

Residual Current Circuit Breaker

This circuit breaker provides protection against leakage current and short circuits in residential electrical systems. It quickly interrupts power in the event of a fault to prevent equipment damage and reduce the risk of electrical shock.



ADDITIONAL IMAGES



Product Overview

Professional Residual Current Circuit Breaker

This residual current operated circuit breaker is engineered for rapid fault detection and power interruption in AC 50Hz circuits. Designed to safeguard personnel and equipment, it effectively mitigates risks from electric shock and grid leakage current. Its modular, robust design ensures reliability in industrial, commercial, and high-rise residential installations, meeting stringent international performance standards.

Electrical Performance

3. Main Technical Data and Technical Performance Table 1

Item	Value
Rated voltage	230V AC (1P+N), 400V AC (3P+N)
Rated current	25A, 40A, 63A
Rated residual operating current	0.03A, 0.1A, 0.3A
Number of poles	1P+N, 3P+N
Rated time short-circuit current	8000A
Rated limit residual short-circuit current	8000A
Rated make-break capacity	500A(In=25, 40A), 630A(In=63A)
Rated residual access and disconnection capacity	500A(In=25, 40A), 630A(In=63A)
Rated residual non-operating current	0.25In
Duration for residual current operated breaking	See Table 2
Mechanical electrical life	See Table 3
Tightening torque	12.5-4.0(N·m)
Appearance and installation dimensions	See Fig. 1 and Fig. 2
Class of pollution	Class 2
Protection class	Ip20
Installation category	Class II

3.1. Duration for Residual Current Operated Breaking Table 2

In	I _{Δn}	Braking duration (t _{br}) when the residual current I _{Δn} is equal to the following values
A	A	1.0s, 21.0s, 5.0s, 5A, 10A, 20A, 50A, 10A, 20A, 50A
25, 40, 63	0.03, 0.1, 0.08, 0.04, 0.04	0.04, 0.04

Maximum breaking duration

Rated Voltage	230V AC (1P+N) / 400V AC (3P+N)
Rated Current Options	25A, 40A, 63A
Residual Operating Current	0.03A, 0.1A, 0.3A

Technical Specifications

Rated Limit Short-Circuit Current	6000 A
Protection Class	IP20
Tightening Torque	2.5 - 4.0 N-m
Max Installation Elevation	2000 m

Standards & Compliance

Standards Compliance	IEC61008-1, GB16916.1, CCC
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Mechanical Data

3.2 Mechanical Electrical Life

The residual current operated circuit breaker should be able to withstand the number of cycles as specified in Table 3.

In(A)	Number of operation cycles		Operation frequency (times/hour)
	Number of loaded operations	Number of unloaded operations	
25	2000	2000	240
40,63	2000	1000	120

4 Structural Characteristics

4.1 The auxiliary power supply is not required. The shortcomings that the interference immunity of electronic type product is poor, the product is greatly affected by the fluctuation of the voltage of the power grid and the protection cannot be realized due to the breaking of the neutral line are overcome and the scope of protection by the residual current is broadened.

4.2 The rated limit short-circuit current is up to 6kA.

4.3 Such plastic parts as the case, etc. are made from high fire retardant, highly temperature resistant and shock resistant plastics.

4.4 Dimensions are modular and installation is easy.

4.5 The dynamic test device makes the buttons more flexible and reliable.

4.6 Insulated shock resistant voltage performance:

a. All electrodes are connected and a peak voltage of 6000V can be withstood with the neutral pole.

b. All electrodes are connected with the neutral pole and a peak voltage of 8000V can be withstood with the metallic support.

4.7 SCPD: 100A pG.

4.8 Elevation: <2000m.

Mechanical Electrical Life

Rated Current (A)	Loaded Operations	Unloaded Operations
25	2000	2000
40, 63	1000	2000