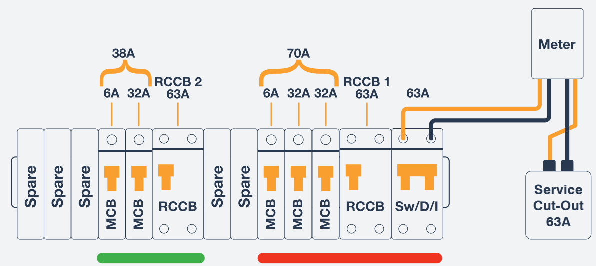
Example 1:

This install would not comply. RCCB1 could be subject to overload.



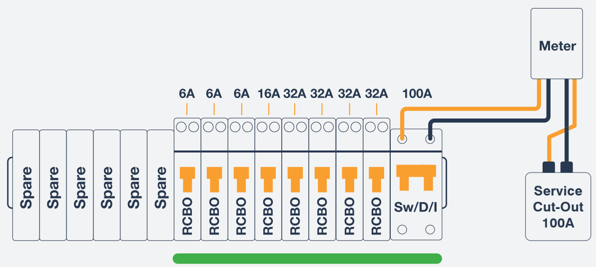
Example 2:

This installation would comply. Although RCCB1 could potentially become overloaded, the protective device at the origin would offer overload protection.



Example 3:

RCBOs offer comprehensive protection as each device is rated to the circuit.



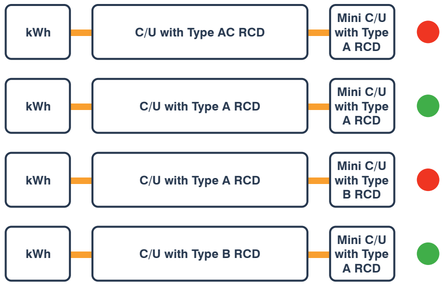
RCD & RCBO
Protective Devices...

RCDs are available in a number of common types; AC, A, F or B. Dependant on the characteristics of the final circuit/s being controlled, the type of RCD selected is very important. If it is believed DC current could be present in the protected circuit/s due to the equipment connected, the designer should select a device capable of working with that DC current present.

General RCDs are designed to operate instantaneously without intentional delay; because of this they are not designed to discriminate in the event of a fault. Therefore, if two general RCDs were to be installed in series, both may operate when a fault presents itself. To avoid this, selectivity is essential between the installed devices to reduce the unintentional operation of a device upstream from the leakage to Earth.

Installing the correct type of device is essential if it is believed DC fault current could be present within the installation. It is important not to install an RCD type that is capable of handling DC fault current ahead of a device that isn't able to operate with these currents.

Such as:



Type A RCD

In today's installations the majority of equipment does have some residual DC current due to the internal electronics. The magnitude of this current can have a detrimental effect on the effectiveness of the protective device. Therefore, we have taken the decision to manufacture Type A devices only.

Type A devices have the ability to continue to work with up to 6mA of DC fault current present. This amount of fault current has been shown to stop AC Type RCDs/RCBOs from working within the maximum time permitted in BS76761.

RCCB - Residual Current Operated Circuit Breaker, without integrated overcurrent protection.

RCBO Protection

These devices combine the functionality of an MCB and RCD into one single device/module. Available as a type A RCD with different inrush curve types B or C, these protective devices have been miniaturised to maximise the available space above for termination or final circuits.

The Neutral fly lead has been made long enough to ensure safe connection to the dedicated Neutral bars.

RCBO - Residual Current Operated Circuit Breaker, with integrated overcurrent protection.

Surge Protection...

Transient Overvoltages

Many installations across the UK have electronic components within them. Surge protection will offer those devices and appliances protection from overvoltage.

Products such as computers, printers, flat screen televisions, alarms, microwaves and washing machines are commonplace. These can all be vulnerable to transient overvoltages, which can significantly reduce the equipment's lifespan through degradation and damage.

A transient overvoltage or surge is a short duration increase in voltage measured between two or more conductors. In short, this means anything from microseconds (millionths of a second) to a few milliseconds (thousandths of a second) in duration.

Example

A domestic consumer unit with 500m of LV supply overhead (Lpal) and 500m of supply underground (Lpcl);

CRL = $f_{env}/(L_p \times N_g)$

CRL = 85 / (2X0.5) x 0.5

CRL = 170

Which means that surge protection will be required.

Covers Overvoltage Control (443.5)

Calculated risk level (CRL) is used to determine if protection against overvoltages of atmospheric origin is required. The CRL is found by the following formula:

CRL = $f_{env}/(L_p \times N_g)$

f_{env} - is an environmental factor selected according to Table 443.1 (Rural/Suburban or Urban)

L_p - is the risk assessment length in km

N_g - is the lightning ground flash density (flashes per km² per year) relevant to the location of the power line and connected structure (see figure 44.2).

If the CRL value is less than 1000 then SPD protection should be installed.
If the CRL value is 1000 or more then SPD protection is not required.

Covers Overvoltage Control (443.4)

Protection against overvoltages shall be provided where the consequence caused by overvoltage could:

(i) Result in serious injury to, or loss of, human life.

(ii) Result in the interruption of public services and/or damage to cultural heritage.

(iii) Result in interruption of commercial or industrial activity.

(iv) Affect a large number of co-located individuals.

For all other cases, a risk assessment according to regulation 443.5 shall be performed to determine if protection against transient over-voltage is required. If the risk assessment is not performed, the electrical installation shall be provided with protection against transient over-voltages, except for single dwelling units where the total value of the installation and equipment therein does not justify such protection.

Protection against switching overvoltages shall be considered in the case of equipment likely to produce switching overvoltages or disturbances exceeding the values according to the voltage category of the installation, e.g. where an LV generator supplies the installation or where inductive or capacitive loads (e.g. motors, transformers, capacitor banks) storage units or high-current loads are installed.

SPD Type 2

SPD which can prevent the spread of over-voltages in the electrical installations and protects equipment connected to it. It usually employs metal oxide varistor (MOV) technology and is characterised by an 8/20 μs current wave.

Terminology

I_{imp} – Impulse current of 10/350 μs waveform.

I_n – Surge current of 8/20 μs waveform associated with Type 2 SPDs.

U_p - The residual voltage that is measured across the terminal of the SPD when In is applied.

U_c - The maximum voltage which may be continuously applied to the SPD without it conducting.

I_{max} - Maximum short circuit current of the device.

Consumer Units

Functional, stylish, and innovative, our Elucian range of consumer units provides an exceptional option for any residential or light commercial environment. Packed with features making installation quick and simple for electricians, with a clear labelling kit for easy identification for the customer. A great range of configurations and sizes makes Elucian perfect for any installation requirement.

Straight Mains Board

100A Mains Switch Fitted

Tail Clamp Pre-Installed

Supplied with complete complement of earth and neutral terminals along with marking labels, busbar and instruction leaflet.

