

NL1-63  
Residual Current Operated  
Circuit Breaker

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**User Instruction**

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## Safety Warning

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- 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.

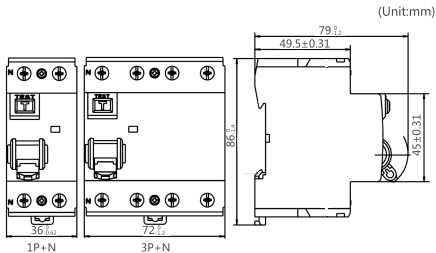
## 2 Key Technical Parameters

Table 1 Key Technical Parameters

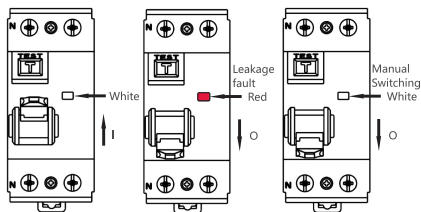
No.	Parameter or performance	Parameter value or performance value
1	Rated voltage ( $U_n$ )	1P+N: AC 230V/240V; 3P+N: AC 400V/415V
2	Rated current ( $I_n$ )	16A, 25A, 32A, 40A, 63A
3	Rated residual operating current ( $I_{\Delta n}$ )	0.01A (only 1P+N, 16/25/32A), 0.03A, 0.1A, 0.3A, 0.5A
4	Operating 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

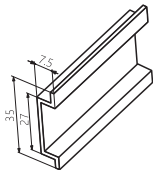


#### 2. On-off indication

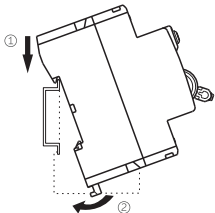


### 3. Installation

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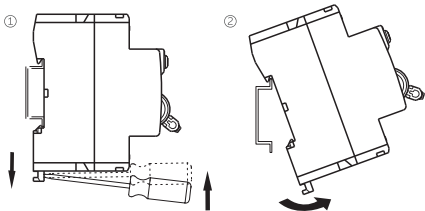


TH35-7.5 type mounting rail



### 4. Disassembly

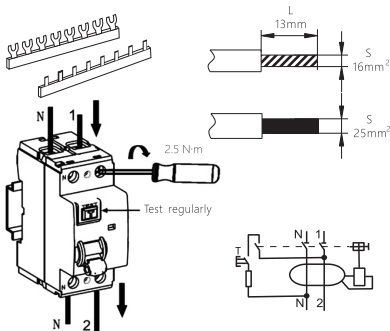
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5. Wiring: Suitable for copper wire or busbar connection. See Table 2 for wire connection

**Table 2 Copper wire cross-sectional area**

Rated current $I_n$ (A)	Copper wire cross-sectional area (mm <sup>2</sup> )
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.



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**QC PASS**

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IEC/EN 61008-1

Check 12

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Test date: Please see The packing

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**ZHEJIANG CHINT ELECTRICS CO.,LTD.**

**CHINT**

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User Instruction

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