FuseBox®

DOC:3P+N_RCBO_TYPEBCD_10kA_23.04.2026_V1

3P + N SW 10kA RCBO

RATING (A)	6	10	16	20	25	32	40	45	50
PART NUMBER B curve	R3PN10B0630BDTB	R3PN10B1030BDTB	R3PN10B1630BDTB	R3PN10B2030BDTB	R3PN10B2530BDTB	R3PN10B3230BDTB	R3PN10B4030BDTB	R3PN10B4530BDTB	R3PN10B5030BDTB
GTIN-13	5060523529629	5060523529636	5060523529643	5060523529650	5060523529667	5060523529674	5060523529681	5060523529698	5060523529704
	R3PN10C0630BDTB	R3PN10C1030BDTB	R3PN10C1630BDTB	R3PN10C2030BDTB	R3PN10C2530BDTB	R3PN10C3230BDTB	R3PN10C4030BDTB	R3PN10C4530BDTB	R3PN10C5030BDTB
	5060523527168	506052352715	5060523527182	5060523527199	5060523527205	5060523527212	5060523527229	5060523527236	5060523527243
	R3PN10D0630BDTB	R3PN10D1030BDTB	R3PN10D1630BDTB	R3PN10D2030BDTB	R3PN10D2530BDTB	R3PN10D3230BDTB	R3PN10D4030BDTB	R3PN10D4530BDTB	R3PN10D030BDTB
	5060523529728	5060523529735	5060523529742	5060523529759	5060523529766	5060523529773	5060523529780	5060523529797	5060523529803

STANDARD	IEC/EN 61009-1
NUMBER OF POLES	3P + N (switched)
RATED VOLTAGE (Un/AC)	400V
FREQUENCY (Hz)	50/60
RATED BREAKING CAPACITY (Icn)	10,000
RATED CURRENT (In)	6, 10, 16, 20, 25, 32, 40, 45, 50
TRIPPING CHARACTERISTICS	B,C & D CURVE
NEUTRAL FLYLEAD CABLE LENGTH	750mm
MECHANICAL ENDURANCE	10,000
PROTECTION DEGREE (IP)	20
TRIPPING TYPE	Thermal magnetic
BI DIRECTIONAL	YES
RESIDUAL CURRENT CHARACTERISTICS	TYPE B (AC,PULSATING DC UP TO 6mA, SMOOTH DC, >50Hz)
RATED RESIDUAL OPERATING CURRENT (IΔn)	0.03
MECHANICAL ENDURANCE	10000
MAXIMUM TERMINAL CAPACITY	1-25mm² L IN / 16mm² OUT
RECOMMENDED TIGHTENING TORQUE (Nm)	N L 2.5Nm L IN / 2NmOUT N L
MOUNTING	35mm din rail
MATERIAL	PA6 (Nylon 6)
WEIGHT (1PC) Kg	0.47
INNER CARTON QUANTITY	12
OUTER CARTON QUANTITY	120



3P+N RCBO series (R3PN10***BD)**

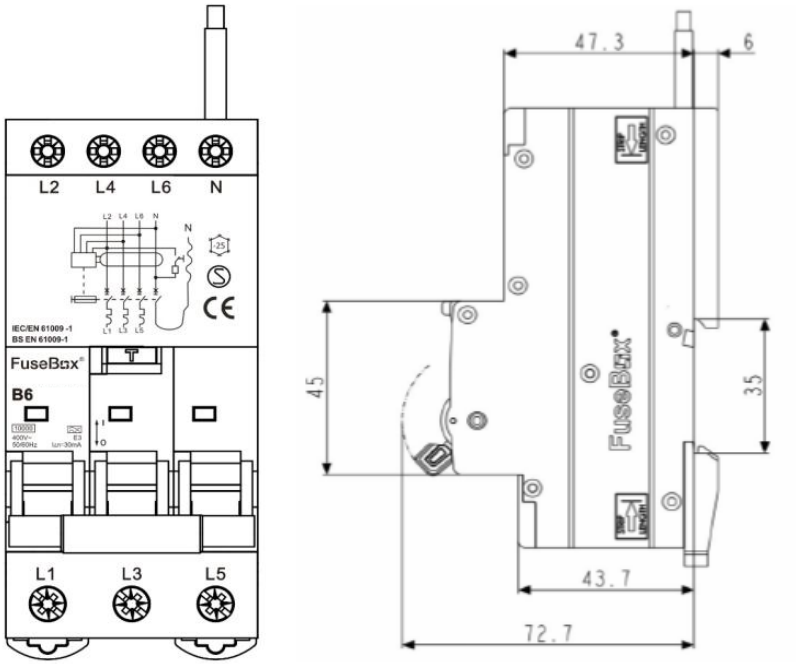
Bi directional 3P+N RCBO with switched LINE and NEUTRAL. Can be Used for the protection against overload, short circuit and earth leakage in solar or EV applications or where current flows in both directions.
Type B for AC,pulsating , and smooth DC sensitivity with a short circuit capacity of 10kA and a maximum rating of 50A and frequencies up to 1KHz.

