

Shanghai Liangxin Electrical Co., Ltd.

NDW2GZ-2500(3P DC1500V) disconnecting switch

Product Specification

(IPD-ENG-DEV-T03 A1 2018-07-10)

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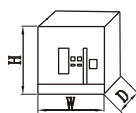
Revision History					
Version	Revision Reason/Content	Implementation Date	Prepared by	Reviewed by	Approved by
0	Newly prepared and issued.	2022/07/11	Wang Wanlu	Zhao Peng	Luo Guorui
1	1. Add breaking capacity derating factor; 2. update operating power consumption, operating current and maximum peak of starting current of motor operating mechanism.	2022/08/01	Wang Wanlu	Zhao Peng	Luo Guorui
2	1.Change short-circuit breaking capacity into making and breaking capacity; 2.Update the minimum electrical gap of copper bar; 3.Update short-connected busbar configuration (table 17); 4.Add terminal bolt as optional function accessories in the ordering type selection specification.	2022/08/16	Wang Wanlu	Zhao Peng	Luo Guorui

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Chapter1 Product Overview

Table 1 Table of Technical Parameters

Disconnecting switch model			NDW2GZ-2500	
Rated current Ie（+40℃）（A）			800、1000、1250、1600、2000、2500	
Rated working voltage Ue（V）			DC1500（3P）	
Rated insulation voltage Ui（V）			1500	
Rated impulse withstand voltage Uimp（kV）			12	
Number of poles			3P in series	
Closing time ^{Note 1} （ms）			≤70	
Full break time ^{Note 2} （ms）			≤40	
Rated short-circuit making capacity I _{cm} （kA）			50	
Rated short-time withstand current I _{cw} （kA）			Common	Enhanced
			50/1s	150/200ms
Utilization category			DC-PV2	
Operation performance	Electrical life (times) Operation frequency (30 times/h)	DC1500V	1000	
	Mechanical life (times) Operation frequency (60 times/h)	Maintenance-free	10000	
		With maintenance	15000	
Installation type			Fixed type	
Wiring method of the main circuit			Vertical wiring Horizontal wiring	
Boundary dimension: W×D×H (mm) 		Fixed type 3P	368×309.5×394	
Weight (kg)		Fixed type 3P	51(800A～1250A)	53(1600A～2500A)

Note: 1. Closing time: Interval from the beginning of the disconnecting switch closing to the end of the contact time for all pole contacts ;

2. Full break time: Interval from the beginning of the disconnecting switch disconnection to the end of the arcing time.

Chapter2 Field of Application

2.1 Working Environment

Ambient temperature

Applicable ambient temperature is $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$, the average within 24 h shall not be more than $+35^{\circ}\text{C}$.

In case the temperature is above $+50^{\circ}\text{C}$, the user shall reduce the capacity according to Table 3.

Table 2 Table of Working Environmental Parameters

Environmental requirements	Description of the specific parameters
Operating ambient temperature	The operating ambient temperature is $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$; the average within 24 h shall not be more than $+35^{\circ}\text{C}$. If the ambient temperature is higher than $+50^{\circ}\text{C}$, the user needs to reduce the capacity. (For details, see Table 3) Note:The GD type disconnecting switch can be used under the environment of plateau and -40°C low temperature; the corresponding disconnecting switch confirms to GB/T 20645 《Specific environment condition—Technical requirements of low-voltage apparatuses for plateau》.
Altitude	The altitude of the installation site doesn't exceed 2,000m. For use with the altitude above 2,000m, it is necessary to correct the working performance, including power frequency withstand voltage、rated current、making and breaking capacity (For details, see Table 4).
Pollution degree	Pollution level: Level 3
Wet heat resistance	The relative air humidity at a maximum temperature of $+40^{\circ}\text{C}$ should not exceed 50%. A higher humidity is allowed at a lower temperature, but special measures should be taken to address occasional condensing due to temperature fluctuation.
Storage conditions	The air temperature is $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$.
Storage period and conditions	The relative air humidity at a maximum temperature of $+40^{\circ}\text{C}$ should not exceed 50%, and the product can be stored for 1 year without unpacking. The product can be stored for 3 months under the condition of packaging. For continuous use, the surface shall be subjected to dust and moisture removal, and measure the loop resistance less than $35\mu\Omega$.
Installation condition	With the vertical gradient no more than 5° , the disconnecting switch shall be installed in places without explosion danger, conductive dust or the possibility of corroding metal and damaging the insulation.

