NO:2020.12

CHINT ELECTRICS

NB3LEG
Residual Current Operated Circuit Breaker

User Instruction

Standard: IEC/EN 61009-1

⚠ Safety Warning

1. The product can only be installed and maintained by professionals.
2. Installation in any damp, condensed-phase environment with inflammable and explosive gas is forbidden.
3. When the product is being installed or maintained, the power must be switched off.
4. You are prohibited from touching the conductive part when the product is operating.
5. It is strictly prohibited to test the performance of the product by the direct contact of the hot wire against the grounding device or the direct short circuit of the hot wire and the neutral wire.
6. The protection features of the product are set by the manufacturer. It is not allowed to open or adjust the circuit breaker at will.
7. It is prohibited to let children play with the product or the package.
8. Foreign matter should be prevented from falling into the product. **Install the product in a well-sealed terminal box.**
9. Do not install the product in places where gaseous media can corrode metals and damage insulation.
10. Tighten the wiring screws when installing the product to prevent wires from loose or being pulled out. Select wires strictly according to instructions and connect them to proper power supply and load.

11 The product cannot protect against the danger of electric shock caused by touching both wires of the protected circuit at the same time.

12 **The product must be wired correctly in strict accordance with the wiring diagram.**

13 **The product is not suitable for the direct starting of high-inductive and high-capacity loads, such as fans, electric motors, electric heating equipment, capacitor cabinets, etc.**

1 Purpose of Use

The NB3LEG residual current operated circuit breaker is applicable to circuits with frequency of AC 50/60 Hz, rated voltage up to 240 V and rated current up to 40A. It provides overload, short circuit and leakage protection, and can also be used for infrequent switching of the circuit under normal circumstances.

2 Key Technical Parameters

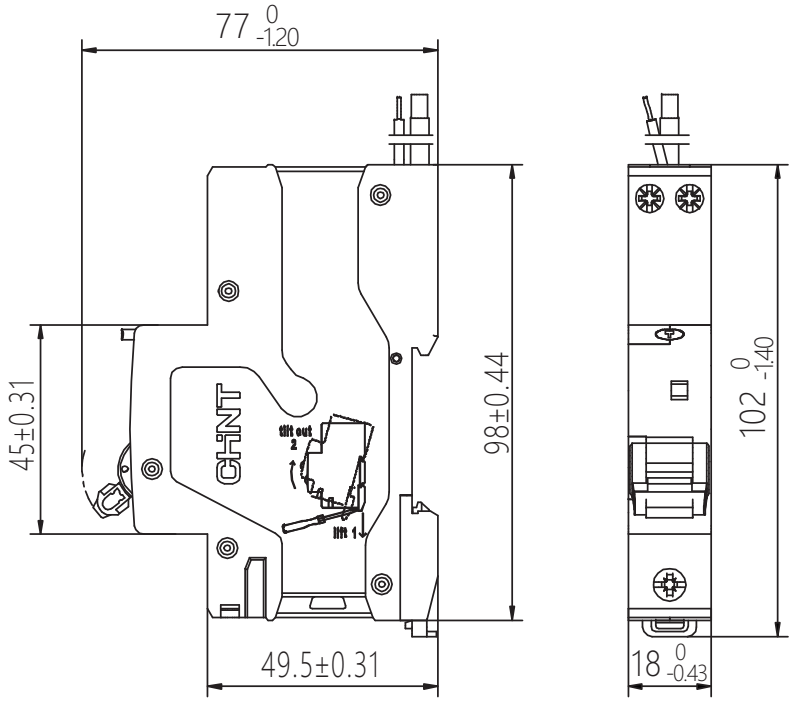
Table 1 Key Technical Parameters

No.	Parameter or performance	Parameter value or performance value
1	Rated voltage (U_n)	1P+N: AC 240V
2	Rated current (I_n)	6A, 10A, 13A, 16A, 20A, 25A, 32A, 40A
3	Instantaneous trip type	B type, C type
4	Rated residual operating current ($I_{\Delta n}$)	0.01A, 0.03A
5	Operating conditions with DC components	A type and AC type
6	Rated short-circuit capacity (I_{cn})	6000A
7	Rated residual making and breaking capacity ($I_{\Delta m}$)	3000A
8	Altitude	≤2000m
9	Pollution level	Level 2
10	Protection level	IP20
11	Installation category	Class II and III

