

# Product Specification of NDB1-125

Product Name: Miniature Circuit Breaker

Product Type: NDB1-125

Date: 2019-1-07

Prepare	Review	Approval
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File number	NDT500954	Version	0version	Date	2019-1-07
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## 1 Application

- Protection against short circuit
- Protection against overload
- Control
- Isolation
- Protection of DC system

NDB1-125 series is used in low voltage electrical distribution system in industry, real estate, power, telecom, construction field, etc.

## 2 Product Picture



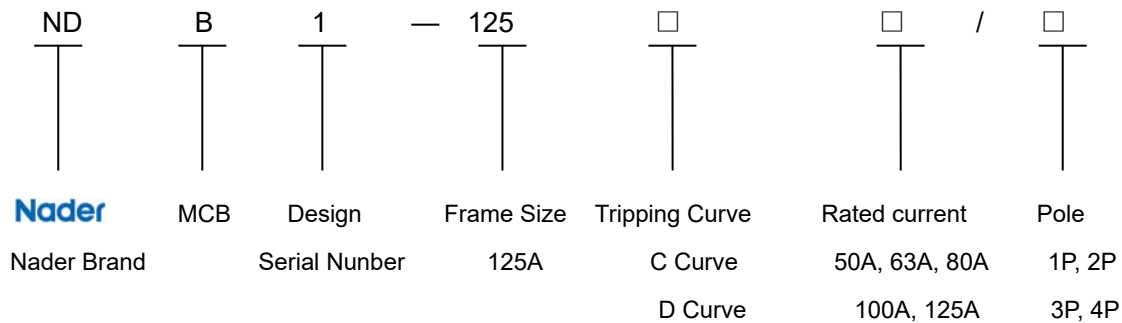
1P

2P

3P

4P

## 3 Model and implication



## 4 Main technical parameters

- Electrical parameters
  - Rated voltage (Ue): AC230/240V(1P); AC400/415V(2P;3P;4P); DC60/80V(1P);DC80/125V(2P)
  - Rated current (In): 50A, 63A, 80A, 100A, 125A
  - Rated breaking capacity (Icn): 10kA
  - Impulse voltage endurance: 6kV
- Isolation function
  - Indication of real breaking
  - Green color in the indication window indicates the contacts are open.
- Mechanical and electrical life: 20000 times
- Standards and Certificates
  - CCC;
  - GB/T 10963.1-2005 、 IEC 60898-1:2002;

File number	NDT500954	Version	0version	Date	2019-1-07
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- Environmental requirements: RoHS
- Used in place without obvious shock and vibration
- Wiring
  - Adopt tunnel type wiring
  - Connection capability: 10mm<sup>2</sup> to 50 mm<sup>2</sup>
  - Connection screw M7, Twisting moment 3.5N.m

5 Working conditions

- Ambient temperature: -40°C~+70°C
- Relative air humidity≤95%
- Altitude: ≤2000m
- Pollution degree: 3
- Used in place without obvious shock and vibration

6 Lower capacity coefficient table above 2000 meters above sealevel

Height above sea level (km)	Rated current	Rated voltage	Rated frequency voltage tolerance	Breaking Capacity	Breaking Capacity and Electrical life	Remarks
2	In	Ue	1.00	1.00	1.00	
3	0.99 In	Ue	0.89	0.89	0.83	
4	0.96In	Ue	0.80	0.80	0.71	
5	0.94In	Ue	0.73	0.73	0.63	

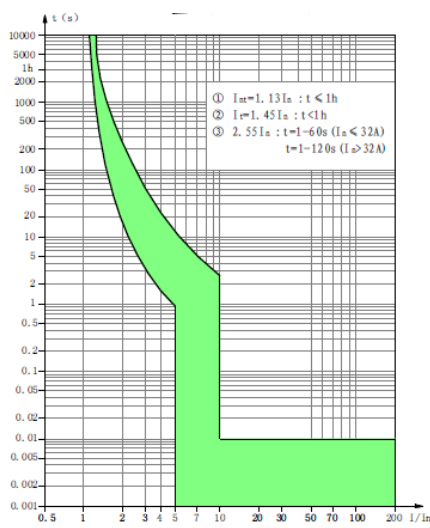
7 Side-by-side volume reduction coefficient table

Number of products placed side by side	1	2~3	4~5	6~9	10
Current derated coefficient	1	0.9	0.8	0.7	0.6

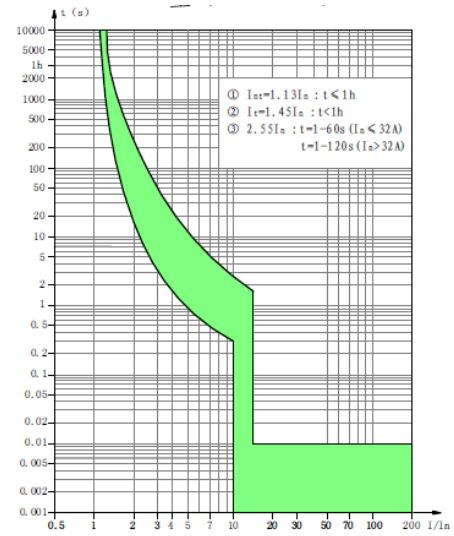
8 Tripping curves (ambient temperature 40°C)

