

Shanghai Liangxin Electrical Co., Ltd.


Product Specification of NDB1-125

Product Name: Moulded Case Circuit Breaker

Product Type: NDB1-125

Date: 2020-7-15

Prepare	Review	Approval
Feng Dai	HuoZhiQiang	Zhang Yang

	File name	Product Specifications	File number	NDT500948
	Product name	NDB1-125 MCCB	Version	2 version
			Date	2020-7-15

Revision records

Version	Revised contents and reasons	Date	By (full name)
0	Initial release.	2018-11-06	Feng Dai
1	1. NDTNDT500948 changed to NDT500948 2. Add UL1077 certification	2019-6-13	Feng Dai
2	Upgrade edition	2020-7-15	Feng Dai

File number	NDT500948	Version	2version	Date	2020-7-15
-------------	-----------	---------	----------	------	-----------

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

ND	B	1	—	125	C	100	/	3
Nader	MCCB	Design		Frame Size A	Tripping Curve	Rated current A		Pole
Nader Brand		Serial Nunber		125	C Curve	50, 63, 80		1=1P,2=2P
					D Curve	100, 125		3=3P,4=4P

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 Insulation Voltage: 500V
 - Ultimate short-circuit breaking capacity (Icu): 10kA
 - Service short-circuit Breaking Capacity(Ics): 7.5kA
 - Impulse voltage endurance: 4kV
 - Rated Frequency Withstand Voltage: AC2500V 50Hz 1min
 - UL1077 parameter table

Trip Curve (C or D)	Type	UG	FW	Maximum V	Freq. Hz	Amp	No. of Poles	TC	OL	SC
C	OC	A	0	240ac	50/60	50-125	1-2	2	0	5kA, U1
D	OC	A	0	240ac	50/60	50-100	1-2	2	0	5kA, U1
C	OC	A	0	480ac	50/60	50-125	3-4	2	0	5kA, U1
D	OC	A	0	480ac	50/60	50-100	3-4	2	0	5kA, U1
C	OC	A	0	60 DC	DC	50-125	1-4	2	0	10kA, U2
D	OC	A	0	60 DC	DC	50-100	1-4	2	0	10kA, U2

File number	NDT500948	Version	2version	Date	2020-7-15
-------------	-----------	---------	----------	------	-----------

- Isolation function
- 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, CE, TUV, UL1077;
 - GB/T14048.2、IEC 60947-2
- Environmental requirements: RoHS
- Used in place without obvious shock and vibration
- Wiring
 - Adopt tunnel type wiring
 - Connection capability: 10mm² to 50 mm²
 - Connection screw M7, Twisting moment 3.5N.m

5 Working conditions

- Ambient temperature: $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- Relative air humidity $\leq 95\%$
- Altitude: $\leq 2000\text{m}$
- 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

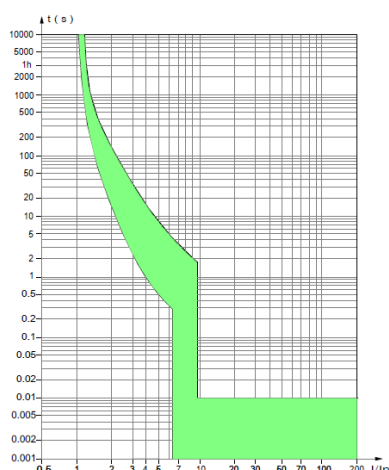
8 Tripping curves (ambient temperature 40°C)

- C Curve
 - Protection common loads and power distribution circuit
 - Available for the rated current of 50A to 125A
 - Tripping characteristic: instantaneous trip between 6.4In to 9.6In