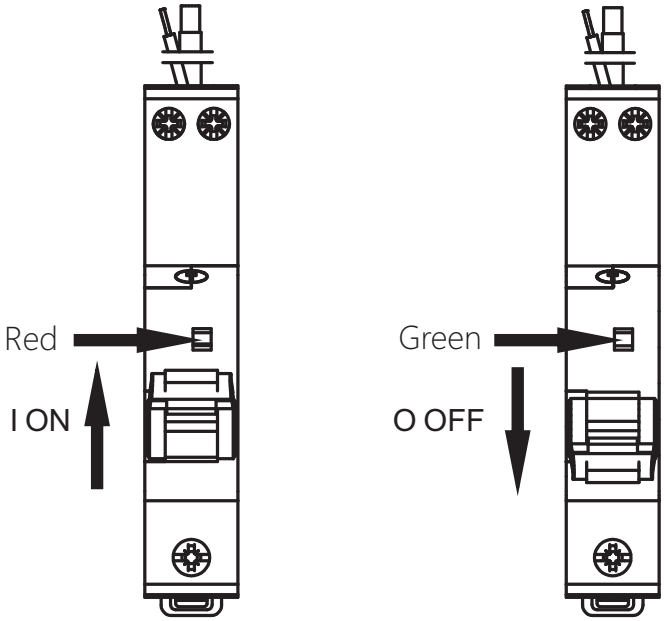
3 Installation

1. installation dimensions

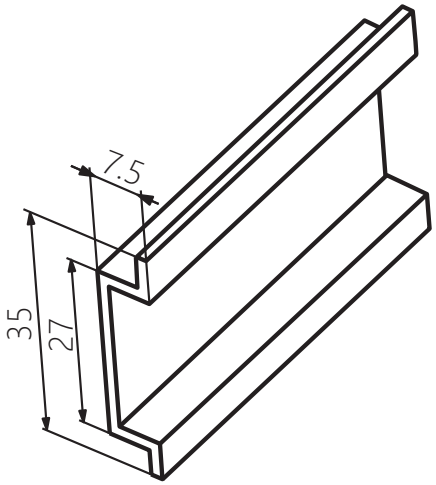
Unit:mm



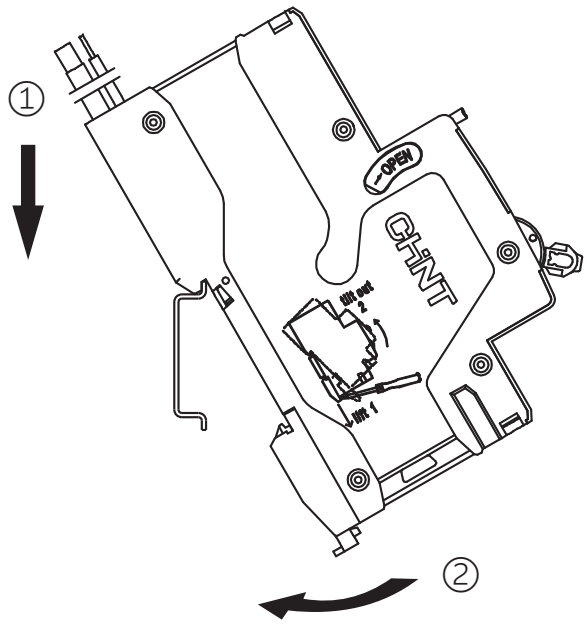
2. On-off indication



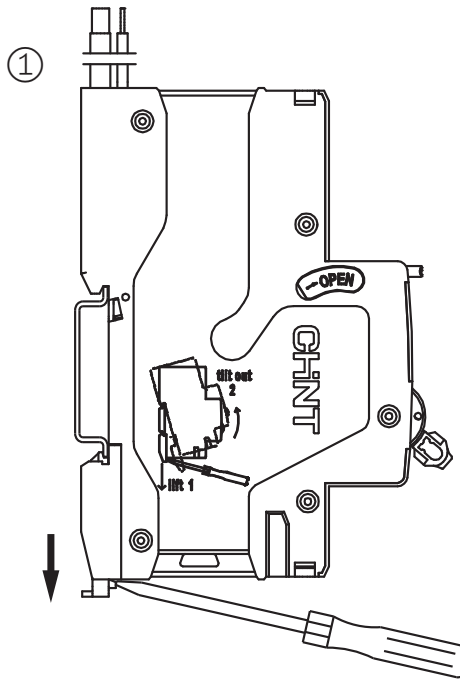
3. Installation

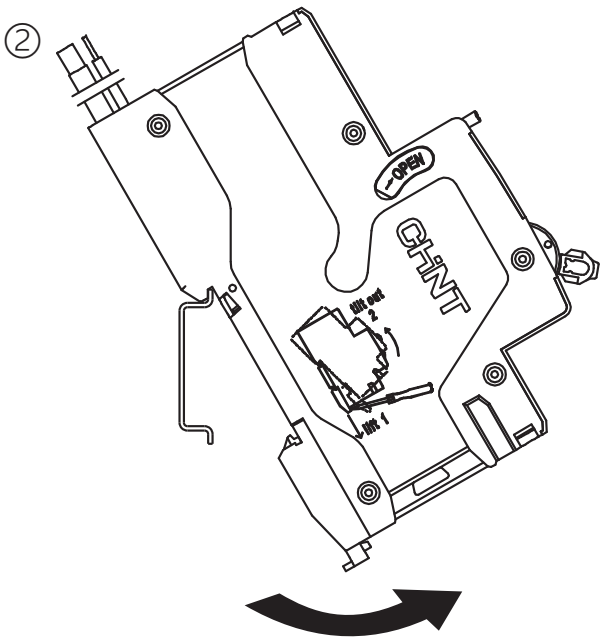


TH35-7.5 type mounting rail



4. Disassembly

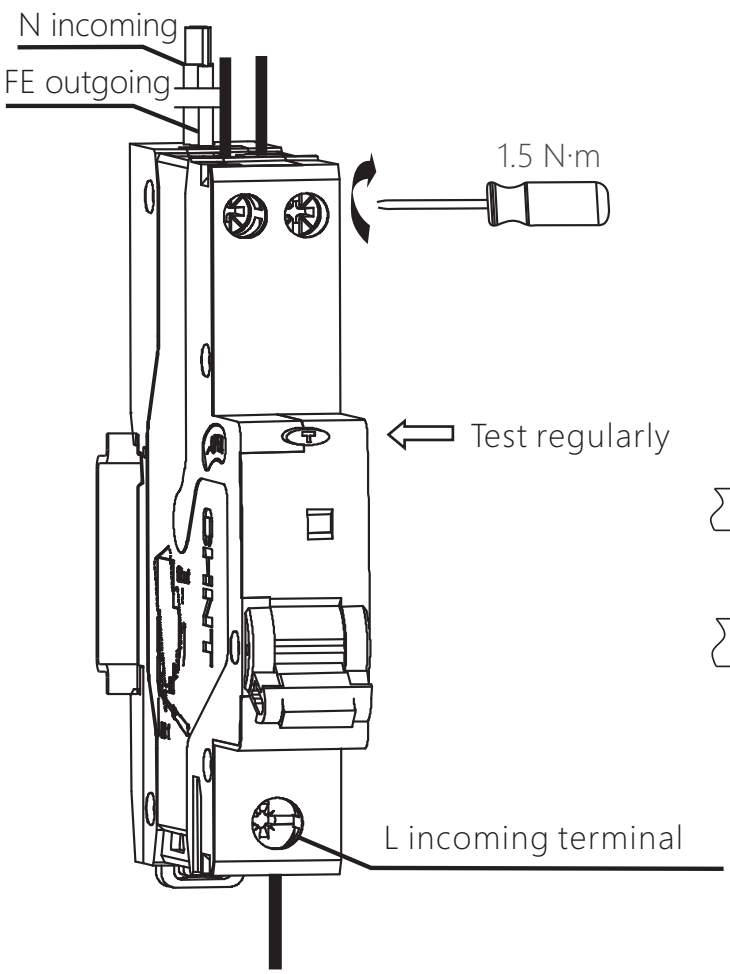


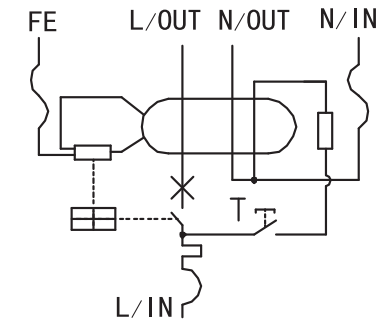


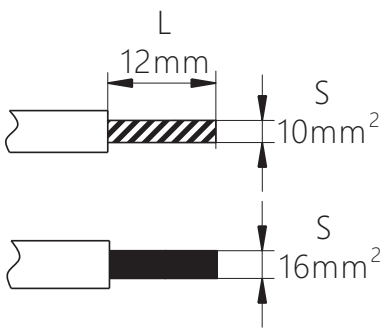
5. Wiring: Suitable for copper wire or busbar connection. See Table 2 for wire selection.

Table 2 Copper wire cross-sectional area

Rated current I_n (A)	Copper wire cross-sectional area (mm^2)
6	1.0
10, 13	1.5
16, 20	2.5
25	4
32	6
40	10







Note: Before powering on the product, check whether the wiring is correct and verify the flexibility of the handle action.

4 Maintenance

-- Check the circuit breaker on a regular basis during operation;

-- After the circuit breaker cuts off the overload or short-circuit current and the residual current, the fault should be eliminated before closing the circuit breaker.

Table 3 Analysis and troubleshooting of common faults

Symptoms	Cause analysis	Troubleshooting methods and precautions
Handle cannot be closed	Short circuit or large residual current exists in the circuit.	Check the circuit, and operate after troubleshooting
Frequent switching	I. The circuit load current does not match the rated current of the circuit breaker, and there is an overload current; II. Residual current in the circuit is within the operating range of the circuit breaker.	I. Check the circuit, and operate after troubleshooting; II. Use a circuit breaker with a larger rated current or rated residual operating current.
The product does not work when the test button is pressed	I. Poor terminal contact; II. Button disabled.	I. Tighten the wiring screws; II. Replace the product.
Terminal temperature is too high	I. Terminal not tightened; II. The cross-sectional area of the selected wire is too small.	I. Tighten the wiring screws; II. Use a wire with the right cross-sectional area.

5 Environmental Protection

In order to protect the environment, the product or product parts should be disposed of according to the industrial waste treatment process, or be sent to the recycling station for assortment, dismantling and recycling according to local regulation.

CHINT

QC PASS

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Circuit Breaker
IEC/EN 61009-1

Check 12

Test date: Please see The packing

ZHEJIANG CHINT ELECTRICS CO.,LTD.

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User Instruction

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