Switch-Disconnector Units

CUEB8MS6	8 Way Unit with 100A Mains Switch (6 Free Ways)
CUEB10MS8	10 Way Unit with 100A Mains Switch (8 Free Ways)
CUEB12MS10	12 Way Unit with 100A Mains Switch (10 Free Ways)
CUEB14MS12	14 Way Unit with 100A Mains Switch (12 Free Ways)
CUEB16MS14	16 Way Unit with 100A Mains Switch (14 Free Ways)
CUEB18MS16	18 Way Unit with 100A Mains Switch (16 Free Ways)
CUEB22MS20	22 Way Unit with 100A Mains Switch (20 Free Ways)

Warranty: 10 Years **Devices:** 3 Years
Standards: BS EN 61439-3 BS EN 60947-3
Dimensions: **8 Way:** 222mm (W) x 260mm (H) x 115mm (D) **10 Way:** 258mm (W) x 260mm (H) x 115mm (D)
12 Way: 294mm (W) x 260mm (H) x 115mm (D) **14 Way:** 330mm (W) x 260mm (H) x 115mm (D)
16 Way: 366mm (W) x 260mm (H) x 115mm (D) **18 Way:** 402mm (W) x 260mm (H) x 115mm (D)
22 Way: 474mm (W) x 260mm (H) x 115mm (D)

RCD Fitted

Tail Clamp Pre-Installed

Supplied with complete complement of earth and neutral terminals along with marking labels, busbar and instruction leaflet.

Mini Units (Garage)

GUEB563RCD3	5 Way Unit with 63A 30mA RCD (3 Free Ways)
GUEB580RCD3	5 Way Unit with 80A 30mA RCD (3 Free Ways)

Warranty: 10 Years **Devices:** 3 Years
Standards: BS EN 61439-3 BS EN 61008-1
Dimensions: 168mm (W) x 260mm (H) x 115mm (D)

Split Load Board

100A

Mains Switch Fitted

Tail Clamp Pre-Installed

RCD

RCD Fitted

Supplied with complete complement of earth and neutral terminals along with marking labels, busbar and instruction leaflet.

Split Load Units

CUEB14MSRCD8	14 Way Unit with 100A Mains Switch + 2 x 80A 30mA RCD (4+4 Free Ways)
CUEB16MSRCD10	16 Way Unit with 100A Mains Switch + 2 x 80A 30mA RCD (5+5 Free Ways)
CUEB18MSRCD12	18 Way Unit with 100A Mains Switch + 2 x 80A 30mA RCD (6+6 Free Ways)
CUEB22MSRCD16	22 Way Unit with 100A Mains Switch + 2 x 80A 30mA RCD (8+8 Free Ways)

Warranty: 10 Years **Devices:** 3 Years
Standards: BS EN 61439-3 BS EN 60947-3 BS EN 61008-1
Dimensions: **14 Way:** 330mm (W) x 260mm (H) x 115mm (D)
16 Way: 366mm (W) x 260mm (H) x 115mm (D)
18 Way: 402mm (W) x 260mm (H) x 115mm (D)
22 Way: 474mm (W) x 260mm (H) x 115mm (D)

Split Load Board With Surge Protection

100A

Mains Switch Fitted

Tail Clamp Pre-Installed

RCD

RCD Fitted

SPD

SPD Fitted

Supplied with complete complement of earth and neutral terminals along with marking labels, busbar and instruction leaflet.

Split Load Units Including Surge Protection

CUEB14MSRCDSP6	14 Way Unit with 100A Mains Switch + 2 x 80A 30mA RCD + 2 Pole SPD (3+3 Free Ways)
CUEB16MSRCDSP8	16 Way Unit with 100A Mains Switch + 2 x 80A 30mA RCD + 2 Pole SPD (4+4 Free Ways)
CUEB18MSRCDSP10	18 Way Unit with 100A Mains Switch + 2 x 80A 30mA RCD + 2 Pole SPD (5+5 Free Ways)
CUEB22MSRCDSP14	22 Way Unit with 100A Mains Switch + 2 x 80A 30mA RCD + 2 Pole SPD (7+7 Free Ways)

Warranty: 10 Years **Devices:** 3 Years
Standards: BS EN 61439-3 BS EN 60947-3 BS EN 61008-1 BS EN 61643-1-11
Dimensions: **14 Way:** 330mm (W) x 260mm (H) x 115mm (D)
16 Way: 366mm (W) x 260mm (H) x 115mm (D)
18 Way: 402mm (W) x 260mm (H) x 115mm (D)
22 Way: 474mm (W) x 260mm (H) x 115mm (D)

HIGH

High Integrity Board

100A

Mains Switch Fitted

Tail Clamp Pre-Installed

RCD

RCD Fitted

Supplied with complete complement of earth and neutral terminals along with marking labels, busbar and instruction leaflet.

Combination Units (High Integrity)

CUEHIB14MSRCD8	14 Way Unit with 100A Mains Switch + 2 x 80A RCD (8 Free Ways)
CUEHIB16MSRCD10	16 Way Unit with 100A Mains Switch + 2 x 80A RCD (10 Free Ways)
CUEHIB18MSRCD12	18 Way Unit with 100A Mains Switch + 2 x 80A RCD (12 Free Ways)
CUEHIB22MSRCD16	22 Way Unit with 100A Mains Switch + 2 x 80A RCD (16 Free Ways)

Warranty: 10 Years **Devices:** 3 Years
Standards: BS EN 61439-3 BS EN 60947-3 BS EN 61008-1
Dimensions: **14 Way:** 330mm (W) x 260mm (H) x 115mm (D)
16 Way: 366mm (W) x 260mm (H) x 115mm (D)
18 Way: 402mm (W) x 260mm (H) x 115mm (D)
22 Way: 474mm (W) x 260mm (H) x 115mm (D)

Protective Devices

Our Elucian range of Protective Devices are easy to install, suitable for residential and light commercial environments, they provide protection against earth faults to ensure people's safety against electrocution and fires.

