

Shanghai Liangxin Electric Appliance Co. Ltd.

(NDGR2-250 disconnecter)

Product specification

(IPD-ENG-DEV-T20 A1 2016-09-23)

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|-------------|--------------|------|------------|
| Authorized | Fan Cong | Date | 2023.09.26 |
| Check | Liu Donghui | Date | 2023.09.27 |
| Countersign | Guo Xiaoming | Date | 2023.09.28 |
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| Approve | Hu Qi | Date | 2023.09.28 |

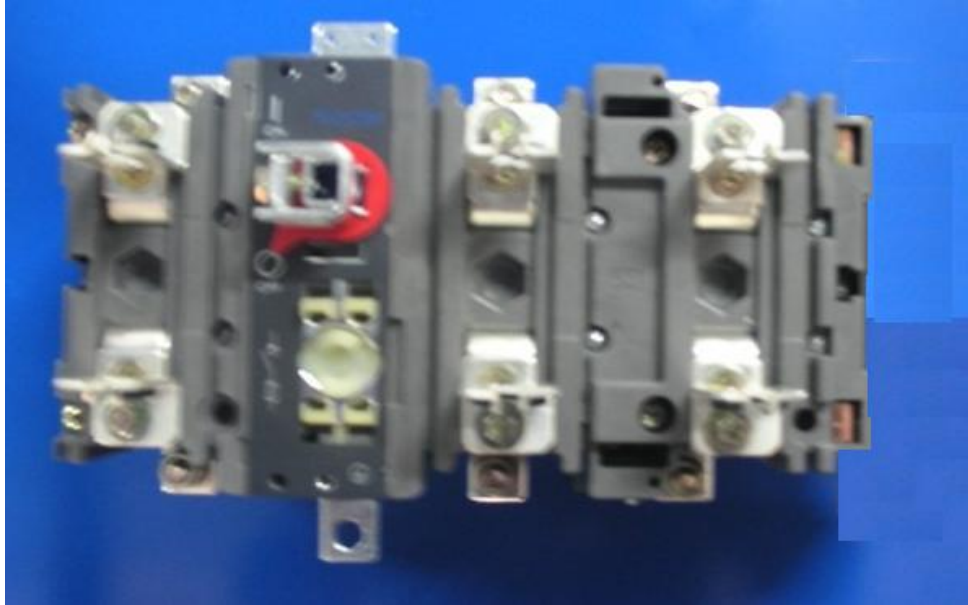
| Revision record | | | | | |
|-----------------|---|---------------------|----------------|-------------|------------|
| version | Reason/content of revision | date of enforcement | Compiler | Reviewer | approver |
| 0 | Add | 2011-10-20 | Li Xingwei | Ding Guohui | Li Shengai |
| 1 | Modification of shape and installation size | 2012-06-01 | Yu jinzen | Ding Guohui | Li Shengai |
| 2 | Merge specifications of 3 poles and 4 poles. | 2018-11-26 | Zhang Jiazheng | Wang Jili | Zhou Bo |
| 3 | Update product dimension. | 2019-06-30 | Jiang Zhaoyong | Zheng Lei | Wang Jili |
| 4 | Update product dimension and handle padlock status dimension. | 2023-09-26 | Fan Cong | Liu Donghui | Hu Qi |
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1、Scope of application and use