Derating factor

Table 3

Ambien temperature	$+40^{\circ}\text{C}$	$+45^{\circ}\text{C}$	$+50^{\circ}\text{C}$	$+60^{\circ}\text{C}$	$+65^{\circ}\text{C}$	$+70^{\circ}\text{C}$
Rated curren ($I_e=2500\text{A}$)	$1.0I_e$	$1.0I_e$	$1.0I_e$	$0.9I_e$	$0.88I_e$	$0.84I_e$

Altitude

Altitude of the installation site shall not exceed 2,000 m.

If the altitude of the installation site is between 2,000 m to 5000m, it can be specially customized. For the working performance, refer to the correction value in the following table (Table 4).

Table 4

Altitude (m)	2000	3000	4000	4500	5000
Power frequency withstand voltage (V)	3500	3500	3000	2500	2200
Rated current	1.0Ie	0.93Ie	0.88Ie	0.85 Ie	0.82Ie
Making and breaking capacity derating factor	1.0	0.83	0.71	0.65	0.58

Note: The above data is calculated according to the test and theory. The data represent only guidelines and recommendations.

2.2 Anti-corrosion Level

Salt spray level: severity class (2)

2.3 Pollution Level

Pollution level: Level 3

The disconnecting switch can be operated in the industrial environment specified in IEC 60664-1. However, we still recommended that it shall be installed in a switchgear with suitable temperature and no excessive dust pollution.

2.4 Shock proof Requirement

The disconnecting switch can ensure resistance to mechanical shock, and has passed the GB/T4798.3 standard test;

Amplitude: $\pm 1.5\text{mm}$ (2Hz~9Hz);

Constant acceleration: 5m/s^2 (9Hz~200Hz);

Super strong shock may result in part damage, and impact the reliable action of the disconnecting switch.

2.5 Electromagnetic Interference

The disconnecting switch can resist the following electromagnetic interference

- Overvoltage caused by electromagnetic interference;
- Overvoltage due to aging of the distribution system or environmental interference;
- Radio wave;
- Electrostatic discharge.

The disconnecting switch has passed the electromagnetic compatibility (EMC) test stipulated by following standards

- GB/T14048.3-2017

The above tests can ensure that the disconnecting switch won't wrongly occur tripping.

2.6 Installation Category

The installation category of the disconnecting switch's main circuit and power transformer primary coil is IV; the rest auxiliary circuit and control circuit installation category is III.

2.7 Protection Class

IP30 and IP40 (installed in a cubicle and equipped with a protective door frame).

2.8 Utilization Category

DC-PV2.

2.9 Reference Specifications of Disconnecting switch's Main Circuit Copper Bar

Table 5

Frame size	Rated current I_e (A) +40°C	Copper bar specification	
		Dimensions	Number
2500	800	80mm×5mm	2
	1000	80mm×5mm	2
	1250	80mm×5mm	3
	1600	80mm×5mm	3
	2000	80mm×10mm	2
	2500	80mm×10mm	3

Note: 1. The table indicates the copper bar specifications adopted when the disconnecting switch is under the ambient temperature of 40°C and the open wide installation under the heating condition meets the stipulation in GB 14048.3. If the temperature is higher than 50°C, the quantity of copper bar should be increased, or the capacity should be reduced refer to table 3.

2. The above data is calculated according to the test and theory, and for reference only.

3. The maximum permissible temperature of the copper bar is no more than +120°C.

4. The electrical gap of copper bar is ≤ 25 mm with the altitude more than 5,000m and relative humidity more than 90%; the electrical gap shall be adjusted according to the relevant standards.

2.10 Specifications and Models Description

ND W 2 GZ □ - □ 1 2 3 4 5 6		
SN	SN name	
1	Enterprise code	ND- Nader 良信电器
2	Product code	W - Universal
3	Design code	2
4	Derived code	G - Disconnecting switch Z - DC
5	Derived code	Not-marked - Conventional
6	Frame size	2500

Notes: For details of the product ordering models and specifications, see the ordering type selection specification.