MCB's

Single Pole

6kA

True 6ka

Large Terminal Capacity

B

B curve

C

C curve

Lockable switch (with compatible kit)
Thermal / Magnetic Trip Release

MCB's Single Pole B Curve

CU1MCB6B	6A B Curve True 6kA MCB
CU1MCB10B	10A B Curve True 6kA MCB
CU1MCB16B	16A B Curve True 6kA MCB
CU1MCB20B	20A B Curve True 6kA MCB
CU1MCB25B	25A B Curve True 6kA MCB
CU1MCB32B	32A B Curve True 6kA MCB
CU1MCB40B	40A B Curve True 6kA MCB
CU1MCB50B	50A B Curve True 6kA MCB
CU1MCB63B	63A B Curve True 6kA MCB

MCB's Single Pole C Curve

CU1MCB6C	6A C Curve True 6kA MCB
CU1MCB10C	10A C Curve True 6kA MCB
CU1MCB16C	16A C Curve True 6kA MCB
CU1MCB20C	20A C Curve True 6kA MCB
CU1MCB25C	25A C Curve True 6kA MCB
CU1MCB32C	32A C Curve True 6kA MCB
CU1MCB40C	40A C Curve True 6kA MCB
CU1MCB50C	50A C Curve True 6kA MCB
CU1MCB63C	63A C Curve True 6kA MCB

Warranty: 3 Years
Standards: BS EN 60898-1
Dimensions: 17.8mm (W) x 85.3mm (H) x 76.6mm (D)

RCBO's

Single Pole + Neutral

6kA

True 6ka

Large Terminal Capacity

30mA

Trip Current

A

Type A

B

B curve

C

C curve

Lockable switch (with compatible kit)

RCBO's Type A Single Pole B Curve

CU1RCBO6B	6A 30mA B Curve True 6kA RCBO
CU1RCBO10B	10A 30mA B Curve True 6kA RCBO
CU1RCBO16B	16A 30mA B Curve True 6kA RCBO
CU1RCBO20B	20A 30mA B Curve True 6kA RCBO
CU1RCBO32B	32A 30mA B Curve True 6kA RCBO
CU1RCBO40B	40A 30mA B Curve True 6kA RCBO

RCBO's Type A Single Pole C Curve

CU1RCBO6C	6A 30mA C Curve True 6kA RCBO
CU1RCBO10C	10A 30mA C Curve True 6kA RCBO
CU1RCBO16C	16A 30mA C Curve True 6kA RCBO
CU1RCBO20C	20A 30mA C Curve True 6kA RCBO
CU1RCBO32C	32A 30mA C Curve True 6kA RCBO
CU1RCBO40C	40A 30mA C Curve True 6kA RCBO

Warranty: 3 Years
Standards: BS EN 61009-1
Neutral Flylead: 450mm
Dimensions: 17.8mm (W) x 91.8mm (H) x 76.6mm (D)

RCD's

CU2RCD63A | CU2RCD80A

CU2RCD100A

Double Pole

Large Terminal Capacity

A

Type A

Lockable switch (with compatible kit)

RCD's

CU2RCD63A	63A 30mA 2 Pole RCD
CU2RCD80A	80A 30mA 2 Pole RCD
CU2RCD100A	100A 30mA 2 Pole RCD

Warranty: 3 Years
Standards: BS EN 61008-1
Dimensions: 35.5mm (W) x 85.2mm (H) x 73mm (D) **100:** 35.6mm (W) x 87mm (H) x 74mm (D)

SPD's

Double Pole

40kA

Max Discharge Current

Large Terminal Capacity

<25ns

Response Time

<1.6kV

Protection Level (Up)

SPD's

CU2SPD275	40kA 275Uc (V~) 2 Pole Type 2 SPD

Cartridge Replaceable For L&N (Product Ref.SP2SPDC275)

Warranty: 3 Years
Standards: BS EN 61643-1-11
Dimensions: 36mm (W) x 90mm (H) x 70mm (D)

Double Pole

100A

Rated

Large Terminal Capacity

Lockable switch (with compatible kit)

Mains Switch-Disconnector

CU2MS100	100A 2 Pole Disconnector-Switch

Warranty: 3 Years
Standards: BS EN 60947-3
Dimensions: 35.9mm (W) x 85.3mm (H) x 76.6mm (D)

Single MCB Width
Clips On To DIN Rail

Blank Modules

CU1BLANK	Single Way Din Rail Blank Module

Warranty: 3 Years
Dimensions: 18mm (W) x 81mm (H) x 70mm (D)

80A

HRC fuse supplied

DB700 | DB750

DB701 | DB751

Suitable for use with CLICK DB981 cable shroud

Fused Main Switch

DB700	80A Fused Main Switch (80A HRC Fuse Fitted)
DB701	80A Fused Main Switch (80A HRC Fuse Fitted) - Lockable
DB750	100A Fused Main Switch (80A HRC Fuse Fitted)
DB751	100A Fused Main Switch (80A HRC Fuse Fitted) - Lockable

Standards: BS 60947-03
Cable Size: **700 701:** 25mm² & 16mm² **750 751:** 35mm²
Dimensions: **700 701:** 127.5mm (W) x 53.5mm (D) x 80.5mm (H) **750 751:** 133mm (W) x 60mm (D) x 101mm (H)

DB790 | DB791

CLICK DB791 metal enclosure available
Suitable for use with CLICK DB981 cable shroud

Fused Main Switch Accessories

DB790 Metal Enclosure for Fused Main Switch (DB700/701)
Suitable for DB700/701 80A fused main switch

DB791 Metal Enclosure for Fused Main Switch (DB750/751)
Suitable for DB701/751 100A fused main switch

DB981 Elongated Cable Shroud (Packaged Individually)
Enables surface and rear entry cable access
Suitable for 35mm² cables

Cable Size: **790:** 25mm² & 16mm² **791 981:** 35mm²
Dimensions: **790 791:** 168mm (W) x 94.5mm (D) x 133mm (H) **981:** 80mm (W) x 90mm (D) x 45mm (H)

UNICRIMP® ScolmoreGROUP

The Unicrimp® range includes cable ties, crimp terminals, PVC tape, copper tube terminals, cable clips, and brass and nylon glands – providing everything required to harness cable between the consumer unit and the end accessory.

For more information check out the latest Unicrimp® Electrical accessories catalogue or visit unicrimp.com

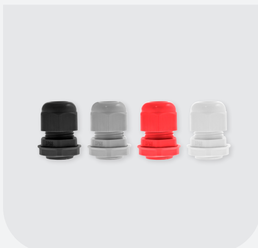
Complete the Installation

Grommets

Standard and quick fit grommets available in 20mm and 25mm

Lock Off Kit

Basic and contractor Lock Off Kits available.