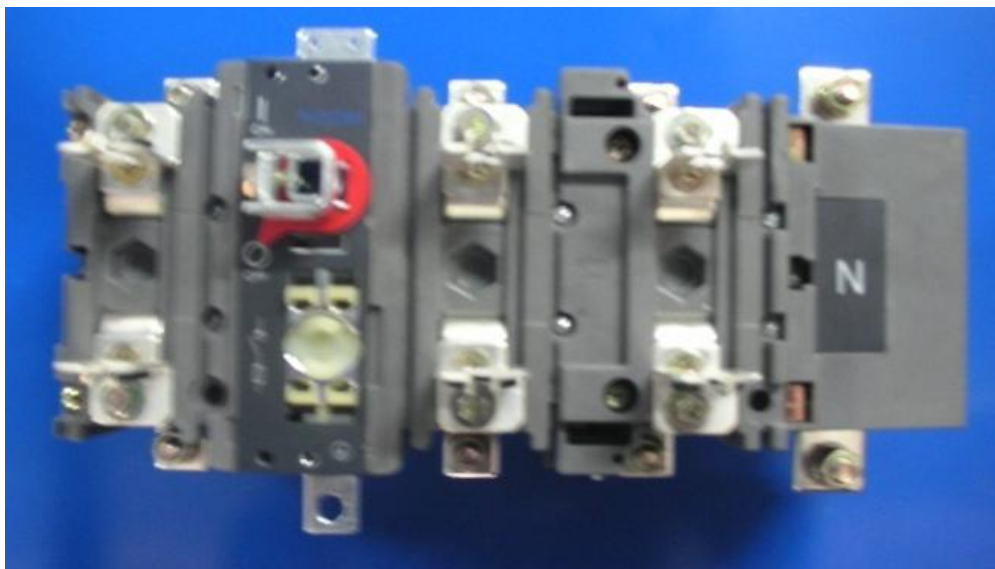
NDGR2-250 disconnecter fuse set is suitable for low-voltage power distribution or motor network with AC 50Hz, rated working voltage of AC400V and AC690V and rated working current of 250A, and is used for isolating circuits and lines that are not frequently connected and disconnected. It can provide short circuit and overload protection functions.

Products are widely used in power transmission and distribution and automation systems in construction, electric power, chemical industry and other industries.

2, product pictures



NDGR2-250/3



NDGR2-250/4

3. Description of specifications and models

| ND GR 2 - 250 / □ / □(□ +□ +□) | | | | | | | | |
|--------------------------------|---------------------------|---|---|---|---|--|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| serial number | Serial number description | | | | | Model meaning | | |
| 1 | Enterprise code | | | | | ND | | |
| 2 | model | | | | | GR: disconnecter fuse set | | |
| 3 | Design serial number | | | | | 2 | | |
| 4 | specifications | | | | | 250A | | |
| 5 | number of poles | | | | | 3: three poles, 4: four poles | | |
| 6 | Auxiliary switch form | | | | | No code: without auxiliary switch F1: with an auxiliary switch (normally open and normally closed) F2: with two auxiliary switches (two normally open and two normally closed) | | |
| 7 | Handle type | | | | | Inside the cabinet: inside the cabinet handle H-shaped: H-shaped handle H-type+interlock: H-type handle with door interlock function Type B: Type B handle with door interlocking function. | | |
| 8 | Axial length type | | | | | L, L1, L2 (see overall installation dimensions for specific length) | | |
| 9 | Fuse body specification | | | | | Specific size and current specification are selected according to customer's needs. | | |

4. Main technical parameters

(1) Electrical characteristics

- ▲ Rated isolation voltage U_i : 1000V V.
- ▲ Rated working voltage U_E : AC 400 V, AC690V V.
- ▲ Rated impulse voltage U_{imp} : 12kV
- ▲ Rated working current I_e (A)/ power AC
400V AC-23B A/kW 250/132
690V AC-23B A/kW 250/220
- ▲ With fuse body size 1-2
- ▲ Maximum fuse 250A
- ▲ Rated connection capacity 690V AC-23B 2500A
- ▲ Rated breaking capacity 690V AC-23B 2000A
- ▲ Rated on-off capacitive load capacity is 400V V. 251kVAr
- ▲ When rated limiting short-circuit current is 400V, 100kA
- ▲ When rated limiting short-circuit current is 690V, 50kA
- ▲ Allowable load
When the ambient temperature is 40℃ 250A
When the ambient temperature is 45℃ 250A
When the ambient temperature is 50℃ 250A
When the ambient temperature is 55℃ 240A
- ▲ Auxiliary switch 380V AC-15 4A

▲ Auxiliary switch 220V DC-13 0.4A

(2) Operating performance

- ▲ Electrical life: 300 times
- ▲ Mechanical life: 12,000 times
- ▲ Operating torque 16Nm

