

Shanghai Liangxin Electrical Co., Ltd.

PRODUCT SPECIFICATION

NDL2M-100

Residual current operated circuit-breakers without integral overcurrent protection

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Revision information					
Version	Revised contents and reasons	Date	Prepared	Reviewed	Approved
0	Added	2021/04/14	Zhang Shuai	Yang Wei	Chen Yangru
1	Revise	2023/08/10	Zhang Shuai	Yang Wei	Zhang Jingyang
2	Updated Type S without 16A; 2 Product picture Rated limit short circuit current without unit "A" and 6 wiring diagram	2024/06/21	Zhang Shuai	Lin Chen	Zhang Jingyang

1 Application

NDL2M-100 series residual current operated circuit-breakers without integral overcurrent protection (RCCB) for industrial, civil construction, energy, communication and infrastructure and other low-voltage terminal distribution system, used for indirect contact protection. RCCBS with a rated residual operating current of no more than 30mA can also be used as a supplementary protection measure when other shock protection measures fail. It has the following functions:

- Leakage protection
- Isolation function

The above must be used with the upper circuit breaker

2 Product pictures (subject to specific physical effects)



2P



4P

3 Product model

ND L 2 M - 100 □ / □ / □ / □ / □
 1 2 3 4 5 6 7 8 9 10

Item	Parameter type	NDL2M-100
1	Enterprise code	ND
2	Product code	L: leakage circuit breaker
3	Design code	2
4	Symbol 1	M: Electromagnetic type
5	Frame size	100A
6	Rate current	16A,25A,40A,63A(General type),25A,40A,63A(S type)
7	Pole	2=2P,4=4P
8	Rated residual operating current	30mA,100mA,300mA(General type), 100mA,300mA(S type)
9	According to behaviour in presence of d.c. components	A type,AC type
10	According to time-delay(in presence of a residual current)	General type (Blank),S type

4 Main technical parameters

4.1 Electrical parameters

NDL2M-100 electrical parameters

Standard	GB/T 16916.1-2014,IEC 61008-1:2012	
Certificate	CCC,CB,CE,TUV	
Number of product poles	2P	4P
Rated operational voltage Ue	AC 230/240V	AC 400/415V
Rated insulation voltage Ui	500V	
Power frequency withstand voltage	AC 2000V 1min	
Rated impulse withstand voltage Uimp	4kV	
According to behaviour in presence of d.c. components	A type,AC type	
Rated current In	16A,25A,40A,63A(General type),25A,40A,63A(S type)	
According to time-delay(in presence of a residual current)	General type	S type
	Residual current includes 30mA,100mA, 300mA; Operation time: $t \leq 100\text{ms}$	Residual current includes 100mA, 300mA; Operation time: $130\text{ ms} \leq t \leq 500\text{ ms}$
Rated remaining making and breaking capacity $I_{\Delta m}$	1000A	
Rated making and breaking capacity Im	1000A	
Rated Limited Short Circuit Current Inc	10kA	
Rated residual operating current $I_{\Delta n}$	30mA,100mA,300mA(General type), 100mA,300mA(S type)	
Rated frequency	50/60Hz	
Electrical life(time)	10000	
mechanical life(time)	20000	

4.2 Other parameters

- Contact position indication: OFF= green, ON= red
- Wiring
 - Tunnel type wiring mode
 - Wiring capacity: Copper cable 1~25mm²
 - Standard torsional moment: 2.0N.m
- Protection class
 - Protection class of the circuit breaker body: IP20
 - To be installed in the distribution box: IP40

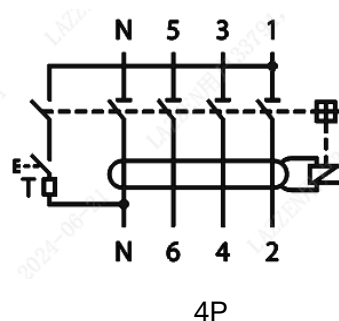
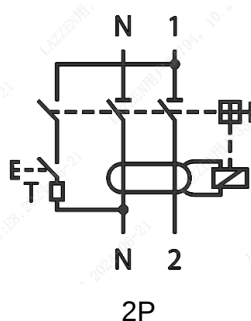
5 Working conditions

