



Fortress

CIRCUIT PROTECTION



www.bg-fortress.uk

AMD²
18TH EDITION



Fortress
CIRCUIT PROTECTION

DISCOVER THE NEW STRENGTH

The BG Fortress circuit protection range has undergone its most extensive upgrade yet, with the latest improvements dovetailing the new guidelines around the 18th Edition Wiring Regulations, Amendment 2.

The latest upgrades have optimised its design, making the range more robust, quicker to install, with a range of devices to help comply with the new regulations.

These changes have been made with the help of trusted contractors working with our product experts.

IN THE RANGE

Enclosures	149
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AMD2	161



BG Electrical products are guaranteed against faulty materials for a period of 10 years from date of delivery.

UPGRADES

Our most extensive upgrade yet – now even quicker and easier to install.

- **Easier cabling** – through better positioned and easier to remove knockouts
- **Easier to install lid** – with strengthened and improved lid and base
- **Conveniently hold open the lid, hands free** – using our handy lid retainer

Available with a range of devices to comply with the 18th edition amendment 2 regulations.



Strengthened lid and base for easier installation

New lid and base

The new lid has been redesigned to add strength and rigidity whilst ensuring an accurate and secure fit with the base. The base itself has also been beefed up, additional strengthening ribs on the top and bottom faces, to ensure the base is rock solid when being secured.

Redesigned aperture and lid retainer

A step-down aperture has been added to improve the fit around the devices and blanks when fitting the cover. What's more, a new and convenient lid retainer allows the lid to be held open. This simple solution is a significant change when finishing an install, or checking the board, leaving both hands free to access the devices.



Redesigned knockouts for easier installation

Optimised positioning

Based on feedback, knockout positions have been realigned on the top and bottom of the base. Why is this better? This change enables the incoming wires to be in line with the offset incomer, making installation easier and termination of the cables more straightforward. This helps to minimise stress on the cable, termination DIN rail, and devices.

Reduced contact points

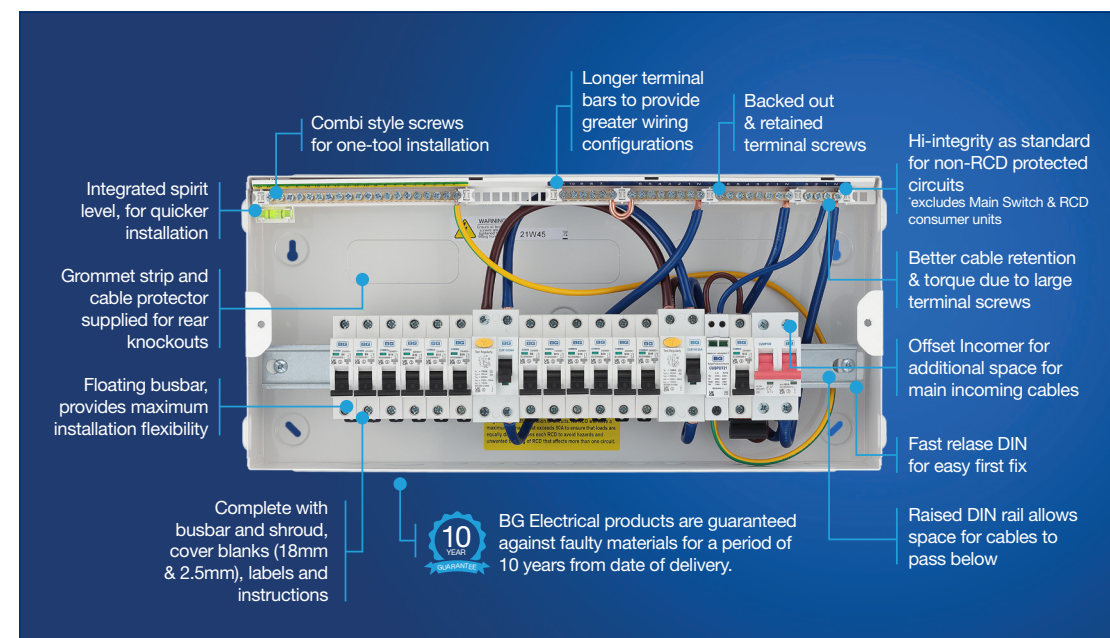
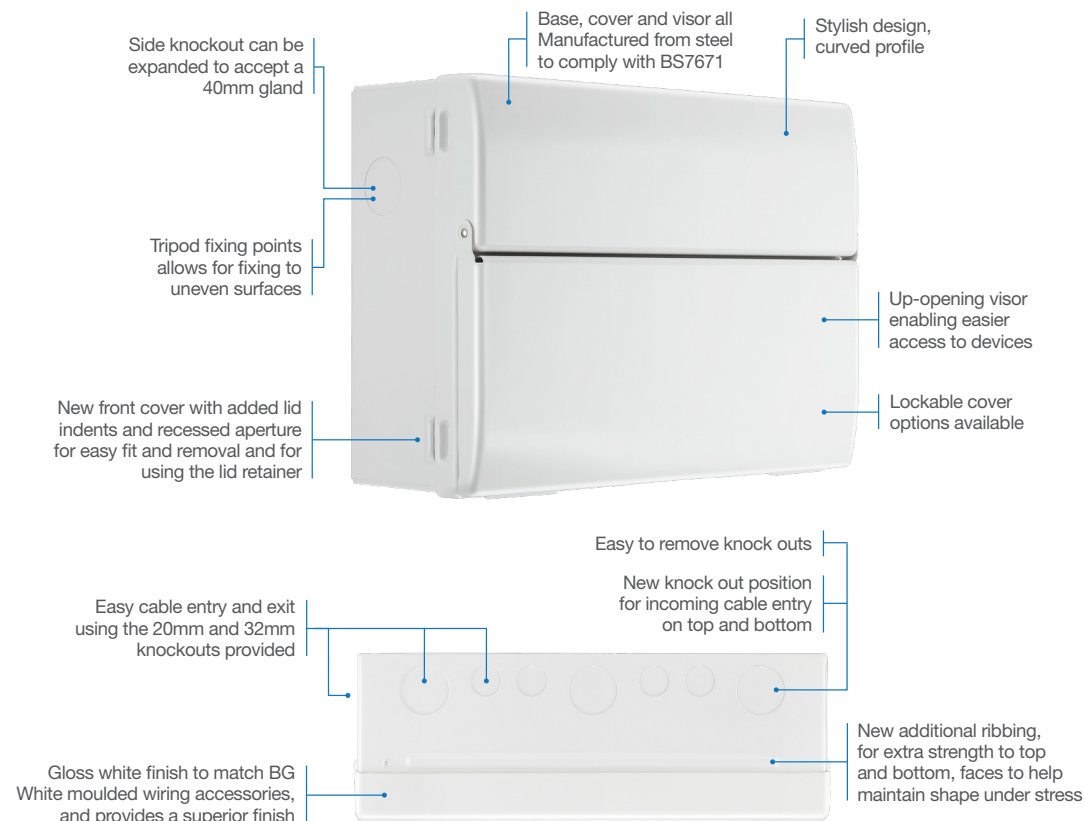
Making removal easier and protecting the board against damage during this process. For our recessed variants, we have added additional knockouts to the top and the rear, for easier cable entry/exit.

