

RCBO ETL3-63(H)

Residual Current Circuit Breaker with Overload Protection



Voltage: 240/415V AC systems (50/60Hz)

Electronic type

Current Range: 6A to 63A

AC and A types

Rated residual current: 10, 30, 100, 300mA

Bidirectional Wiring Capability

Tripping Curves: Type B/C available

Visual leakage fault indication window

Breaking Capacity: 6kA/10kA options

Transparent trip status observation port

Protects against overload, short circuit, and leakage faults

RCBO according to IEC/EN 61009-1

Applications



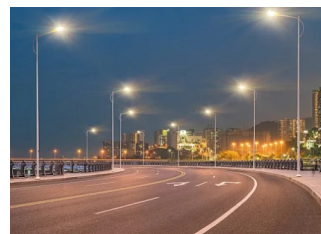
Main circuit protection in residential distribution systems



Lighting circuit control in commercial buildings



Power supply line protection for industrial equipment

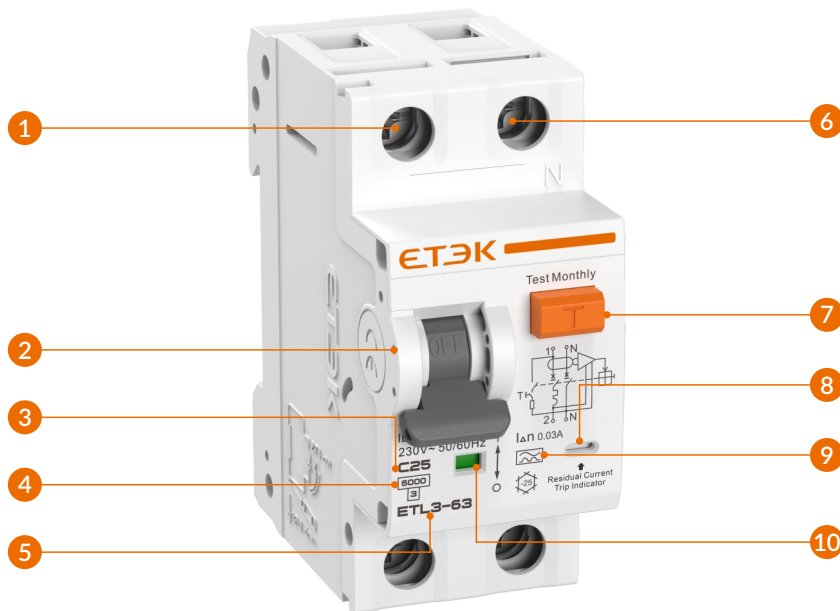


Electrical safety assurance in public facilities

Overview

ETL3-63 Residual Current Circuit Breaker with Overcurrent Protection (RCBO) provide protects against overload, short circuit, and leakage faults, supporting 230/240V (1P+N) or 400/415V (3P+N) power systems with ratings up to 63A, its reliable operation across residential and industrial applications.

Product Tips



1 Live line interface

2 The position of handle Lock

3 Tripping characteristics B, C

4 Rated short circuit breaking capacity 6kA, 10kA

5 Product model ETL3-63, ETL3-63H

6 Neutral line interface

7 Test button

8 Residual current trip indicator

9 Sensitivity to residual current AC, A

10 Contacts position indication window

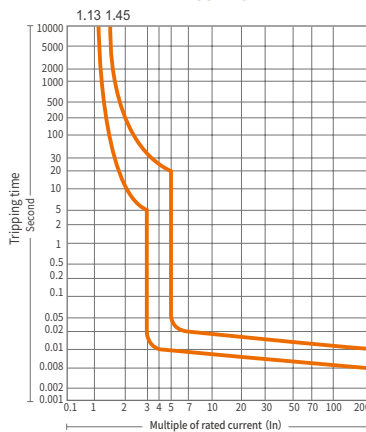
Technical Data

Standard	IEC/EN 61009-1
Protection	Ground fault, Overcurrent and short circuit
Type of trip	Ground fault: Electronic
	Overload and short circuit: Thermo-magnetic
Residual current type	AC type-AC residual current
	A type- residual AC and pulsating DC current
No. of poles	1P+N, 3P+N
Insulation voltage (Ui)	500V
Rated voltage (Ue)	1P+N: 230/240V~; 3P+N: 400/415V~
Rated currents (In)	6,10,16,20,25,32,40,50,63A
Rated sensitivity currents (I Δ n)	10,30,100,300mA
Residual current off-time under (I Δ n)	≤0.1s
Rated residual making and breaking capacity (I Δ m)	500A (In≤50A)
	10In (In>50A)
Rated frequency	50/60Hz
Rated short-circuit capacity (Icn)	ETL3-63:6kA
	ETL3-63H:10kA
Energy limiting class	3
Rated impulse withstand voltage (Uimp) (1.2/50μs)	4kV
Dielectric test voltage	2kV (50/60Hz,1 min.)
Fire resistance (glow-wire test)	960±15°C (Enclosure)
	650±10°C (Handle)
Thermal tripping characteristics	1.13In No tripping within an hour
	1.45In Tripping within an hour
Instantaneous tripping characteristics	B: 3In-5In; C: 5In-10In
Electrical life	4,000 Cycles
Mechanical life	8,000 Cycles
Contact position indicator	green OFF / red ON
Ground fault indicator	White: Normal
	Blue: Leakage fault
Protection degree	IP20
Ambient temperature	-25°C ~ +55°C
Storage temperature	-30°C ~ +70°C
Terminal connection type	Cable/ Pin-type/ Fork-type busbar
Max. terminal size for cable	25mm ²
Max. tightening torque	2.5N.m
Installation	Mounting on 35mm DIN rail
Incoming method	Bi-directional