Chapter3 Accessories

3.1 Remote live operation

3.1.1 Closed electromagnet

Closed electromagnet is mainly composed of coil, iron core component and electronic parts. In the condition of mechanism energy storage, as long as the closed electromagnet is energized, the disconnecting switch can be closed.

◆ Action features of the closed electromagnet.

1) When the power supply voltage of the closed electromagnet maintains at 85%~110% of the rated control supply voltage U_s , operation of the closed electromagnet can make reliable closing of the disconnecting switch;

2) Closed electromagnet is the short-time duty-type;

3) There is the control circuit inside to ensure the long-time energizing, which shall be >200ms. The user cannot connect it with the auxiliary switch point of the disconnecting switch in series;

4) It can be energized for 3s at 1.4 U_s .

5) Without the overvoltage protection, 1.4 U_s beyond the limit, long-term energization will burn.

Technical Parameters of Closed Electromagnet are shown in the table below.

Table 6

Rated insulation voltage (U_i)	Rated control supply voltage (U_s)	Instantaneous power
400V	AC380V/AC400V 50/60Hz	620VA
	AC220V/AC230V 50/60Hz	500VA
	DC220V	500W

3.1.2 Shunt release

Shunt release is mainly composed of coil, iron core component and electronic parts, which can make the disconnecting switch disconnect by remote operation.

◆ Action features of the shunt release

1) When the power supply voltage of the shunt release maintains at 70%~110% of the rated control supply voltage U_s , operation of the shunt release can make the disconnecting switch disconnect;

2) Closed electromagnet is the short-time duty-type.

3) There is the control circuit inside to ensure the long-time energizing, which shall be >200ms. The user cannot connect it with the auxiliary switch point of the disconnecting switch in series;

4) It can be energized for 3s at 1.4 U_s .



Fig. 1



5) Without the overvoltage protection, 1.4Us beyond the limit, long-term energization will burn.

Technical Parameters of Shunt Release are shown in the table below.

Table 7

Rated insulation voltage (Ui)	Rated control supply voltage (Us)	Instantaneous power
400V	AC380V/AC400V 50/60Hz	620VA
	AC220V/AC230V 50/60Hz	500VA
	DC220V	500W

3.1.3 Maintained shunt release

The maintained shunt release is mainly composed of coil, iron core component and electronic parts, which can make the disconnecting switch disconnect by remote operation.

◆ Action features of the shunt release (holding type)

- 1) When the power supply voltage of the retentive shunt release is maintained between 70% and 110% of the rated control power supply voltage, operating the shunt release can make the circuit breaker disconnect.
- 2) When the applied voltage is 85% to 110% of the rated working voltage of the retentive shunt release, the retentive shunt release can ensure that the circuit breaker cannot be closed reliably.
- 3) The retentive shunt release is a long-term working system, and it needs an interval of more than 500ms to give a closing signal after a power failure.
- 4) Trigger time $t > 200\text{ms}$ for each power-on.
- 5) The 1.3Us tolerance time is 9.5s without damage, and the 1.4Us tolerance time is 0.5s without damage.



Maintaining shunt release technical parameters are shown in the table below.

Table 8

Rated insulation voltage (Ui)	Rated control power supply voltage (Us)	Instantaneous power	Running power
400V	AC220V/ AC230V 50/60Hz	<600VA	<5VA
	DC220V	<600W	<5W

3.1.4 Motor operating mechanism

The disconnecting switch can only be closed after the motor operating mechanism make the disconnecting switch to store energy in advance.

◆ Operation features



1) If the rated supply voltage of the motor operating mechanism is between 85%~110%, energy storage of the disconnecting switch can be made in place.

2) The motor will close the power supply automatically and stop operation after it stores energy in place.

3) The motor operating mechanism can realize the automatic pre-energy storing.

4) Each power-on trigger time: $t > 7s$, long-term energization is allowed for the secondary circuit input terminal.

5) Without the overvoltage protection, 1.4Us beyond the limit, long-term energization will burn. It is allowed to energize for 1s at 1.4Us during operation.

Operating power is shown in the table below.