FURTHER UPGRADES

- **NEW redesigned blank cover plates**, offering a more rigid and improved fit, including a slim blank ensuring IP2XC rating. Simply twist and slide in place securely.
- **NEW improved connections** the cable pin terminal has been removed from the internal neutral connections, improving the connection with the terminal block – providing a more even terminal torque and greater surface area.
- **NEW single module Arc Fault Detection Device (AFDD's) and RCBO combined** now available.

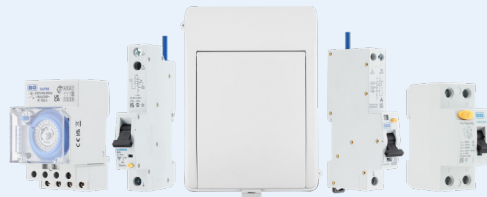
Consumer Units

AMB
18TH EDITION



Standards

All metal consumer units comply with 18th Edition Wiring Regulations Amendment 2 BS 7671.



Product	Standard	Product	Standard
Consumer Unit	BS EN 61439-3	RCD	EN/IEC 61008
Main Switch	EN/IEC 60947-3	Enclosure	EN/IEC 61439
MCB	EN/IEC 60898	Contactors	EN/IEC 60947, 61095
RCBO	EN/IEC 61009-1	RCBO	EN/IEC 61558-1
SPD	IEC 61643-11	AFDD	IEC/EN 62606 & IEC/EN 61009-01

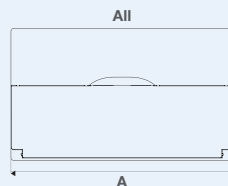
Technical

• Terminals

Device	Capacity mm²	Max Torque Nm
Switch	35mm²	2.5Nm
MCB	25mm²	2Nm
RCD	35mm²	2.5Nm
RCBO	25mm² L in 4-10mm² L/N Out	2Nm
SPD	1.5-6mm²	2Nm L in 1.2Nm L/N Out

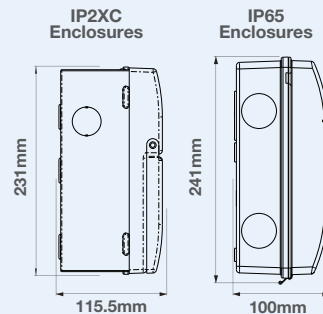
• Devices – Pole Pitch 18mm

Consumer Unit	Width (A)
4 Modules	172.4mm
6 Modules	208.4mm
9 Modules	262.4mm
12 Modules	316.4mm
16 Modules	388.4mm
19 Modules	442.4mm
22 Modules	494.4mm



• Cut Outs and Knockouts

Modules	Base Knockout Qty				
	Left Side	Right Side	Top (mm)	Bottom (mm)	Rear (mm)
4 Modules	ø32.2mm	ø32.2mm	2 x ø20.2 + 1 x ø32.2	2 x ø20.2+1x ø32.2	37.4*67.4
6 Modules	ø32.2mm	ø32.2mm	3 x ø32.2	3 x ø32.2	35*90
9 Modules	ø32.2mm	ø32.2mm	2 x ø20.2 + 3 x ø32.2	2 x ø20.2 + 3 x ø32.2	35*90
12 Modules	ø32.2mm	ø32.2mm	4 x ø20.2 + 3 x ø32.2	2 x ø20.2 + 3 x ø32.2	35*90
16 Modules	ø32.2mm	ø32.2mm	5 x ø20.2 + 4 x ø32.2	5 x ø20.2 + 4 x ø32.2	35*90+2*ø50
19 Modules	ø32.2mm	ø32.2mm	7 x ø20.2 + 4 x ø32.2	7 x ø20.2 + 4 x ø32.2	35*90+2*ø50
22 Modules	ø32.2mm	ø32.2mm	9 x ø20.2 + 4 x ø32.2	9 x ø20.2 + 4 x ø32.2	3*35*90



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

Product	Description
Consumer Units	Max current rating 100A (Ina), Operating Voltage 230V 50Hz (Un/Ue), Short circuit withstand 16kA rms, Metal CU base manufactured from 1.2mm steel
RCD Type A	Tripping Time – 1 x In≤100mS, 5 x In≤40mS
RCBO Type A	Poles – 1 (1P + N)
Enclosures	IP65, 5 Module, 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, B Curve operating 3-5 x In, C Curve operating 5-10 x In
Contractors	Poles – 2 (1 +N), NO (Normally Open)
Bell Transformer	Output voltage 8, 12, 24V AC, Rated output 8VA, Consumption 1, 15W
SPD Type 2	Max Operating Voltage 275V, Voltage Protection Level <1.5kV, Nominal discharge current – L-N 20kA, N-PE 20kA, Max discharge current: 40kA, Response time <25ns
AFDD	Combined RCBO Type A – Poles – 2 1P + Switched N

Enclosures

Main Switch Isolator Enclosure

- Allows the power to be isolated easily without removing the main fuse
- Two part cover to isolate the incoming terminals
- Safety screw allowing wire seal to secure bottom cover

Populated with 100A Main Switch (CUSW100).

Product Code	Modules	Ways	Main Switch	RCD	MCB's	SPD Type 2	IP	Cover Blanks
CUEMS1	2	2	100A	-	-	-	20	-



CUEMS1

CFUS100

Fuse Switch

Can be used for safe isolation of the incoming electrical supply, and as a midpoint isolation unit if the Consumer Unit is more than 3m away from the intake fuse position. Comes with 100A, 80A & 63A fuses.

