CCC, CQC, CB, CE, TUV

Molded Case Circuit Breaker

NDM2-125 series

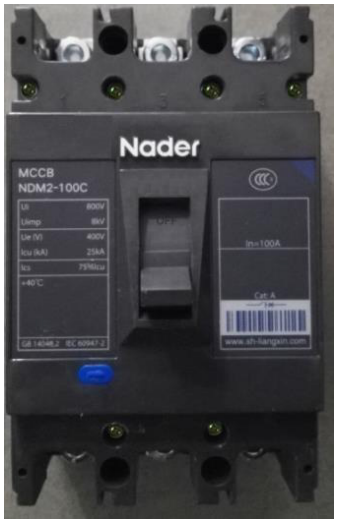
QUISURE
Keep quick, Make sure
ISO9001:2015
QUALITY GUARANTEED

1、 Application Scope and Purpose

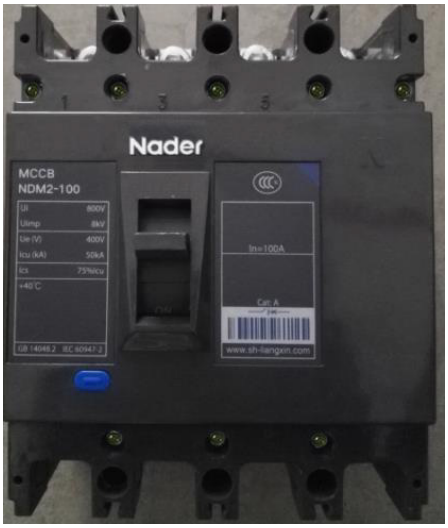
NDM2 series of molded case products apply to infrequent switching of circuits with the AC 50Hz (or 60Hz), the rated working voltage of 690V and rated working current of 125A as well as infrequent motor starting. With the overload, short circuit and undervoltage protection functions, the circuit breaker can protect lines and power equipment from damage.

2 、 Picture of the Product (The picture is for reference only)

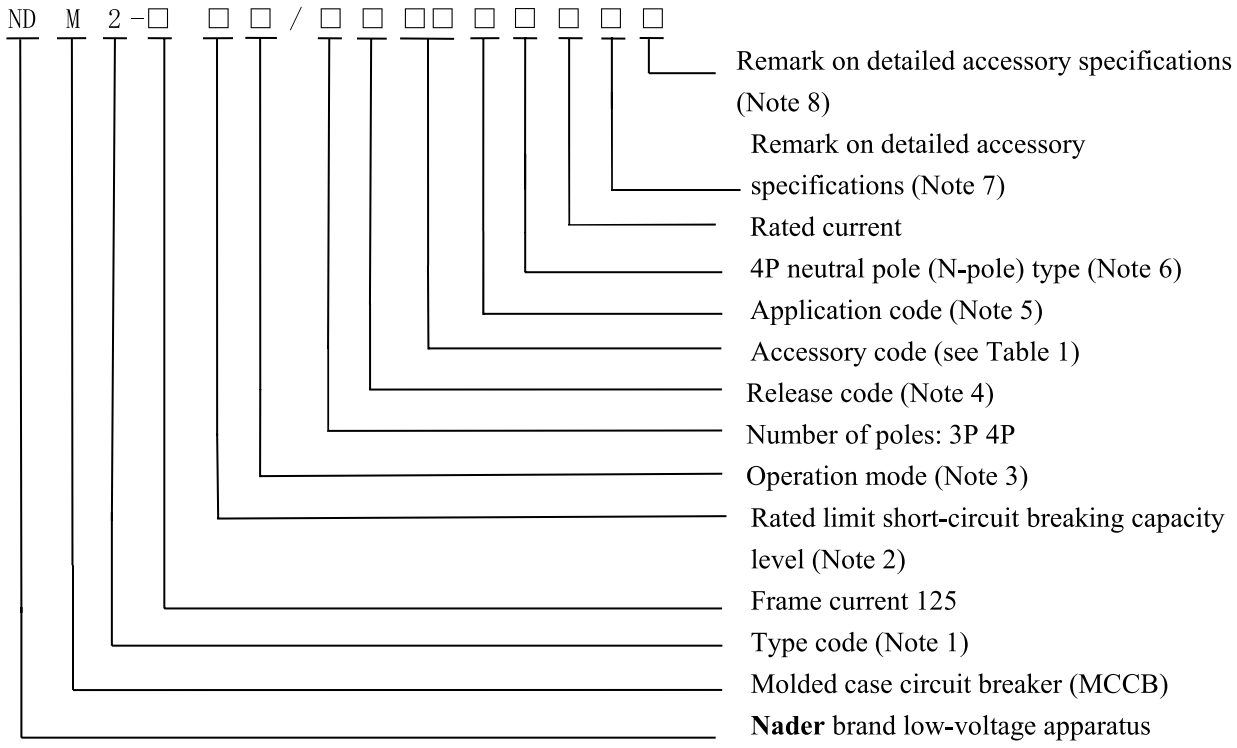
3P



4P



3、 Specifications and Models Description



Note 1: Type code

2: Design SN

Note 2: Rated limit short-circuit breaking capacity of 3P products:

C: Basic type, L: Standard type, M: Relatively high breaking type, H: High breaking type;

Note 3: Operation mode:

No code is available for the direct handle-operated mode

P: Motor-operated

Z: Rotation handle;

Note 4: Release code:

0: Tripper (none)

2: Instantaneous tripper only

3: Complex tripper;

Note 5: Application code

No code is available for the circuit breaker for distribution

2: Protection motor type;

Note 6: 4P neutral pole (N-pole) type:

Type A: The N-pole isn't installed with an overcurrent tripper, but always connected;

Type B: The N-pole isn't installed with an overcurrent tripper, but on-off with the other three poles;

Type C: The N-pole is installed with an overcurrent tripper, and on-off with the other three poles;

Note 7: Remark on detailed accessory specifications

1. Detailed description of connection-type or rotation handle:

① Normal products are uncoded;

② P: Extended connection busbar;

③ JK: Only the inlet wire end adopts the connection frame while the outlet wire end adopts the front-plate connection mode as the wiring mode;

④ CK: Only the outlet wire end adopts the connection frame while the inlet wire end adopts the front-plate connection mode as the wiring mode;

⑤ K: Inlet and outlet wire ends adopt the connection frame as the wiring mode;

⑥ H: Rear-plate connection

⑦ Z1: Plug-in rear-plate connection

⑧ Z2: Plug-in front-plate connection

For example: NDM2-125M/3300 125A (plug-in rear-plate connection);

NDM2-125LZ/3321 125A (CS1-A);

NDM2-125M/33002 125A (connection busbar), etc.

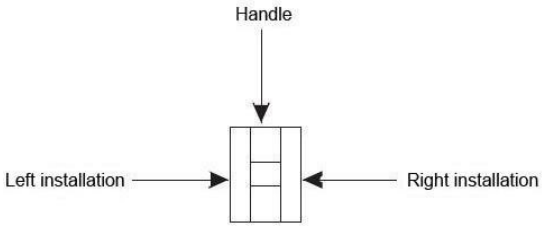
Note 8: Indicate the accessory voltage; the voltage of the electric operating mechanism, undervoltage tripper and shunt tripper shall be indicated temporarily:

① The voltage of the electric operating mechanism is represented as DC1 space+voltage: For example NDM2-125LP/3020 125A (DC1 220V),

② If only the voltage exists in the (), the voltage of the shunt tripper or undervoltage tripper from the accessories is indicated in default,

For example: NDM2-125L/3341 125A (AC220V)

Table 1: Comparison Table of Accessory Code:



Legend：

- Single auxiliary contact
- Dual-auxiliary contact
- Alarm contact
- Shunt release
- Under-voltage release
- (Single auxiliary & alarm) contact

Accessory code	Accessory name	NDM2-125	
	Installation position / Model / Number of poles	3	4
00	None	—	
10	Shunt release		
20	Dual-auxiliary contact		
21	Single auxiliary contact		
30	Under-voltage release		
40	Shunt release, dual-auxiliary contact		
41	Shunt release, single auxiliary contact		
50	Shunt release, under-voltage release		
60	Two sets of dual auxiliary contacts		
61	Two sets of single auxiliary contacts		
62	Dual-auxiliary contact, single auxiliary contact		
70	Under-voltage release, dual-auxiliary contact		
71	Under-voltage release, single auxiliary contact		
08	Alarm contact		
18	Shunt release, alarm contact		
28	Dual-auxiliary contact, alarm contact		
38	Under-voltage release, alarm contact		
48	Shunt release, single auxiliary/alarm contact		
58	Single auxiliary/alarm contact		
68	Dual-auxiliary contact, single auxiliary/alarm contact		
78	Under-voltage release, single auxiliary/alarm contact		

4. Main Technical Parameters

Model		NDM2-125				
Rated current of housing Inm (A)		125				
Rated current In (A)		16, 20, 25, 32, 40, 50, 63, 80, 100, 125				
Rated insulation voltage Ui (AC V)		1000				
Rated impulse withstand voltage Uimp (V)		8000				
Rated working voltage Ue (AC V)		AC400V, AC690V				
Number of poles		3				4
Rated limit short-circuit breaking capacity level		C	L	M	H	/
Rated limit short-circuit breaking capacity Icu (KA)	400V	25	35	50	85	50
	690V			10		
Rated operating short-circuit breaking capacity Ics (KA)	400V	19	26	38	64	38
	690V			8		
Operating performance	POWER ON	8000				
	Without electricity	20000				

