

Shanghai Liangxin Electrical Co., Ltd.

Product Specification

NDG3A-3200Z

Disconnecter

(IPD-ENG-DEV-T20 A2 2023-03-14)

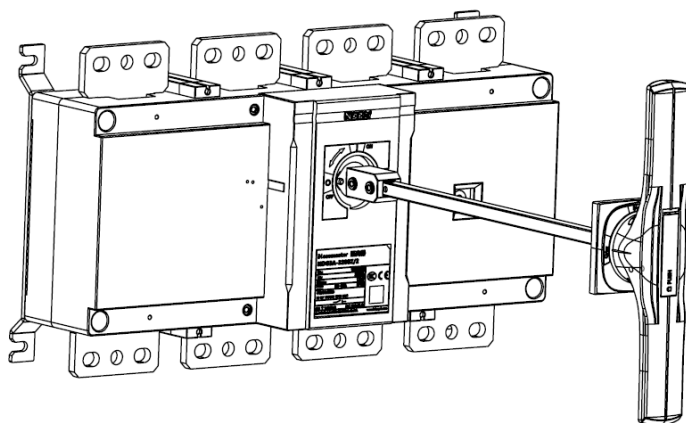
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Revision information					
Version	Revision Reason/Content	Date	Prepared	Reviewed	Approved
0	Add	20240102	Ma Qian	Ba Li	Wei Lingling

1 Application

The NDG3A-3200Z disconnecter is designed for use in DC power systems operating at a maximum rated voltage of DC1500V and carrying a rated current of 3200A. It can be used for infrequent switching operations and provide line isolation. Moreover, it is primarily installed in energy storage bus cabinets and bus boxes, rendering it well-suited for applications within the energy storage industry.

2 Product picture



NDG3A-3200Z/2/P

3 Product model

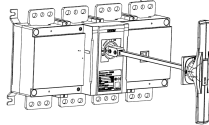
ND G 3 A - □ □ / □ / □
1 2 3 4 5 6 7 8

Item	Parameter type	Code Description
1	Enterprise code	ND "Nader" low-voltage apparatus
2	Product code	G Disconnecting switches/disconnectors
3	Design code	3
4	Derived code	A
5	Rated current (A)	In: 3200
6	Product type	Z: DC disconnecter
7	Number of poles	2: 2 poles
8	Handle type	P: Handle outside a cabinet ^①

Note: ① No inside-cabinet handles

4 Main technical parameters

Table 1: Main Technical Parameters of NDG3A-3200Z

	
Product Model	NDG3A-3200Z
Applicable Standards	IEC60947-1 / IEC60947-3/ GB/T14048.1/ GB/T14048.3
Certificated	CCC, CE, TUV
Number of product poles	2
Rated working voltage Ue (V)	1500
Rated insulation voltage Ui (V)	1500
Rated impulse withstand voltage Uimp (kV)	12
Rated current In (A)	3200
Rated short-time withstand current Icw (kA) 1s	50
Rated limited short-circuit current (kA)	150
Utilization category	DC-20A/DC-20B
Single-phase internal resistance (mΩ)	0.08
Minimum cross-sectional area of copper bar (mm ²)	3 pcs 100 x 10
Minimum tightening torque of copper bar connection (N.m)	40
Mechanical life (times)	4000
Operating torque (N.m)	56 ^①
Overall dimensions (L × W × H, mm)	492×288×165.5
Installation method	Screw mounting
Weight (kg)	18.5±1

Note: ① Floating range of operating torque is 0~35%.

② For other parameters not specified, refer to GB/T14048.3

5 Working conditions

5.1 Ambient temperature

Products are suitable for ambient temperature:-25°C~55°C (UPS test ambient temperature is 40°C); when the ambient air temperature exceeds +55°C, the user should negotiate with the manufacturer, refer to table 2.