(3) Connection ability

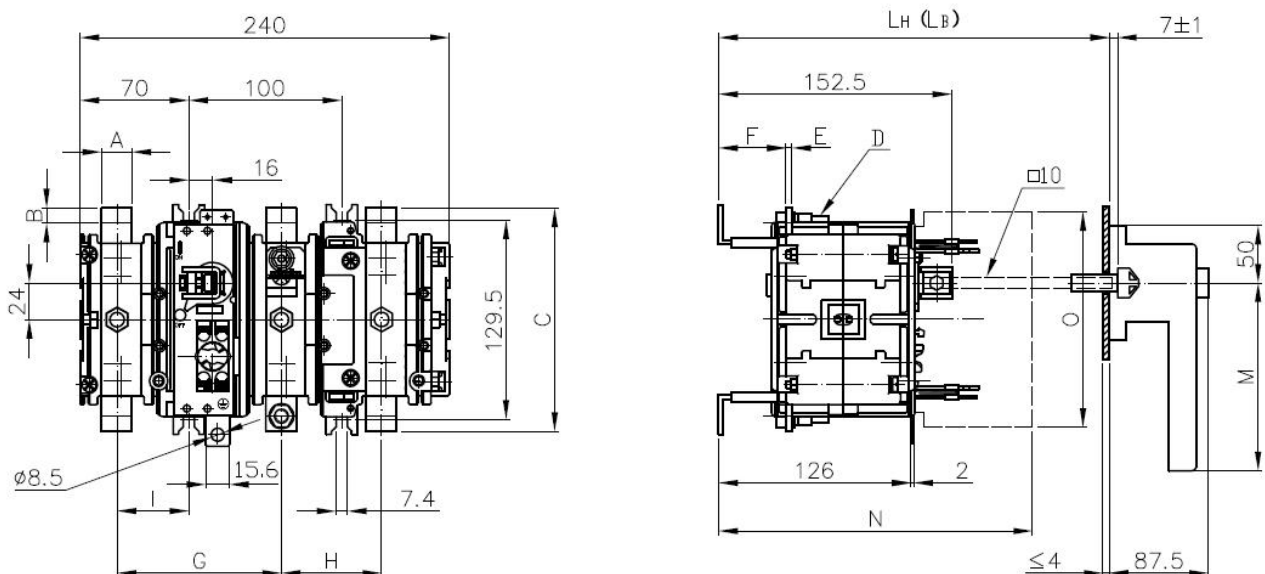
Rated current (a) 250
 Minimum copper cable cross section (mm²) 150
 Maximum copper cable cross section (mm²) 40×16
 Maximum copper cable width (mm) 25
 Terminal tightening torque (Nm) 15-22

5. Normal working environment

- ▲ Altitude: ≤ 2000m;
- ▲ Ambient temperature: -25℃ ~ +55℃; And the 24-hour average value does not exceed +35℃, and the volume reduction should be considered when the ambient temperature is higher than 40℃;
- ▲ Pollution level 3;
- ▲ When the highest temperature is +40℃, the relative humidity of the air does not exceed 50%, and higher relative humidity can be allowed at lower temperatures, for example, it can reach 90% at +20℃. Special measures should be taken for the occasional condensation due to temperature changes;
- ▲ Installation categories III and IV:
- ▲ It should be installed in a place where there is no obvious shaking, impact vibration and rain and snow. At the same time, the installation site should be free of explosive dangerous media, and there is no gas and dust in the media that can corrode metals and destroy insulation.

