



# CIRCUIT PROTECTION

## Metal Consumer Unit

Safety & Installation Instructions  
Please Retain - Read Before Use

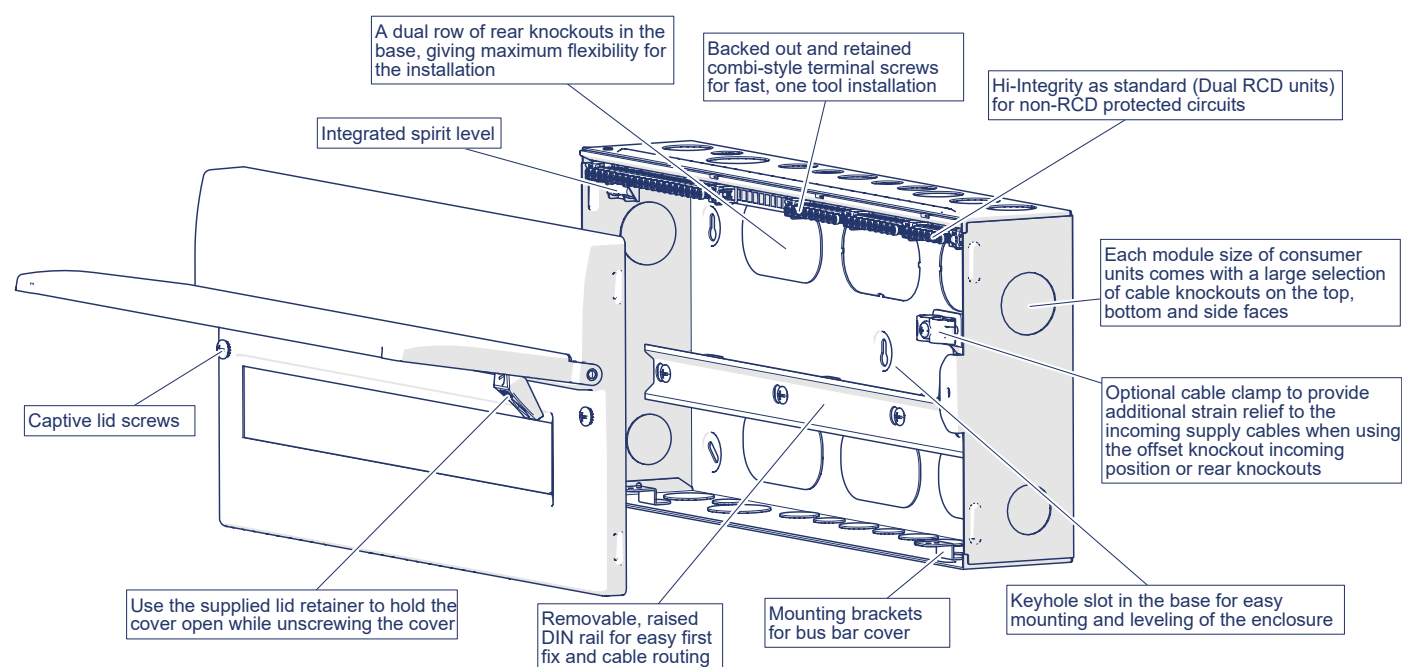
### Safety Warning

This unit must be installed by a qualified registered electrician in accordance with the current IET wiring regulations BS7671. Before commencing any electrical work ensure the electrical supply is isolated and locked off.

This BG consumer unit consists of a non-combustible metal enclosure, with an integral DIN rail onto which a main switch isolator or RCD is mounted along with MCB's/RCBO's, neutral and earth terminals and all connecting cables (depending on which board configuration). BG consumer units are tested to BS EN 61439-3 standard, this tested standard verifies the safety requirements and performance of the devices installed within the unit.

