

NDB2Z Miniature Circuit Breakers Nader

1. Product Overview

			
Product models	NDB2Z-63	NDB2Z-63 (PV)	NDB2ZB-40
Rated operational voltage (V)	DC250V(1P)/DC500V(2P)	DC750V(3P)/DC1000V(4P)	DC250V
Rated operating current (A)	1 ~ 63A	1 ~ 63A	10 ~ 40A
Number of poles	1P、2P	3P、4P	1PN
Product certification	CCC		

2. Product Features

● Scope of application and purpose

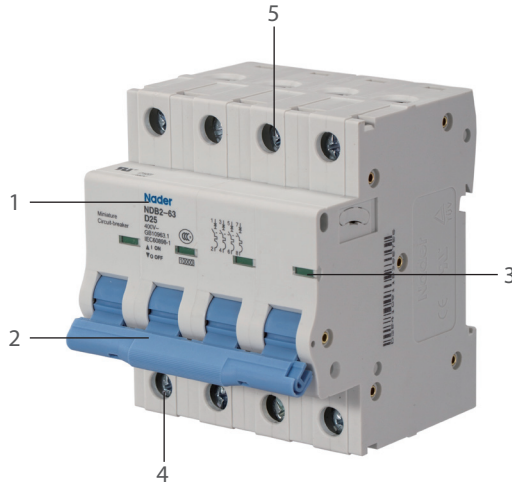
NDB2Z series circuit breakers are applicable to low-voltage terminal power distribution in such fields as industry, civil construction, energy, communication and infrastructure.

● Design features

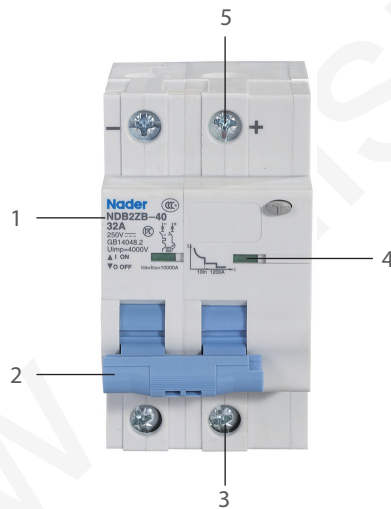
- ◆ Quick closure: ensures reliable operation of impact load and prolongs the service life of circuit breaker
- ◆ Frame wiring structure: Reliable wiring
- ◆ Supporting a variety of accessories: Simple and convenient function extension
- ◆ Modulization and modularization: Arbitrary combination

● Structural features

- ◆ NDB2-63 External structural drawing



1. Product model
2. Handle
3. Closing indication
4. Outgoing line terminal
5. Incoming line terminal



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● Meeting the following standards

- ◆ GB14048.2 Low-voltage switchgear and controlgear - Part 2: Circuit breaker.
- ◆ IEC 60947-2 Low-voltage switchgear and controlgear-Part 2.

3. Application scope

● Electrical symbols



● Applicable environment

- ◆ Temperature of the working environment/storage temperature

Use temperature: $-35^{\circ}\text{C}\sim+70^{\circ}\text{C}$, the average value in 24h is not more than $+35^{\circ}\text{C}$

Storage temperature: $-35^{\circ}\text{C}\sim+70^{\circ}\text{C}$

- ◆ Altitude

Installation site altitude $\leq 2,000\text{m}$.

- ◆ Relative humidity for operation/Relative humidity for storage

The relative humidity of atmosphere is not more than 50% at the ambient air temperature of $+40^{\circ}\text{C}$; at a lower temperature, a higher relative humidity is allowed, for example, 90% at 20°C . Special measures should be taken to deal with occasional condensation due to temperature change.