4.1 Connection capacity:

Rated current A	16, 20	25	32	40, 50	63	80	100	125
Wire cross-section area mm^2	2.5	4	6	10	16	25	35	50

4.2 Tightening torque value of terminal/mounting screw

SN	Rated current of frame	Thread diameter	Torque value
1	NDM2-125	M8	12
		M4	2.4

4.3 Derating factor table of the circuit breaker

SN	Housing	Derating Factor Table of Product Temperature							
1	125	Temperature	40℃	45℃	50℃	55℃	60℃	65℃	70℃
		Derating factor	1	0.977	0.954	0.931	0.907	0.883	0.858

Note: 1). When the operating ambient temperature is below + 40℃, the product can be used normally without derating capacity.

2). The above derating factors are measured at the frame current.

4.4 High-altitude derating factor

High-altitude Derating Factor Table of Molded Case Circuit Breaker

Altitude (km)	Rated operating current	Maximum operating voltage	Rated power frequency withstand voltage
2	In	Ue	1U
2.5	In	Ue	1U
3	0.98In	0.83Ue	0.89U
3.5	0.97In	0.77Ue	0.85U
4	0.96In	0.71Ue	0.80U
4.5	0.95In	0.67Ue	0.77U
5	0.94In	0.63Ue	0.73U

5. Normal Working Environment

1) Altitude≤2000 m;

2) Ambient temperature: -35℃ ~ + 70℃; the average within 24h shall not be more than +35℃. If the ambient temperature is higher than +40℃, the user needs to reduce the capacity. See "Derating Factor Table of Product Temperature Change" for the derating factory;

3) The relative humidity at an ambient temperature of +40℃ should not exceed 50%. A higher relative humidity is allowed at a lower temperature. For example, the relative humidity at 20℃ can reach 90%

4) For frost due to temperature change, the corresponding measures should be taken

) The product can withstand the effects of wet air, salt mist and oil mist.

6) The installation category of the circuit breaker connected/not connected to the main loop is Ⅲ and Ⅱ respectively

7) The pollution level is Level 3

8) The maximum gradient is 22.5°.

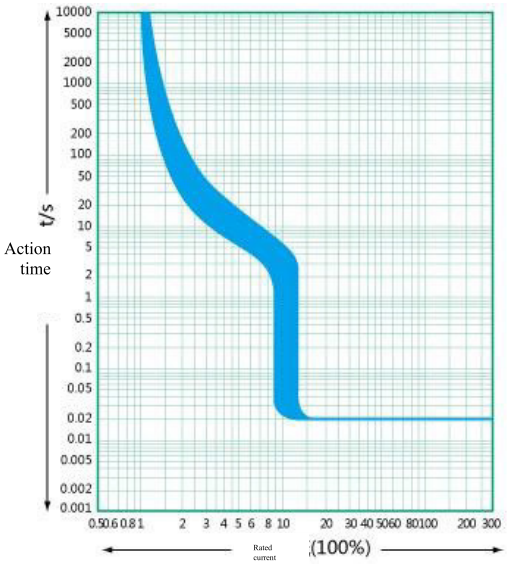
9) The product can be disposed in places that are free from explosive media, media corrosive to metal, insulation damaging gas, and conductive dust

10) The product should be installed free from snow and rain

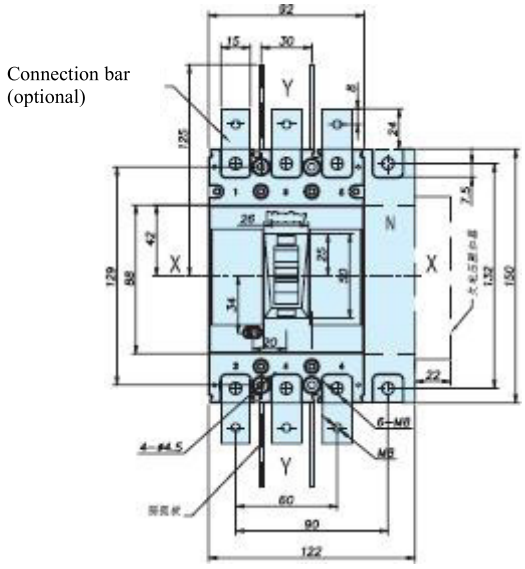
11) In case of stricter user conditions than the above description, negotiate with the manufacturer

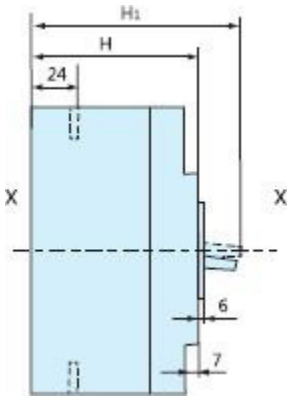
6 . Characteristic Curve of Circuit Breaker

