

3Product Data Sheet

Type: **RCBO 1 protected poles + solid neutral – 1-module wide**

Reference:

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1 General Characteristics

Compact protection devices which combine the overcurrent functions of an MCB with the earth fault functions of an RCCB in a single unit

Curve: B&C

Pole: 1 protected poles (Magnetic & Thermal protection) + solid neutral

Internal diagram:



Rated current (I_n): 6 to 40 A

Rated voltage (U_n): 230/240V +10%/-15%

Rated residual operating current (I_{Δn}) 30mA

Operating characteristic Type AC

Rated Frequency: 50/60Hz

Rated short-circuit capacity (I_{cn}) 10000A

Rated residual making and breaking capacity (I_{Δm}) 10000A

Breaking capacity (I_{cs}) EN 61009-1: 75 % of I_{cn} according to EN 61009-1

Pollution degree: 3

Rating insulation voltage (U_i): 500 V according to EN 61009-1

Rated impulse voltage (U_{imp}): 4 kV

Electrical endurance: 2 000 operating cycles
Mechanical endurance:

- 2 000 operating cycles for RCBOs having I_n ≤ 25 A
- 1 000 operating cycles for RCBOs having I_n > 25 A.

IP rating: IP2x of terminals

Temperature:

Calibration temperature:	- 30°C according to IEC 61009-1
Working temperature:	- 5°C to + 40 °C
Storage temperature:	- 25°C to + 60°C

Temperature de-rating:

RCBOs are designed and calibrated to carry their rated current and to operate within their designated thermal time/current zone at 30°C.

Testing is carried out with the device mounted singly in a vertical plane and in a controlled environment. Therefore if it has to operate in conditions which differ from the reference conditions, certain factors have to be applied to the standard data.

For instance if the RCBO is required to operate at higher ambient temperature than 30 °C it will require progressively less current to trip within the designated time/current zone.

Temperature Correction factor:

In [A]	-5 °C	0 °C	5 °C	10 °C	15 °C	20 °C	25 °C	30 °C	35 °C	40 °C
6	7,68	7,44	7,2	6,96	6,72	6,48	6,24	6	5,76	5,52
10	12,8	12,4	12	11,6	11,2	10,8	10,4	10	9,6	9,2
13	16,6	16,1	15,6	15,1	14,6	14	13,5	13	12,5	12
16	20,5	19,8	19,2	18,6	17,9	17,3	16,6	16	15,4	14,7
20	25,6	24,8	24	23,2	22,4	21,6	20,8	20	19,2	18,4
25	32	31	30	29	28	27	26	25	24	23
32	41	39,7	38,4	37,1	35,8	34,6	33,3	32	30,7	29,4
40	51,25	49,63	48,00	46,38	44,75	43,25	41,63	40	38,38	36,75

Grouping factor:

Rated current reduced by factor K Consideration should also be given to the proximity heating effect of the breakers themselves when fully loaded and mounted together in groups. There is a certain amount of watts loss from each breaker depending on the trip rating which may well elevate the ambient air temperature of the breaker above the ambient air temperature of the enclosure

No. of units n	K (grouping factor)
n = 1	1
2 ≤ n < 4	0,95
4 ≤ n < 6	0,9
6 ≤ n	0,85

Note: If the design current of a circuit (I_b) is less than 0,85 times the nominal setting of the RCBO (I_n) grouping can be ignored.

Dielectric strength:

2kV according to IEC 61009-1

Case material:

Thermoplastic (Polyamide) in accordance with IEC 695-2-1

Glow-wire test:

960°C for case according to IEC 60695-2-1
 650°C for toggle according to IEC 60695-2-1

Tropicalisation:

All climates, treatment 2 (relative humidity = 95% at 55°C)

2 Dimensional characteristics

2.1 Dimension

Height: 115mm

2.2 Flying neutral lead:

Length: 700mm

3 Packaging

Each product is wrapped in a cardboard box.

4 Over packing

The goods are over parked in a cardboard box.

5 Weight

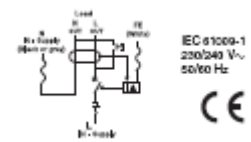
0.185kg without packaging

6 Marking

- On front face:



- On right side:



7 Installation

Mounting:	Din rail EN 60715
Supply:	Feed from bottom
Terminal capacity:	Rigid conductor: 16 mm ² Flexible conductor: 10 mm ²
Tightening torque:	2.4 Nm nominal with Screw head Pozidrive size 2 and slot 6 mm
Type of cable:	Copper only
Sealable:	The locking kit allows RCBO locking in the “OFF” and “ON” position. The locking kit is sealable.
Contact position indication:	Flag on product
Earth default indicator:	No
Installation altitude:	2 000 meters max
Working position:	Product performances not affected if installed vertically, horizontally or flat
Din clip type:	Metal insulated DIN rail clip
Accessories:	<ul style="list-style-type: none">○ Locking kit

8 Standards:

Complies with BS EN 61009-1 & IEC 61009-1

9 References

Range	Terasaki Reference	Description
TD3RCBO	103674	RCBO 1P 10kA B-6A 30mA AC
	103681	RCBO 1P 10kA B-10A 30mA AC
	103698	RCBO 1P 10kA B-16A 30mA AC
	103704	RCBO 1P 10kA B-20A 30mA AC
	103711	RCBO 1P 10kA B-25A 30mA AC
	103728	RCBO 1P 10kA B-32A 30mA AC
	103735	RCBO 1P 10kA B-40A 30mA AC
	103742	RCBO 1P 10kA C-6A 30mA AC
	103759	RCBO 1P 10kA C-10A 30mA AC
	103766	RCBO 1P 10kA C-16A 30mA AC
	103773	RCBO 1P 10kA C-20A 30mA AC
	103780	RCBO 1P 10kA C-25A 30mA AC
	103797	RCBO 1P 10kA C-32A 30mA AC
	103803	RCBO 1P 10kA C-40A 30mA AC