

NL1-63
Residual Current Operated
Circuit Breaker

User Instruction

Safety Warning

- ① The product can only be installed and maintained by professionals.
- ② This product is strictly prohibited from being installed in an environment where there is flammable or explosive gases or moisture or condensation.
- ③ The power must be turned off when installing and repairing the product.
- ④ It is strictly prohibited to touch the conductive parts of the product when it is in operation.
- 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 characteristics of the product are set by the manufacturer. It is not allowed to dismantle or adjust the circuit breaker at will.
- ⑦ It is strictly prohibited for children to play with the product or packaging materials.
- 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 When the product is installed and used, the wiring screws should be tightened, the wires should not be easy to loosen or pull out and should be selected in strict accordance with the requirements, and the power supply and load should comply with the requirements.
- 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 start of high-inductive and high-capacity loads, such as fans, electric motors, electric heating equipment, capacitor cabinets, etc.**
- 14 **The product does not have overload and short-circuit protection functions, and an additional circuit breaker is required for protection.**

1 Purpose of Use

The NL1-63 residual current operated circuit breaker is suitable for a line with a frequency of AC 50/60Hz, a rated voltage of up to 240/415 V and a rated current of up to 63A. It provides leakage protection, and can also be used for infrequent making and breaking of the circuit under normal circumstances.

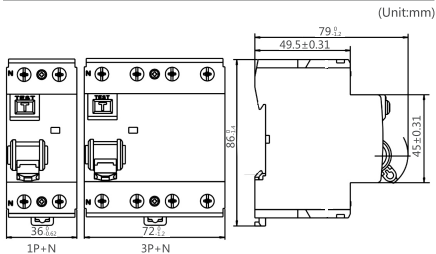
2 Key Technical Parameters

Table 1 Key Technical Parameters

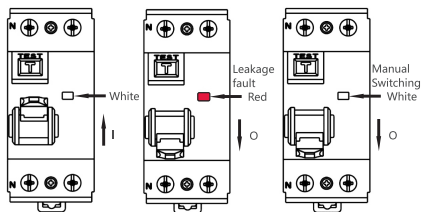
| No. | Parameter or performance | Parameter value or performance value |
|-----|--|--|
| 1 | Rated voltage (U_n) | 1P+N: AC 230V/240V; 3P+N: AC 400V/415V |
| 2 | Rated current (I_n) | 16A, 25A, 32A, 40A, 63A |
| 3 | Rated residual operating current ($I_{\Delta n}$) | 0.01A (only 1P+N, 16/25/32A), 0.03A, 0.1A, 0.3A, 0.5A |
| 4 | Operating conditions with DC components | Type A , type AC |
| 5 | By the delay when the residual current appears | No delay: general purpose type, and SI/G type |
| 6 | Rated limited short-circuit capacity (I_{nc}) | 6,000A, 10,000A |
| 7 | Rated residual making and breaking capacity ($I_{\Delta m}$) | 500A ($I_n=16A, 25A, 32A, 40A$), 630A ($I_n=63A$) |
| 8 | Altitude | $\leq 2,000m$ |
| 9 | Pollution level | Level 2 |
| 10 | Protection level | IP20 |
| 11 | Installation category | Class II and III |

3 Installation

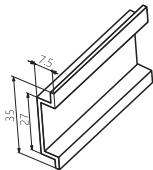
1. Outline and installation size



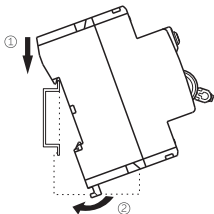
2. On-off indication



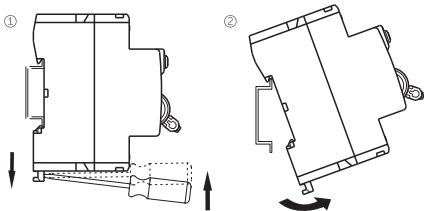
3. Installation



TH35-7.5 type mounting rail



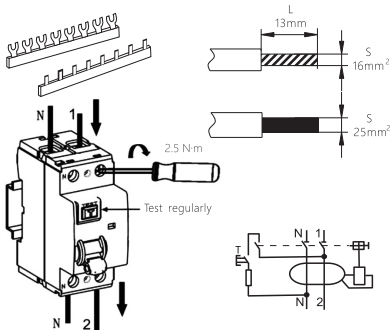
4. Disassembly



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

Table 2 Copper wire cross-sectional area

| Rated current I_n (A) | Copper wire cross-sectional area (mm ²) |
|-------------------------|---|
| 16 | 2.5 |
| 25 | 4 |
| 32 | 6 |
| 40 | 10 |
| 63 | 16 |



Note: Before powering on, check whether the wiring is correct, especially the incoming end should be connected to the power supply and the outgoing end should be connected to the load, and verify the flexibility of the handle action.

6. This product needs to be used with SCPD,SCPD reference value:100A gG

4 Maintenance

- The circuit breaker should be checked regularly when it is in operation;
- After the associated circuit breaker cuts off the residual current, the fault should be eliminated before closing.

Table 3 Analysis and Troubleshooting of Common Faults

| Symptoms | Cause analysis | Troubleshooting methods and precautions |
|---|--|--|
| Handle cannot be closed | Large residual current existing in the circuit | Check the circuit, and operate after troubleshooting |
| Frequent switching action | Residual current in the circuit is within the operating range of the circuit breaker | Check the circuit, and operate after troubleshooting |
| | | Use a circuit breaker with a large rated residual operating current |
| The product does not work when the test button is pressed | Poor terminal contact | Tighten the wiring screws |
| | Button disabled | Replace the product(Do not press the button continuously for more than 2s) |
| Terminal temperature is too high | Terminal not tightened | Tighten the wiring screws |
| | The cross-sectional area of the selected wire is too small | 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.

CHINT

QC PASS

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IEC/EN 61008-1

Check 12

Test date: Please see The packing

ZHEJIANG CHINT ELECTRICS CO.,LTD.

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Residual Current Operated
Circuit Breaker
User Instruction

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