● Pollution grade

- ◆ 3 poles

● Protection grade

- ◆ Product protection grade: IP20

● Installation category

- ◆ II Class II (load level) and Class III (power distribution and control level)

● Installation way

- ◆ Installed on the TH35mm \times 7.5 standard guard rail

● Installation direction

- ◆ Vertical installation, with the gradient between the installation plane and the vertical plane $\leq \pm 5^{\circ}$
- ◆ Horizontal installation

● Environmental protection requirements

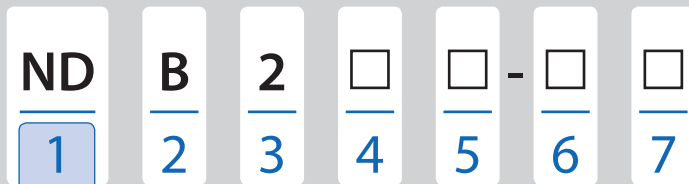
- ◆ Products meet the RoHS standard

4. Technical Characteristics of the Product

4.1 Description of Specifications and Models of NDB2Z-63

Serial No.	Serial No. name	Code explanation
1	Enterprise code	ND : Nader brand low-voltage apparatus
2	Model	B : Disconnecting switch
3	Design serial No.	2
4		Z : DC
5	Frame grade	63
6	Tripping characteristic	B、C
7	Rated current	1、1.2、1.5、1.6、2、3、4、5、6、7、8、10、12、13、15、16、20、25、30、32、35、40、50、60、63
8	Grade number	Conventional products: 1 : 1P、2 : 2P PV: 3 : 3P、4 : 4P
9	PV code	None: Conventional product PV: Indicates photovoltaic use

4.2 Description of Specifications and Models of NDB2ZB-40



Serial No.	Serial No. name	Code explanation
1	Enterprise code	ND: Nader brand low-voltage apparatus
2	Model	B: Miniature Circuit Breakers
3	Design serial No.	2
4	DC	Z: DC
5	Function code	B: Three-section protection
6	Frame grade	40
7	Rated current	10、16、20、25、32、40

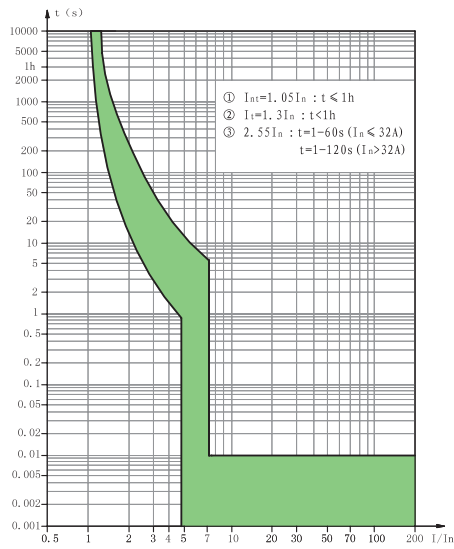
4.3 Technical Parameters

Specifications	NDB2Z-63	NDB2Z-63 (PV)	NDB2ZB-40
Rated operational voltage	DC250V(1P)/DC250V(2P)	DC750V(3P)/DC1000V(4P)	DC250V
Rated insulation voltage	1000V	1000V	1000V
Rated impulse withstand voltage	6kV	6kV	4kV
Rated current	1A、1.2A、1.5A、1.6A、2A、3A、4A、5A、6A、7A、8A、10A、12A、13A、15A、16A、20A、25A、30A、32A、40A、50A、63A、		10A、16A、20A、25A、32A、40A
Rated ultimate short-circuit breaking capacity	10kA	10kA	10kA
Rated running short-circuit breaking capacity	7.5kA	7.5kA	10kA
Instantaneous tripping characteristic	B: $6I_n \pm 20\%$ C: $12I_n \pm 20\%$	B: $6I_n \pm 20\%$ C: $12I_n \pm 20\%$	8In: No tripping within 200ms 10In: Tripping within 10~30ms 1680A: Tripping within 6ms
Number of poles	1P/2P	3P/4P	1PN
Mechanical life	20000	20000	10000