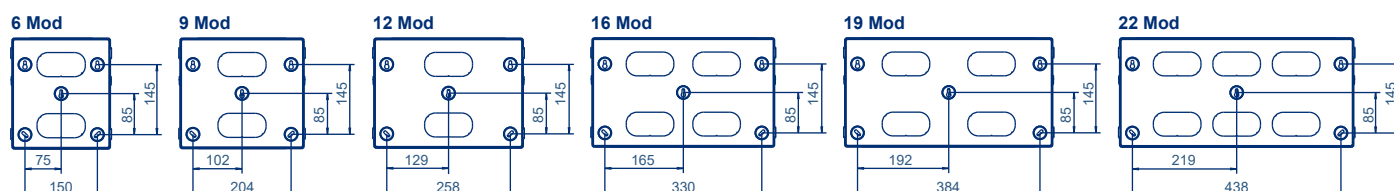
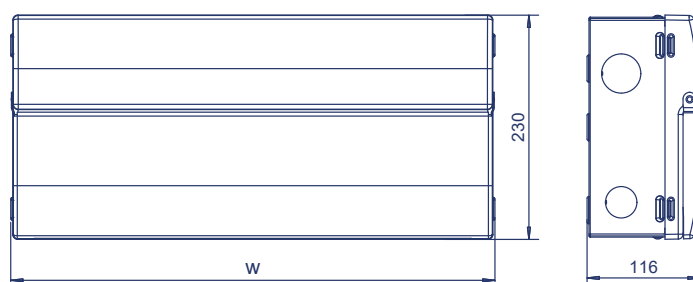
- Please note these instructions are for additional guidance to assist with an easy and neat installation, not a how to wire guide.**
- The total load must not exceed the rating of the incoming isolator or any other limiting factor.
- Ensure all connections are secure and terminal screws are tightened up to the supplied torque settings. See torque settings table on page 5.
- DO NOT USE POWER TOOL SCREWDRIVERS ON ELECTRICAL CONNECTIONS.

### Installation Features



### Consumer Unit Dimensions

Consumer Unit	Height (mm)	Width (mm)	Depth (mm)
6 Module	230	209	116
9 Module	230	263	116
12 Module	230	317	116
16 Module	230	389	116
19 Module	230	443	116
22 Module	230	497	116

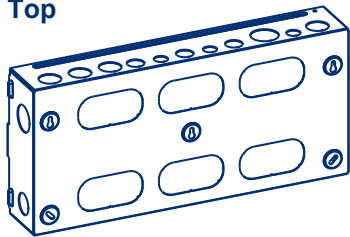


# Metal Consumer Unit

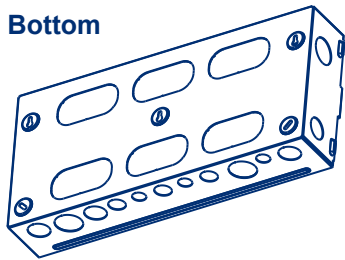
## Consumer Unit Knockout Detail per Face

Consumer Unit	Top	Bottom	Base	Sides
6 Module	1x 20mm, 3x 32mm	1x 20mm, 2x 32mm, 1x 40mm	2x 100mm x 50mm	2x 32mm, 2x 40mm
9 Module	1x 20mm, 1x 25mm, 3x 32mm	1x 20mm, 1x 25mm, 2x 32mm, 1x 40mm	2x 100mm x 50mm	2x 32mm, 2x 40mm
12 Module	1x 20mm, 1x 25mm, 4x 32mm	1x 20mm, 1x 25mm, 3x 32mm, 1x 40mm	2x 100mm x 50mm	2x 32mm, 2x 40mm
16 Module	2x 20mm, 1x 25mm, 4x 32mm, 1x 40mm	2x 20mm, 1x 25mm, 3x 32mm, 2x 40mm	4x 100mm x 50mm	2x 32mm, 2x 40mm
19 Module	3x 20mm, 2x 25mm, 4x 32mm, 1x 40mm	3x 20mm, 2x 25mm, 3x 32mm, 2x 40mm	4x 100mm x 50mm	2x 32mm, 2x 40mm
22 Module	3x 20mm, 3x 25mm, 4x 32mm, 1x 40mm	3x 20mm, 3x 25mm, 3x 32mm, 2x 40mm	6x 100mm x 50mm	2x 32mm, 2x 40mm

