

Product Specification

Product Name: Miniature Circuit Breaker

Product Model: NDB3-125 (General Specification)

Date: 20200417

Prepared by	Reviewed by	Approved by
Chen Huayong	Zhang Jingyang	Zhang Yang

Revision History

Version	Revision Description	Revision Date	Revised by
3	Addition of dimensions of the wiring hole and mounting rail surface, adjustment of the screw wiring torque value; format adjustment	20191211	Chen Huayong
4	File format and content adjustment	20200417	Chen Huayong

1. Applicable Scope and Purpose

NDB3-125 series miniature circuit breakers comply with the GBT10963 standard and are applicable to the electric systems with the rated current of 10A to 125A and the rated voltage of AC230V/240V, AC400/415V, (50/60Hz) or DC80V, DC125V and below, which can be used for overload and short-circuit protection as well as infrequent making and breaking. They are widely used in the computer and peripheral equipment, industrial automatic control system, telecommunication equipment, universal power supply system, UPS equipment, locomotive, marine electrical system, aerospace, elevator control system and mobile power supply equipment.

2. Picture of the Product

Note: Contents printed on the picture product are only for the reference.



3. Specification and Model Description

N D B 3 Z- 125 X XX / X X X

1 2 3 4 5 6 7 8 9 10

SN		NDB3-125
1	Enterprise code	ND "Nader" brand low-voltage electrical device
2	Product code	B Miniature Circuit Breaker
3	Design SN	3
4	Current type	Z: DC; no Z means AC.
5	Shell frame level	125A
6	Instantaneous characteristics	Type B, C, D
7	Rated current	10A, 15A, 16A, 20A, 25A, 30A, 32A, 40A, 50A, 60A, 63A, 70A, 80A, 90A, 100A, 110A, 125A

8	Number of poles	1-1P, 2-2P, 3-3P, 4-4P
9	Pole type	“P”: Without neutral pole; “N”: With neutral pole
10	Customer code	Composed of numbers or letters

4. Main Technical Parameters

- Electrical parameters

- Number of poles: 1P, 1P+N (N pole can be opened and closed), 2P, 3P, 3P+N (N pole can be opened and closed), 4P
- Rated working voltage: AC230V/240V (1P, 1P+N, 2P), AC400V/415V(3P, 3P+N, 4P), DC80V/DC125V (1P, 2P)
- Rated working current: 10A, 15A, 16A, 20A, 25A, 30A, 32A, 40A, 50A, 60A, 63A, 70A, 80A, 90A, 100A, 110A, 125A
- Rated insulation voltage: 500V.
- Rated frequency: 50/60Hz
- Rated impulse withstand voltage: 4kV
- Power frequency withstand voltage: AC2500V 50Hz 1min
- Rated short-circuit breaking capacity I_{cn} : 6kA
- Rated running breaking capacity I_{cs} : 6kA
- Instant tripping characteristics: Type B curve $3I_n \sim 5I_n$; Type C curve $5I_n \sim 10I_n$; Type D curve $10I_n \sim 14I_n$

- Mechanical and electrical life

- Mechanical life: 10,000 times
- Electrical life: 6,000 times

- Protection class

- Protection class of the body: IP20
- To be installed in the distribution box: IP40

- Utilization category: Category A

- Installation category: II

- Product certification and implementing standards: GB/T10963.1, IEC 60898-1; GB/T10963.2, IEC 60898-2

