

# Product Specification of NDB1LE-100

Product: Residual Current Circuit Breaker with Overload Protection

Product type: NDB1LE-100

Date: March 1, 2017

Prepare	Review	Approval
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## 1 Application

- Protection against short circuit
- Protection against overload
- earth leakage
- Isolation

NDB1LE-100 series residual current unit clipped onto the right side of NDB1-125 series MCBs to protection against earth leakage faults , which is used in low voltage electrical distribution system in industry, real estate, power, telecom and construction field.



● Material Name: RCBO

● Model: ND B 1 L E — 100 □ □ / □

Nader MCB
Design Code
Earth Leakage Protection
Electronic trip
Framework 100A
Tripping Curve C Curve D Curve
Rated current 50A, 63A, 80A, 100A,
/
Poles 1N 2P 3P/3N

4P

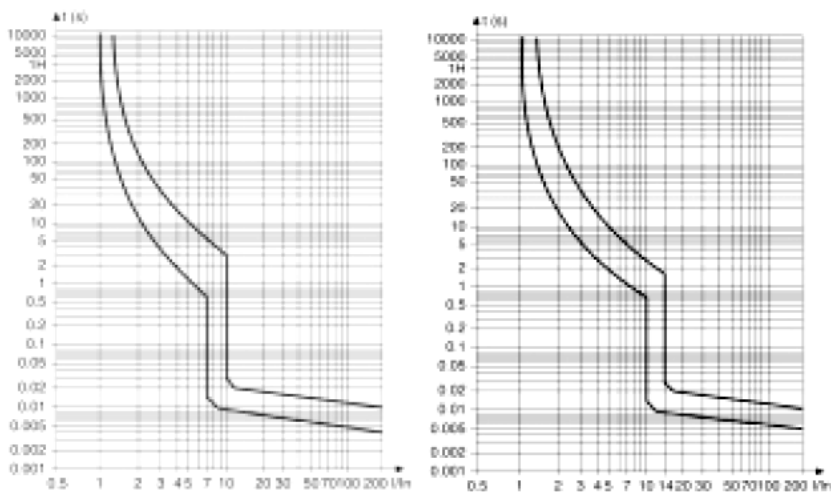
## 2 Main technical parameters

- Electrical parameters
  - Rated working voltage (Ue): AC230V(1N、 2P、 3P+N、 4P) AC400V(3P)
  - Rated current (In): 50A, 63A, 80A, 100A
  - Breaking capacity (Icn): Icn = 10kA
  - Rated residual operating current: 100mA
- Mechanical & electrical life: 10000 times
- Wiring
  - Adopt tunnel type wiring
  - Connection capability: 1mm<sup>2</sup> to 50 mm<sup>2</sup>
- C curve
  - Illumination distribution system
  - Tripping characteristic: instantaneous trip 8In (1±20%)
- D curve

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- Industrial distribution system
- Tripping characteristic: instantaneous trip  $12I_n$  ( $1\pm 20\%$ )