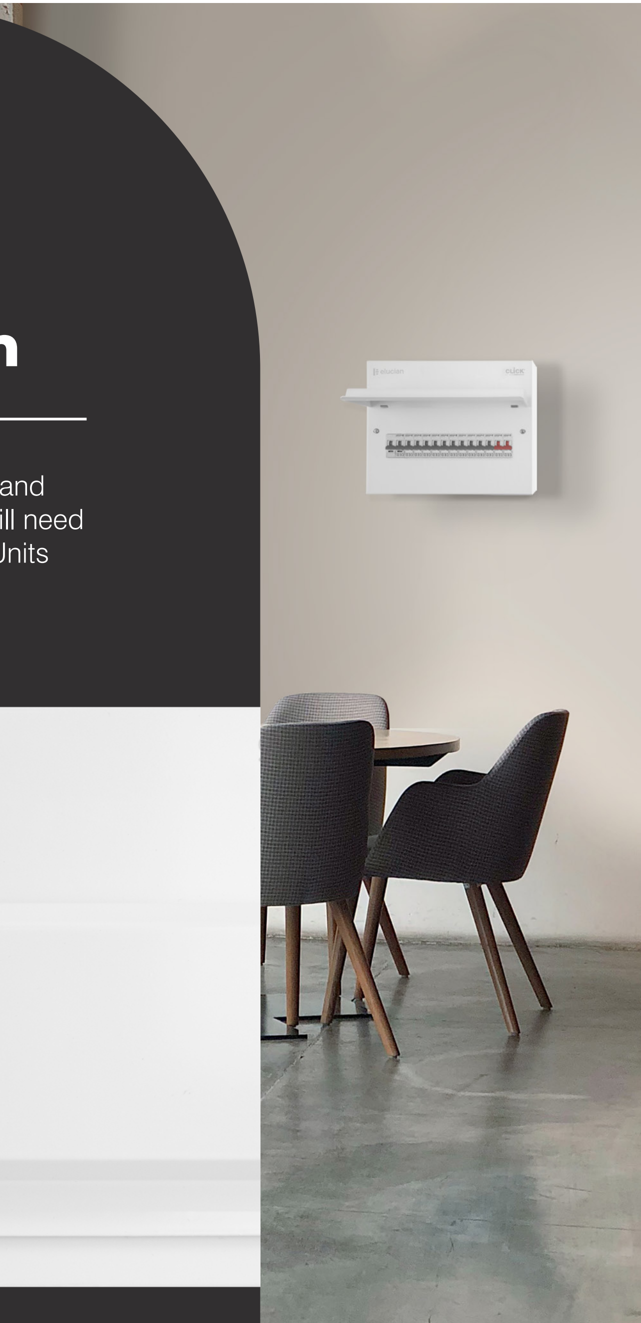


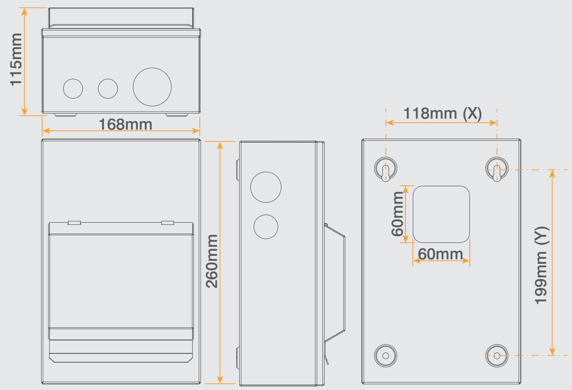
Nylon Glands

Available in black, grey, red & white in sizes ranging from 12mm-63mm

Technical Information

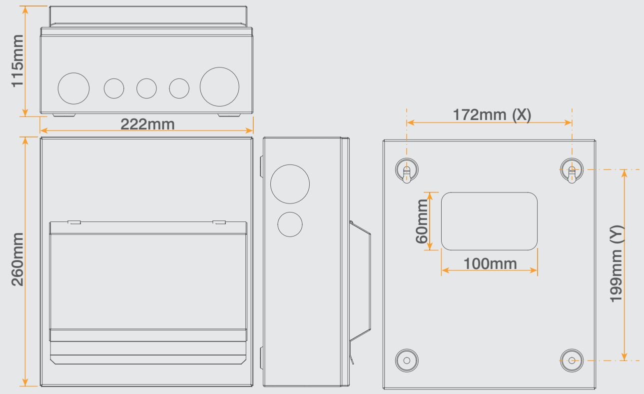
All the technical information and mounting dimensions you will need for your Elucian Consumer Units and Protective Devices.





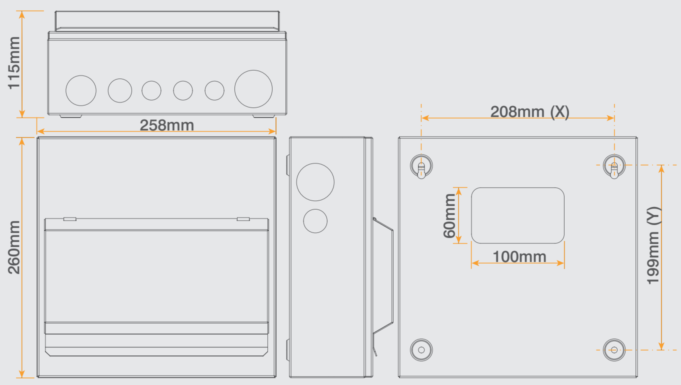
Mini (Garage) Units

Board Product Code	GUEB563RCD3	GUEB580RCD3
Ingress Protection	IP20	
IK Rating	IK05	
Operational Temperature	-5°C to +40°C	
Tail Clamp Capacity	25mm²	
Tail Clamp Torque	1.2Nm Max	
CPC & N Bars Capacity	16mm²	
CPC & N Bars Torque	2.0Nm	
Switch-Disconnector Fitted	-	-
RCD Fitted	1 x 63A 30mA RCD (CU2RCD63A)	1 x 80A 30mA RCD (CU2RCD80A)
SPD Fitted	-	-
Free Ways	3	3
Nett Weight	2.9kg	2.9kg



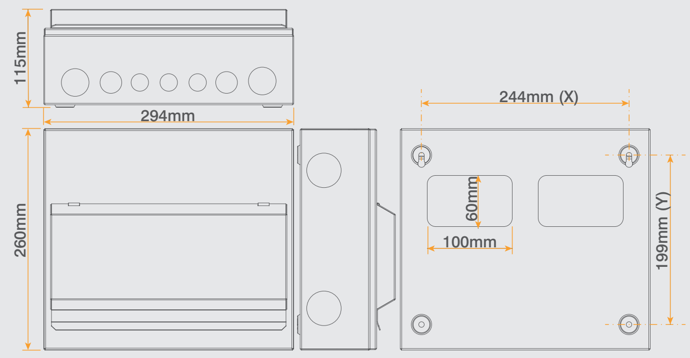
8 Way Units

Board Product Code	CUEB8MS6
Ingress Protection	IP20
IK Rating	IK05
Operational Temperature	-5°C to +40°C
Tail Clamp Capacity	25mm²
Tail Clamp Torque	1.2Nm Max
CPC & N Bars Capacity	16mm²
CPC & N Bars Torque	2.0Nm
Switch-Disconnector Fitted	1 x 100A (CU2MS100)
RCD Fitted	-
SPD Fitted	-
Free Ways	6
Nett Weight	3.3kg



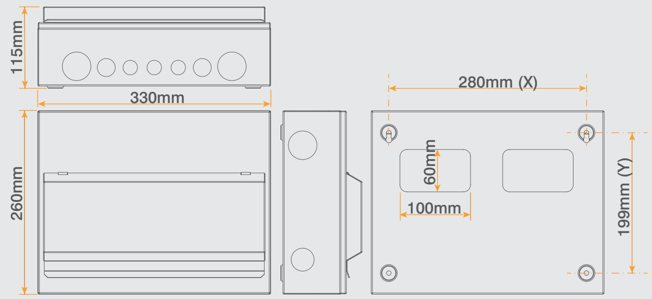
10 Way Units

Board Product Code	CUEB10MS8
Ingress Protection	IP20
IK Rating	IK05
Operational Temperature	-5°C to +40°C
Tail Clamp Capacity	25mm²
Tail Clamp Torque	1.2Nm Max
CPC & N Bars Capacity	16mm²
CPC & N Bars Torque	2.0Nm
Switch-Disconnector Fitted	1 x 100A (CU2MS100)
RCD Fitted	-
SPD Fitted	-
Free Ways	8
Nett Weight	3.6kg