Top

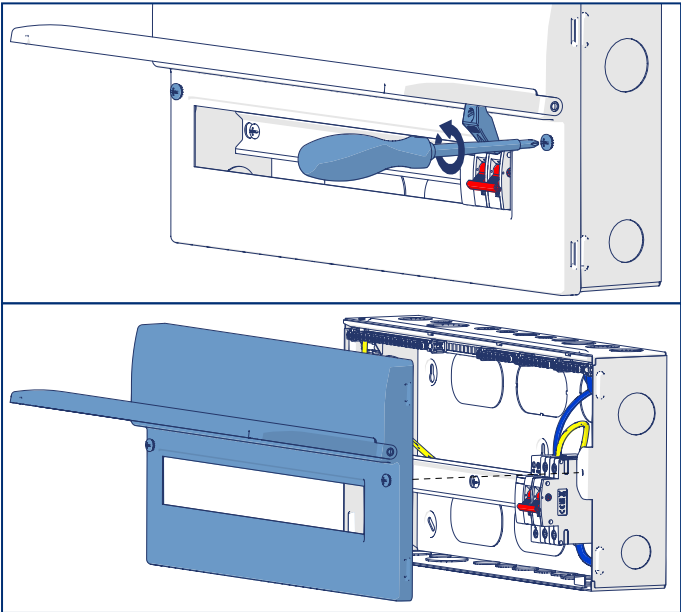


Bottom



## Installation Instructions

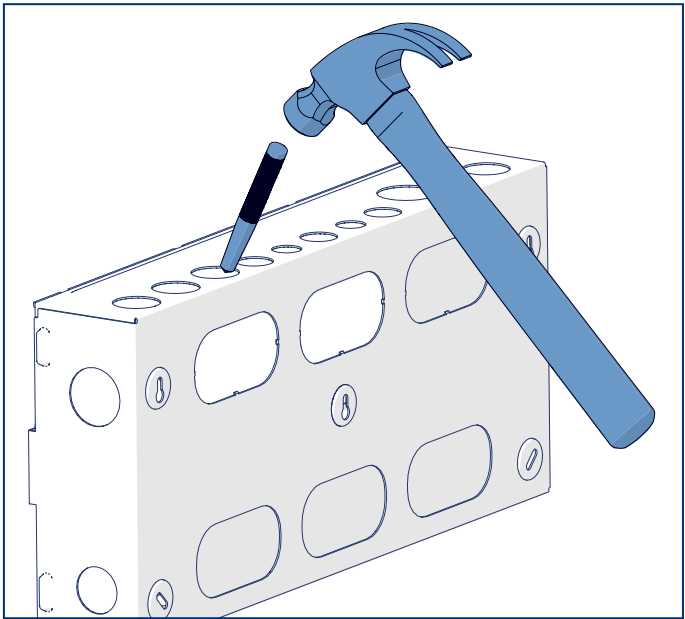
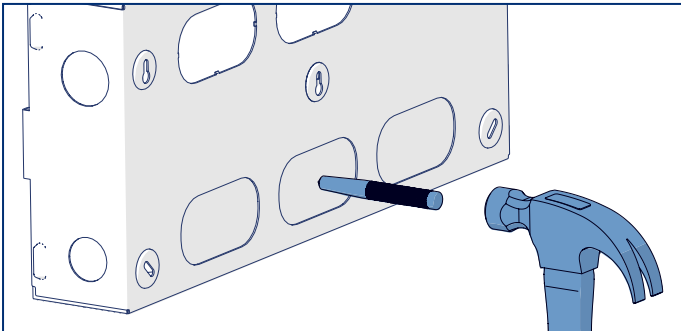
### 1. Removing the Cover



Lift up front cover to access the cover screws, turn screws anti-clockwise until they are completely loose and remove front cover.

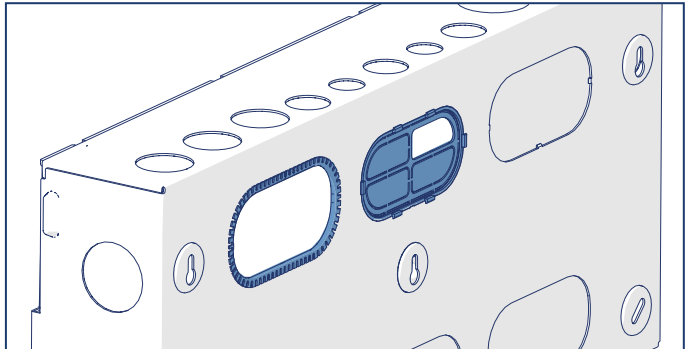
**Note:** Screws are captive.

### 2. Remove Cable Entry Knock-Outs

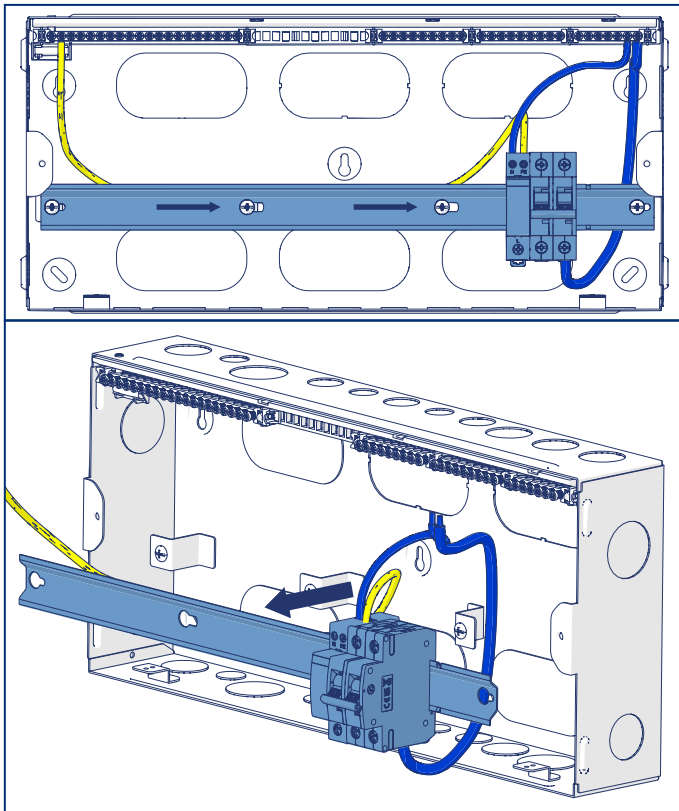


Use a punch to remove all knockouts required, making sure to use glands for all side, top or bottom knockouts to retain the IP integrity of the consumer unit.