### 3 Tripping curves (ambient temperature 30°C)



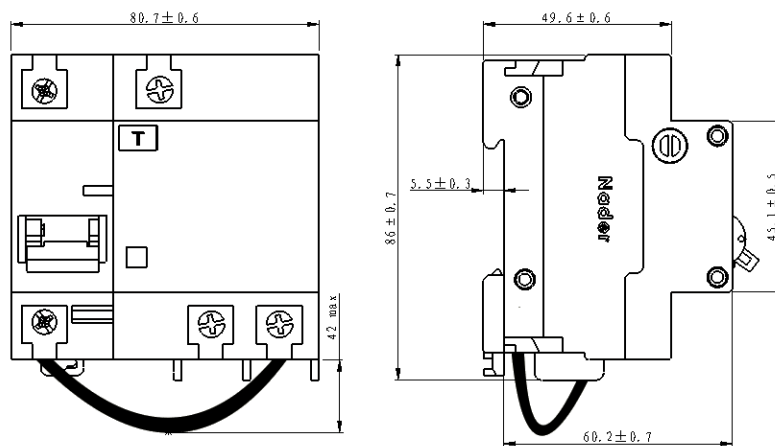
C Curve

D Curve

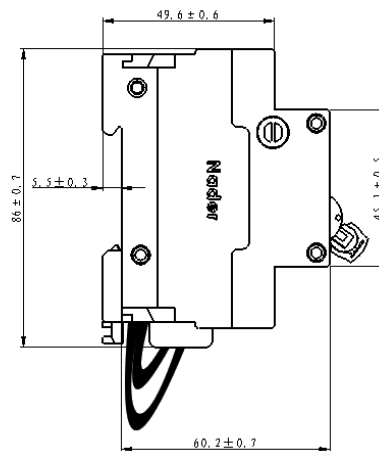
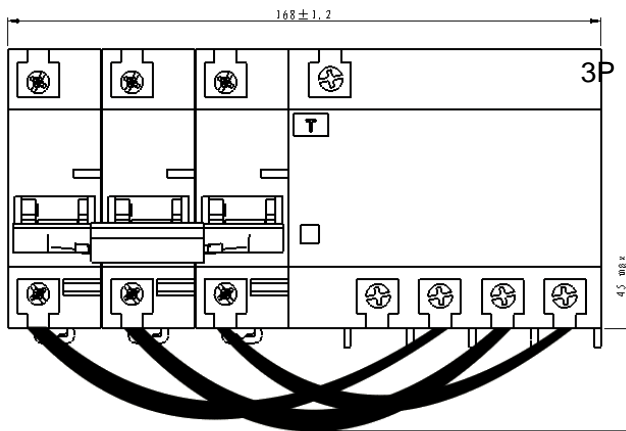
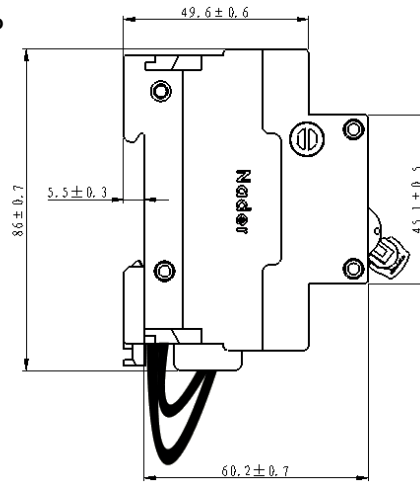
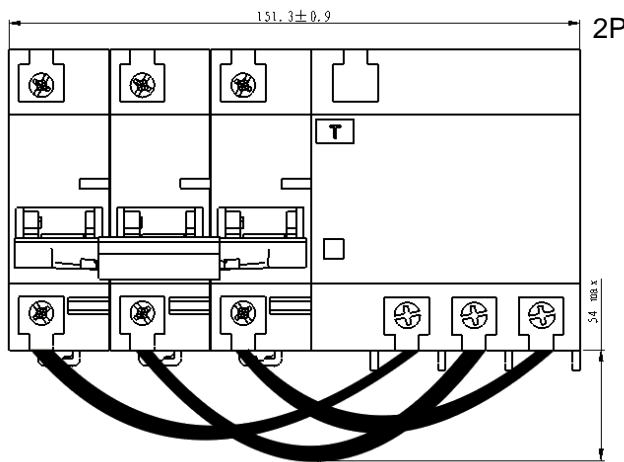
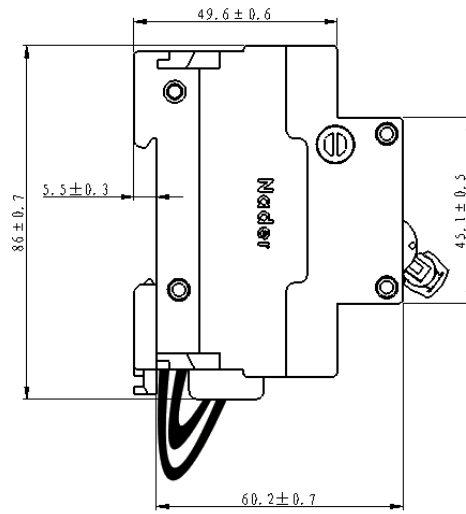
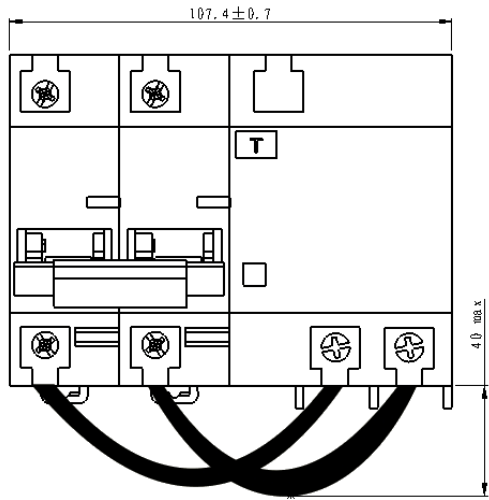
### 4 Working conditions