Compact in size increasing working space within a FuseBox consumer unit making installation, connection and testing easier and quicker.

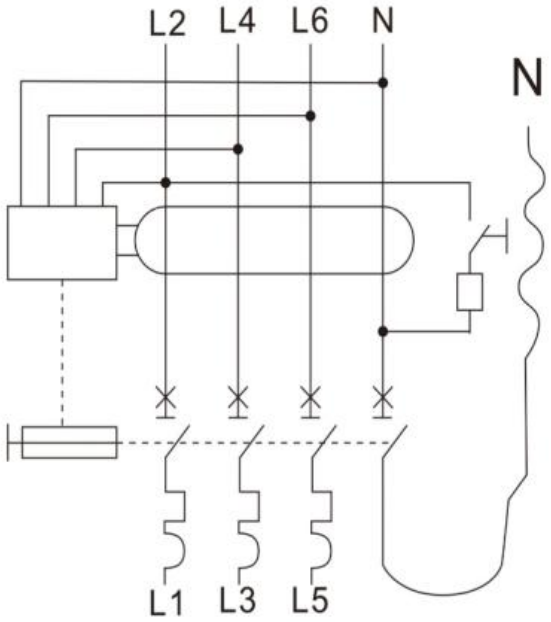
Flying Neutral cable can be cut to suit but should be terminated.

DIMENSIONS

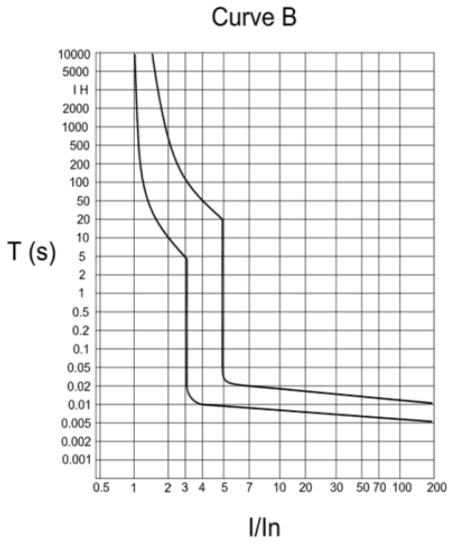
3P+N (SW)



WIRING DIAGRAM



Waveform definition	**B TYPE**
	Tripping current
Sinusoidal exchange	0.5-1 IΔn
Pulsating half wave	0.5-1.4 IΔn
Pulsating half wave + direct current (6mA)	Max 1.4 IΔn+6mA Max
Pulsating half wave + direct current (10mA)	1.4 IΔn+10mA 150Hz
	0.5-2.4 IΔn
High frequency (up to 1KHz)	400Hz 0.5-6 IΔn
	1000Hz 1-14 IΔn
Two phase rectified full wave	0.5-2 IΔn
Three phase rectified full wave	0.5-2 IΔn
Direct current	0.5-2 IΔn



Installation

Neutral Cable CSA	
6A	2.5mm^2
10A	2.5mm^2
16A	2.5mm^2
20A, 25A	2.5mm^2
32A	4.0mm^2
40A, 50A, 63A	4.0mm^2

1 Installation instructions

1a RCBO must be installed by a qualified electrician in accordance with the current version of IET wiring regulations.
1b Total load must not exceed the rating of the RCBO or any additional limitation.
1c RCBO range designed to fit FuseBox TPN distribution boards and modular enclosures.
1d 35mm top hat din rail mounting.
1e Clip securely on to the din rail making sure the din rail clip at the bottom is pushed in, locking the RCBO onto the din rail, ensure lever is in the OFF position.
1f Cut, dress and connect cables as shown in the **wiring diagram.**

2 Connections

2a **Before powering up the circuit check all connections are TORQUED. Loose connections cause fires!!!!**

3 Testing

3a Line and Neutral conductors DO NOT NEED TO BE disconnected for IR test (insulation resistance) if the RCBO BD is in the OFF position.
3b On completion of the installation, the installation must be tested by a qualified electrician in accordance with the current version of IET wiring regulations.