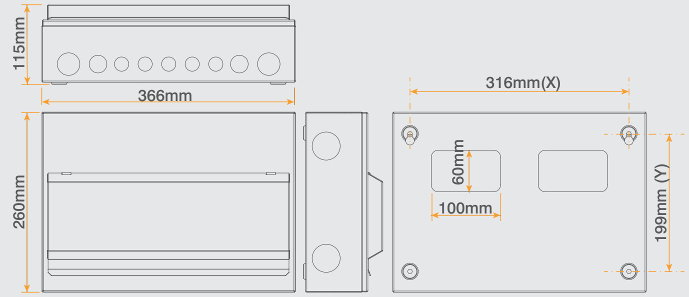
12 Way Units

Board Product Code	CUEB12MS10
Ingress Protection	IP20
IK Rating	IK05
Operational Temperature	-5°C to +40°C
Tail Clamp Capacity	25mm²
Tail Clamp Torque	1.2Nm Max
CPC & N Bars Capacity	16mm²
CPC & N Bars Torque	2.0Nm
Switch-Disconnector Fitted	1 x 100A (CU2MS100)
RCD Fitted	-
SPD Fitted	-
Free Ways	10
Nett Weight	3.9kg



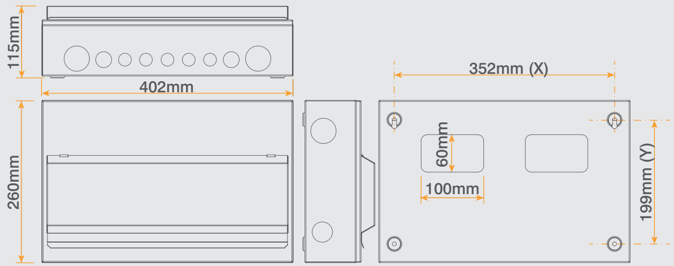
14 Way Units

Board Product Code	CUEB14MS12	CUEB14MSRCD8	CUEB14MSRCDSP6	CUEHIB14MSRCD8
Ingress Protection	IP20			
IK Rating	IK05			
Operational Temperature	-5°C to +40°C			
Tail Clamp Capacity	25mm²			
Tail Clamp Torque	1.2Nm Max			
CPC & N Bars Capacity	16mm²			
CPC & N Bars Torque	2.0Nm			
Switch-Disconnector Fitted	1 x 100A (CU2MS100)	1 x 100A (CU2MS100)	1 x 100A (CU2MS100)	1 x 100A (CU2MS100)
RCD Fitted	-	2 x 80A 30mA RCD (CU2RCD80A)	2 x 80A 30mA RCD (CU2RCD80A)	2 x 80A 30mA RCD (CU2RCD80A)
SPD Fitted	-	-	1 x 40kA SPD (CU2SPD275)	-
Free Ways	12	8 (4+4)	6 (3+3)	8
Nett Weight	4.3kg	5.2kg	5.4kg	5.2kg



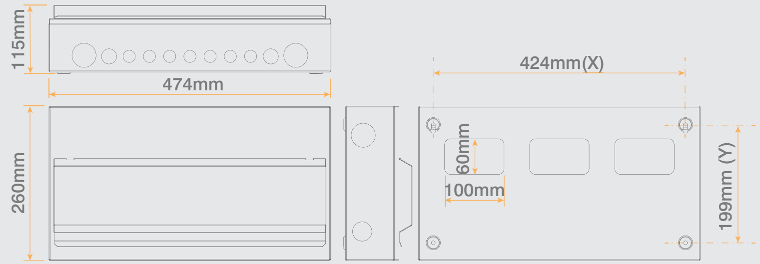
16 Way Units

Board Product Code	CUEB16MS14	CUEB16MSRCD10	CUEB16MSRCDSP8	CUEHIB16MSRCD10
Ingress Protection	IP20			
IK Rating	IK05			
Operational Temperature	-5°C to +40°C			
Tail Clamp Capacity	25mm²			
Tail Clamp Torque	1.2Nm Max			
CPC & N Bars Capacity	16mm²			
CPC & N Bars Torque	2.0Nm			
Switch-Disconnector Fitted	1 x 100A (CU2MS100)	1 x 100A (CU2MS100)	1 x 100A (CU2MS100)	1 x 100A (CU2MS100)
RCD Fitted	-	2 x 80A 30mA RCD (CU2RCD80A)	2 x 80A 30mA RCD (CU2RCD80A)	2 x 80A 30mA RCD (CU2RCD80A)
SPD Fitted	-	-	1 x 40kA SPD (CU2SPD275)	-
Free Ways	14	10 (5+5)	8 (4+4)	10
Nett Weight	4.5kg	5.4kg	5.6kg	5.4kg



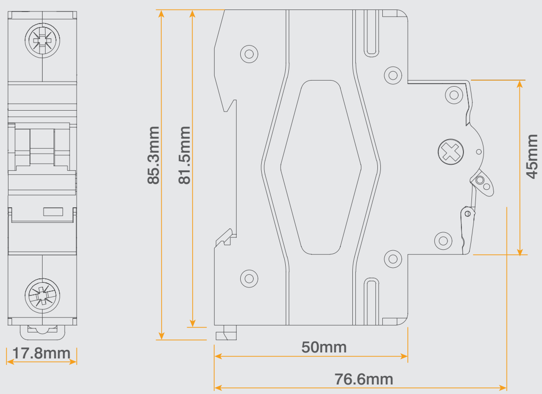
18 Way Units

Board Product Code	CUEB18MS16	CUEB18MSRCD12	CUEB18MSRCDSP10	CUEHIB18MSRCD12
Ingress Protection	IP20			
IK Rating	IK05			
Operational Temperature	-5°C to +40°C			
Tail Clamp Capacity	25mm²			
Tail Clamp Torque	1.2Nm Max			
CPC & N Bars Capacity	16mm²			
CPC & N Bars Torque	2.0Nm			
Switch-Disconnector Fitted	1 x 100A (CU2MS100)	1 x 100A (CU2MS100)	1 x 100A (CU2MS100)	1 x 100A (CU2MS100)
RCD Fitted	-	2 x 80A 30mA RCD (CU2RCD80A)	2 x 80A 30mA RCD (CU2RCD80A)	2 x 80A 30mA RCD (CU2RCD80A)
SPD Fitted	-	-	1 x 40kA SPD (CU2SPD275)	-
Free Ways	16	12 (6+6)	10 (5+5)	12
Nett Weight	4.7kg	5.5kg	5.7kg	5.5kg



