



# Fortress Circuit Protection

## Metal Consumer Unit

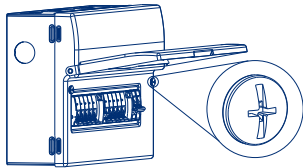
### Safety Warning

For your safety, this product must be installed in accordance with local Building Regulations. **This product MUST be installed by a competent person who is registered with an electrical self-certification scheme.** Further information is available online or from your Local Authority. Please read carefully and use in accordance with these safety wiring instructions. Before commencing any electrical work ensure the supply is disconnected, and securely locked off. Wiring should be in accordance with the latest edition of the IET regulations (BS 7671).

**Note:** - Most illustrations relate to a typical Dual RCD unit, exact configuration will depend on type, size and material of consumer unit purchased.  
Ensure all screws are fully tightened before use. (Please refer to torque settings table)

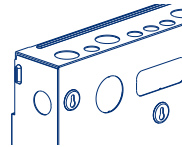
### Instructions

1. Remove front cover by opening visor and turning screws anti-clockwise, until retained screws dis-engage.



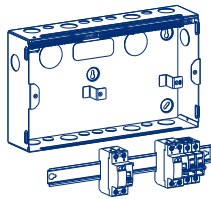
**Note:** - Screws are captive

2. Provide cable access via 20 or 32mm knock outs in sides, top and bottom, or access via cut outs in base. Push in cable protector provided, Only remove minimum required. Ensure IP rating is maintained, e.g. use of glands.

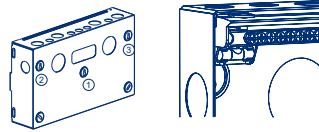


**Note:** - Use punch to remove metal knockouts. Remove any sharp edges, affix protective trim supplied to prevent damage to cables being pulled through. - 32mm knock outs on left and right hand side can be opened up to accept 40mm gland.

3. Optional removal of DIN rail is possible, disconnect neutral cables from terminal bars or devices, loosen screws either end of DIN rail, slide DIN rail sideways and lift out.

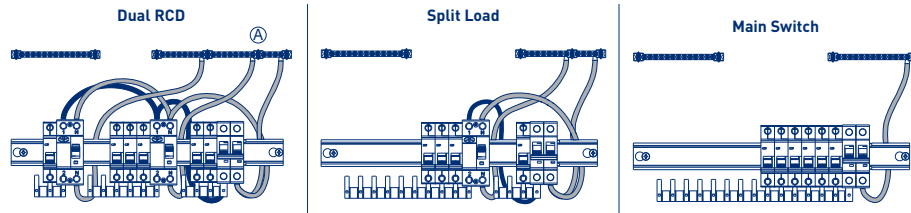


4. Secure to wall, use the keyhole slots to hang in position, use the integral spirit level to ensure the unit is level, secure with remaining fixing holes. For uneven walls use 3 point fixing. Use appropriate wall fixings suitable for the mounting surface when installing this unit.



**Note:** - Wall fixings are not included

5. Refit DIN rail if previously removed and re-connect neutral cables, locate and prepare main incoming cables.



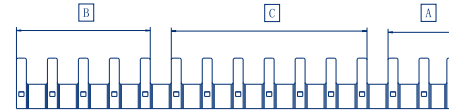
**Note:** - Terminal Bar 'A' is for optional high integrity, unprotected circuits.

6. Fit devices, ensure the main switch is aligned with the notches on the right hand side of the DIN rail. Place required devices on to the DIN rail, attach the top of the device onto the rail first and then push down bottom of device, the retaining clip will snap onto the rail. Devices can be removed by pulling out the bottom clip device (use a flat bladed screwdriver) and remove by lifting the bottom part of the device first.

7. Configure by cutting the supplied busbar to desired length, depending on number of ways protected by RCD1 or RCD2 if Dual, or/and unprotected. Ensure one finger for incomer plus number of ways required, plus any spare ways which may need to be added later.

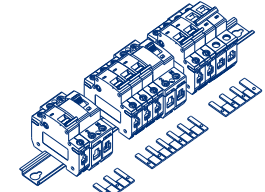
B and C: Length equal to number of ways protected by each RCD plus one finger for RCD.

A: Length equal to number of ways unprotected plus one finger for incomer.



**Note:** - Please cut busbar square to finger edge, and discard excess.

8. Fit busbars, and fit additional cable kits if required, e.g. for Split Load or Dual RCD.



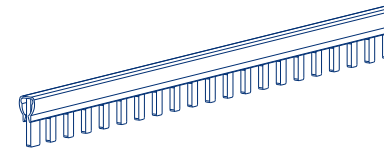
**Note:** - Please ensure the live cables to RCD1/RCD2 are fitted under the busbar in the main switch live terminal.