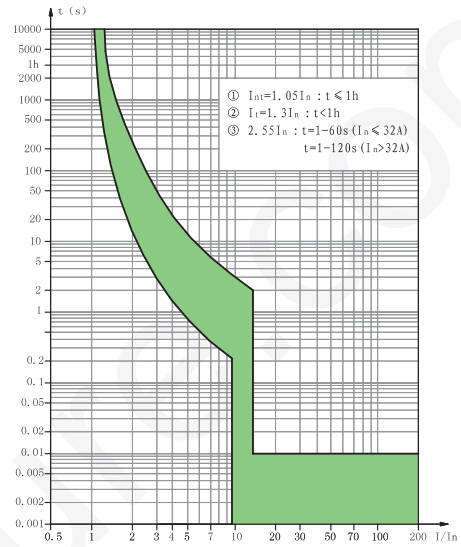
4.4 Tripping Characteristic Curve

● NDB2Z-63/NDB2Z-63 (PV)

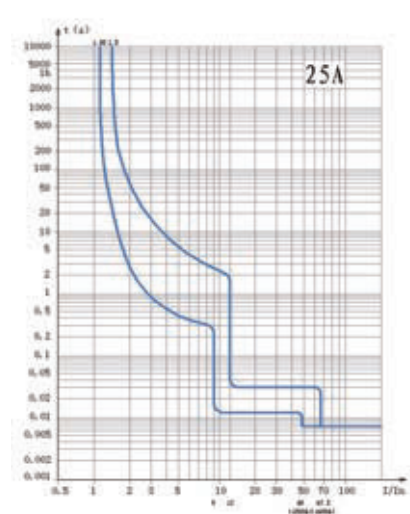
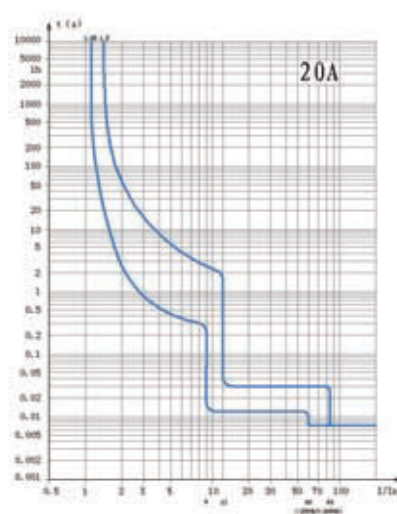
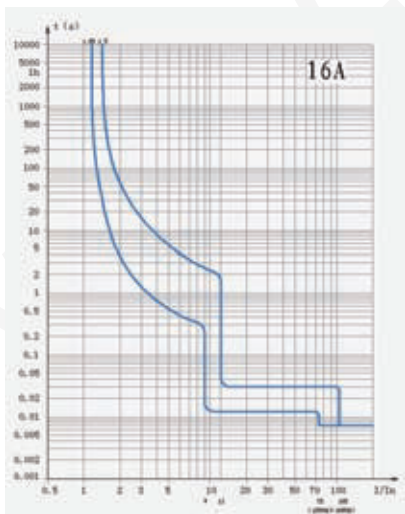
Type B 6 In (1 ± 20%)



Type C 12In (1 ± 20%)