22 Way Units

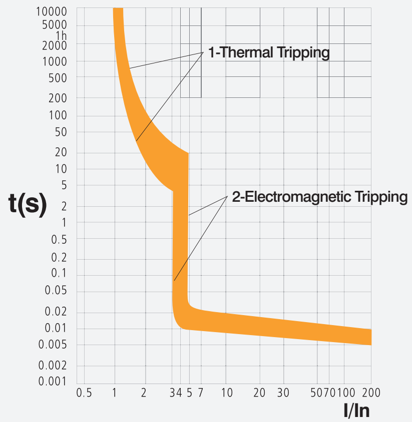
Board Product Code	CUEB22MS20	CUEB22MSRCD16	CUEB22MSRCDSP14	CUEHIB22MSRCD16
Ingress Protection	IP20			
IK Rating	IK05			
Operational Temperature	-5°C to +40°C			
Tail Clamp Capacity	25mm²			
Tail Clamp Torque	1.2Nm Max			
CPC & N Bars Capacity	16mm²			
CPC & N Bars Torque	2.0Nm			
Switch-Disconnector Fitted	1 x 100A (CU2MS100)	1 x 100A (CU2MS100)	1 x 100A (CU2MS100)	1 x 100A (CU2MS100)
RCD Fitted	-	2 x 80A 30mA RCD (CU2RCD80A)	2 x 80A 30mA RCD (CU2RCD80A)	2 x 80A 30mA RCD (CU2RCD80A)
SPD Fitted	-	-	1 x 40kA SPD (CU2SPD275)	-
Free Ways	20	16 (8+8)	14 (7+7)	16
Nett Weight	5.4kg	6.2kg	6.4kg	6.2kg



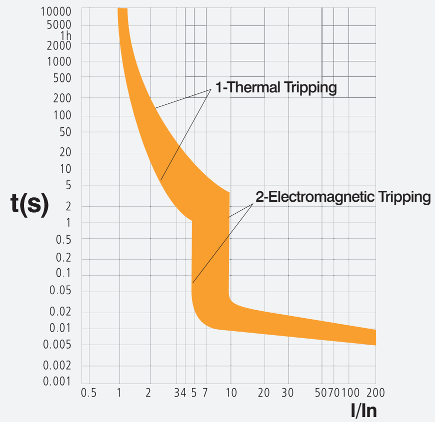
MCB's

	B Curve	C Curve
Rated Operational Voltage (Ue)	230/400V~ 50/60Hz	230/400V~ 50/60Hz
Maximum Rated Current (In)	6A to 63A	6A to 63A
Thermal Operating Limit	(1.13-1.45) x In	(1.13-1.45) x In
Rated Breaking Capacity (Ics)	True 6kA	True 6kA
Number Of Poles	1	1
Insulation Voltage (UI)	500V	500V
Impulse Withstand Voltage (Uimp)	4000V	4000V
Endurance Operations	Mechnical: 20000 Electrical: 8000	Mechnical: 20000 Electrical: 8000
Trip Type	Thermal/Magnetic Release	Thermal/Magnetic Release
Magnetic Operating Characteristics	(3-5) x In	(5-10) x In
Device Terminal Type	Screwed Lug & Pin	Screwed Lug & Pin
Terminal Capacity	6-25A - 16mm² Flexible or 25mm² Rigid 32-63A - 25mm² Flexible or 35mm² Rigid	6-25A - 16mm² Flexible or 25mm² Rigid 32-63A - 25mm² Flexible or 35mm² Rigid
Maximum Torque	2.0Nm	2.0Nm
Operational Temperature	-5°C to +40°C	-5°C to +40°C

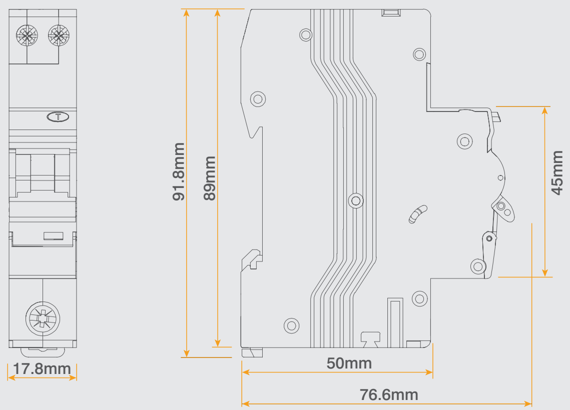
Breaking Curves



B Curve



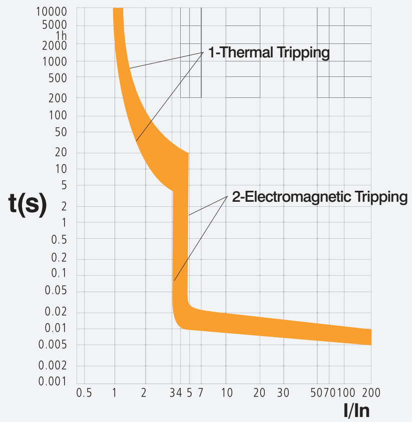
C Curve



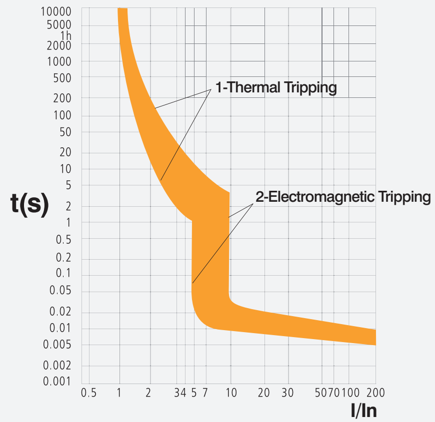
RCBO's

	B Curve & C Curve
Rated Operational Voltage (Ue)	240V~ 50/60Hz
Maximum Rated Current (In)	6A to 40A
Number Of Poles	1P + N
Neutral Tail Length	450mm
Circuit Protection	Earth fault, overcurrent & short-circuit
Device Terminal Type	Screwed Lug & Pin
Input Terminal Capacity	25mm² Flexible / 32mm² Rigid
Output Terminal Capacity	16mm² Flexible / 25mm² Rigid
Maximum Torque	Input: 2.0Nm Ouput: 1.2Nm
RCD Type	A
Residual Current Making & Breaking Capacity (Im)	500A
Tripping Current	30mA
Residual Non-operating Current (IΔn)	0.5
Impulse Withstand Voltage (Uimp)	4000V
Trip Type	Ground Fault: Electronic/Electromagnetic Over Current: Thermal/Magnetic
Endurance Operations	Mechnical: 20000 Electrical: 5000
Operational Temperature	-25°C to +40°C