- Ambient temperature: -25℃~+60℃, 20℃ relative humidity $\leq 95\%$; 40℃ relative humidity $\leq 50\%$
- Storage ambient temperature: -40℃~+80℃, Storage relative humidity: $\leq 80\%$
- Damp heat resistance: When the ambient air temperature is 55℃, the relative air humidity is $\leq$

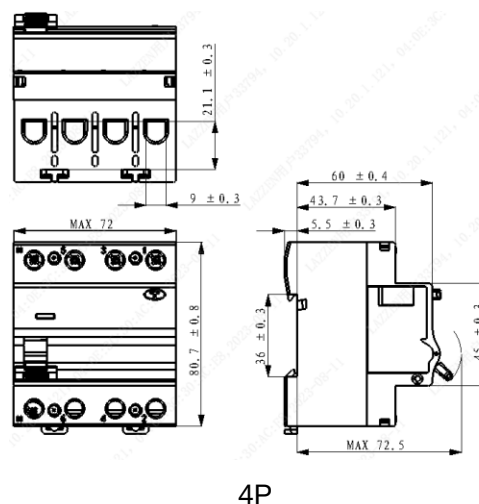
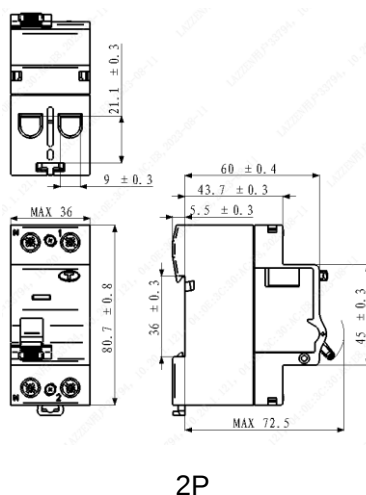
95%

- Altitude: $\leq 2000\text{m}$. If you need to use at a higher altitude, reduce the capacity according to the requirements of the company's small circuit breaker
- Pollution degree: 2
- The external magnetic field around the storage does not exceed 5 times the Earth's magnetic field in any direction (there is no strong magnetic field around)
- Can withstand the effects of salt mist and oil mist
- In a medium without explosion risk, and where the medium is not sufficient to corrode metals and damage insulation with gases and conductive dust
- In a place where there is no rain or snow invasion

6 Wiring Modes (Wiring Diagram)



7 Dimensions



8 Installation

It can be easily installed on the TH35mm×7.5 standard guide.

9 Packaging and storage

The maximum packaging quantity (2P products: 7 / box, 4P products: 3 / box), 6 boxes/box, packaged products should be stored in a warehouse with air circulation and relative humidity of

not more than 80%, temperature not higher than +80 ° C, not lower than -40 ° C. Store in a warehouse without acidic, alkaline or other corrosive gases in the surrounding air. Under the above conditions, the storage period shall not exceed 3 years from the date of production.

10 RoHS compliance

Products comply with RoHS2.0.

[Note: Compliance with EU Directive 2011/65/EU and its amendment Directive (EU) 2015/863 on the restriction of the use of certain Hazardous Ingredients in Electrical and Electronic equipment]

11 List of accessories and installation

OF2 auxiliary contact is loaded on the left side of RCCB, indicating the on-off status of RCCB;
SD2 alarm contact is loaded on the left side of the RCCB, indicating the fault trip state of the RCCB;

12 Notice

- 1) A user must be responsible for addressing a product issue that occurs because the user disassembles the product without approval.
- 2) It fails to provide protection for the electric shock caused due to two phases of the contacted lines to be protected.
- 3) Do not test the insulation resistance of the product or carry out power frequency withstand voltage tests directly or indirectly with a megger or similar devices on the product so as to avoid damage to the product. If required by users, our company can provide an effective proof of the conformance test.
- 4) In case of insulation resistance test on the project line, do not connect the product to avoid misunderstanding of the product quality or damage to the circuit board.
- 5) Do not touch the exposed part of the non-insulating parts of the circuit breaker when the working power is on.
- 6) Reliable connection to prevent terminal burning caused by abnormal heating of terminal.
- 7) After installing the residual current circuit breaker, press the test button to test three times, and all should work normally. After a monthly leakage simulation test, that is, press the test button to make the circuit breaker operate to detect whether the circuit breaker is working normally, and replace the abnormal products in time.
- 8) If the circuit breaker automatically disconnects with the remaining current, analyze the cause of line or equipment failure in time.