

17th Edition Wiring Regulations Amend 3

The BS 7671:2008 17th Edition IET Wiring Regulations Amendment 3:2015, Regulation 421.1.201 prescribe that within Domestic (household) premises, consumer units and associated switchgear assemblies (enclosures), are manufactured from non combustible material or enclosed in a non combustible cabinet/enclosure and comply with product standard BS EN 61439-3.

The purpose of the new regulations is to reduce the risk and limit the spread of fire from consumer units due to faulty components or poorly installed components.

The new range of BG 'all metal' consumer units and enclosures meet this requirement.

Domestic (household) premises include houses, bungalows, flats, apartments, student lets, sheltered accommodation, static homes, home offices, and attached garages etc. Other types of property that are classed as commercial, and you may wish to consider using all metal consumer units for are :- Nursing Homes, guest Houses, bed and breakfast houses and hostels, etc.

BG 'all metal' consumer units, consist of a metal base, cover and visor and are manufactured from steel – a non-combustible material.

Regulation 421.1.201 requires all designs for new installations from July 1st 2015 to be to the new standard, between July 1st and end of December 2105 installation of 'all metal' consumer units is optional unless designed after July 1st, from Jan 1st 2016 'all metal' consumer units must be installed in domestic premises unless designed before July 1st 2015, in which case choice of metal or plastic is optional.

A flexible solution for
**17th Edition
Wiring
Regulation
Amendment 3**

Requirements for Additional Protection (30mA RCD)

The 17th Edition Wiring Regulations also has the requirement for additional protection from 30mA RCDs, summarised below.

i) All Socket outlets should be protected

- ii) Socket outlets (section 411.3.3)
- All sockets up to 20A
 - All mobile equipment up to 32A, used outdoors
 - Exceptions are socket outlets under supervision of someone skilled/instructing, and labelled socket, e.g. 'Freezer'.

iii) Cables buried in Walls (section 522.6.200)

- All cables concealed in a wall/partition less than 50mm depth, and without earthed mechanical protection, e.g. earth metal conduit.

iv) Location containing a bath or a shower (section 701.411.3.3)

- All circuits serving or passing through a room with a fixed bath or shower

v) Circuit Separation (section 314.1)

- Regulation 314.1, Installation shall be divided into circuits as necessary, to avoid danger and prevents unwanted tripping
- Regulation 314.2, Separate circuits that need to be separately controlled so that so that these circuits are not affected by the failure of other circuits

v) Safety Circuits

- Safety circuits such as smoke alarms should be on independent circuits.

17th Edition BG Consumer Unit Options

Possible consumer unit options to support 17th Edition Wiring Regulations compliance.



1. Main Switch

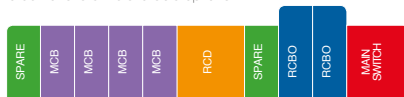
- Main switch plus the use of RCBOs for every circuit



3. Dual RCD

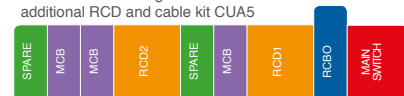
- Some circuits using MCBs protected by an RCD1
- Some circuits using MCBs protected by an RCD2

Note:- The following diagrams use a 12 module consumer unit to demonstrate the available options



2. Split Load

- Some circuits using MCBs protected by an RCD
- Other independent circuits using RCBOs
- Can be created using standard mains switch consumer unit, additional RCD and cable kit CUA5



4. High Integrity Dual RCD

- Some circuits using MCBs protected by an RCD1
- Some circuits using MCBs protected by an RCD2
- Other independent circuits using RCBOs

Standard Dual RCD consumer unit offers

Standard Dual RCD consumer unit offers option of High Integrity Dual RCD as standard.

Note: High Integrity Triple RCD is achieved using only the 22 module Consumer Unit.