Fuse Switch Spares

CFUFH100	Fuse Holder
CUF100	100A Fuse
CUF80	80A Fuse
CUF63	63A Fuse

Product Code	Modules	Ways	Main Switch	RCD	MCB's	SPD Type 2	IP	Cover Blanks
CFUS100	4	-	100A	-	-	-	2XC	-

Weatherproof Enclosure

These enclosures provide an easy solution for additional add on circuits for a garage or a new shower installation. Available in IP65 – Weatherproof & IP20 non-weatherproof.

Product Code	Modules	Ways	Main Switch	RCD	MCB's	SPD Type 2	IP	Cover Blanks
CFE5W	5	5	-	-	-	-	65	1
CFGAR1A	5	3	-	40A Type A	2	-	65	1
CFGAR2	5	3	100A	-	2	-	65	1
CFSHOW1A	5	3	-	63A Type A	1	-	65	2
CFSPDE02	5	3	100A	-	1	Y	65	1

Non-Weatherproof Enclosures

Product Code	Modules	Ways	Main Switch	RCD	MCB's	SPD Type 2	IP	Cover Blanks
CFUE4M	4	4	-	-	-	-	20	2
CFUGAR1A	4	2	-	40A Type A	2	-	20	2
CFUGAR2	4	2	100A	-	2	-	20	2
CFUSHOW1A	4	2	-	63A Type A	2	-	20	2

Weatherproof IP65

- 5 Module enclosures accept SP RCBOs
- IP65 enclosures c/w Ø20mm knockouts on all sides drillable to Ø32mm
- Enclosure kits supplied complete with devices, DIN rail, neutral cable, neutral & earth terminals, cover blanks and busbar



CFGAR1A

Product Code	Quantity of MCB's	B Curve MCB's Included
CFE5W	0	-
CFGAR1A	2	6A x 1, 32A x 1
CFGAR2	2	6A x 1, 16A x 1
CFSHOW1A	1	50A x 1
CFSPDE02	1	32A x 1

Non-Weatherproof IP20

- IP20 enclosures suitable for use in indoor, dry locations
- Ø20mm knockouts on all sides drillable to Ø32mm
- Enclosure kits supplied complete with devices, DIN rail, neutral cable, neutral and earth terminals, cover blanks and busbar



CFUGAR1A

Product Code	Quantity of MCB's	B Curve MCB's Included
CFUE4M	0	-
CFUGAR1A	2	6A x 1, 32A x 1
CFUGAR2	2	6A x 1, 16A x 1
CFUSHOW1A	1	50A x 1

Main Switch Consumer Units

Double pole isolation ready for MCB & RCBO circuits.

- Metal units supplied with Ø20mm and Ø32mm knockouts
- Each consumer unit supplied with spare cover blanks
- Lockable covers also available, see accessories section

Note: Split load configurations, can be created using Main Switch Consumer Unit, RCD and cable kit CUA05.



CFUSW10

Product Code	Modules	Ways	Main Switch	RCD	MCB's	SPD Type 2	IP	Cover Blanks
Main Switch Consumer Units – Unpopulated								
CFUSW04	6	4	100A	-	-	-	2XC	2
CFUSW07	9	7	100A	-	-	-	2XC	2
CFUSW10	12	10	100A	-	-	-	2XC	2
CFUSW14	16	14	100A	-	-	-	2XC	2
CFUSW17	19	17	100A	-	-	-	2XC	4
CFUSW20	22	20	100A	-	-	-	2XC	4
Main Switch Consumer Units – Unpopulated + SPD								
CFUSW05SPD	9	5	100A	-	-	Y	2XC	2
CFUSW08SPD	12	8	100A	-	-	Y	2XC	2
CFUSW12SPD	16	12	100A	-	-	Y	2XC	2
CFUSW15SPD	19	15	100A	-	-	Y	2XC	2
CFUSW18SPD	22	18	100A	-	-	Y	2XC	4

RCD Incomer

A RCD Incomer allows the protection of isolating both poles of the incoming supply with the protection of a 30mA RCD, a great way to add additional board in workshops, garages, garden offices and sheds which use small numbers of circuits.

- Metal units supplied with Ø20mm and Ø32mm knockouts
- Each consumer unit supplied with spare cover blanks
- Lockable covers also available, see accessories section



CFURSW10004A

Product Code	Modules	Ways	Main Switch	RCD	MCB's	SPD Type 2	IP	Cover Blanks
RCD Incomer Consumer Units – Unpopulated – 100A Type A								
CFURSW10004A	6	4	-	Type A 100A	-	-	2XC	2
CFURSW10007A	9	7	-	Type A 100A	-	-	2XC	2
CFURSW10010A	12	10	-	Type A 100A	-	-	2XC	2
RCD Incomer Consumer Units – Unpopulated – 100A Type A + SPD								
CFURSW10005ASPD	9	5	-	100A Type A	-	Y	2XC	2
CFURSW10008ASPD	12	8	-	100A Type A	-	Y	2XC	4
CFURSW10012ASPD	16	12	-	100A Type A	-	Y	2XC	4



Dual RCD Consumer Units – Unpopulated

Allows the installer to split the consumers power needs across two 30mA RCD's, for example lighting and sockets circuits.

- Dual RCD units supplied with optional High Integrity as standard
- Each consumer unit supplied with spare cover blanks
- Terminal and busbar design provide maximum flexibility for combination of protected or unprotected circuits
- Lockable covers also available, see accessories section



CFUD6613A

Product Code	Modules	Ways	Main Switch	RCD	MCB's	SPD Type 2	IP	Cover Blanks
Dual RCD Consumer Units – Unpopulated 63A Type A								
CFUD6606A	12	6	100A	63A/63A Type A	-	-	2XC	2
CFUD6610A	16	10	100A	63A/63A Type A	-	-	2XC	2
CFUD6613A	19	13	100A	63A/63A Type A	-	-	2XC	4
CFUD6616A	22	16	100A	63A/63A Type A	-	-	2XC	4
Dual RCD Consumer Units – Unpopulated 63A Type A + SPD								
CFUD6608ASPD	16	8	100A	63A/63A Type A	-	Y	2XC	2
CFUD6611ASPD	19	11	100A	63A/63A Type A	-	Y	2XC	4
CFUD6614ASPD	22	14	100A	63A/63A Type A	-	Y	2XC	4
Dual RCD Consumer Units – Unpopulated 80A Type A + SPD								
CFUD8811ASPD	19	11	100A	80A/80A Type A	-	Y	2XC	4
CFUD8814ASPD	22	14	100A	80A/80A Type A	-	Y	2XC	4
Dual RCD Consumer Units – Unpopulated 100A Type A								
CFUD1000010A	16	10	100A	100A/100A Type A	-	-	2XC	2
CFUD1000013A	19	13	100A	100A/100A Type A	-	-	2XC	4
CFUD1000016A	22	16	100A	100A/100A Type A	-	-	2XC	4
Dual RCD Consumer Units – Unpopulated 100A Type A + SPD								
CFUD1000008ASPD	16	8	100A	100A/100A Type A	-	Y	2XC	2
CFUD1000011ASPD	19	11	100A	100A/100A Type A	-	Y	2XC	4
CFUD1000014ASPD	22	14	100A	100A/100A Type A	-	Y	2XC	4

Dual RCD Consumer Units – Populated

Allows the installer to split the consumers power needs across two 30mA RCD's, for example lighting and sockets circuits.