- Environmental protection requirements

- The product complies with the RoHS standards

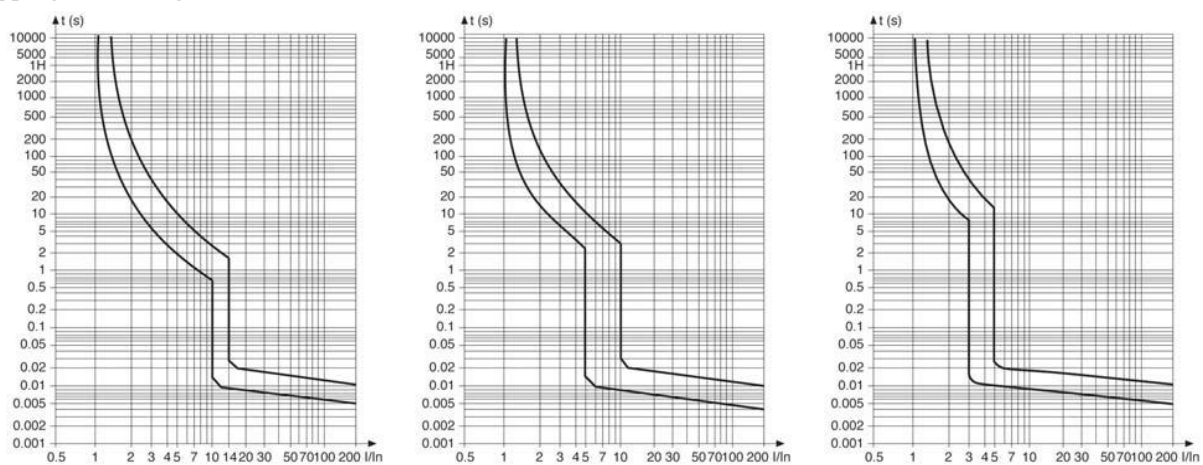
5. Normal Working Environment

- Operating ambient temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

- Wet heat resistance: When the ambient air temperature is $+40^{\circ}\text{C}$ and above, the relative humidity of air should not exceed 50%; a high relative humidity is allowed under a low temperature, e.g. 90% under $+20^{\circ}\text{C}$
- Altitude of the installation site is $\leq 2000\text{m}$
- Working site without obvious vibration and shock
- The environmental pollution level at the installation site is Level 2
- The product can be disposed in places that are free from explosive media, media corrosive to metal, insulation damaging gas, and conductive dust. The product should be avoided from snow and rain.

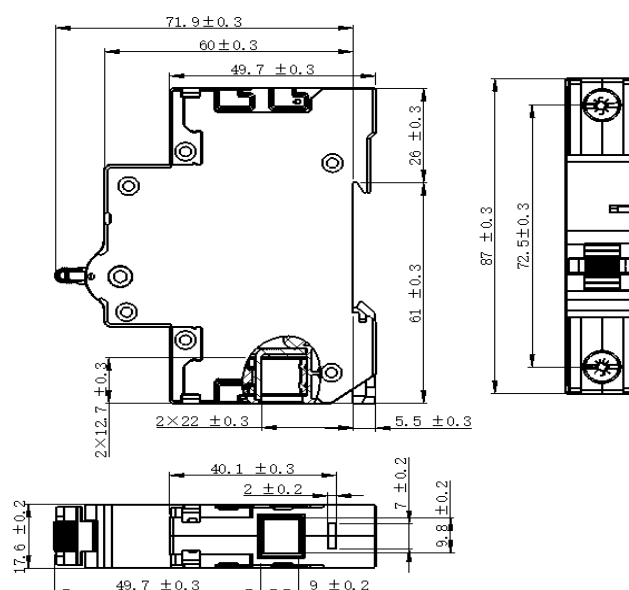
6. Tripping Characteristics

- Tripping curve diagram:

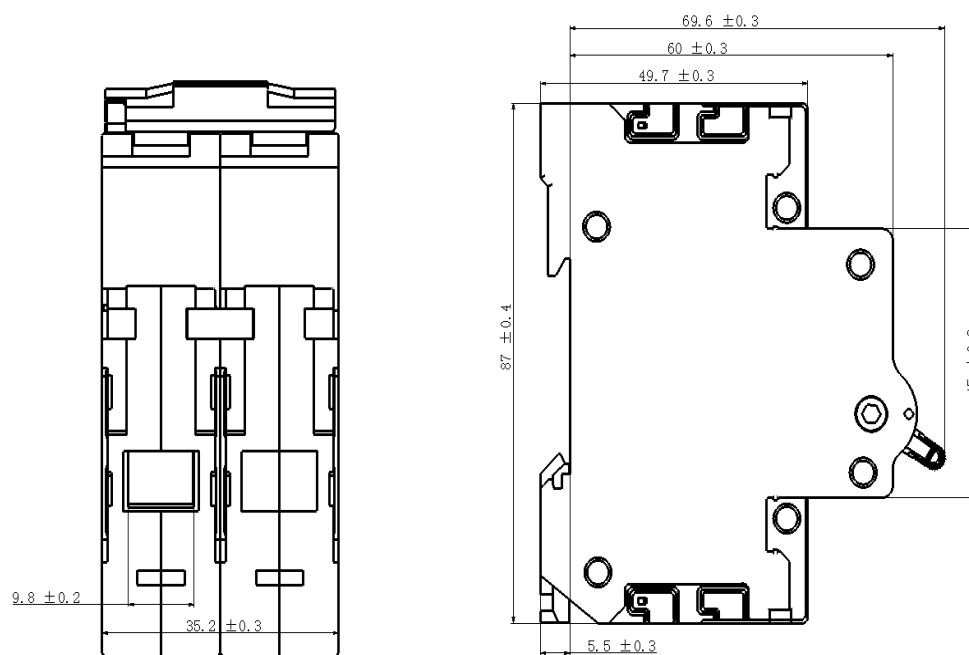


7. Product Outline and Installation Dimensions

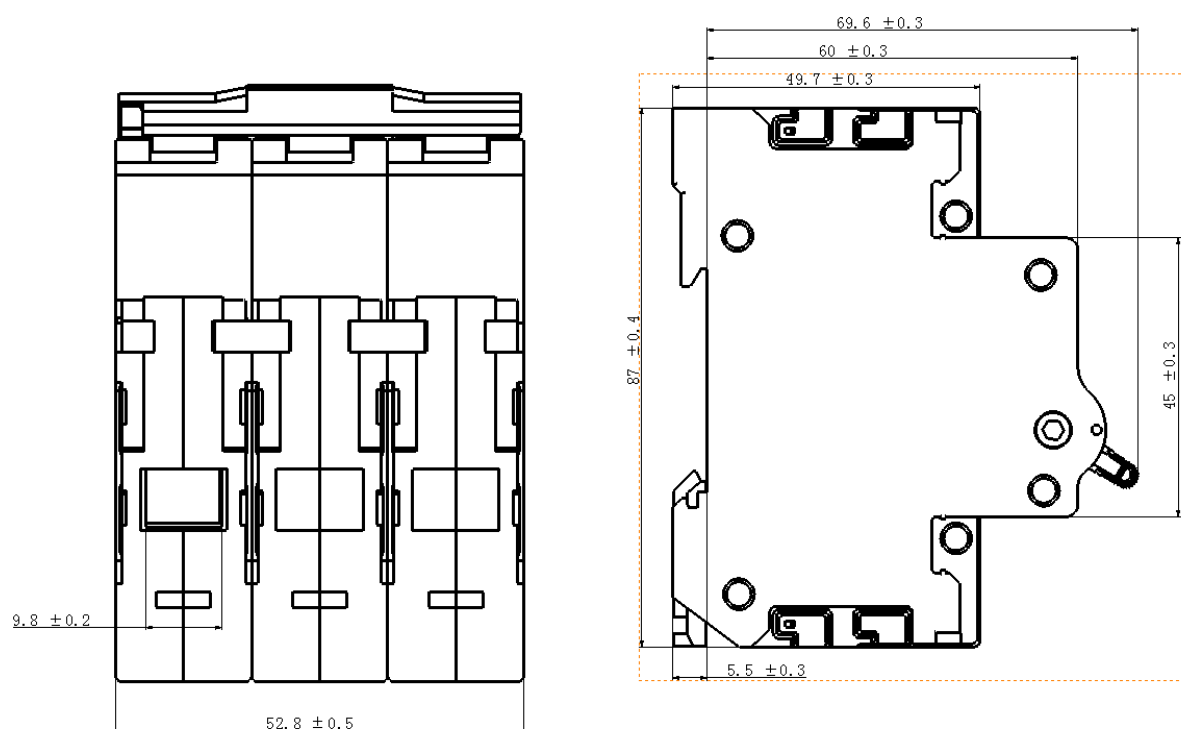
- 1P



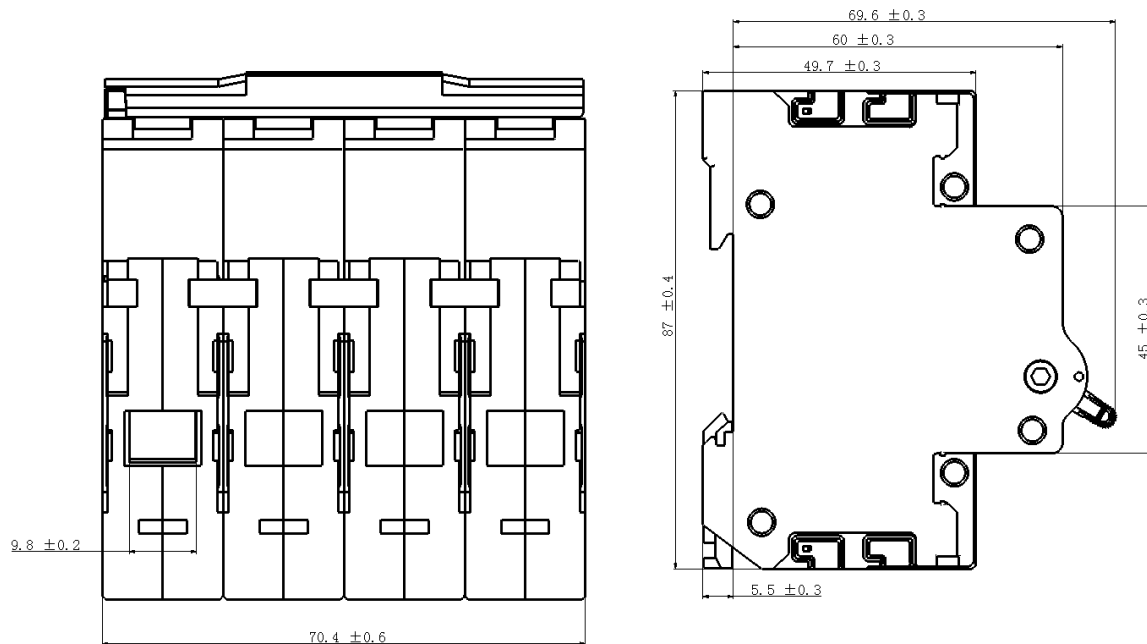
.2P



.3P



.4P



8. Installation and Wiring

- Installation mode: Modular structure, 35mm standard guide rail installation
- Screw-frame terminal blocks
- Terminal connection area: 1~50mm² conductor (minimum and maximum conductors have prefabricated terminal ends)
- Terminal screw: M6, torque: 3.0N.m

9. Packaging and Storage

Maximum packaging quantity: (1P product: 9 pieces/box, 2P product: 4 pieces/box, 3P product: 3 pieces/box, 4P product: 2 pieces/box). The packaged products should be stored in a warehouse with the air ventilation and the relative humidity no more than 80% and the temperature between -25°C and +60°C without acidic, alkali or other corrosive gas in the surrounding air. Under the above conditions, the storage period shall be no more than three years since the manufacturing date.

10. List of Accessories and Installation

N/A

11. Precautions

- Any quality problem due to disassembly without permission will be the liability of the user.
- Under the energized operation state, do not touch the exposed portion of the uninsulated parts on the circuit

breaker with bare hand.

- Do not commission the characteristics of the circuit breaker randomly; the manufacturer shall not be responsible for any quality problem caused.
- Wiring must be reliable to prevent the malfunction of the circuit breaker or terminal burning due to the abnormal heat generation on the terminal.
- When installing the product, keep the distance above 50mm in the direction of the product's arc injection port (LOAD side), so as not to cause short circuit after the arc injection.