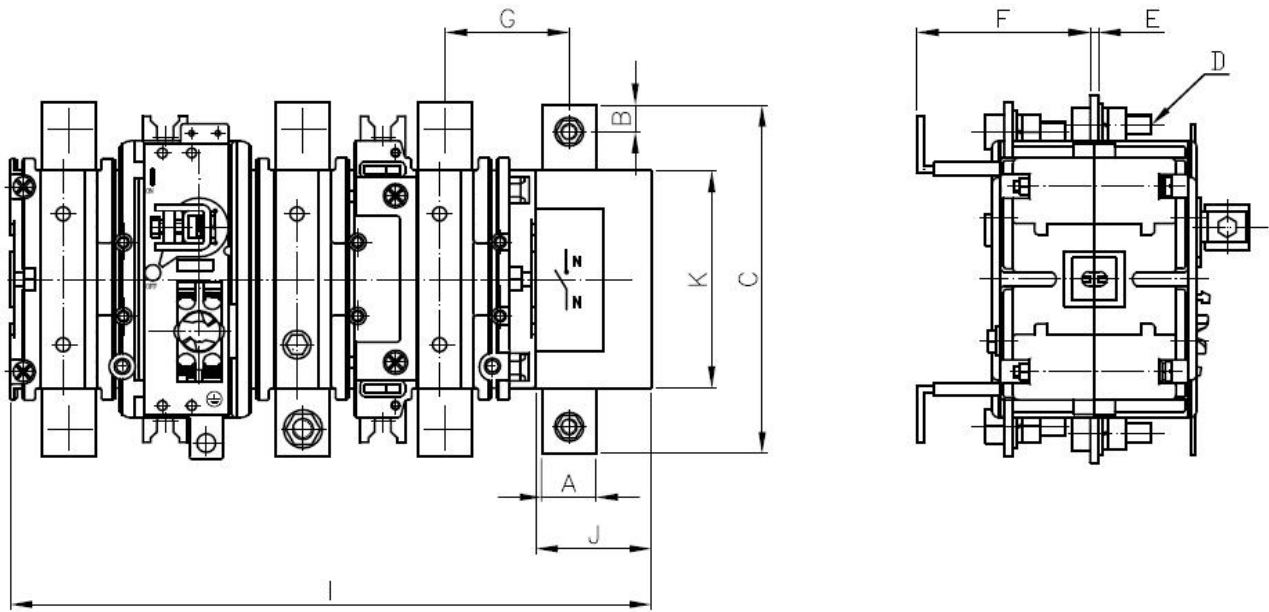
6, product appearance and installation size

Shape of 3-pole product and installation dimensions of handle outside the cabinet (H-type /B-type)



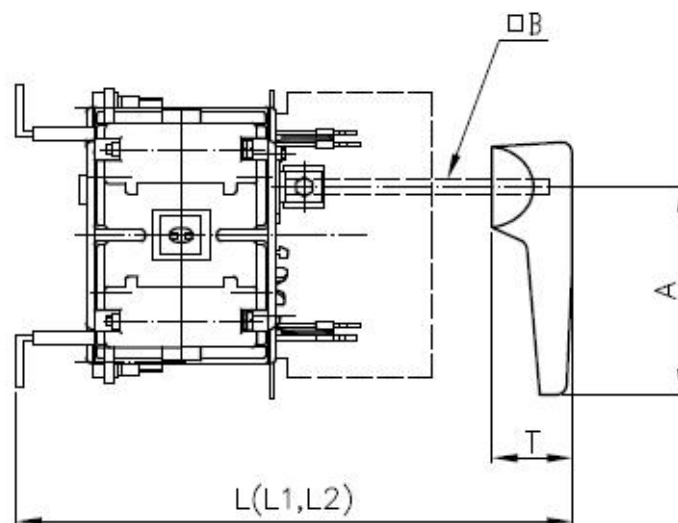
| model | A | B | C | D | E | F | G | H | I | LH | LB | M | N | O |
|-------------|----|------|-----|-----|---|----|-----|----|------|-----|-----|-----|-----|-----|
| NDGR2-250/3 | 25 | 12.5 | 160 | M10 | 4 | 39 | 107 | 65 | 43.5 | 290 | 265 | 140 | 209 | 160 |

Dimensions of 4-pole products



| model | A | B | C | D | E | F | G | I | J | K |
|-------------|----|------|-------|-----|---|----|----|-----|----|-----|
| NDGR2-250/4 | 25 | 12.5 | 160.2 | M10 | 4 | 80 | 56 | 293 | 53 | 100 |