● NDB2ZB-40



5. Accessories

OF2 auxiliary contact



SD2 alarm contact



MX + OF2 shunt tripper



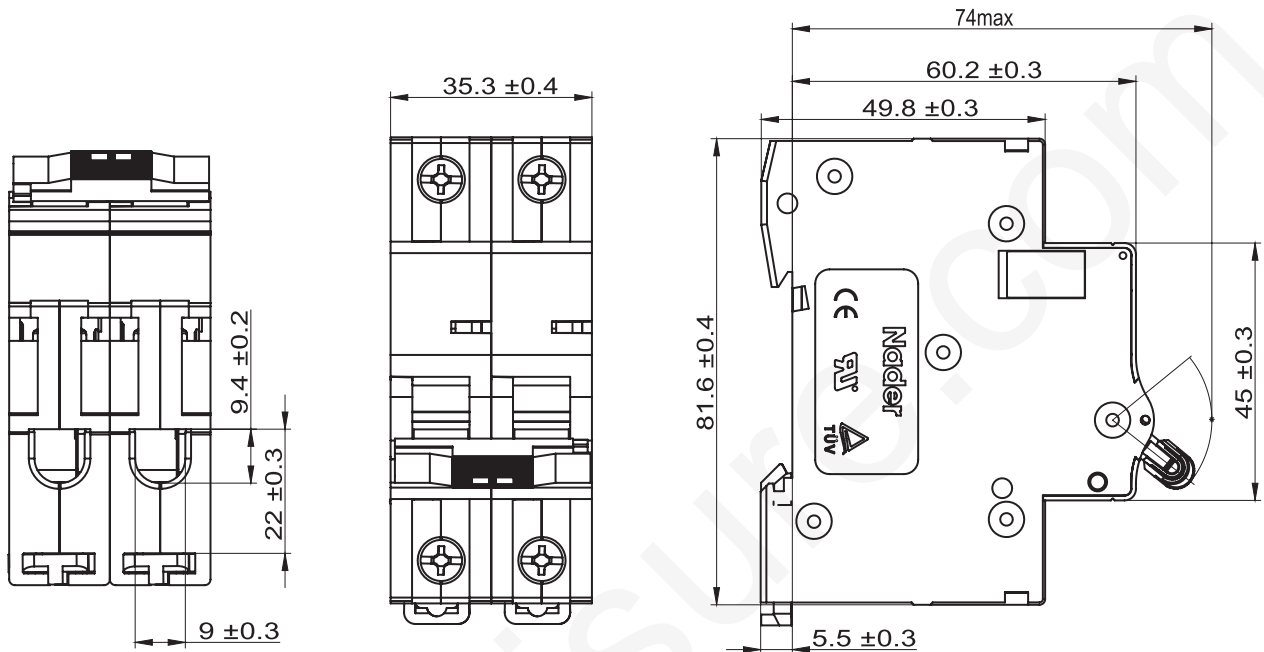
NDB2Z-63/NDB2Z-63(PV) accessories forms

Serial No.	Name	Accessory code	Function and number of loading
1	Auxiliary contact	OF2	Loaded on the left side of a circuit breaker to indicate the On/Off state of the circuit breaker; 3 can be loaded at most
2	Alarm contact	SD2	Loaded on the left side of a circuit breaker to indicate the fault tripping state of the circuit breaker; 3 can be loaded at most
3	Shunt tripper	MX+OF2	Loaded on the left side of a circuit breaker to indicate the fault tripping state and remote breaking control of the circuit breaker;

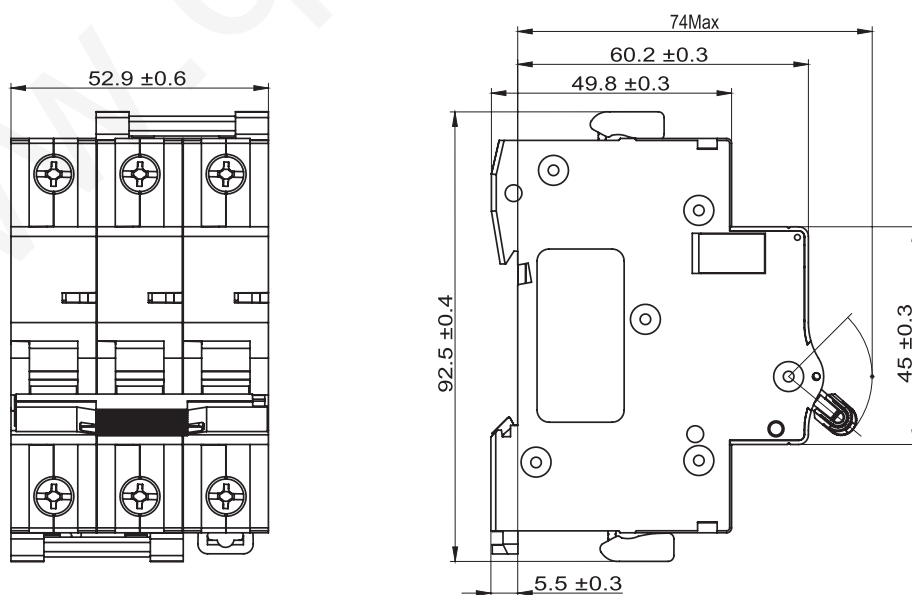
Note: For details of accessory parameters, see "OF2, SD2 and MX+OF2" samples

