Technical Data

Bidirectional RCBO 2 Module Double Pole 10kA C Curve 30mA

Brief Product Description

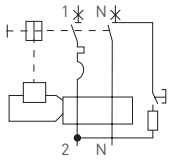
Double pole bidirectional RCBO type F, providing superior protection for both circuits and people where current has the ability to flow in 2 directions through the device such as a PV/Solar application.

The single module compact design will fit in any BG consumer unit or enclosure via a standard DIN rail fit.

Features

- Bidirectional
- Both pole isolation
- BS7671 Amendment 3 compliant device
- -25°C - +40°C operating temperature range
- Single module
- Type F
- 10kA
- Available in 16-40A
- C Curve

Wiring Diagram



Consumer Unit Part Codes

C Curve	
Cat No.	Rating
CUCRC16F	16A
CUCRC20F	20A
CUCRC25F	25A
CUCRC32F	32A
CUCRC40F	40A

Technical Specifications (16A -40A)

Bidirectional	Yes
Neutral Position	Right
Number of Poles	2
Type of Pole	1P+N
Fixing Mode	DIN Rail Type 35mm
Curve	B & C
Rated Operational Voltage Ue	230/240 V
Operating Temperature Range	-25°C - +40°C
Frequency	50/60Hz
Type of Supply Voltage	AC
Rated Insulation Voltage	500V
Max Operating Voltage	264 V
Rated Impulse Withstand Voltage	4 kV
Rated Residual Operating Current	30,100,300 mA
RCD Type	Type F
Total Power Loss Under IN	12.48 W
Electric Endurance in Number of Cycles	10000
Number of Mechanical Operations	20000
Screw Terminal	YES
Recommended Screwdriver Type	Pozidrive 2
Short Circuit Current Withstand	N/A
Terminal Torque Settings	2 Nm
Max Cables	25mm2
Rated Short-Circuit Capacity Icn	10kA
Energy limiting Class	3

Standards IEC/EN 61009-1, IEC/EN 62423

Product Images

BRITISH BG GENERAL CIRCUIT PROTECTION

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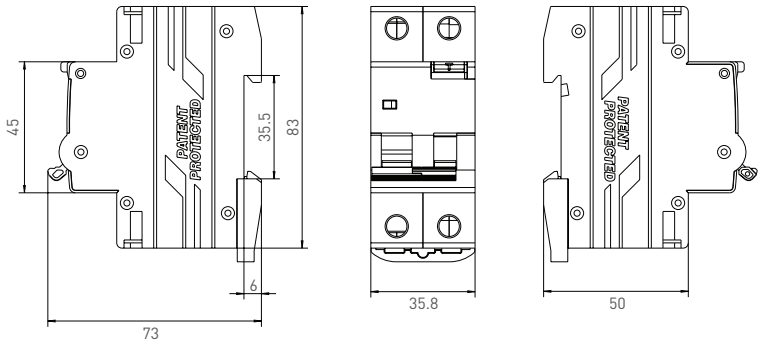
Operating Temperature

The rated value of the current of a double pole bidirectional RCBO B & C curve characteristic refers to ambient temperature of 30°C.

The following table contains the derating of the load capacity at ambient temperatures from -30°C to 70°C for B & C characteristics.

