

Function

Residual current circuit-breakers ensure:

- The control and isolation of electrical circuits
- The protection of persons against direct and indirect contacts
- The protection of installations against insulation faults

They conform to both the residual current device standard BS EN 61008 and to switch standards BS EN 60947-1 and BS EN 60947-3. Residual current circuit-breakers are used in the housing, commercial and industrial sectors.

AC class

Tripping is ensured for sinusoidal, alternating currents, whether they be quickly applied or slowly increase.

A class

Tripping is ensured for sinusoidal, alternating residual currents as well as for pulsed DC residual currents, whether they be quickly applied or slowly increase.

Application: loads with electronics, rectifiers, instruments.

“si” type

Reinforced continuity of supply on disturbed networks with:

- A high risk of nuisance tripping:
 - Successive lightning strokes
 - IT earthing system
 - Variable speed controllers, frequency converters
 - Presence of electronic ballasts
 - Presence of switchgear that incorporates interference filters i.e. lighting, microcomputing, etc
- Sources of blinding:
 - Presence of harmonics or high frequency rejection
 - Presence of DC components: diodes, thyristors, triacs
 - Low temperature

“SiE” type

The RCCB “SiE” types are particularly suitable for use in humid environments and/or environments polluted by aggressive agents, for example swimming pools, marinas, the food-processing industry, water treatment plants, industrial sites. They also incorporate RCCB “si” functions.

Instantaneous

It ensures instantaneous tripping (no time-delay).

Selective [Ⓢ]

Total discrimination can be achieved using a non-selective residual current device placed downstream.

Description

The residual current trip unit is electromechanical. It functions without an auxiliary source.

Technical data

Voltage rating	230...400 V AC, -15...+10 %
Frequency rating	AC and A classes: 50/60 Hz “si” and “SiE” types: 50 Hz
Current rating (I _{th}) at 40 °C	16...100 A
As in IEC 61008	Breaking and making capacity Rated residual (I _{Δm}): 2.5 kA Rated (I _m): 1.5 kA
As in IEC 60947-3:	Isolation with positive break indication, opening is indicated by a green strip on the device operating handle. This indicator shows that all poles are open. Rated impulse withstand Voltage (U _{imp}): 6 kV Insulation voltage (U _i): 440 V Utilization category: AC 23A rating ≤ 63 A AC 22B ratings 80 and 100 A

Description cont..

- Padlocking in the “tripped” position is possible using the padlocking device (not supplied)
- Protected against nuisance tripping due to transient overvoltages (lightning, switchgear operation on the network, etc.)
- Impulse withstand level 8/20 μs:
- AC and A classes:
 - 250 A for instantaneous
 - 3 kA for s
- “si” and “SiE” type:
 - 3 kA for instantaneous
 - 5 kA for s
- Short-circuit current withstand (I_{Δc} = I_{nc}): 10 kA with 100 A fuse upstream
- Number of operations (O-C): 20 000
- Trip units with fixed sensitivities for all ratings:
- Instantaneous trip unit
- Selective trip unit with 50-70ms delay: total vertical selectivity can be achieved using 30 mA residual current devices placed downstream
- Indication:
- Mechanical: earth fault indication on front panel by means of a mechanical indicator
- Electrical: using auxiliaries
- Remote tripping: using auxiliaries
- Environment:
- Tropicalisation: treatment 2 (relative humidity 95 % at 55°C)
- Operating temperature:
 - AC class: -5...+40°C
 - A class, “si” and “SiE” type: -25...+40°C
- Storage temperature: -40...+60°C

Weight (g)	2P	3P
	230	450

- Terminal size 35mm² up to 63amp. 50mm² up to 80 and 100 amps
- Connection using tunnel terminals for flexible 35mm² cable or rigid 50mm² cable
- Can be directly connected using comb busbars
- Conform with standards:
 - BS EN 61008
 - BS EN 60947-1
 - BS EN 60947-3