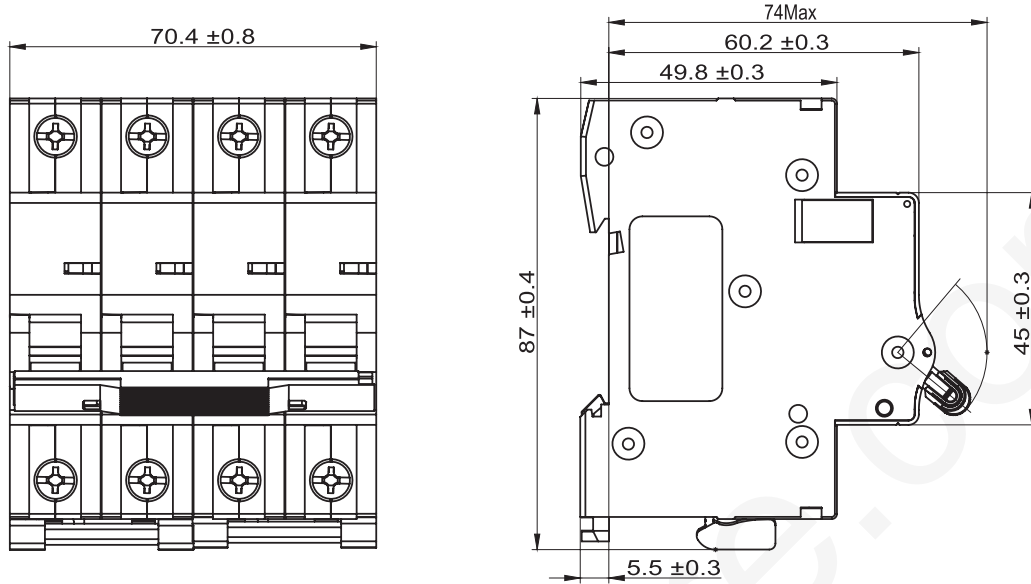
6. Outline and Installation Dimension

6.1 NDB2Z-63 Outline Dimension



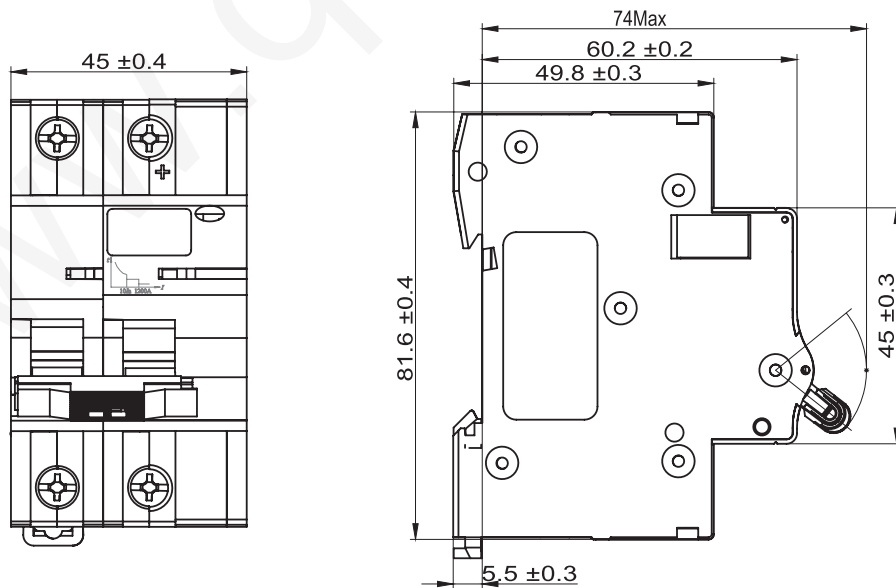
6.2 NDB2Z-63 (PV) Outline Dimension