RCBO TEST

RCBOs ARE MANUFACTURED IN ACCORDANCE WITH IEC/EN BS EN**61009-1** AND MUST BE TESTED TO THIS SPECIFICATION USING A CALIBRATED TEST METER.
General type

0.5IΔn	**RCBO will not trip**
1IΔn	**RCBO must trip within 300ms**
5IΔn	**RCBO must trip within 40ms**

What to do if a RCBO trips

1 Reset tripped RCBO to **ON** position
2 If RCBO trips again then disconnect all appliances connected to this circuit.
3 Switch RCBO to **ON** position and connect 1 appliance at a time to see which one trips the RCBO.
4 Once the faulty appliance has been identified, DO NOT USE appliance until it has been checked.
5 Switch RCBO to **ON** position.
6 **If fault does not clear phone a qualified electrician to check installation**

Environment

WASTE ELECTRICAL PRODUCTS SHOULD NOT BE DISPOSED OF IN HOUSEHOLD WASTE. CONTACT YOUR RETAILER OR LOCAL AUTHORITY FOR RECYCLING INFORMATION

FuseBox®

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PART NUMBER	DESCRIPTION	BARCODE
R3PN10B0630BD	06A 30mA 10kA B curve TYPE A 3P+N SW BD	5060523527083
R3PN10B1030BD	10A 30mA 10kA B curve TYPE A 3P+N SW BD	5060523527090
R3PN10B1630BD	16A 30mA 10kA B curve TYPE A 3P+N SW BD	5060523527106
R3PN10B2030BD	20A 30mA 10kA B curve TYPE A 3P+N SW BD	5060523527274
R3PN10B2530BD	25A 30mA 10kA B curve TYPE A 3P+N SW BD	5060523527113
R3PN10B3230BD	32A 30mA 10kA B curve TYPE A 3P+N SW BD	5060523527120
R3PN10B4030BD	40A 30mA 10kA B curve TYPE A 3P+N SW BD	5060523527137
R3PN10B4530BD	45A 30mA 10kA B curve TYPE A 3P+N SW BD	5060523527144
R3PN10B5030BD	50A 30mA 10kA B curve TYPE A 3P+N SW BD	5060523527151
R3PN10C0630BD	06A 30mA 10kA C curve TYPE A 3P+N SW BD	5060523527168
R3PN10C1030BD	10A 30mA 10kA C curve TYPE A 3P+N SW BD	5060523527175
R3PN10C1630BD	16A 30mA 10kA C curve TYPE A 3P+N SW BD	5060523527182
R3PN10C2030BD	20A 30mA 10kA C curve TYPE A 3P+N SW BD	5060523527199
R3PN10C2530BD	25A 30mA 10kA C curve TYPE A 3P+N SW BD	5060523527205
R3PN10C3230BD	32A 30mA 10kA C curve TYPE A 3P+N SW BD	5060523527212
3PN10C4030BD	40A 30mA 10kA C curve TYPE A 3P+N SW BD	5060523527229
R3PN10C4530BD	45A 30mA 10kA C curve TYPE A 3P+N SW BD	5060523527236
R3PN10C5030BD	50A 30mA 10kA C curve TYPE A 3P+N SW BD	5060523527243
R3PN10D0630BD	06A 30mA 10kA D curve TYPE A 3P+N SW BD	5060523529728
R3PN10D1030BD	10A 30mA 10kA D curve TYPE A 3P+N SW BD	5060523529735
R3PN10D1630BD	16A 30mA 10kA D curve TYPE A 3P+N SW BD	5060523529742
R3PN10D2030BD	20A 30mA 10kA D curve TYPE A 3P+N SW BD	5060523529759
R3PN10D2530BD	25A 30mA 10kA D curve TYPE A 3P+N SW BD	5060523529766
R3PN10D3230BD	32A 30mA 10kA D curve TYPE A 3P+N SW BD	5060523529773
R3PN10D4030BD	40A 30mA 10kA D curve TYPE A 3P+N SW BD	5060523529780
R3PN10D4530BD	45A 30mA 10kA D curve TYPE A 3P+N SW BD	5060523529797
R3PN10D5030BD	50A 30mA 10kA D curve TYPE A 3P+N SW BD	5060523529803

NEUTRAL CABLE CSA	
6A	2.5 mm²
10A	2.5 mm²
16A	2.5 mm²
20, 25A	2.5 mm²
32A	4.0 mm²
40,45,50A	4.0 mm²