- C Curve
  - Protection common loads and power distribution circuit
  - Available for the rated current of 50A to 125A
  - Tripping characteristic: instantaneous trip between 5In to 10In
- D Curve
  - Protection big impulse load of starting current (Motor, transformer etc)
  - Available for the rated current of 50A to 125A
  - Tripping characteristic: instantaneous trip between 10In to 14In

File number	NDT500954	Version	Overversion	Date	2019-1-07
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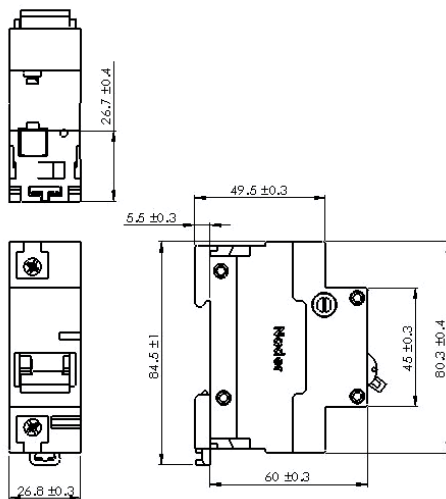


C Curve

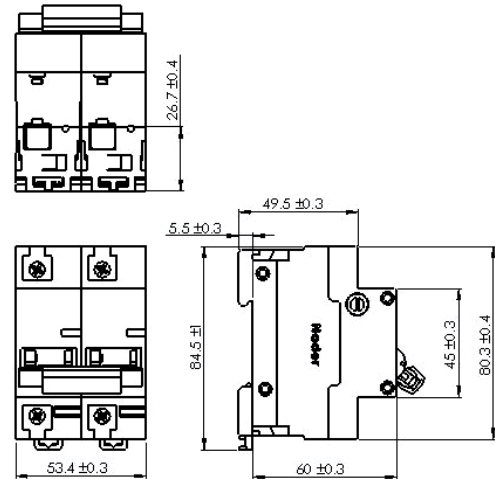


D Curve

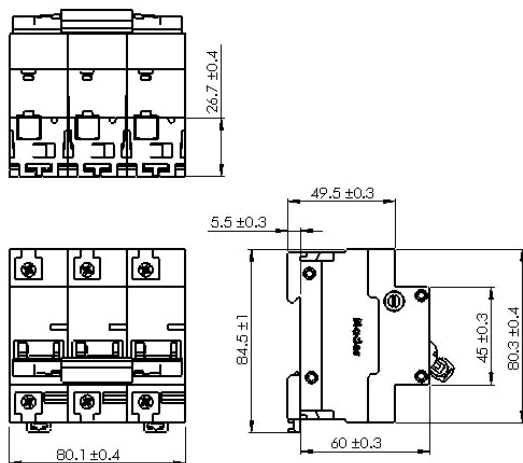
### 9 Outline dimensions and installation



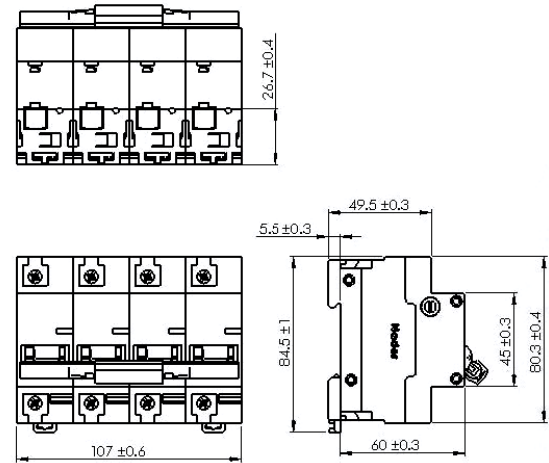
1P



2P



3P



4P

File number	NDT500954	Version	0version	Date	2019-1-07
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## 10 Mounting

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

## 11 Packing and depositing

- Maximum packing quantity

1P: 9 pieces in a box, 12 boxes in an overwrap carton.

2P: 4 pieces in a box, 12 boxes in an overwrap carton.

3P: 3 pieces in a box, 12 boxes in an overwrap carton.

4P: 2 pieces in a box, 12 boxes in an overwrap carton.

- 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 -40°C to +70°C. In addition, there should not be acidic, alkaline and corrosive gas in the air.

- Products should not be deposited more than 3 years in the above mentioned conditions since the producing date.

## 12 Accessories

- OF auxiliary contact: Installed on the left hand of the NDB1 series MCCBs to indicate tripping status of the breaker.

- SD alarm contact: Installed on the left hand of the NDB1series MCCBs to indicate failure tripping status of the breaker.

- MX+OF shunt release: Installed on the right hand of the NDB1 series MCCBs to control the breaker from a distance.

## 13 Notices

13.1 Manufacturer will take no responsibility for problems caused by disassembly privately.

13.2 Attention to live part when the breaker is energized and avoid touching them.

13.3 Manufacturer will take no responsibility for the quality problem caused by adjusting the characteristic of the breaker privately.

13.4 Wiring properly to avoid mis-trip or terminal burn.

13.5 Please open the cover when installing the accessory. Please refer to *OF, SD MX+OF Instruction* for details.