	Maximum operating current at ambient temperature T																			
Rated Current In	**-30**	**-25**	**-20**	**-15**	**-10**	**-5**	**0**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
6	8.05	7.9	7.74	7.58	7.42	7.26	7.09	6.92	6.74	6.56	6.37	6.18	6	5.81	5.6	5.38	5.15	4.91	4.65	4.38	4.08
10	12.23	12.06	11.89	11.71	11.53	11.35	11.16	10.98	10.78	10.59	10.39	10.19	10	9.81	9.59	9.37	9.17	8.91	8.68	8.43	8.18
13	17.27	16.86	16.26	15.83	15.26	14.82	14.56	14.26	13.98	13.74	13.49	13.24	13	12.76	12.53	12.22	11.96	11.7	11.46	11.21	10.98
16	19.4	19.13	18.87	18.6	18.33	18.05	17.77	17.48	17.19	16.9	16.6	16.29	16	15.7	15.38	15.05	14.71	14.36	14	13.64	13.26
20	24.31	23.98	23.65	23.31	22.96	22.61	22.25	21.89	21.52	21.15	20.77	20.38	20	19.62	19.2	18.78	18.35	17.91	17.45	16.99	16.51
25	30.4	29.98	29.56	29.14	28.71	28.27	27.82	27.37	26.91	26.44	25.96	25.48	25	24.51	24	23.47	22.93	22.38	21.81	21.23	20.63
32	38.15	37.67	37.19	36.7	36.21	35.71	35.2	34.68	34.16	33.13	33.09	32.54	32	31.45	30.87	30.28	29.68	29.07	28.44	27.8	27.14
40	47.88	47.25	46.85	46.26	45.86	45.22	44.56	43.78	43.05	42.33	41.56	40.77	40	39.19	38.35	37.46	36.66	35.74	34.88	34.03	33.26

Dimensional Line Drawing



Dimensions of product

Height: 83 mm
Width: 35.8 mm
Depth: 73 mm

Maintenance

The RCBO should be tested on a regular basis by pressing the test button (T) in accordance with the latest edition of the IET Wiring regulations BS7671.

Make sure all terminations are tightened to the correct torque level supplied in this document.

What to do if an MCB/RCBO trips

Reset tripped MCB/RCBO to the ON position.

If device trips again, disconnect all appliances connected to this circuit. Switch RCBO ON and safely connect appliances one at a time to identify which one trips the device.

In all cases, once the faulty appliance has been identified, do not continue to use the item until it has been checked.

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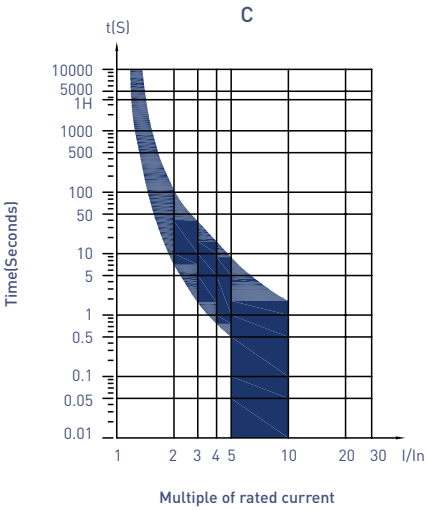
Trip Curve Data



Test Parameter (AC Setting)		Result
0.5x In		RCBO will not trip
1.0x In	0 & 180°	RCBO must trip within 300ms
5.0x In	0 & 180°	RCBO must trip within 40ms

Type C - Domestic and light commercial installations such as lighting and power circuits running higher current appliances that may cause nuisance tripping of a B Curve RCBO.

Table 41.5 – Maximum Earth Loop Impedance Values – BS7671 IET Wiring Regulations

Maximum earth loop impedance(Z_s) for non delayed and time delayed 'S' type RCD to BSEN61008-01 and BSEN61009-1 for U_o of 230V (see regulation 411.5.3).

Rated residual operating current (mA)	Maximum earth fault loop impedance Z_s (ohms)
30	1667*
100	500*
300	167*
500	100

Disconnection shall be within the times stated in table 41.1. in BS7671 IET Wiring Regualtions.

NOTE1: Figures for Zs result from the application of regulation 411.5.3 (i) and (ii).

NOTE2: * the resistance of the installation earth electrode should be as low as practicable. A value exceeding 200 ohms may not be stable. Refer to Regulation 542.2.4.

Rated Diversity Factor (RDF)/Values of assumed loading

CU Ways	RDF
1 Way	1
2-3 Ways	0.8
4-5 Ways	0.7
6-9 Ways	0.6
10 Ways+	0.5

Adjacent thermal magnetic RCBOs/MCBs should not be continuously loaded at their nominal rated currents when mounted within enclosures.

A rated diversity factor (RDF) should be applied to the nominal current rating of the RCBO/MCB where it is intended to load the circuits continuously and simultaneously.

BG Devices are Tested to -25°C - +40°C.