Table 2 Temperature derating of NDG3A-3200Z

Ambient temperature	55°C	70°C	85°C
Correction factor of working current	1	1	1

5.2 Altitude

Products are suitable for altitude: below 2000 meters; at elevations surpassing 2000 meters, users are advised to enter into consultations with the manufacturer before proceeding with use, refer to table 3.

Table 3 Altitude derating of NDG3A-3200Z

Altitude	2000m	3000m	4000m
Impulse withstand voltage	12kV	12kV	12kV
Power frequency withstand voltage	3820V	3820V	3820V
Correction factor of working voltage	1	1	1
Correction factor of working current	1	1	1

Note: high altitude derating refer to GB/T 2023.1-2000 5.6.1 table2, test under low altitude (below 2000 meters)

5.3 Operating/storage relative humidity

The relative humidity at an ambient temperature of +40°C should not exceed 50%. A higher relative humidity is allowed at a lower humidity

5.4 Protection class

Protection class: IP20 for the complete appliance, handle outside a cabinet: IP65

5.5 Storage environment

-50°C~+80°C

5.6 Pollution level

Level 3

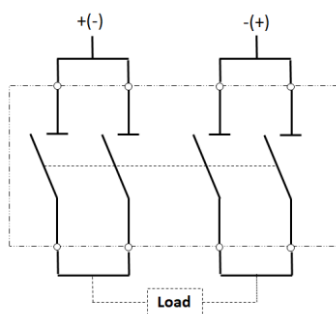
5.7 Installation category

III and IV

5.8 Environmental protection requirements

Comply with the requirements of RoHS2.0 directives

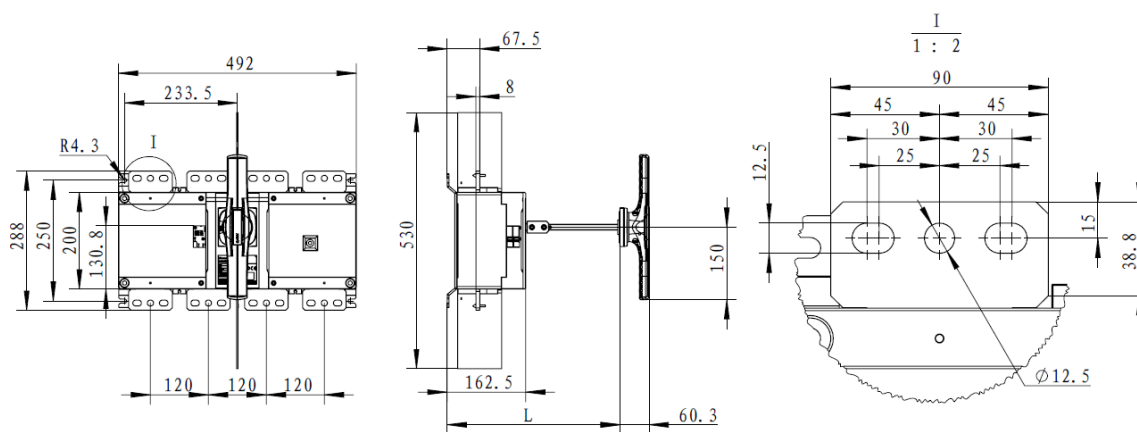
6 Electrical schematic Diagram



Product electrical schematic diagram

7 Dimensions

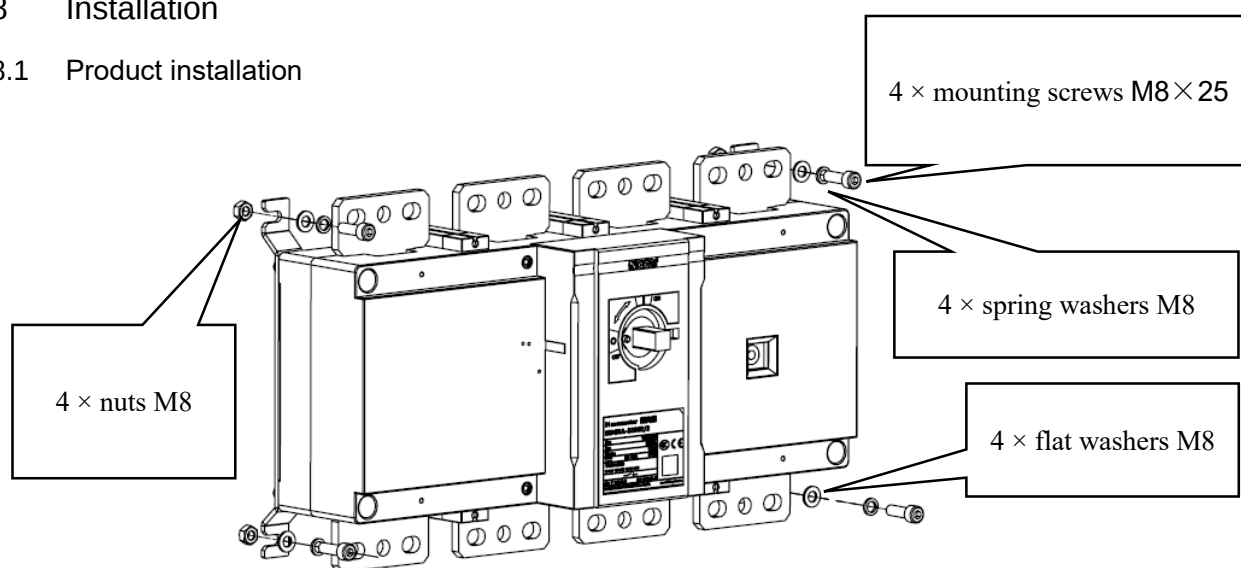
Body + Phase partition + Handle outside a cabinet



L = "A" + 158 (unit: mm, A: Square shaft length of handle outside a cabinet)

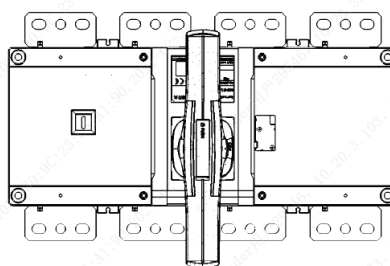
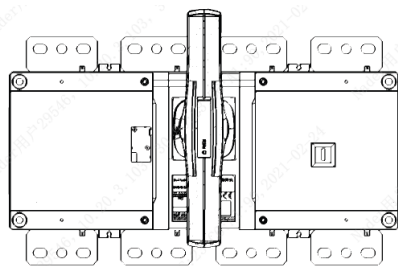
8 Installation

8.1 Product installation

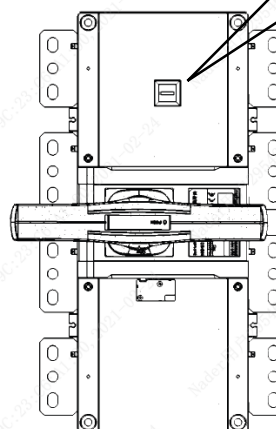
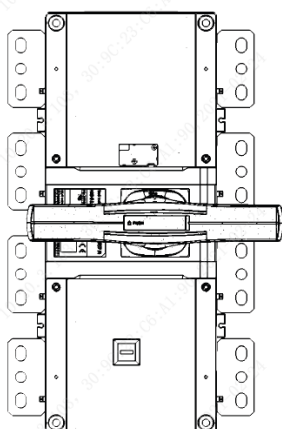


8.2 Product installation position description

1) The product can be installed horizontally.



2) Vertical installation is available, but the contact inspection window shall not position upward, as the 2nd method shown in the figure below. The inclination of the vertical installation plane shall not be more than 5°.