Remove the required knockouts for cable entry to suit the installation, use the provided clip in cable protector or perforated grommet strip for the base knockouts to prevent cable chafing.



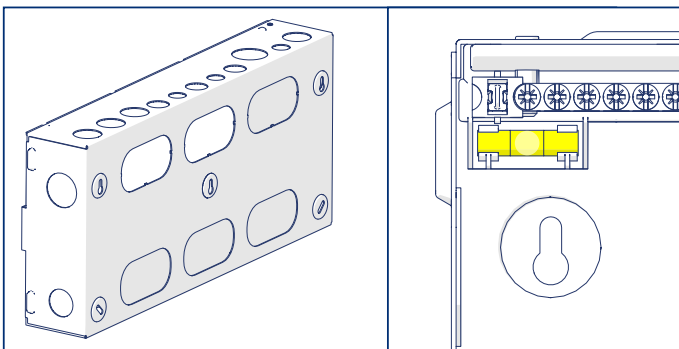
### 3. Remove DIN Rail and Neutral Cables



Removable DIN rail to assist with a easier and quicker first fix of the enclosure.

**Note:** Model shown is Main Switch with SPD. Devices and wiring will vary dependent on model type.

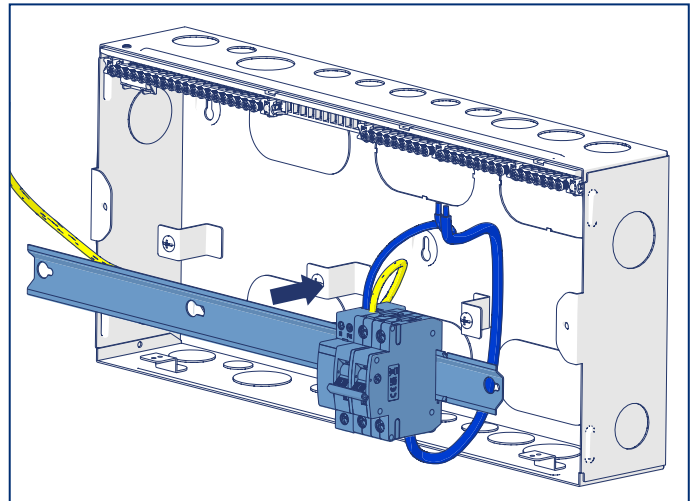
### 4. Mounting the Consumer Unit



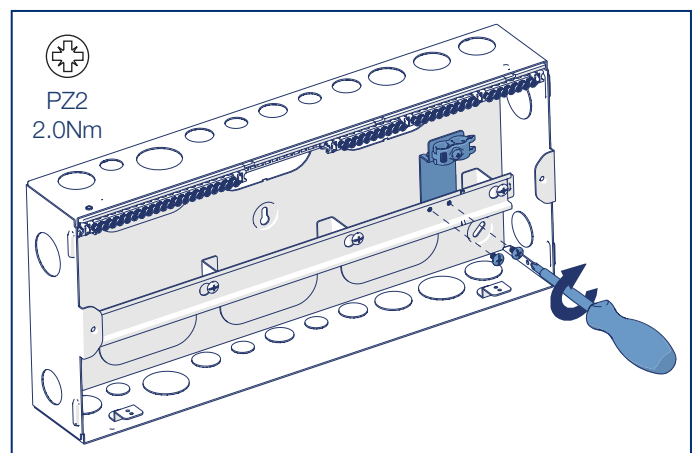
Use the keyhole slot in the base of the unit for easy mounting, levelling and marking of the fixing points of the consumer unit.

Once level (use integrated spirit level) and the fixing positions are marked secure to the fixing surface using the keyhole slot first and then align to the other fixing points using the appropriate wall fixings for the chosen surface.