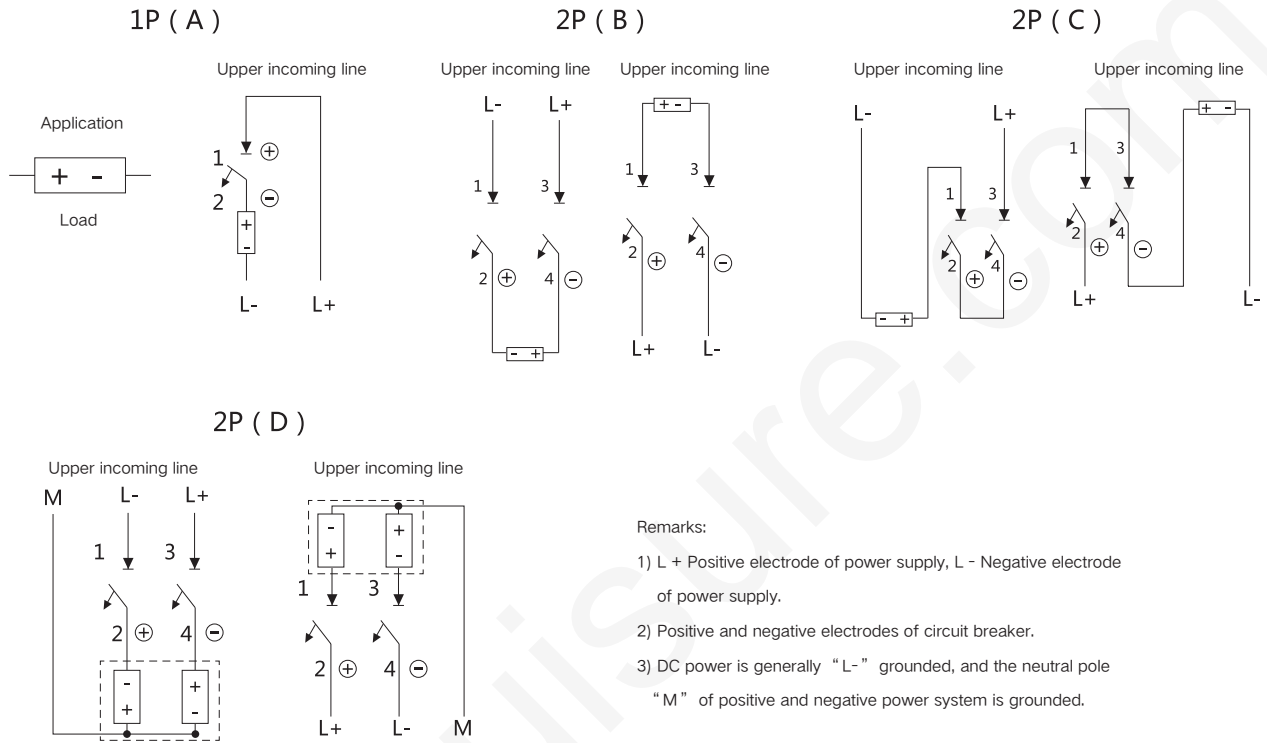
4P

6.3 NDB2ZB-40 Outline Dimension

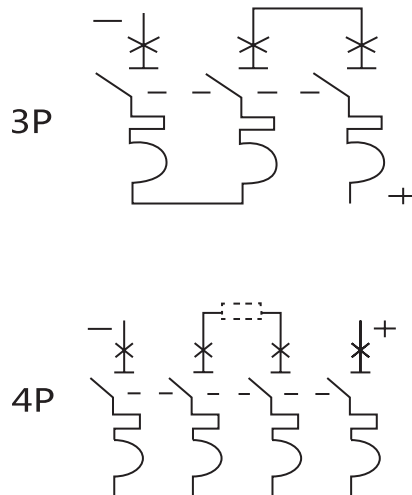


7. Electric Circuit Diagram

● NDB2Z-63



● NDB2Z-63(PV)



- NDB2ZB-40