Inspection window
Cannot be
upward-facing

9 Packaging and Storage

Packed in wooden crates. With the terminal protected with an anti-oxidation sleeve, the product is covered with a moisture-proof bag and secured in the box. Each box contains a single unit. Dropping test is in accordance with LXWI8.203-15 Product Drop Experiment Inspection Speculation A1.

10 Environmental Compliance

Products comply with RoHs2.0.

11 Accessories

11.1 List of accessories

SN	Name	Accessories Installation and Quantity
1	Mounting Screw Kit	Installed on the product bracket and connected to the cabinet
2	Busbar Screw Kit	Mounted on busbars of inlet and outlet lines of the product
3	Phase partition	Mounted on the product body, 2 pcs

11.2 Optional accessories list

SN	Name	Accessories installation and quantity
1	Handle outside a cabinet	Mounted on the cabinet door, connected to the body with square shaft
2	Auxiliary contact	Mounted on the front left of the main switch, up to two units

11.3 Accessory Model Interpretation

11.3.1 Model interpretation of handle outside a cabinet

SB 1 -  / G3A-2000

1 2 3 4

SN	SN Description	Code Description
1	Function code	SB Handle
2	Design SN	1
3	Square Shaft Code	200: Shaft length of 200mm 400: Shaft length 400mm
4	Suitable switch model	The G3A-2000 is suitable for NDG3A-2000, 1800, 1600, and 3200Z

11.3.2 Auxiliary contact model interpretation

F 1 - 11  / G3A-2000

1 2 3 4 5

SN	SN Description	Code Description
1	Function code	F Auxiliary Contacts
2	Design SN	1

3	Pairs of contacts	11: One NO, One NC
4	Installed quantity	A: One for each unit B: Two for each unit
5	Suitable switch model	The G3A-2000 is suitable for NDG3A-2000, 1800, 1600, and 3200Z

11.4 Accessory Parameters

Rated parameters of the auxiliary contact

Electrical parameters:

Rated working voltage	AC230V	DC250V	DC125V
Rated working current	16A	0.3A	0.6A

Rated insulation voltage : AC1000V

Agreed thermal current: I_{th}: 16A

Rated frequency: 50/60Hz

Usage category: AC-15, DC-13

Protection class: IP20

Electrical life: 20000 times

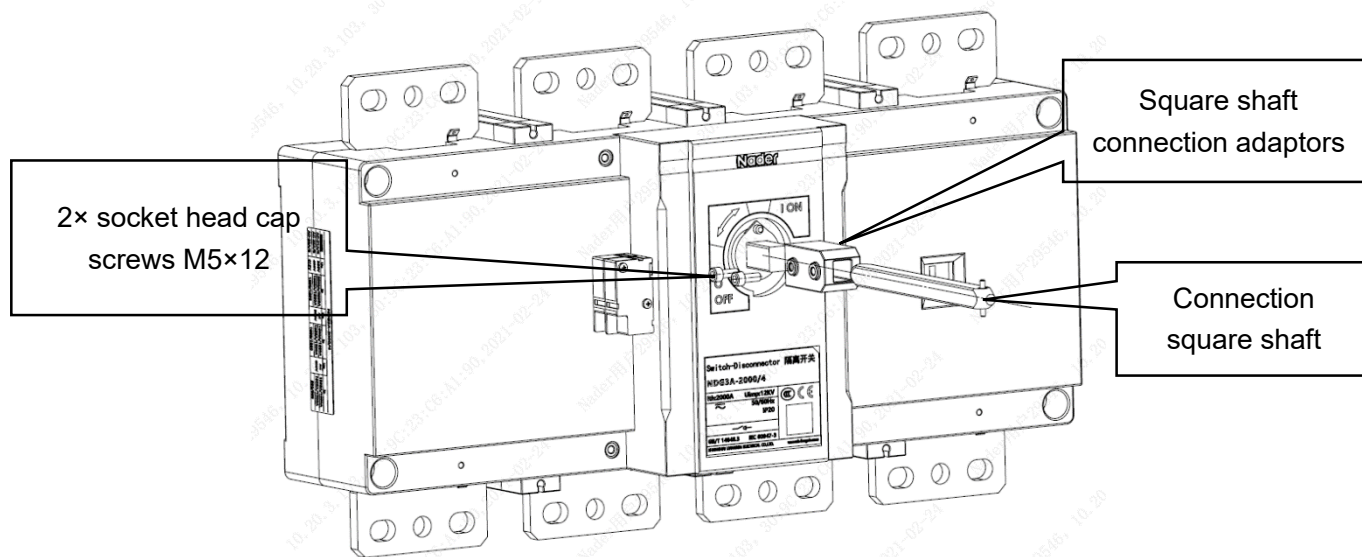
Standard certification: GB/T 14048.5

Comply with ROHS 2.0

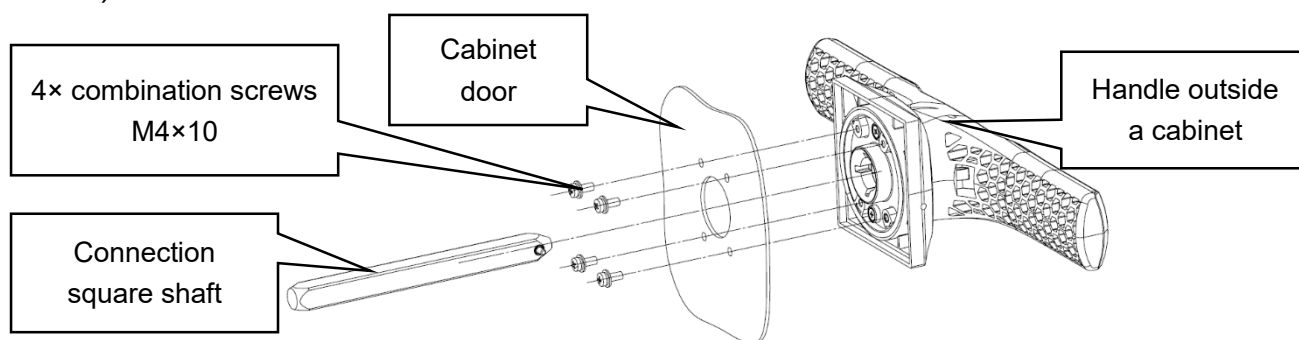
11.5 Accessory mounting method

11.5.1 Installation of the handle outside a cabinet

1) Connection square shaft installation of the handle outside a cabinet

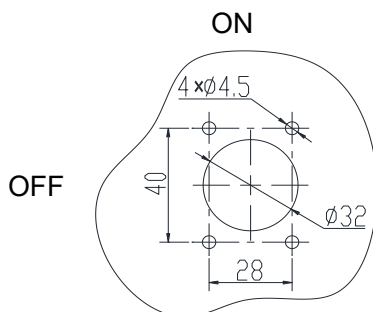


2) Cabinet door installation of the handle outside a cabinet

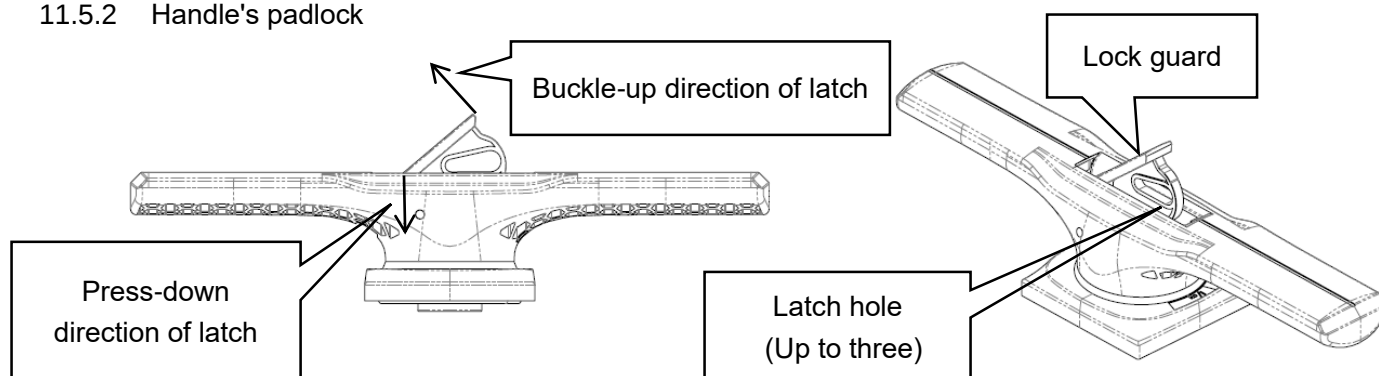


Note: Handle ON/OFF position corresponds to the product ON/OFF position.