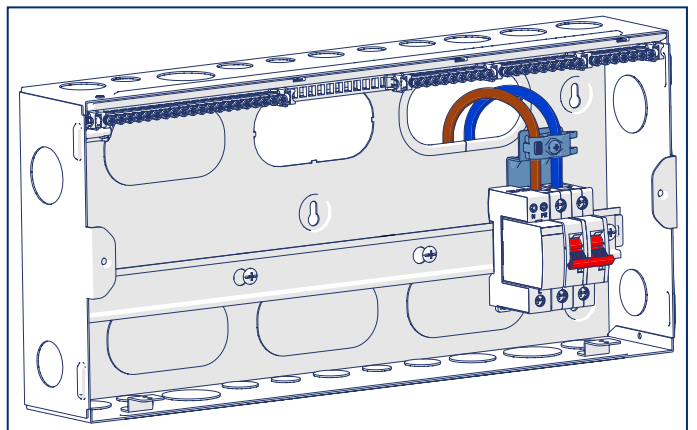
### 5. Re-Fit DIN Rail and Neutral Cables



### 6. Fit Meter Tails Clamp (if required)



### 7. Fit Meter Tails



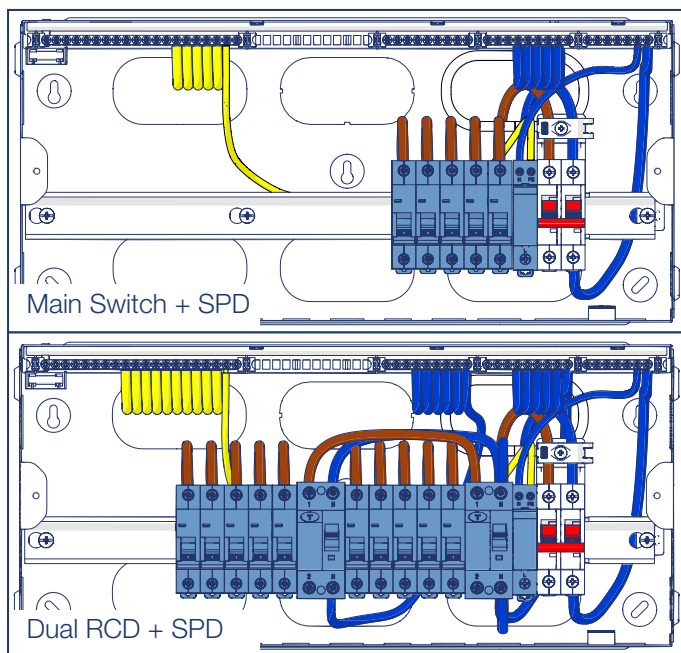
Prepare the incoming meter tails cables (25mm). Bring the cables into the consumer by using the provided top, bottom, side or rear knockouts to suit the installation requirements, making sure the correct gland size is used or use the supplied rear clip-in cable protector or grommet strip if rear cable access is required.

This consumer unit has an offset incomer position for additional incoming cable space or choose to use the 40mm knockout position which is in-line with the isolator to allow for an easy cable route behind the raised DIN rail to the incoming isolator switch.

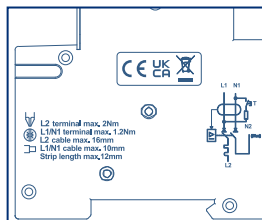
Use the provided (optional) meter tails clamp to dress and secure the cables to provide additional strain relief and give a neat finish for termination.

# Metal Consumer Unit

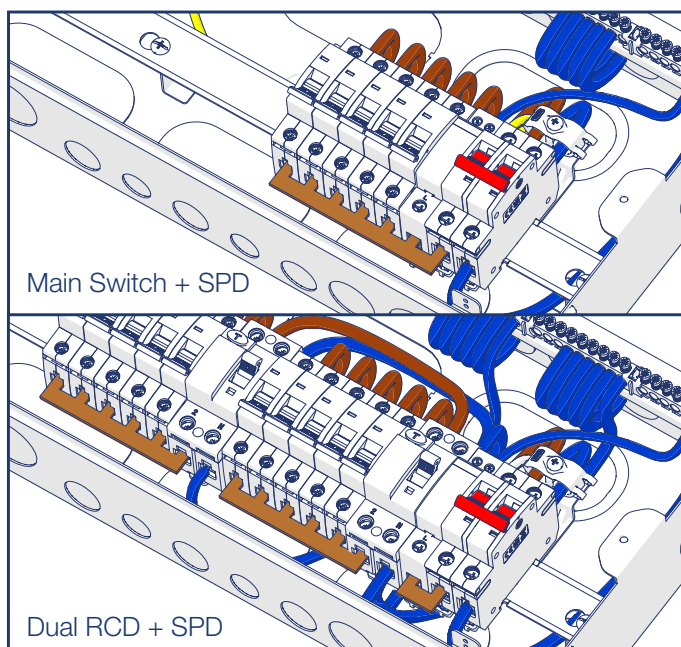
## 8. Wire Devices



Dress the cables neatly into the device and the corresponding circuit position Neutral and Earth terminals. Refer to the torque settings and cable strip lengths in this manual, the label in the base of the unit or on the side of the device.