- Supplied complete with MCBs fitted, see table
- Dual RCD units supplied with optional High Integrity as standard
- Each consumer unit supplied with spare cover blanks
- Terminal and busbar design provide maximum flexibility for combination of protected or unprotected circuits
- Lockable covers also available, see accessories section



CFUDP16606A

Consumer Unit Size	Quantity of MCB's	B Curve MCB's Included	Consumer Unit Size	Quantity of MCB's	B Curve MCB's Included
6 Way	6	6A x 2, 16A, 32A x 2, 40A	8 Way	8	6A X 3, 16A X 1, 32A x 3, 40A x 1
10/13 Way	10	6A x 3, 16A x 2, 32A x 4, 40A	11 Way	10	6A X 3, 16A X 2, 32A x 4, 40A x 1
16 Way	12	6A x 3, 10A, 16A x 2, 32A x 4, 40A, 50A	14 Way	12	6A X 3, 10A , 16A X 2, 32A x 4, 40A , 50A

Product Code	Modules	Ways	Main Switch	RCD	MCB's	SPD Type 2	IP	Cover Blanks
Dual RCD Consumer Units – Populated 63A Type A								
CFUDP16606A	12	6	100A	63A/63A Type A	6	-	2XC	2
CFUDP16610A	16	10	100A	63A/63A Type A	10	-	2XC	2
CFUDP16613A	19	13	100A	63A/63A Type A	10	-	2XC	4
CFUDP16616A	22	16	100A	63A/63A Type A	12	-	2XC	4
Dual RCD Consumer Units – Populated 63A Type A + SPD								
CFUDP16608ASPD	16	8	100A	63A/63A Type A	8	Y	2XC	2
CFUDP16611ASPD	19	11	100A	63A/63A Type A	10	Y	2XC	4
CFUDP16614ASPD	22	14	100A	63A/63A Type A	12	Y	2XC	4
Dual RCD Consumer Units – Populated 80A Type A + SPD								
CFUDP18811ASPD	19	11	100A	80A/80A Type A	10	Y	2XC	4
CFUDP18814ASPD	22	14	100A	80A/80A Type A	12	Y	2XC	4
Dual RCD Consumer Units – Populated 100A Type A								
CFUDP1000010A	16	10	100A	100A/100A Type A	10	-	2XC	2
CFUDP1000013A	19	13	100A	100A/100A Type A	10	-	2XC	4
CFUDP1000016A	22	16	100A	100A/100A Type A	12	-	2XC	4
Dual RCD Consumer Units – Populated 100A Type A + SPD								
CFUDP1000008ASPD	16	8	100A	100A/100A Type A	8	Y	2XC	2
CFUDP1000011ASPD	19	11	100A	100A/100A Type A	10	Y	2XC	4
CFUDP1000014ASPD	22	14	100A	100A/100A Type A	12	Y	2XC	4

RCBO Main Switch Consumer Units – Populated

Allows 30mA RCD protection of individual circuits with the added safety features of short circuit & over current protection incorporated in each device.

- Supplied complete with SP RCBOs fitted
- Each consumer unit supplied with spare cover blanks



CFUSWP610A

Product Code	Quantity of RCBO's	B Curve Type A RCBO's Included
CFUSWP612ASPD	6	6A x 2, 16A, 32A x 2, 40A
CFUSWP812ASPD	8	6A x 3, 16A, 32A x 3, 40A
CFUSWP112ASPD	10	6A x 3, 16A x 2, 32A x 4, 40A

Product Code	Modules	Ways	Main Switch	RCD	MCB's	RCBO's	SPD Type 2	IP	Cover Blanks
RCBO Main Switch Consumer Units – Populated Type A									
CFUSWP610A	12	10	100A	-	-	6	-	2XC	2
CFUSWP810A	12	10	100A	-	-	8	-	2XC	2
CFUSWP110A	12	10	100A	-	-	10	-	2XC	2
RCBO Main Switch Consumer Units – Populated Type A + SPD									
CFUSWP612ASPD	14	12	100A	-	-	6	Y	2XC	2
CFUSWP812ASPD	14	12	100A	-	-	8	Y	2XC	2
CFUSWP112ASPD	14	12	100A	-	-	10	Y	2XC	2

Recessed Consumer Units

A method of installation which allows the installer to carry out a first fix to a property, without the worry of other trades painting or plastering the outer front cover.

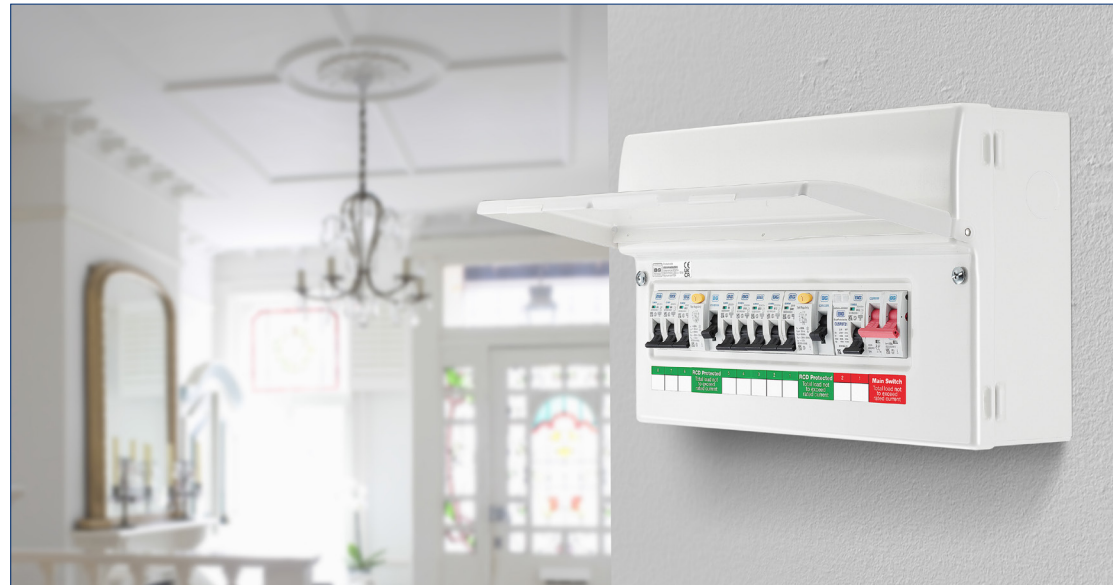
This range also offers a smaller profile for narrow passages and where height requirements are specified. Available in Main Switch/RCD, Dual RCD, in Populated and Unpopulated versions.