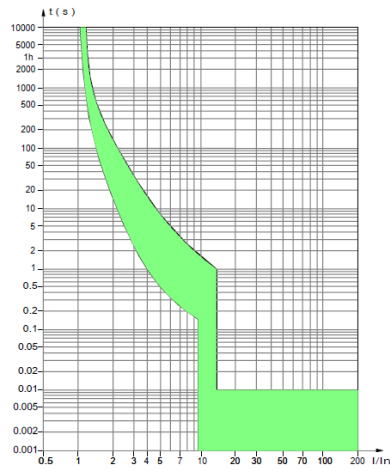
File number	NDT500948	Version	2version	Date	2020-7-15
-------------	-----------	---------	----------	------	-----------

● 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 $9.6I_n$ to $14.4I_n$

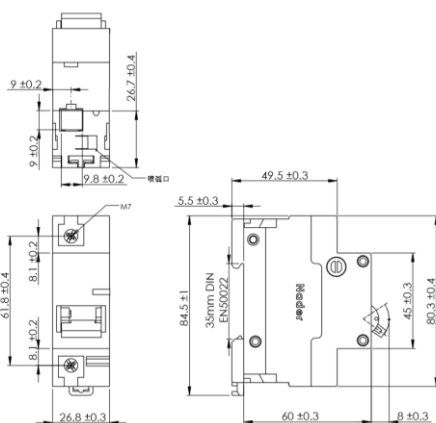


C Curve $8I_n(1\pm20\%)$

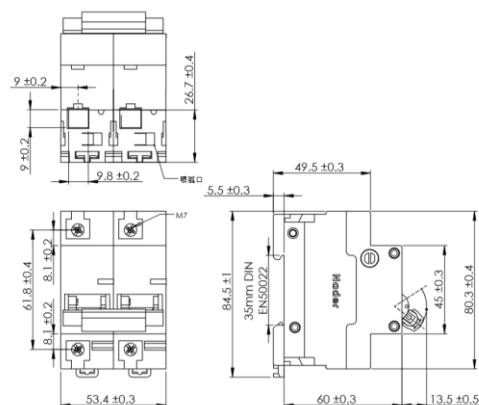


D Curve $12I_n(1\pm20\%)$

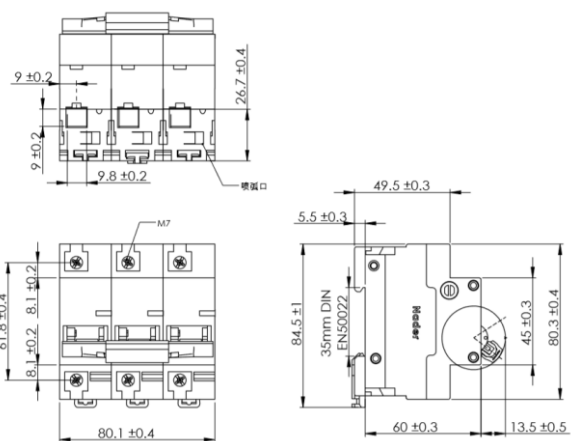
9 Outline dimensions and installation



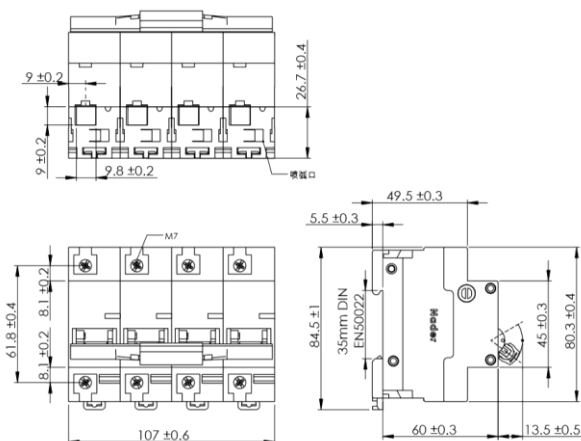
1P



2P



3P



4P

File number	NDT500948	Version	2version	Date	2020-7-15
-------------	-----------	---------	----------	------	-----------

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℃ to +70℃. 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.