## 9. Fit Busbar

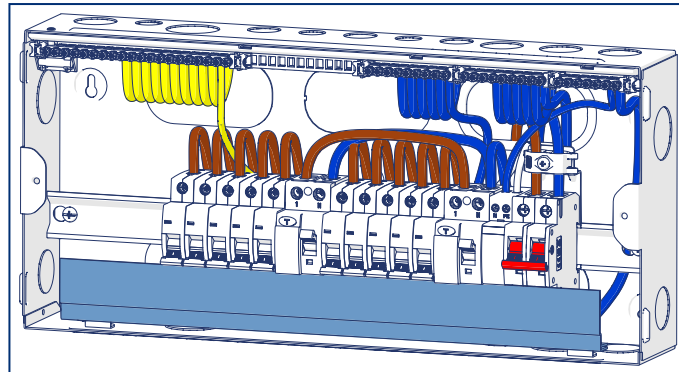


When all connections are tightened to the correct torque settings cut and fit busbar to the lower terminals of the devices and tighten to the correct torque setting.

**Note 1:** Please ensure the live cables to RCD1/RCD2 are fitted under the busbar in the main switch live terminal (Dual RCD Unit).

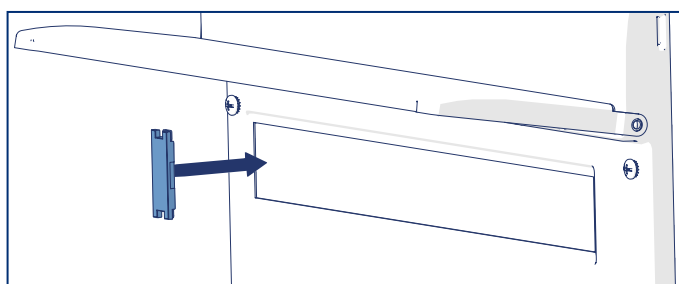
**Note 2:** Please ensure the busbar is inserted fully into the devices cage terminal before tightening terminal screws to the correct torque.

## 10. Fit Busbar Cover



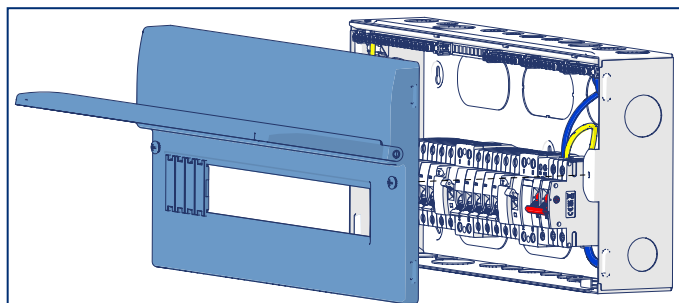
Fit plastic busbar cover to shield busbar.

## 11. Fit Cover Blanks

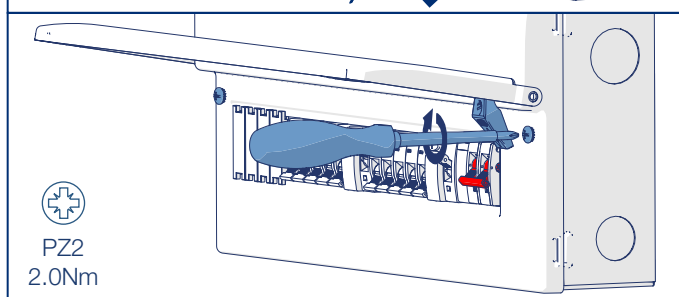
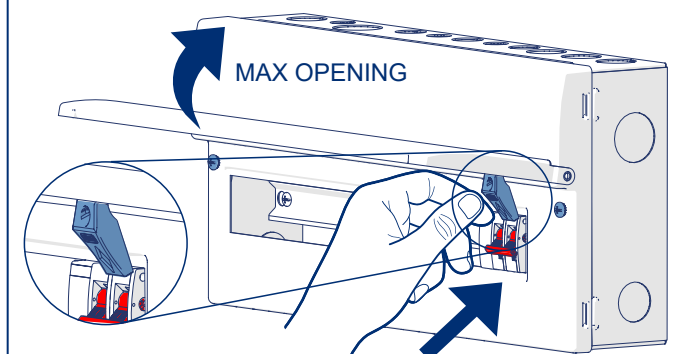


Insert cover or DIN rail blanks in any unused ways if required.