- Fully recessed for low intrusion
- 68mm depth into wall cavity
- Dual RCD units supplied with optional high integrity as standard
- Each consumer unit supplied with spare cover blanks
- Supplied with lockable cover as standard
- Optional barrel lock supplied separately
- Terminals and Busbar design provide maximum flexibility for combination of protected or unprotected circuits



CFFD8616

Product Code	Modules	Ways	Main Switch	RCD	MCB's	RCBO's	SPD Type 2	IP	Cover Blanks
Recessed Consumer Units – Main Switch, Unpopulated									
CFFSW14	16	14	100A	-	-	-	-	2XC	-
CFFSW20	22	20	100A	-	-	-	-	2XC	-
Recessed Consumer Units – Main Switch, Unpopulated + SPD									
CFFSW12SPD	16	12	100A	-	-	-	Y	2XC	-
CFFSW18SPD	22	18	100A	-	-	-	Y	2XC	-



Recessed Dual RCD Consumer Units – Type A



Consumer Unit Size	Quantity of MCB's	B Curve MCB's Included
10 Way	10	6A x 3, 16A x 2, 32A x 4, 40A
16 Way	12	6A x 3, 10A, 16A x 2, 32A x 4, 40A, 50A

SPD Consumer Unit Size	Quantity of MCB's	B Curve MCB's Included
8 Way	8	6A X 3, 16A X 1, 32A x 3, 40A x 1
14 Way	10	6A X 3, 16A X 2, 32A x 4, 40A x 1

Product Code	Modules	Ways	Main Switch	RCD	MCB's	RCBO's	SPD Type 2	IP	Cover Blanks
Recessed Dual RCD Consumer Units – Populated, 63A Type A									
CFFDP16610A	16	10	-	63A/63A Type A	10	-	-	2XC	2
CFFDP16616A	22	16	-	63A/63A Type A	12	-	-	2XC	4
Recessed Dual RCD Consumer Units – Unpopulated, 80A Type A + SPD									
CFFD8808ASPD	16	8	100A	80A/80A Type A	-	-	Y	2XC	2
CFFD8814ASPD	22	14	100A	80A/80A Type A	-	-	Y	2XC	4
Recessed Dual RCD Consumer Units – Unpopulated, 100A Type A									
CFFD1000010A	16	10	100A	100A/100A Type A	-	-	-	2XC	2
CFFD1000016A	22	16	100A	100A/100A Type A	-	-	-	2XC	4
Recessed Dual RCD Consumer Units – Populated, 80A Type A + SPD									
CFFDP18808ASPD	16	8	100A	80A/80A Type A	8	-	Y	2XC	2
CFFDP18814ASPD	22	14	100A	80A/80A Type A	10	-	Y	2XC	4
Recessed Dual RCD Consumer Units – Unpopulated, 100A Type A + SPD									
CFFD1000008ASPD	16	8	100A	100A/100A Type A	-	-	Y	2XC	2
CFFD1000014ASPD	22	14	100A	100A/100A Type A	-	-	Y	2XC	4

Accessories

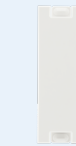
Lockable Cover

- Lockable covers are pre-assembled
- Ideal during first installation to ensure power isolation, and protect installer

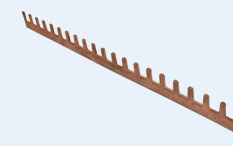


Product Code	Description	Inner Carton
CFUA19	6 Module lockable cover complete with up opening visor and barrel lock fitted	1
CFUA20	9 Module lockable cover complete with up opening visor and barrel lock fitted	1
CFUA21	12 Module lockable cover complete with up opening visor and barrel lock fitted	1
CFUA22	16 Module lockable cover complete with up opening visor and barrel lock fitted	1
CFUA23	19 Module lockable cover complete with up opening visor and barrel lock fitted	1
CFUA24	22 Module lockable cover complete with up opening visor and barrel lock fitted	1

Accessories



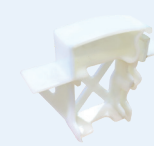
CUA01



CUA02



CUA03



CUA04



CUA05



CUA11



CUA17

Product Code	Description	Inner Carton
CUA01	Consumer unit cover blanks (pack 10, 5 x pairs)	10
CUA02	21 Way copper pin busbar (can be cut to size)	10
CUA03	21 Way busbar shield	10
CUA04	MCB blank, clips onto DIN rail to cover spare ways	10
CUA05	Cable Kit includes neutral and live cables, terminal bar, fixing clip and spare labels (may be used to convert mains switch to split load consumer unit)	5
CUA08	Wiring Kit C/W live, neutral & earth wires, busbar & shroud 1 x SDP & 1 x 32A MCB	1
CUA11	Spare label sheets (pack of 5)	10
CUA15	Barrel lock to suit all BG consumer units which are fitted with a lockable cover	1
CFA16	Metal cover lock blank	1
CUA17	Lid Retainer, for keeping the front cover open for screw removal/refitting on surface mount Consumer units	1
CUA18	Consumer Unit Stacking Kit - Kit includes Live, Neutral & Earth wires, labels and couplers	1
CFUFH100	22mm x 58mm DIN rail mount fuse holder	5
CUF100	22mm x 58mm cartridge fuse	20
CUF80	22mm x 58mm cartridge fuse	20
CUF63	22mm x 58mm cartridge fuse	20

*Cable kit enables consumer unit upgrade from main switch to split load or split load to dual RCD, or dual RCD to triple RCD (22 module only)