Table 9

Rated insulation voltage (Ui)	Energy storage time	Rated control supply voltage (Us)	Operating power consumption	Operating current	Maximum peak of starting current
AC400V	3s~5s	AC380V/AC400V	190VA	0.5A	2.7A
		AC220V/AC230V 50/60Hz	170VA	0.8A	4.6A
		DC220V	220W	1.0A	4.5A

3.1.5 Undervoltage release

◆ Action features of the undervoltage release

1) When the applied voltage drops, even slowly drops to 70%~35% of the rated operational voltage, the undervoltage release will work to disconnect the disconnecting switch;

2) When the applied voltage is less than 35% of the rated operational voltage of the undervoltage release, the undervoltage release will make the disconnecting switch cannot be closed;

3) When the applied voltage is 85%~110% of the rated operational voltage of the undervoltage release, the undervoltage release can be closed reliably to guarantee the reliable closing of the disconnecting switch.

◆ Undervoltage release can be divided into two types (instantaneous release and delayed release), which is mainly composed of coil, iron core component and electronic parts.

◆ The undervoltage delayed release sets the delay time of the release action through toggling the toggle switch on the undervoltage delayed device. The delay time is set as 1 s, 3 s, 5 s or instantaneous as required.

See the table below for the power consumption of loss of undervoltage release.



Table 10

Rated insulation voltage (Ui)	Rated operational voltage (Ue)	Operating power
400V	AC380V/AC400V 50/60Hz	5.2VA
	AC220V/AC230V 50/60Hz	3.9VA
	DC220V	3.9W
	DC110V	3.9W

3.1.6 Loss-of-voltage release

◆ Action features of the loss of voltage release

- 1) When the applied voltage suddenly drops to 0%~35% of the rated working voltage, the loss of voltage release will work to disconnect the disconnecting switch;
- 2) When the applied voltage is less than 35% of the rated operational voltage of the loss of voltage release, the loss of voltage release will make the disconnecting switch cannot be closed;
- 3) When the applied voltage is 85%~110% of the rated working voltage of the loss of voltage release, the loss of voltage release can guarantee reliable closing of the disconnecting switch.
- 4) When the applied voltage drops, not lower than 35% of the rated working voltage ,the loss of voltage release can guarantee reliable closing of the disconnecting switch.



The loss of voltage release can be divided into instantaneous release and delayed release, which is mainly composed of coil, iron core component and electronic parts.

- #### ◆ The loss of voltage delayed release sets the delay time of the release action through toggling the toggle switch on the loss of voltage delayed device. The delay time is set as 1s, 3s and 5s or instantaneous as required.

See the table below for the power consumption of loss of voltage release.

Table 11

Rated insulation voltage (Ui)	Rated operational voltage (Ue)	Operating power
400V	AC380V(AC400V) 50Hz/60Hz	8VA
	AC220V(AC230V) 50Hz/60Hz	4VA

3.2 Signal Output Accessories

3.2.1 Auxiliary switch



The conventional thermal current of the auxiliary switch is 10A;

Auxiliary contact form: four normally opened and four normally closed、 five normally opened and five normally closed、 six normally opened and six normally closed;

Technical parameters of auxiliary contact.

Table 12

Auxiliary contact form		Four normally opened and four normally closed, Five normally opened and five normally closed Six normally opened and six normally closed
Minimum load(DC)		2mA/15V
Breaking capacity	DC-12	5A/DC250V
	AC-12	10A/AC250V
	DC-13	1.2A/DC220V
	AC-15	3A/AC400V

3.2.2 Closing ready signal output device

Closing ready signal output device of the disconnecting switch is the output signal device that reflects the operating mechanism to achieve the closed state. It can output signals if it meets the following mechanical states. See the table below for technical parameters.

- ◆ Disconnecting switch off state;
- ◆ Energy storage in place;
- ◆ No disconnection instruction;
- ◆ Undervoltage release 、 loss of voltage release closing in place;

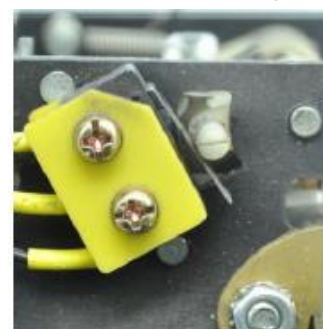


Table 13

Breaking capacity	3A /AC250V
	5A /AC125V

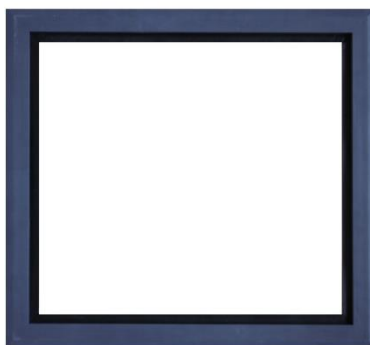
3.3 Counter

Counter is used to record the number of the "close-open" operation of the disconnecting switch.