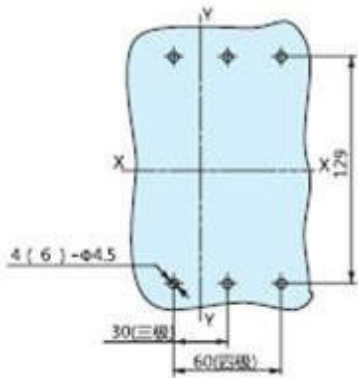
Time/current characteristic curve:



7 . Outline and Installation Dimensions



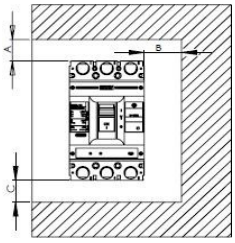




Model	H	H1
NDM2-125C、L	69	86
NDM2-125M	87	104
NDM2-125四极		

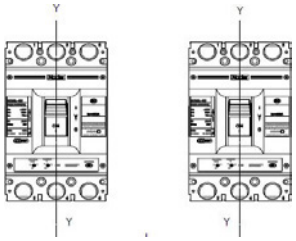
7 .1 Mounting distance (mm)

1) Insulation distance mounted in the metal cabinet (unit: mm), as shown below:



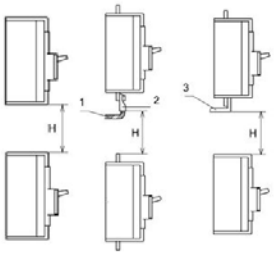
Mounting distance	A (inlet wire end to the cabinet face)		B (distance from side to cabinet)	C (outlet wire end to the cabinet face)
Specification	With a 0 arcing cover	Without a 0 arcing cover		
NDM2-125	25	65	30	30

2) Minimum center distance between rowed circuit breakers



Specification	Width of circuit breaker (mm)			Center distance (mm)		
	2P	3P	4P	2P	3P	4P
NDM2-125	/	92	122	/	122	152

Note: Check the connected busbar or cable during rowing or stacking of the circuit breaker air insulation distance won't be reduced.



3) Minimum center distance between stacked circuit breakers

Specification	H (distance of circuit breaker from bottom)	
	With a 0 arcing cover	Without a 0 arcing cover
NDM2-125	90	91

Note: 1. Bare cable connection (only for Type L products)

2. Cable insulating connection

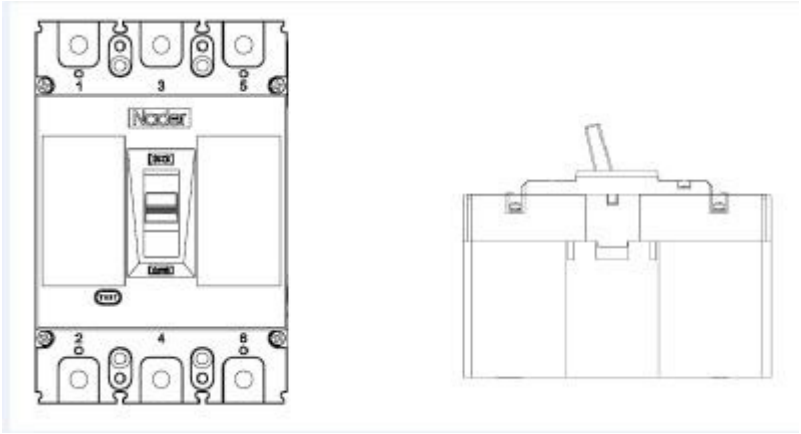
3. Connection without insulation

4. Check whether the 0 arcing cover or phase partition is assembled properly before products are energized.

8. **Installation Mode**

For vertical installation of the product, the gradient between the installation surface and the vertical plane is no more than ±22.5°.

Horizontal installation of the product.



Vertical Installation Horizontal Installation

9. **Packaging and Storage**

Minimum packaging quantity: 1 piece/box. The packaged products should be stored in a warehouse with the ambient temperature of -40℃~75 ℃ and the corresponding relative humidity below 80% without acidic, alkali or other corrosive gas in the surrounding air. Under the conditions above, the storage period shall be no more than 36 months since the manufacturing date.

10. **List of Accessories and Installation**

SN	Name	Specification	Quantity/Set/3P	Quantity/Set/4P
1	Cross small pan-head screws	M4X45	4	6
2	Plain washer	4	4	6
3	Spring washer	4	4	6
4	Hexagon nut	M4	4	6
5	Phase partition	——	4	6

11. **Precautions**

▲ Various characteristics and accessories of the circuit breaker are set in the factory, which shall not be adjusted randomly;

▲ The circuit breaker handle can be located in three positions, indicating three states: on, off and free tripping. When the handle is in the free tripping position, pull the handle in the off direction when the circuit breaker is connected and on.