Lid Retainer – CUA17

Lid retainer for keeping front cover in open position

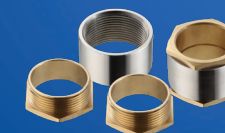
- For use with all new design BG Fortress surface mount consumer units
- Hands-free access to cover screws, devices and labels
- Designed to fit the contour of the front cover and devices
- Magnetic – can be attached to the front cover or lid for storage
- Lightweight strong support



Stacking Kit – CUA18

Includes Live, Neutral & Earth wires, labels and couplers

- For the addition of another consumer unit
- Allows for more available circuits where the existing consumer unit is at full capacity, and where width space is a problem
- Quick and easy to install
- Both consumer units can be independently isolated for safety



2 x 32mm Steel Couplers
with 4 brass bushes



Neutral, Live & Earth Cables
Pre-terminated and cut to length

Cable Glands

- Both Plastic and Brass Glands acceptable, due to no set regulation on cable entry
- Tails Glands allow 2 x tails and 1 x earth cable to enter one single entry, whilst being individually sealed
- No Eddy currents
- Earth cable entry can be easily blanked
- All Glands/Grommets satisfy IP4X (minimum requirement as per NICEIC Guidelines for all cable entry and exit on horizontal planes)
- Cable Retention, negates requirement for additional tails clamp
- All products are self-extinguishing
- Glands are vibration resistant
- Halogen Free Material
- Individually bagged



Insert Options



Product Code	Description	Inserts	Material	Cable Acceptance	Inner Carton
CPRGPF20S	Grey Plastic Gland Kit for 1-1.5mm flat cable c/w Flat Cable Insert, Locknut		Polyamide	1-1.5mm² Flat Cable	40
CPRGPF20	Grey Plastic Gland Kit for 2.5-4mm flat cable c/w Flat Cable Insert, Locknut		Polyamide	2.5-4mm² Flat Cable	40
CPRGPF252	Grey Plastic Gland Kit for 2 x 2.5mm flat cable c/w Flat Cable Insert, Locknut, Adaptor		Polyamide	2x2.5mm² Flat Cable	40
CPRGPF25	Grey Plastic Gland Kit for 6mm flat cable c/w Flat Cable Insert, Locknut, Adaptor		Polyamide	6mm² Flat Cable	40
CPRGPF32	Grey Plastic Gland Kit for 10-16mm flat cable c/w Flat Cable Insert, Locknut		Polyamide	10-16mm² Flat Cable	40
CPRGPT32	Grey Plastic Tails Kit. c/w Multiple Inserts, Locknut, Blanking insert		Polyamide	2x16mm² + 1x16mm²	40
CPRGPT40	Grey Plastic Tails Kit. c/w, Multiple Inserts, Locknut, Blanking insert		Polyamide	2x25mm² + 1x16mm²	40
CPRGPT40A	Grey Plastic Tails Kit. c/w Adaptor, Multiple Inserts, Locknut, Blanking insert		Polyamide	2x25mm² + 1x 16mm² + Adaptor	40
CPRGBF20S	Brass Gland Kit for 1-1.5mm flat cable c/w Flat Cable Insert, Locknut		Nickel Plated Brass	1-1.5mm² Flat Cable	40
CPRGBF20	Brass Gland Kit for 2.5-4mm flat cable c/w Flat Cable Insert, Locknut		Nickel Plated Brass	2.5-4mm² Flat Cable	40
CPRGBF252	Brass Gland Kit for 2 x 2.5mm flat cable c/w Flat Cable Insert, Locknut, Reducer		Nickel Plated Brass	2x2.5mm² Flat Cable	40
CPRGBF25	Brass Gland Kit for 6mm flat cable c/w Flat Cable Insert, Locknut, Reducer		Nickel Plated Brass	6mm² Flat Cable	30
CPRGBF32	Brass Gland Kit for 10-16mm flat cable c/w Flat Cable Insert, Locknut		Nickel Plated Brass	10-16mm² Flat Cable	30
CPRGBT32	Brass Tails Kit. c/w Multiple Inserts, Locknut, Blanking insert		Nickel Plated Brass	2x16mm² + 1x16mm²	40
CPRGBT40	Brass Tails Kit. c/w, Multiple Inserts, Locknut, Blanking insert		Nickel Plated Brass	2x25mm² + 1x16mm²	40
CPRGBT40A	Brass Tails Kit. c/w Adaptor, Multiple Inserts, Locknut, Blanking insert		Nickel Plated Brass	2x25mm² + 1x 16mm² + Adaptor	40
CPRGMGR	10x M20, 3 x M32 Semi Blind Grommets	-	TPE, Flame Retardant	1 – 25mm²	10

Devices

SPD

Surge Protection Device



Designed to limit transient overvoltages, diverting the surge current to earth, limiting potential damage to any connected electrical equipment and electrical wiring

AFDD

Arc Fault Detection Device



A combined AFDD and RCBO which is extremely effective against fires which may be caused by electrical arcing faults, and with the addition of overload/short circuit & earth leakage protection of an electrical circuit

RCBO

Residual Current Circuit Breaker with Overcurrent Protection



A combined MCB and RCD offering overload/short circuit & earth leakage protection of an electrical circuit

RCD

Residual Current Device



A life saving device to prevent fatal electric shocks by monitoring the current flowing through one or more electrical circuits

MCB

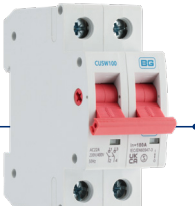
Miniature Circuit Breaker



A small trip switch operated by overload/short circuit of an electrical circuit

Main Switch

100A



A switch for the safe isolation of the incoming supply to the consumer unit and it's electrical circuits

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Main Switch – Isolator

- Positive contact status indication
- Device capable of being locked in 'ON' or 'OFF' position using a device lock



CUSW100

Product Code	Description	Rating	Modules	Inner Carton
CUSW100	Double Pole 100A Main Switch	100A	2	5

MCB's

- Positive contact status indication
- Available in B or C Curve
- Device capable of being locked in 'ON' or 'OFF' position using a device lock

Type	Tripping Current	Operating Time
B Curve	3-5 times the full load current	0.04-13sec
C Curve	5-10 times the full load current	0.04-5sec

B Curve	C Curve	Description	Rating	Modules	Inner Carton
CUMB6	CUMC6	Single Pole, 6kA	6A	1	12
CUMB10	CUMC10	Single Pole, 6kA	10A	1	12
CUMB16	CUMC16	Single Pole, 6kA	16A	1	12
CUMB20	CUMC20	Single Pole, 6kA	20A	1	12
CUMB32	CUMC32	Single Pole, 6kA	32A	1	12
CUMB40	CUMC40	Single Pole, 6kA	40A	1	12
CUMB45	-	Single Pole 6kA	45A	1	12
CUMB50	CUMC50	Single Pole, 6kA	50A	1	12
CUMB55	-	Single Pole 6kA	55A	1	12