3.4 Door frame

It is mainly placed on the door of the cubicle for sealing effect, and can make the protection level of the disconnecting switch reaches IP40. It is beautiful and practical.



3.5 Dust cover

Installed on the beam of the wiring terminal, it can prevent dust and other debris falling into the terminal of the wiring terminal, leading to poor contact. It is an optional accessory.



3.6 Lock

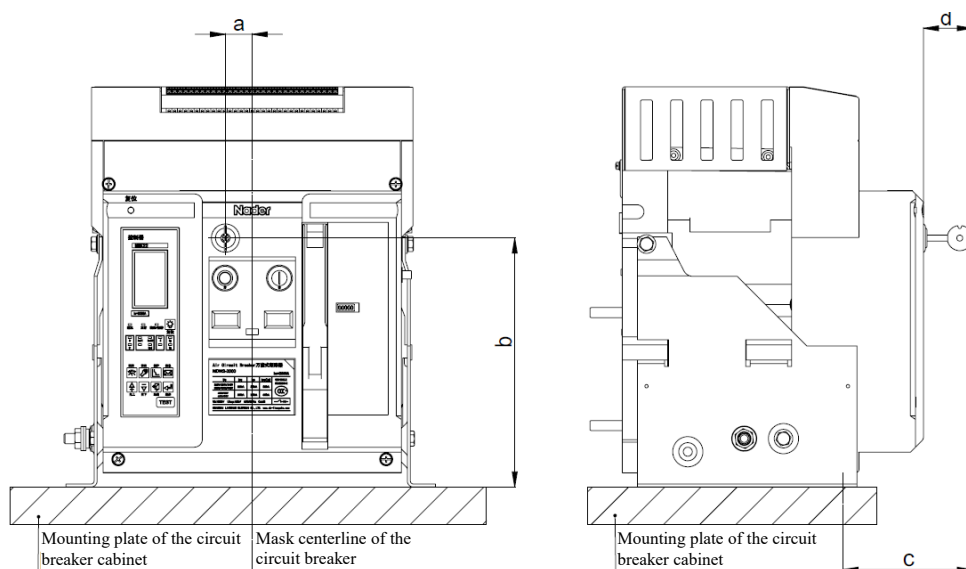
3.6.1 Off-position key lock

◆ This key lock is locked on the manually disconnected position of the disconnecting switch. When the key is anticlockwise locked and pulled out, the disconnecting switch cannot carry out closed operation, so as to prevent irregular operation. Model and type are shown in the table below.

Table 14

Model	Name	Number of disconnecting switches	Number of keys
SF11	One lock one key	1	1
SF21	Two locks one key	2	1
SF31	Three locks one key	3	1
SF32	Three locks two keys	3	2
SF53	Five locks three keys	5	3

◆ When the off-position lock is optionally selected, this accessory is sent to the user after being assembled with the disconnecting switch. As the off-position lock protrudes out of the disconnecting switch mask, the installer shall pay attention to the protruding dimension when opening the power distribution cabinet door. This dimension diagram and data are as follows.



Fixed type

Table 15

Unit: mm

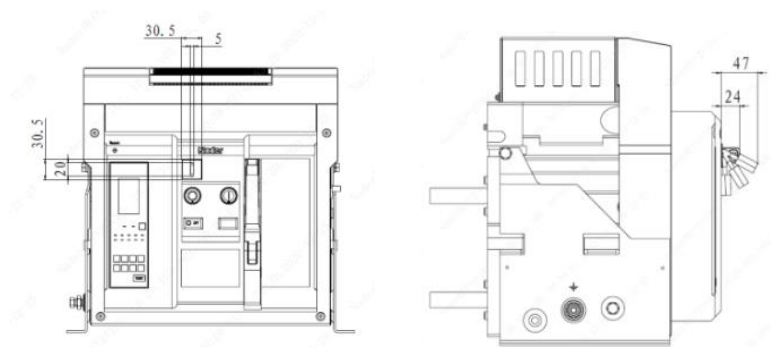
a	b	c	d
27	247	115	35

3.6.2 Safety lock

When the handle of safety lock is put the padlock, the product can be locked in opening state, and the product cannot be closed. Only when all padlocks are unlocked can the product be closed. The proper diameter for anchor beam is 5mm when the padlocks range from one to three, or the proper diameter for anchor beam is 5mm when the padlocks range from one to two.