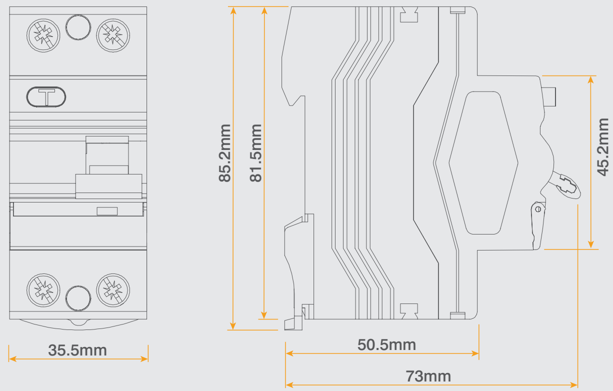
Breaking Curves



B Curve

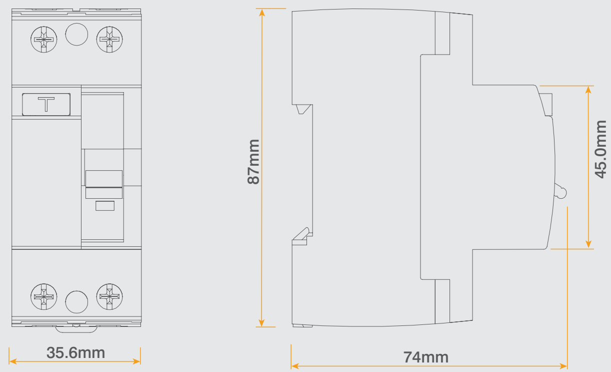


C Curve



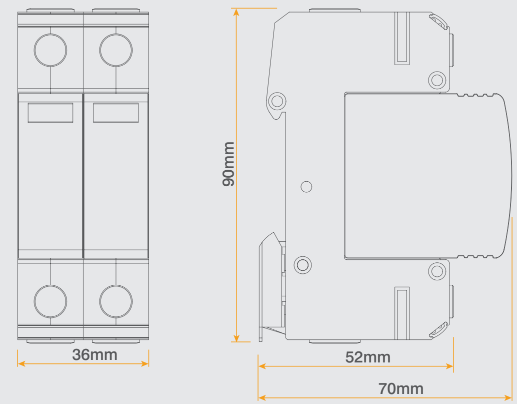
63A & 80A RCD's

	63A 30mA	80A 30mA
Rated Operational Voltage (Ue)	230V~	230V~
Maximum Rated Current (In)	63A	80A
RCD Type	A	A
Number Of Poles	2 (1+N)	2 (1+N)
Residual Current Making & Breaking Capacity (Im)	630A	800A
Tripping Current	30mA	30mA
Residual Non-operating Current (IΔn)	0.5	0.5
Impulse Withstand Voltage (Uimp)	4000V	4000V
Endurance Operations	2000 'ON' & 1000 'OFF' Cycles	2000 'ON' & 1000 'OFF' Cycles
Trip Type	Electro-Magnetic Release	Electro-Magnetic Release
Device Terminal Type	Screwed Lug & Pin	Screwed Lug & Pin
Terminal Capacity	16mm²	25mm²
Maximum Torque	2.5Nm	2.5Nm
Operational Temperature	-25°C to +40°C	-25°C to +40°C



100A RCD's

	100A 30mA
Rated Operational Voltage (Ue)	230V~
Maximum Rated Current (In)	100A
RCD Type	A
Number Of Poles	2 (1+N)
Residual Current Making & Breaking Capacity (Im)	1000A
Tripping Current	30mA
Residual Non-operating Current (IΔn)	0.5
Impulse Withstand Voltage (Uimp)	4000V
Endurance Operations	2000 'ON' & 1000 'OFF' Cycles
Trip Type	Electro-Magnetic Release
Device Terminal Type	Screwed Lug & Pin
Terminal Capacity	35mm²
Maximum Torque	2.5Nm
Operational Temperature	-25°C to +40°C



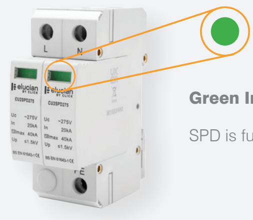
SPD's

Maximum Continuous Operating Voltage (Uc)	275V~
SPD Type	Type 2
Number Of Poles	2
Visual Status (Green)	Normal Function
Visual Status (Red)	Cartridge Replaceable For L&N (Product Ref.SP2SPDC275)
Device Terminal Type	Screwed Lug & Pin
Terminal Capacity	L&N: 2.5mm²-35mm², PE: 4mm²-35mm²
Maximum Torque	2.0Nm
Circuit Current	25A to 32A
Internal Overcurrent Protection	300A
Maximum Voltage Protection Level (Up)	<1.6Kv
Nominal Discharge Current (In)	20kA (L-N & N-PE)
Maximum Discharge Current (Imax)	40kA (L-N & N-PE)
Response Time (tA)	<25ns
Compatible Earthing Systems	TT / TN
Operational Temperature	-40°C to +70°C

Protection Devices

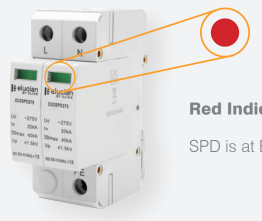
Reserve Indicator Light

Neutral cartridges cannot be put into spares reserved for phase cartridges and visa versa.



Green Indicator Light

SPD is functioning correctly.



Red Indicator Light

SPD is at End of Life.

Surge Protection

The Type 2, 2 Pole 40kA Surge Protection Device 275Uc (V~) protect all aspects of the installation from an electrical surge, anything from lighting and motors to lightning.

As well as preventing premature aging, destruction of equipment and unnecessary downtime SPDs are recommended to protect sensitive electronic equipment connected to the installation such as computers, televisions, washing machines & LED Lighting.

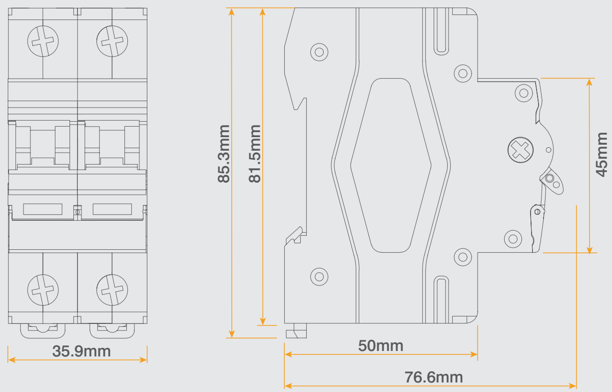
Technical Data

- Complies with BS EN 61643-1-11
- D Versions: end of life indicator, auxiliary contact for remote indication.
- R Versions: reserve status indicator, signalling.
- Connection Capacity (terminal blocks L, N & E): Rigid conductor: 10mm², Flexible conductor: 6mm².
- 230V a.c. 1A. 12V...10mA.