- Ambient temperature:  $-5^{\circ}\text{C} \sim +55^{\circ}\text{C}$
- Relative air humidity  $\leq 95\%$
- Altitude  $\leq 2000\text{m}$
- Pollution degree: 2
- Used in place without obvious shock and vibration

### 5 Outline dimensions and installation

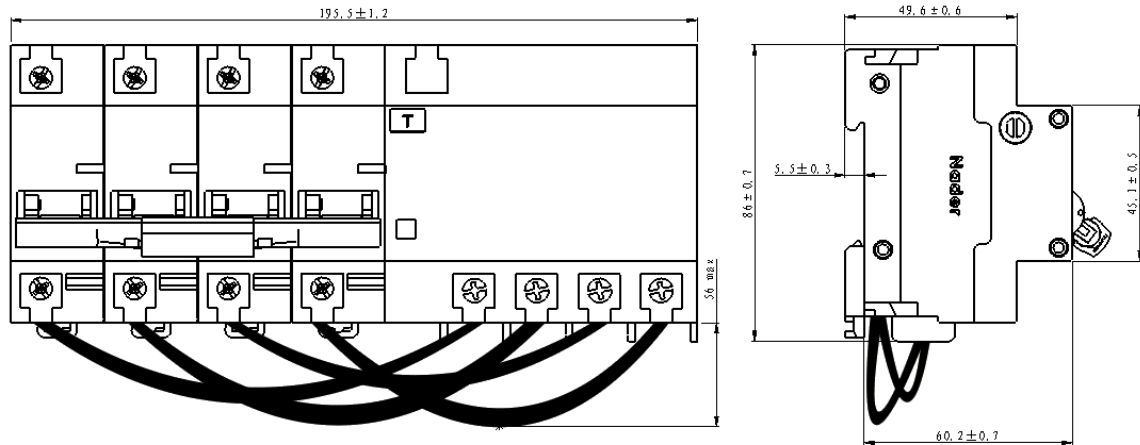


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3N



4P

## 6 Mounting

Modularized structure, can be easily installed in TH35mm×7.5 Standard DIN rail.

## 9 Packaging and storage

### 9.1 Maximum packing quantity

1N-pole: 3 pieces in a box, 12 boxes in an overwrap carton.

2-pole: 2 pieces in a box, 12 boxes in an overwrap carton.

3-pole: 1 pieces in a box, 12 boxes in an overwrap carton.

3N-pole: 1 pieces in a box, 12 boxes in an overwrap carton.

4-pole: 1 pieces in a box, 12 boxes in an overwrap carton.

9.2 The products should be stored in the warehouse where there is ventilation. The relative humidity there should not exceed 80%, and the ambient temperature there is between  $-10^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ . In addition, there should not be acidic, alkaline and corrosive gas in the air. The products should not be deposited more than 3 years in the above mentioned conditions since the producing date.

## 10 Accessories

- OF auxiliary contact: Installed on the left hand of the NDM1L-100 series RCBOs to indicate tripping status of the breaker.

- SD alarm contact: Installed on the left hand of the NDM1L-100 series RCBOs to indicate

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failure tripping status of the breaker.

## 11 Notices

- 11.1 Take no responsibility for problems occurred by disassembly privately.
- 11.2 RCBO can't provide protection in the cases that touch two phase line synchronously.
- 11.3 Please don't perform insulating resistance test or voltage-withstand test on the product directly or indirectly by megohmmeter or similar test devices. If you need, we can offer validated certificate about the term.
- 11.4 When test insulating resistance of the engineering circuit, the outlet terminal (at least one line) must be disconnected to avoid the misunderstanding of the products' quality or damage of the products.
- 11.5 The power line should be connected to 'LINE', while another terminal to 'LOAD'. Don't connect contrarily. Otherwise the product will be damaged when the test button is pressed or there is earth leakage in the circuit.
- 11.6 Please make sure reliable connection to avoid fault tripping or damage of terminals caused by exceptional heat resulting from unsuitable connection.
- 11.7 Simulating test should be made once a month by pressing the test button to check whether the circuit breaker works normally. If RCBO is abnormal, it should be replaced.
- 11.8 When RCBO opens automatically, line analyzing or equipment checking should be done to find the causation of failure. Then switch on only after eliminating the malfunction.