CUMB55



CUMB32

RCBO's Type A

- Positive contact status indication
- Available in B or C Curve
- Device capable of being locked in 'ON' or 'OFF' position using a device lock

B Curve	C Curve	Description	Rating	Modules	Inner Carton
CUCRB6A	CUCRC6A	Compact RCBO, Type A, Single Pole 6kA	6A 30mA	1	5
CUCRB10A	CUCRC10A	Compact RCBO, Type A, Single Pole 6kA	10A 30mA	1	5
CUCRB16A	CUCRC16A	Compact RCBO, Type A, Single Pole 6kA	16A 30mA	1	5
CUCRB20A	CUCRC20A	Compact RCBO, Type A, Single Pole 6kA	20A 30mA	1	5
CUCRB32A	CUCRC32A	Compact RCBO, Type A, Single Pole 6kA	32A 30mA	1	5
CUCRB40A	CUCRC40A	Compact RCBO, Type A, Single Pole 6kA	40A 30mA	1	5
CURB45A	-	Tall Body RCBO Type A, Single Pole, 6kA	45A 30mA	1	5
CURB50A	-	Tall Body RCBO Type A, Single Pole, 6kA	50A 30mA	1	5
CURB55A	-	Tall Body RCBO Type A, Single Pole, 6kA	55A 30mA	1	5
CUCRB40DPA	-	Compact RCBO Type A Double Pole 6kA	40A 30mA	1	5



CUCRB32A



CURB55A

AFDD's Combined RCBO Devices – Type A

AFDD's provide additional protection for prevention of fire from electrical arc faults. Arc fault detection devices offer extremely effective protection against fires that are started by electrical faults. Typical causes include loose connections, damaged and crushed cables, rodent cable damage, and deteriorating insulation due to age of installation creating conditions where arc faults can be formed.

B Curve	Rating	Modules	Inner Carton
CURAFDB6A	6A 30mA	1	5
CURAFDB10A	10A 30mA	1	5
CURAFDB16A	16A 30mA	1	5
CURAFDB20A	20A 30mA	1	5
CURAFDB32A	32A 30mA	1	5
CURAFDB40A	40A 30mA	1	5

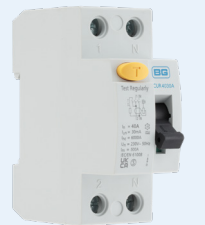


CURAFDB32

RCD Type A

- Positive contact status indication
- Device capable of being locked in 'ON' or 'OFF' position using a device lock

Product Code	Description	Rating	Modules	Inner Carton
CUR4030A	Double Pole, Type A	40A 30mA	2	5
CUR6330A	Double Pole, Type A	63A 30mA	2	5
CUR8030A	Double Pole, Type A	80A 30mA	2	5
CUR10030A	Double Pole, Type A	100A 30mA	2	5
CUR100100A	Double Pole, Type A, 100mA	100A 100mA	2	5
CUR100100TDA	Double Pole, Type A, 100mA, Time Delayed	100A 100mA	2	5



CURAFDB32

Control Devices

- Wide range of additional control devices for installation inside the consumer unit
- Contactors are ideal for controlling large lighting loads, heating or ventilation systems
- The bell transformer is for use with mains powered door chimes which do not have integrated transformers
- Step down transformer to 8V-24V
- The timers control circuits to activate or deactivate at certain times the user sets
- The number of channels indicates the number of separate circuits which can be controlled



CUB1



CUC20



CUTS5

Product Code	Description	Modules	Inner Carton
CUC20	Contactor 20A double pole	1	5
CUC40	Contactor 40A double pole	2	5
CUB1	Bell Transformer	2	5
CUTS1	Time Delay Switch, 1-20 mins	2	5
CUTS5	Timer Analogue 24 Hr	2	5
CUTS10	Timer Digital 1 Channel	2	5
CUTS11	Timer Digital 2 Channels	2	5



CUTS10



CUTS11

Type 2 – Surge Protected Device

- Type 2 Single Phase Surge Arrester
- Nominal Discharge current L-N 20kA, N-E 20kA
- Max Discharge L-N 40kA N-PE 40k
- Fully compliant to BSEN61643-11, BSEN62305 & BS7671
- Space saving 1 module design
- Min. back up MCB 16-32A B curve
- Can be fitted on DIN rail directly into the consumer unit
- Grey colour to match existing circuit protection devices
- IP20 protection degree
- Response time < 25ns

Product Code	Description
CUSPDT21	Type 2, 1 Module, TNCS, PME & TT SYSTEMS



Wiring Kit

This wiring kit can be used for the installation of a Surge protection Device into a Consumer unit which has the requirement for Overvoltage protection. Wiring Kit includes Live, Neutral & Earth Wires, Busbar & Shroud 1 x Surge protection Device 1 x 32A MCB.



Product Code	Description
CUA08	Wiring Kit c/w Live, Neutral & Earth Wires, Busbar & Shroud 1 x SPD, 1 x 32A MCB

Metal Enclosure

This stand alone enclosure is to be fitted next to existing consumer units/enclosures, to provide Surge Protection against overvoltages. Supplied with 100A Main Switch 1 x Surge Protection Device (pre-wired) 1 x 32A MCB (SPD Protective device) IP65 (weatherproof).



Product Code	Description
CFSPDE02	Metal Enclosure 5 Way Populated with 1x SPD, 1x 32A MCB 100A Main Switch

Type 3 – Surge Protection Extension Leads

Note: Information on this range can be found on page 174 of the BG Electrical catalogue.



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AME2
18TH EDITION



Amendment 2 of the 18th edition (BS 7671) IET wiring regulations was introduced on 28th March 2022 and mandated from 28th September 2022.

This update introduces significant changes to which all new electrical installations, additions and alterations to existing electrical installations in the UK are to comply.

Surge Protection Devices (SPD's)

443.4.1 – Transient overvoltages due to the effects of indirect lightning strokes.

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

1. Serious injury to, or loss of, human life
2. Failure of a safety service, as defined in Part 2
3. Significant financial or data loss



Indent 2 must be carried out regardless of any later considerations.