Installation and Connection

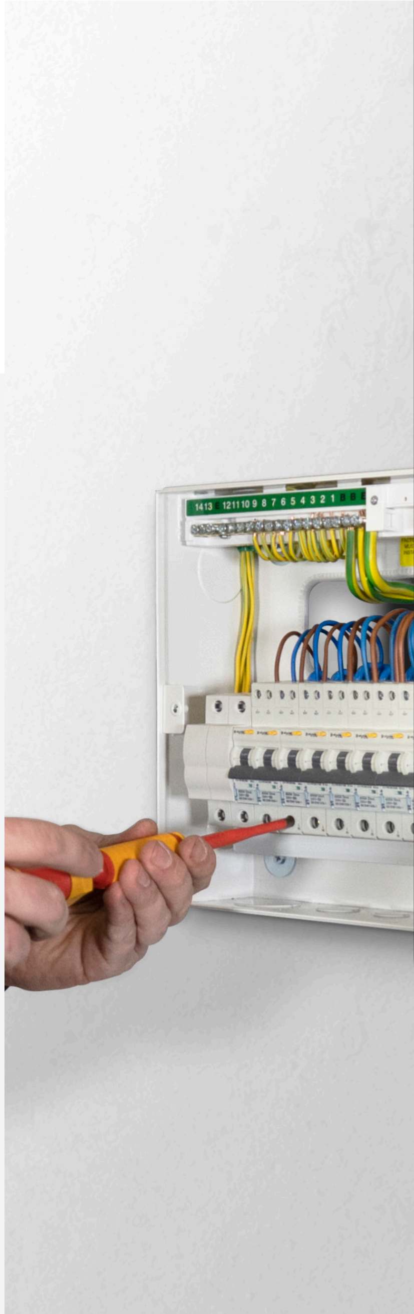
- The main protection SPDs are installed directly after the main incoming switch or RCCB.
- Connected in parallel to the equipment to be protected.
- Protection is assured in both common and differential modes.

Cartridge Replaceable For Both L&N (Product Ref.SP2SPDC275)



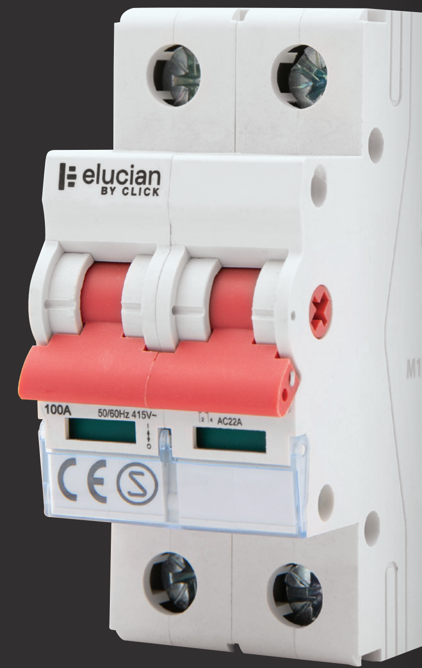
Mains Switch-Disconnector

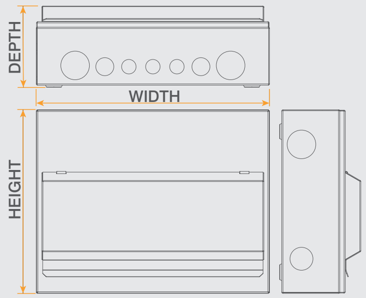
Rated Operational Voltage (Ue)	230/415V~
Maximum Rated Current (In)	100A
Number Of Poles	2
Endurance Operations	Mechnical: 10000 Electrical: 1500
Device Terminal Type	Screwed Lug & Pin
Terminal Capacity	35mm²
Maximum Torque	2.5Nm
Utilisation Category	AC-22A
Short Circuit Withstand Current (Icw)	12 Ie, t=1s
Short Circuit Making Capacity (Icm)	20 Ie
Making & Breaking Capacity	3Ie,1.05Ue, COS ϕ =0.65
Insulation Voltage (UI)	690V
Impulse Withstand Voltage (Uimp)	6000V
Operational Temperature	-25°C to +40°C



Installation Information

All the installation information you need, from fixing centre's, knockout sizes and torque settings.





Dimensions & Knockouts

Dimensions (mm)					
Unit Ways	Width	Height	Depth (Body)	Depth (Overall)	XY Fixing Centres
5	168	260	92	116	118 x 199
8	222	260	92	116	172 x 199
10	258	260	92	116	208 x 199
12	294	260	92	116	244 x 199
14	330	260	92	116	280 x 199
16	366	260	92	116	316 x 199
18	402	260	92	116	352 x 199
22	474	260	92	116	424 x 199

Knockouts (mm)			
Unit Ways	Sides (Ø)	Top & Bottom (Ø)	Rear
5	1x25, 1x32	2x20, 1x40	60x60
8	1x25, 1x40	3x20, 1x32, 1x40	100x60
10	1x25, 1x40	3x20, 1x32, 1x40	100x60
12	2x40	3x20, 2x25 2x32	2x100x60
14	1x32, 1x40	3x20, 2x25, 2x40	2x100x60
16	2x40	4x20, 2x25, 2x40	2x100x60
18	1x32, 1x40	5x20, 2x25, 2x40	2x100x60
22	1x32, 1x40	7x20, 2x25, 2x40	3x100x60

After fitting all outgoing devices and connecting all outgoing cables, ensure that all connections are tightened to the torque settings stated in the table below, including factory made connections which may have become loose during transit.

Torque Settings

Device Type	Number Of Ways	Maximum Conductor Size	Maximum Torque	
			Input	Output
Main Switch	2	35mm²	2.5Nm	2.5Nm
RCD	2	16mm² (63A), 25mm² (80A), 35mm² (100A)	2.5Nm	2.5Nm
SPD	2	L&N: 2.5mm²-35mm², PE: 4mm²-35mm²	2.0Nm	2.0Nm
MCB	1	16mm² Flexible or 25mm² Rigid (Up to 25A)	2.0Nm	2.0Nm
		25mm² Flexible or 35mm² Rigid (32A - 63A)		
RCBO	1	25mm² Flexible / 32mm² Rigid (Input)	2.0Nm	1.2Nm
		16mm² Flexible / 25mm² Rigid (Output)		
Earth & Neutral Bars		16mm²	2.0Nm	
Mains Tail Clamp		25mm²	1.2Nm	

80A and 100A variants are supplied with a 80A Bussmann fuse as standard.

However the following fuses will fit:

Fused Main Switch

Fuse Manufacturer				
Rating	**Bussmann**	**Lawson**	**MEM**	**GE**
40A	40KR85	ME40	404R	RHF40
45A	45KR85	ME45	454R	-
50A	50KR85	ME50	504R	RHF50
60A	60KR85	ME60	604R	RHF60
70A	70KR85	ME70	-	-
80A	80KR85	ME80	804R	RHF80
100A	100KR85	ME100	-	-

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