## 12. Re-Fit Front Cover

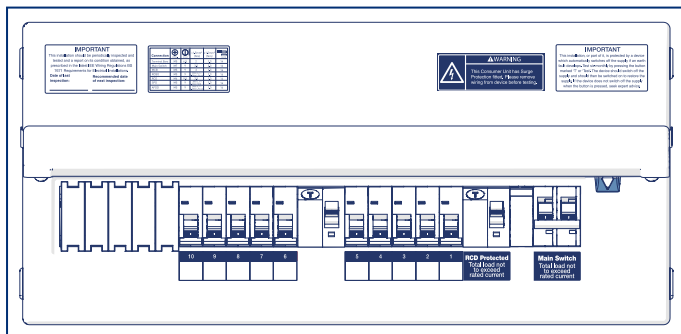


Push up cover to maximum opening and fit lid retainer



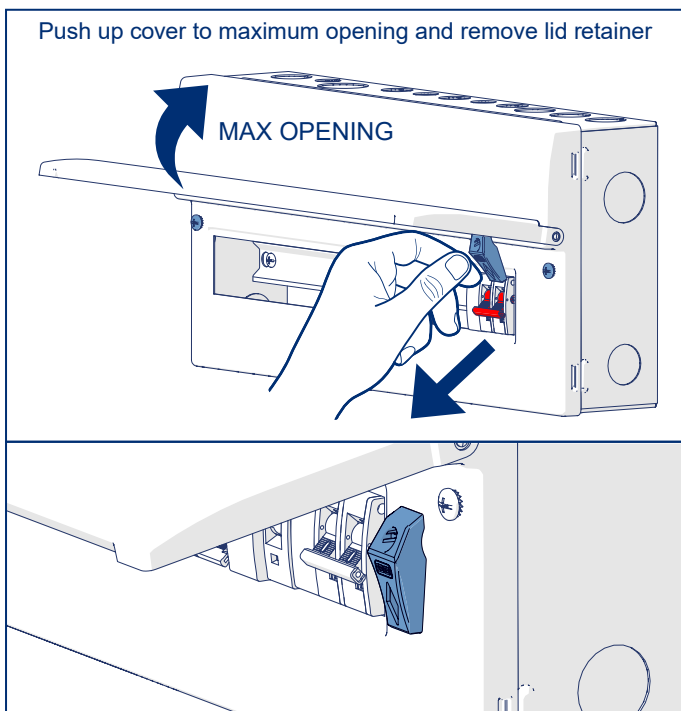


## 13. Apply Labels



Apply circuit identification labels as required. Use the lid retainer to make label application easier. The image above is an example only.

## 14. Store Lid Retainer



Remove the lid retainer as per image instructions and store inside front cover using the built-in magnet.

## Interface Characteristics

<b>Rated &amp; operational voltage (Un/UE)</b>	230V A.C 50Hz
<b>Rated &amp; insulation voltage (Ui)</b>	500V A.C 50Hz
<b>Rated impulse withstand voltage (Uimp)</b>	4kV
<b>Rated current of assembly (InA)</b> <b>Note:</b> dependant upon rating of main incoming device	40A, 63A, 80A, 100A
<b>Rated current of outgoing circuits (Inc)</b>	MCB 6A - 55A RCBO 6A - 55A AFDD 6A - 40A
<b>Rated current of outgoing circuits (Inc)</b>	RCD 40A, 63A, 80A, 100A AFDD 6A - 40A
<b>Rated conditional circuit of assembly (Icc)</b>	16kA for 0.25 second
<b>Rated diversity factor (RDF) / Values of assumed loading</b>	<b>Note:</b> RDF only applies to continuously and simultaneously loading circuits.
<b>No. of outgoing circuits</b>	
<b>Assumed loading factor</b>	
2 and 3	
4 and 5	
6 to 9 inclusive	0.6
10 and above	0.5
<b>Rated Frequency Hz</b>	50Hz
<b>Pollution degree</b>	2
<b>Types of earthing systems for which the assembly is designed</b>	Indoor use only Stationary assembly
<b>Degree of protection</b>	IP2XC Intended for use in domestic (residential) or similar premises
<b>EMC</b>	A
<b>Enclosure design</b>	Wall mounted, surface type, enclosed assembly
<b>Mechanical impact protection</b>	IK05
<b>Type of construction</b>	Fixed parts
<b>Type A DBO</b>	Distribution board for use by ordinary persons

## Consumer Unit and Devices Standards

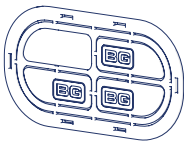
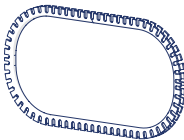



Connection	Standard
Consumer Unit	BS EN 61439-3
Main Switch	IEC/EN 60947-3
MCB	IEC/EN 60898-1
RCBO	IEC/EN 61009-1
AFDD	IEC/EN 62606, IEC/EN61009-1
SPD	IEC/EN 61643-11
RCD	IEC/EN 61008
IP Rating	IP2XC