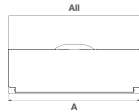
Standards

New all metal consumer units comply with 17th Edition Wiring Regulations BS 7671 Amendment 3¹

Product	Standard
Consumer Unit	BS EN 61439-3
Main Switch	EN/IEC 60947-3
MCB	EN/IEC 60898
RCBO	EN/IEC 61009-1

Product	Standard
RCD	EN/IEC 61008
Enclosure	EN/IEC 60439
Contactors	EN/IEC 60947, 61095
RCBO	EN/IEC 61558-1

Technical

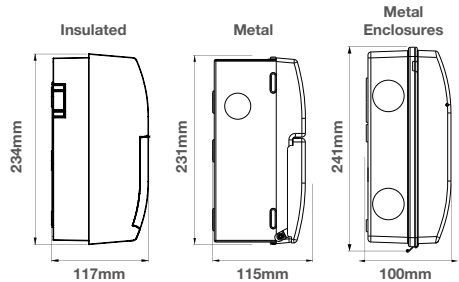


Devices - Pole pitch 18mm

Consumer Unit	Insulated (A)	Metal (A)
8 Modules	245mm	244mm
12 Modules	317mm	316mm
16 Modules	389mm	388mm
19 Modules	443mm	442mm
22 Modules	497mm	496mm

Terminals

Device	Capacity mm ²	Max Torque Nm
Switch	35	2.5
MCB	16 (32-50A 25mm ²)	2
RCD	35	2.5 (80A 3.5Nm)
RCBO	16 (32-40A 25mm ²)	2



*Note 8 & 12 module 'Tall' variant, height is 261mm

Cut Outs and Knockouts

Range	Top & Bottom Face	Sides	Base
Metal 8 Module	6 x ø20mm, 1 x ø32mm	1 x ø32mm	1 x ø50 x 100mm
Metal 12 Module	8 x ø20mm, 1 x ø32mm	1 x ø32mm	1 x ø50 x 100mm
Metal 16 Module	9 x ø20mm, 2 x ø32mm	1 x ø32mm	2 x ø50mm, 1 x ø50 x 100mm
Metal 19 Module	11 x ø20mm, 2 x ø32mm	1 x ø32mm	2 x ø50mm, 1 x ø50 x 100mm
Metal 22 Module	13 x ø20mm, 2 x ø32mm	1 x ø32mm	3 x ø50 x 100mm
Insulated 8 Module	4 off - 40, 25 x 16mm	40, 25 x 16mm	3 off - 50, 30 x 40mm
Insulated 12 Module	6 off - 40, 25 x 16mm	40, 25 x 16mm	4 off - 50, 30 x 50mm
Insulated 12 Module Tall	6 off - 40, 25 x 16mm	40, 25 x 16mm, 1 x Ø25 or Ø20mm	4 off - 50, 30 x 50mm
Insulated 16 Module	8 off - 40, 25 x 16mm	40, 25 x 16mm	2 off 50,30 x 50, 4 off 50,30 x 40mm
Insulated 19 Module	9 off - 40, 25 x 16mm	40, 25 x 16mm	6 off - 50, 30 x 50mm
Insulated 22 Module	10 off - 40, 25 x 16mm	40, 25 x 16mm	2 off 50,30 x 50, 6 off 50,30 x 40mm

• Positive contact status indication on Switch, MCB, RCD & RCBO provided by green indicator to show contacts are open

Consumer Unit

Max current rating 100A
 Operating Voltage 230V
 Short circuit withstand 16kA rms
 Metal CU base manufactured from 1.2mm steel

RCD

Type AC
 Tripping Time : 1 x In≤100ms
 5 x In≤40ms

RCBO

Type AC
 Poles: 1 (1P + N)

Enclosures

IP65
 5 Module
 Dims- W-176mm, H- 241mm, D- 100mm
 Knockouts- Dia ø20mm can be drilled to 32mm, sides - 2 off, top and bottom - 3 off, base - 1 off

MCB

Breaking Capacity 6000A
 Type B operating 3-5 x In
 Type C operating 5-10 x In

Contractors

Poles: 2 (1 +N)
 NO (Normally Open)

Bell Transformer

- Output voltage 4, 6, 8, 12, 16, 24V
 - Rated output 8VA
 - Consumption 1, 15W