Tripping Characteristics

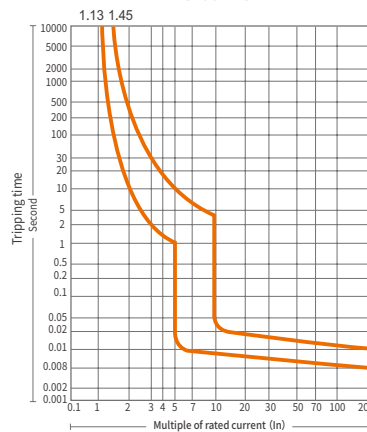
Curve	Rated current	Condition						
		Thermal release				Magnetic release		
		Non-trip	Trip	Non-trip time	Trip time	Hold current	Trip current	Trip time
B	6-63A	$1.13 \times I_n$		$\leq 1h$		$3 \times I_n$		≥ 0.1
			$1.45 \times I_n$		$< 1h$		$5 \times I_n$	< 0.1
C	6-63A	$1.13 \times I_n$		$\leq 1h$		$5 \times I_n$		≥ 0.1
			$1.45 \times I_n$		$< 1h$		$10 \times I_n$	< 0.1

B curve



Universal use
- socket outlet, lighting device

C curve



Resistive & inductive loads with low inrush current
- lamp, high starting current motor

Tripping Sensitivity

- 10mA: Provides a higher level of protection for the human body and is used in certain situations with very high requirements for electric shock protection, such as children's facilities, swimming pools, bathrooms and other humid environments.
- 30mA: This is the most commonly used protection level in homes and commercial buildings, and is suitable for socket protection in general residential environments, offices and commercial places.
- 100mA: Usually used in situations where personal protection requirements are not as strict as 30mA, or for equipment protection, such as air conditioning systems, industrial equipment, etc.
- 300mA: Mainly used for fire protection, such as distribution boards and general protection of large electrical equipment.

RCD Type

AC



Only sinusoidal alternating current (AC) leakage current can be detected. Suitable for environments where DC leakage does not occur, such as homes and general offices.

A



Able to detect alternating current (AC) leakage current and pulsed DC leakage current. It is suitable for environments where DC leakage may occur, including places where modern electrical equipment such as inverters, UPS (uninterruptible power supply systems), and LED lighting are used.

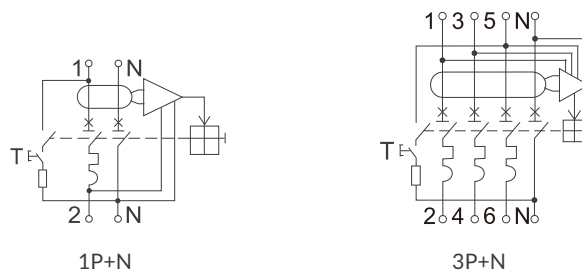
Breaking Time of Residual Current

$I_n(A)$	$I_{\Delta n}(mA)$	Max. breaking time			
		$I_{\Delta n}$	$2I_{\Delta n}$	$5I_{\Delta n}$	5,10,20,50,100,200,500A
6,10,16,20,25,32,40,50,63	10,30, 100, 300	0.1s	0.08s	0.04s	0.04s

Temperature Derating Table

Rated current (A)	Correction factor for ambient temperature											
	-40°C	-30°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
6	8	7.7	7.5	7.2	6.9	6.6	6.3	6	5.7	5.3	4.9	4.5
10	13.3	12.9	12.5	12	11.5	11.1	10.5	10	9.4	8.8	8.2	7.5
16	21.3	20.7	20	19.2	18.5	17.7	16.9	16	15.1	14.1	13.1	11.9
20	26.7	25.8	24.9	24	23.1	22.1	21.1	20	18.9	17.6	16.3	14.9
25	33.3	32.3	31.2	30	28.9	27.6	26.4	25	23.6	22	20.4	18.6
32	42.7	41.3	39.9	38.5	37	35.4	33.7	32	30.2	28.2	26.1	23.9
40	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40	37.7	35.3	32.7	29.8
50	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50	47.1	44.1	40.8	37.3
63	84	81.3	78.6	75.7	72.7	69.6	66.4	63	59.4	55.6	51.4	47

Wiring Diagram



Dimension (mm)