9. Locate, prepare and connect all incoming cables as required, suggest cable strip length of 14mm.

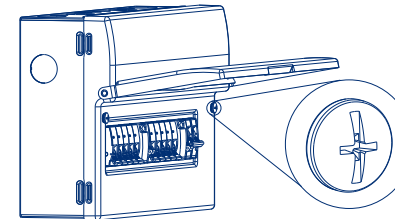
**Important - Ensure connections are secure and terminal screws fully tightened. Recommended max torque for Terminal screws, MCBs and RCBs is 2Nm, Switch is 3.5Nm, RCD is 2.5Nm. (Please refer to torque settings table)**

10. Test in accordance with the current IET wiring regulations.

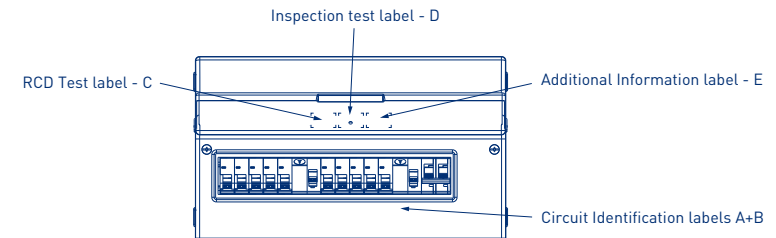
11. Ensure busbar shield and busbar are refitted.



12. Refit front cover, by opening visor and turning screws clockwise until cover is secured in position.





13. Apply labels – open hinged visor and apply warning and circuit identification labels as shown.



**Note:** - Fill any unused ways with cover blanks provided.

## Torque Settings

Torque Settings			Cable > 1.5mm <sup>2</sup> Tightening torque (Nm)	Cable ≤ 1.5mm <sup>2</sup> Tightening torque (Nm)	Cable stripping (mm)
	<b>Consumer Unit Terminals</b>				
Earth and Neutral Terminal Bars	M5	6.5	2	1.3	11
<b>Isolation</b>					
Switch Disconnecter	M7	9	3.5	2.3	14
<b>Circuit Protection</b>					
MCB	M5	9	2	1.3	12
RCBO	M5	9	2Nm L / in - 1.2Nm L / N out	1.3	12
RCD	M6	9.5	2.5	1.3	14
SPD	M5	9	2Nm PE 1.2Nm L / N	1.3	12

## Interface Characteristics

Rated & Operational voltage (Un / Ue)	230V A.C 50Hz		
Rated & Insulation voltage (Ui)	500V A.C 50Hz		
Rated impulse withstand voltage (Uimp)	4kV		
Rated current of the Assembly (InA)	40A, 63A, 80A, 100A		
<b>Note:</b> dependant upon rating of main incoming device			
Rated current of an outgoing circuit (Inc)	MCB 6A-50A (marked rating of current on device) RCBO 6A-40A (marked rating of current on device)		
Rated current of outgoing unit (Inc)	RCD 40A 63A 80A 100A (marked rated current on device)		
Rated conditional short-circuit current of the assembly (Icc)	ICC=16KA		
Protection against electric shock	Consumer unit shall be installed in an electrical system conforming to the current edition of IEC 60364 / BS7671		
Rated diversity factor (RDF) / Values of assumed loading	Note: RDF only applies to continuously and simultaneously loading circuits. In principle this means adjacent circuit breakers having a load 'on' time exceeding 30 minutes or where a load not exceeding 30 minutes has an 'off' time less than the 'on' time will need to have the rating diversity factor applied as indicated Table and ratings based on a continuous rating of 90A		
Number of outgoing circuits			Assumed Loading factor
2 and 3			0,8
4 and 5			0,7
6 to 9 inclusive			0,6
10 and above	0,5		
Rated Frequency (fn)	50Hz		
Pollution degree	2		
Types of earthing system for which the assembly is designed	Indoor use only Stationary Assembly		
Degree of protection	IP2XC Intended for use in domestic (residential) or similar premises		
Electromagnetic compatibility (EMC) classification	A		
External design	Wall-mounted, surface type, enclosed assembly		
Mechanical impact protection	IK05		
The type of construction	Fixed parts		
Type A DBO	Distribution board for use by ordinary persons		

## General

Tools – Screwdriver PZ 2 or Flat screwdriver, knife and pliers.

Cleaning – use a soft damp cloth with luke warm water (only clean outside of unit).

Standards – All consumer units have been designed to comply with the requirements of BS EN 61439-3, BS 7671 and Part P document.

## Guarantee

BG Electrical Fortress 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.

## Batch Code Explanation

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

## Address/Helpline

Luceco PLC	[EU] Luceco SE
Stafford Park 1	C/ Bobinadora 1-5
Telford TF3 3BD	08302 Mataró
ENGLAND	SPAIN

If you have further technical assistance you can get in touch with our

**Technical Helpline on:**

**+44 (0)3300 249 279**

**technical.support@bgelectrical.co.uk**

## Environmental Protection



This symbol is known as the "Crossed-out Wheeled 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.