The definition of a safety service in part 2 is: An electrical system for electrical equipment provided to protect or warn persons in the event of a hazard, or essential to their evacuation from a location, including smoke alarms, heat alarms and fire alarm systems.

Where smoke, heat, or fire alarm circuits are connected to the mains supply, it is mandatory to protect against high transients, with a Type 2 Surge Protection Device.

For all other cases, protection against transient overvoltages shall be provided unless the owner of the installation declares

it is not required due to any loss or damage being tolerable and they accept the risk of damage to equipment and any consequential loss.

However, if a discussion takes place, the contractor must provide details of the effects of high transient voltages to the owner. And if the owner of the installation still says no, the contractor now must add this to the installation documentation as a departure, from the requirements of BS7671.



Type 2 SPD

Installed in each electrical switchboard, it prevents the spread of overvoltages in the electrical installations and protects the loads.

Type 2 SPD is characterized by an 8/20 μ s current wave.

Benefits of using a Surge Protection Device (SPD)

Reduces the risk of loss of human life, from the effects of electrical voltage surges

- Reduces the risk of damage from atmospheric surges (lighting strikes) to connected electrical equipment
- Reduces the risk of electric shock hazards due to overvoltage (industrial capacitor banks, contactor coils or other industrial switching)
- Reduces the risk of fire, caused by lighting current effects including sparking and flashovers
- Protect sensitive electronic equipment (TV's Computers etc.)
- Protects the internal/external wiring infrastructure of the building
- Prevents unnecessary disruption

What's the worst that can happen?

Examples of damage due to LEMP on unprotected installations.



Arc Fault Detection Devices (AFDD's)

Locations where AFDD's are mandatory

421.1.7 Arc fault detection devices (AFDDs) conforming to BS EN 62606 shall be provided for single-phase AC final circuits supplying socket-outlets with a rated current not exceeding 32A in:

- Higher Risk Residential Buildings (HRRB)
- Houses in Multiple Occupation (HMO)
- Purpose built student accommodation
- Care homes

For all other premises, the use of AFDDs conforming to BS EN 62606 is recommended for single phase AC final circuits supplying socket-outlets not exceeding 32A.

NOTE 1: HRRBs are assumed to be residential buildings over 18m in height or in excess of six storeys, whichever is met first. It is anticipated that in many areas, higher-risk residential buildings will be defined in legislation which can be subject to change over time, as well as in risk management procedures adopted by fire and rescue services. Current legislation should be applied.



Where AFDD's should be installed

Regulation 532.6 provides installation information. Where specified, AFDDs shall be installed:

1. At the origin of the final circuits to be protected, and
2. In AC single-phase circuits not exceeding 230V

When using busbar systems to BS EN 61439-6, and power track systems to BS EN61534, AFDDs may be placed at a location other than the origin of the circuit, so they could be installed into each socket.

Locations where AFDDs are recommended - For all other premises, the use of AFDDs conforming to BS EN 62606 is recommended for single-phase AC final circuits supplying socket outlets not exceeding 32A.

Locations where AFDDs are not required - Medical locations groups 1 and 2 are not required to be installed. Group 0 is subject to risk assessment.

From regulation 433.3.3 omission of devices for protection against overload for safety reasons, AFDDs may be omitted where unexpected disconnection of the circuit could cause danger. A safety alarm circuit is an example of one such circuit.

How AFDD's work

Electrical installations should minimise the risk of ignition of flammable materials from electric arc or high temperature.

An AFDD utilises electronic technology to analyse the signature (waveform) of an arc to differentiate between normal arcing and arcing faults between L-L, L-N & L-E. Upon detection of an arcing fault, the AFDD disconnects the final circuit from the supply.

In electrical circuits there are numerous cases of normal arcs appearing that correspond to a typical operation such as switches, contactors, portable tools and vacuum cleaner motors.

AFDDs are designed and tested to not respond to arcing under normal operation of equipment, but to respond to arc faults while the equipment is in operation.

A Type Residual Current Devices (RCD's)

RCDs and unwanted tripping

531.3.2 (new indent 2) - Residual current protective devices shall be selected and erected such as to limit the risk of unwanted tripping. The following shall be considered:

- 1. Subdivision of circuits with individual associated RCDs – RCDs shall be selected and the circuits subdivided in such a way that any earth leakage current likely to occur during normal operation of the connected load will not cause unwanted tripping of the device. See also section 314;
- 2. The use of RCBOs for individual final circuits in residential premises. See also section 314;
- 3. In order to avoid unwanted tripping by protective conductor currents and/or earth leakage currents, the accumulation of such currents downstream of the RCD shall be not more than 30% of the rated residual operating current.



NOTE 1: This will also allow a better selection of the type of RCDs according to the nature of the circuit or the load.

NOTE 2: RCDs may operate at any value of residual current in excess of 50% of the rated residual current

For indent 2, this change is driven by the need to consider the connected loads. Dual split load consumer units can't be organized effectively or efficiently to deal with the modern use of technology and modern lifestyle.

A Type devices

531.3.3 - RCD Type AC shall only be used to serve fixed equipment, where it is known that the load current contains no DC components.

NOTE 1: Examples of fixed equipment with a load current containing no DC components can include, but not be limited to electric heating appliances and/or simple filament lighting, neither containing electronic components. This will require more A Type RCD's/ RCBO's devices in place of AC Type devices and it will lead to an increase in demand for RCBO devices in residential applications.

Rotary Isolators

Rotary Isolators

- Insulated
- IP65
- Red/Yellow padlock-able handle
- Earth terminals included
- Easy cable access via M20 knock-outs (top and bottom)
- Captive retained cover screws
- Switch interlocked with lid to prevent opening in ON position
- Manufactured and tested BS EN 60947-3

2 Pole	4 Pole	Description	Inner Carton
-	CPRSD416	16A Rotary Isolator IP65	1
CPRSD220	CPRSD420	20A Rotary Isolator IP65	1
-	CPRSD425	25A Rotary Isolator IP65	1
CPRSD232	CPRSD432	32A Rotary Isolator IP65	1
CPRSD240	CPRSD440	40A Rotary Isolator IP65	1
CPRSD263	CPRSD463	63A Rotary Isolator IP65	1
-	CPRSD4100	100A Rotary Isolator IP65	1



CPRSD463



Residual Current Devices

Type A: Ensures tripping for residual AC currents and pulsating DC currents. Where loads produce DC currents such as electric vehicle chargers and washing machines then type A RCD must be used.

Type AC: Ensures tripping on AC currents.



Type A



Type AC



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