3) Cabinet door mounting hole dimensions of the handle outside a cabinet

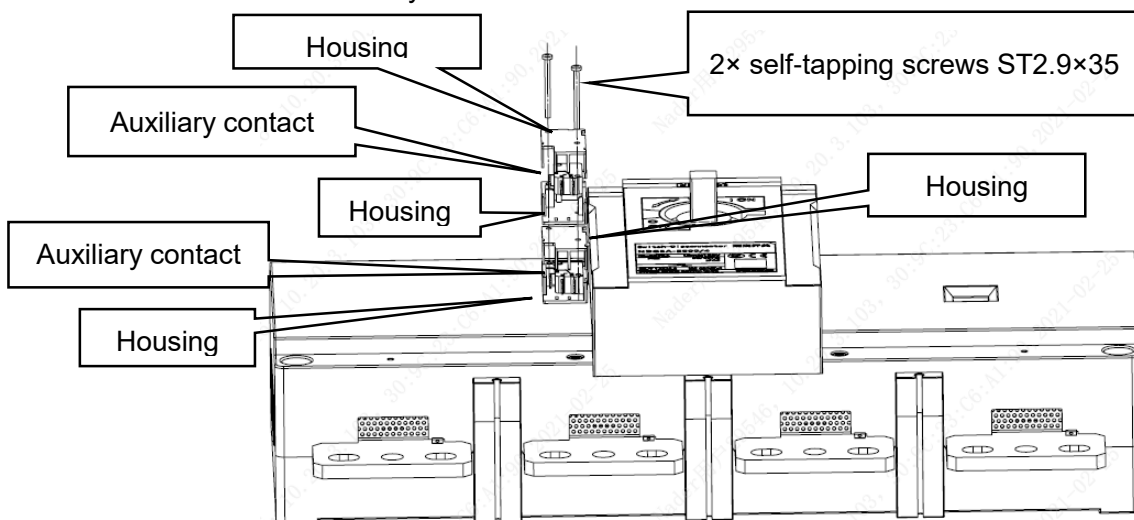


11.5.2 Handle's padlock

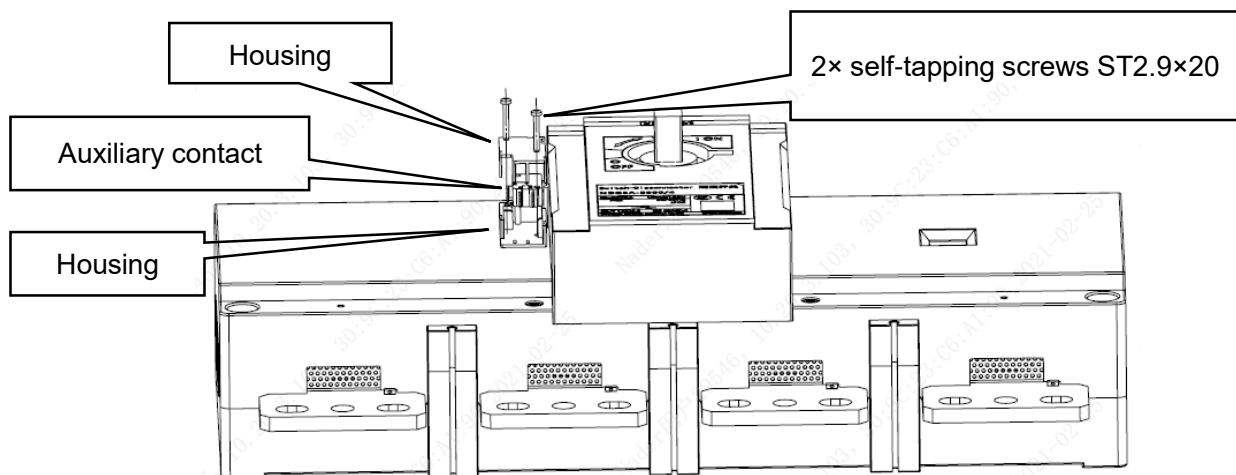


Note: Padlock is only available when the handle is in the OFF position

11.5.3 Installation of auxiliary contacts

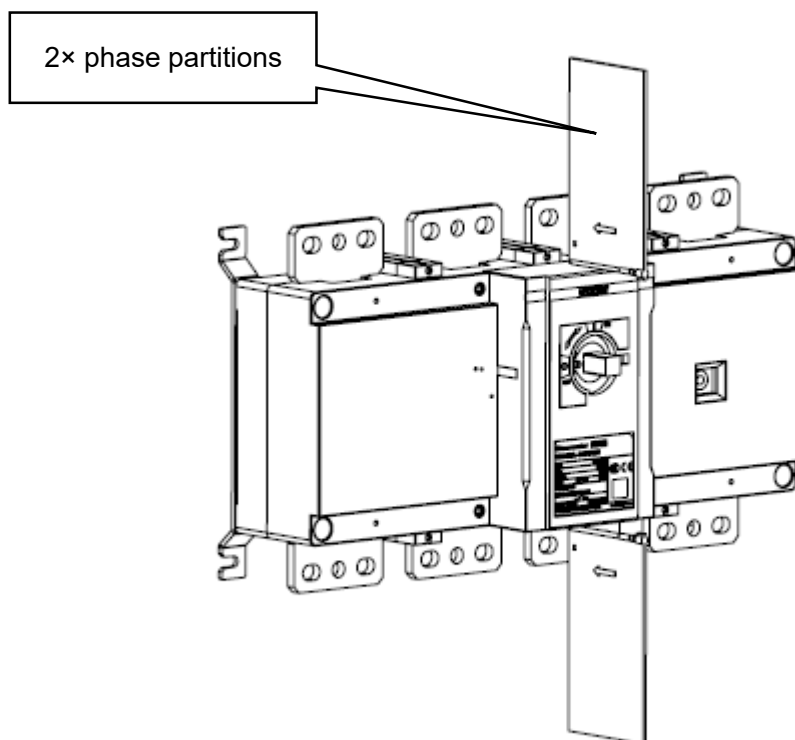


Installation of dual auxiliary contacts



Installation of single auxiliary contact

11.5.4 Installation of phase partition



Note: Insert the phase partition into the slot in the direction of arrow and press it evenly.

12 Notice

- 1) Any quality problem due to disassembly without permission will be the liability of the user
- 2) Do not touch the non-insulated exposed parts of the disconnecting switch when it is connected to a power supply
- 3) Connecting wires shall be fastened in the distribution cabinet rack. The switch shall not undertake the weight of the conductor. Before fastening the conductor, it is required to make the plane of the busbar or cable terminal in parallel to that of the wiring terminal of the switch. After the conductor is connected with the wiring terminal of the switch by using the bolts, the switch shall not undertake any mechanical stress
- 4) Reliable cabling is required to prevent the terminals from being burnt out due to abnormal heat at the terminals