Installation dimensions in cabinet



| model | L* | L1* | L2* | A | B | T |
|-----------|---------|---------|---------|-----|----|----|
| NDGR2-250 | 260~295 | 296~345 | 346~395 | 120 | 10 | 55 |

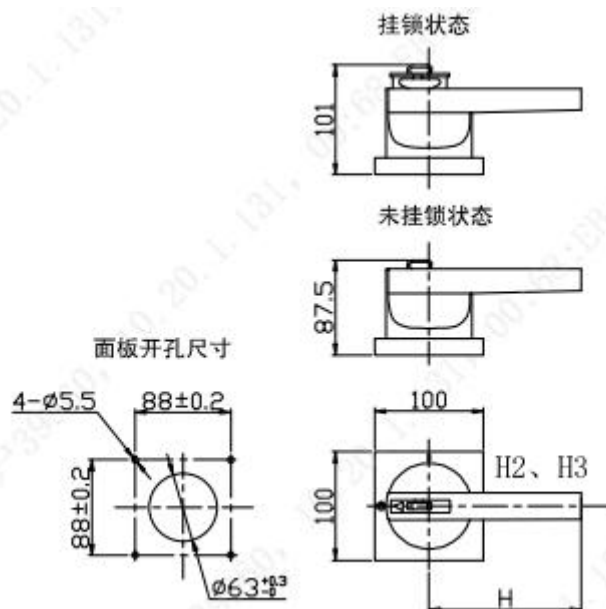
Note: 1. For the installation dimensions of the handle outside the cabinet (H type /B type),

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please refer to "3-pole product shape and installation dimensions of the handle outside the cabinet (H type /B type)".

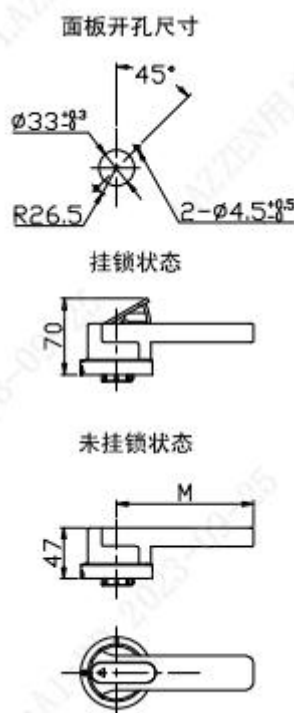
2. See "Installation Dimensions in Cabinet" for the installation dimensions of the handle in the cabinet.

H-shaped handle size and mounting hole size



Note: H=140 here.

B-type handle size and mounting hole size



Note: M=126 here.

7. Installation method

Vertical installation, wire feeding mode can be up and down, or down and up.

8. Packaging and storage

The storage temperature of products packed in boxes is $-50^{\circ}\text{C}\sim+80^{\circ}\text{C}$, and the products must not be attacked by rain during transportation.

9. Attachment List and Installation

List of accessories for H-handle

| serial number | name | unit | quantity | remarks |
|---------------|--------------------------------------|------------|----------|---------|
| 1 | axis | root | 1 | |
| 2 | Coupling (including screws) | set | 1 | |
| 3 | hand shan | set | 1 | |
| 4 | Self-tapping screw for fixing handle | individual | 4 | |
| 5 | Handle pad | piece | 1 | |
| 6 | Adjusting sample | piece | 1 | |
| 7 | H series handle instruction manual | basis | 1 | |

List of accessories for type B handle

| serial number | name | unit | quantity | remarks |
|---------------|--------------------------------------|------------|----------|---------|
| 1 | axis | root | 1 | |
| 2 | hand shan | set | 1 | |
| 3 | Self-tapping screw for fixing handle | individual | 2 | |

List of operating accessories in the cabinet

| serial number | name | unit | quantity | remarks |
|---------------|-----------|------|----------|---------|
| 1 | hand shan | set | 1 | |

10. Matters needing attention

- ▲ The default standard handle of the product is H-series handle. If B-series handle or cabinet handle is needed, it should be noted that H-series handle and B-series handle can be padlocked, but the cabinet handle has no padlock function.
- ▲ If the required installation depth is beyond the normal given range, the required installation depth should be indicated.