## Terminal Torque Settings

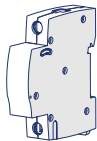
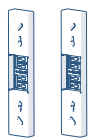
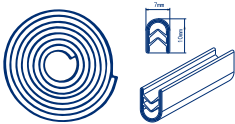
Connection	PZ No.	Slotted Screwdriver Size	Torque Setting >1.5mm <sup>2</sup> (Nm)	Torque Setting ≤1.5mm <sup>2</sup> (Nm)	Strip Length
Terminal Bars	PZ2	6.5mm	2.0	1.3	14mm
Main Switch	PZ2	9mm	3.5	2.3	14mm
MCB	PZ2	9mm	2.0	1.3	14mm
RCBO	PZ2 L/--, PZ1 PE/N	9mm	2.0 in/--, 1.2 L/N out	1.3	14mm
RCD	PZ2	9.5mm	2.5	1.3	14mm
SPD	PZ2 L/--, PZ1 PE/N	6mm	2.0 L/--, 1.2 PE/N	1.3	14mm
AFDD	PZ2 L/--, PZ1 PE/N	9mm	2.0 in/--, 1.2 L/N out	1.3	14mm

## Accessories

BG surface mount consumer units come supplied with the below accessories.

<b>Clip-in Cable Protector</b> Has 4 individual removable pieces or can all be removed for multiple cables, fits rear knockouts BG code – CUA26/10 pk 10	
<b>Grommet Strip</b> Cut to size for rear knockouts, can be used in conjunction with clip-in cable protector	
<b>Cable Clamp</b> Can be fitted to DIN rail to help strain relief on incoming meter tails BG code CUA28	
<b>Cover Blanks</b> Twist fit, for any unused ways BG code CAU01 PK 10	
<b>Lid Retainer</b> Keeps front cover in the up position for removal of cover screws or applying labels BG code CAU17	

Additional accessories are also available.

<b>Blank Module</b>  DIN Rail Mounted to fill any unused ways BG code - CUA19 x 1	
<b>Consumer Unit Stand off Mounts</b> Stands consumer unit off wall so trunking can be used BG code – CUA29 1 x pair	
<b>Heavy Duty Grommet Strip – 5m Length</b> Additional protection for cable knockouts BG code – CUA27	

## Guarantee

BG Electrical Circuit Protection products are guaranteed against faulty materials and workmanship for a period of 10 years from date of delivery: products will be repaired or (at BG Electrical's discretion) replacements will be supplied or (at BG Electrical's discretion) a credit note will be issued. This guarantee is subject to BG Electrical's conditions of sale and in particular to the following conditions being met:

1. Notification of any defect is given to BG Electrical as soon as reasonably practicable after becoming apparent, and the products then returned to BG Electrical.
2. The products have only been operated under normal operating conditions and have only been subject to normal use.
3. No work (other than normal and proper maintenance) has been carried out to the products without BG Electrical's prior written consent.
4. The products have been assembled, or incorporated into other goods, by a qualified and recognised electrician and only in accordance with any instructions issued by BG Electrical.
5. The defect has not arisen from an item manufactured or supplied by a person other than BG Electrical.

This guarantee does not affect any consumer statutory rights. All components used in a BG Electrical enclosure, must be supplied by BG Electrical. The use of any other components will negate compliance to BS EN 61439 and the BG Electrical Guarantee. Failure to fit the enclosure in accordance with these instructions will invalidate the guarantee.

## Contact Information

**Luceco PLC**  
Stafford Park 1  
Telford TF3 3BD  
ENGLAND

**(EU) Luceco SE**  
C/ Bobinadora 1-5  
08302 Mataró  
SPAIN

## Care

To maintain the high quality appearance of this product BG Electrical recommend the use of a soft damp cloth periodically to clean the surfaces. **ONLY CLEAN THE OUTSIDE OF THE CONSUMER UNIT.**

## Batch Code Explanation

yyWxx: Manufacturing date code;  
year of manufacturing (yy) and week of manufacturing (Wxx)

## Environmental Protection



This symbol is known as the "Crossed-out Wheelie Bin Symbol". When this symbol is marked on a product or battery, it means that it should not be disposed of with your general household waste. Some chemicals contained within electrical/ electronic products or batteries can be harmful to health and the environment. Only dispose of electrical/electronic/ battery items in separate collection schemes, which cater for the recovery and recycling of materials contained within. Your co-operation is vital to ensure the success of these schemes and for the protection of the environment.

If you require further technical assistance:  
**Technical Helpline: +44 (0)3300 249 279**  
**technical.support@bgelectrical.co.uk**