You can choose from safety lock and off-position key lock, and the two have the same installation center position. The size of safety lock can refer to off-position key lock.

When choose safety lock, this accessory will be delivered to clients when the disconnecting switch is assembled. And because the safety lock is bulge on the mask, therefore, when installation people open power distribution cabinet, attention should be paid to the bulge size. This size diagram and data are shown below.



3.6.3 Button lock

- ◆ To be used with a padlock, it is used to prevent non-staff from illegally operating the opening/closing button (padlock should be prepared by users).
- ◆ When the off-position lock is optionally selected, this accessory is sent to the user after being assembled with the disconnecting switch. As the off-position lock protrudes out of the disconnecting switch cover, the installer shall pay attention to the protruding dimension when opening the power distribution cabinet door.

This dimension diagram and data are as follows.

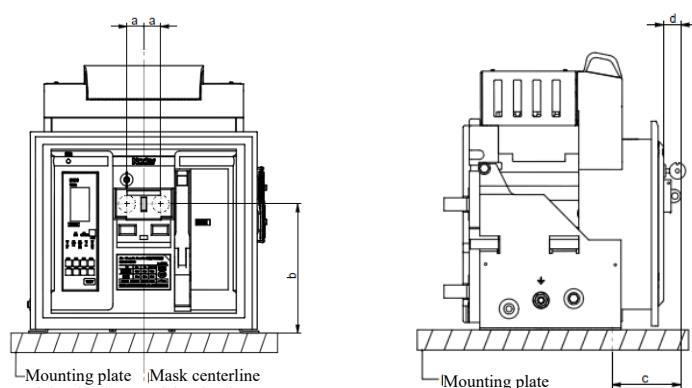


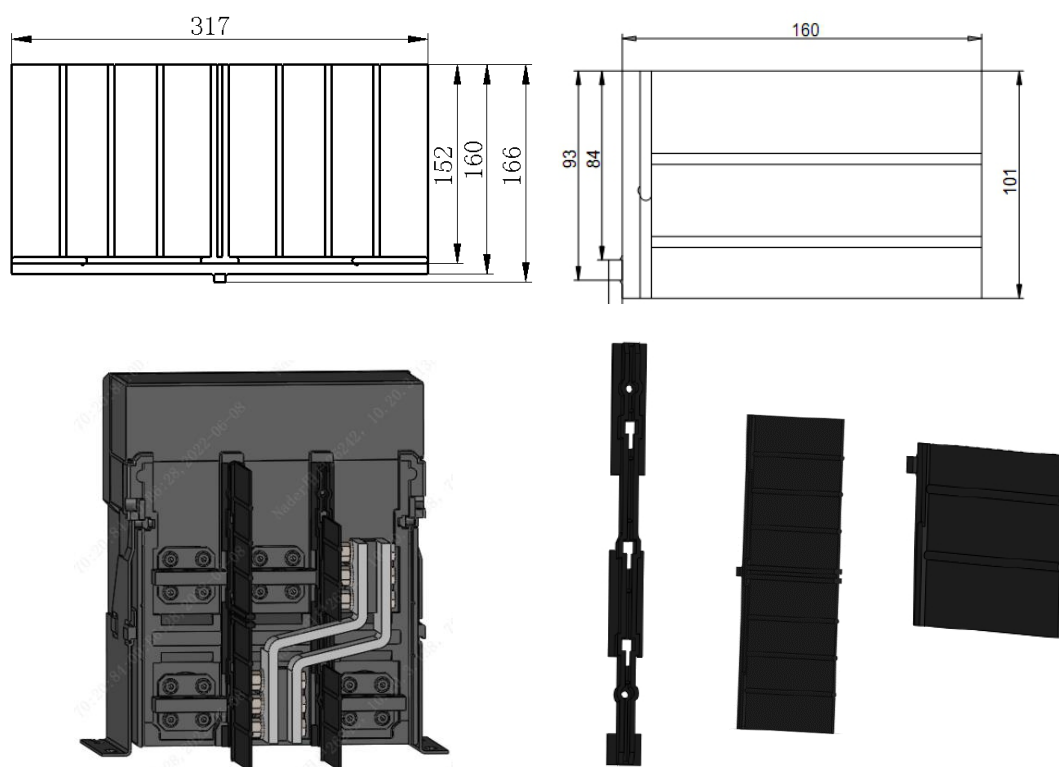
Table 16

Unit: mm

a	b	c	d
27	204	106	26.4

3.7 Phase partition

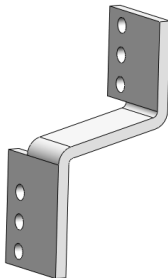
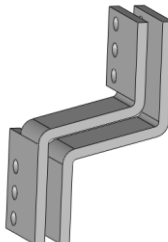
It is installed in the groove between the phase bus bars, used to increase the insulation strength between phase to phase of the main circuit and improve the insulation performance. For the location of installation, see the Fig below.



3.8 Short-connected busbar

The short-connected busbar is optional. The configuration of the busbar in series is shown in table 17.

Table 17

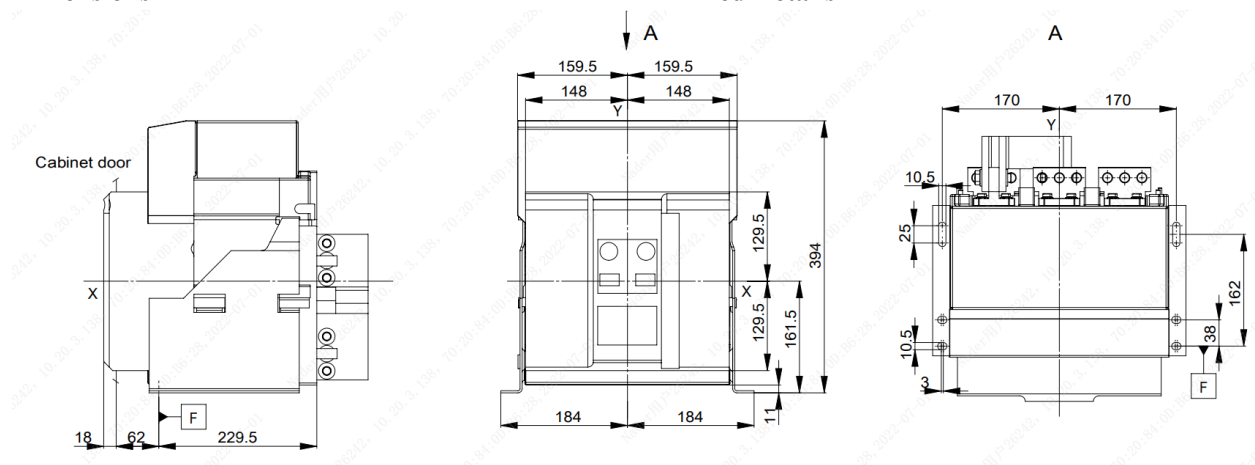
Rated current	Short-connected busbar
800A、1000A、1250A	
1600A 、2000A、2500A	

Chapter4 Outline and Installation Dimensions

NDW2GZ-2500 (3P) fixed type (unit: mm)

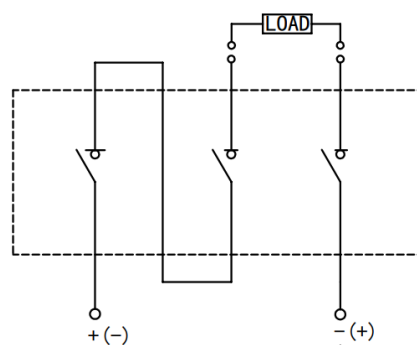
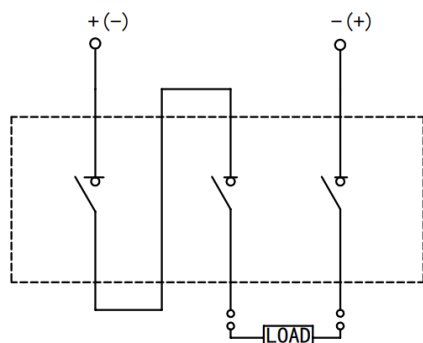
Dimensions

Fixed Details



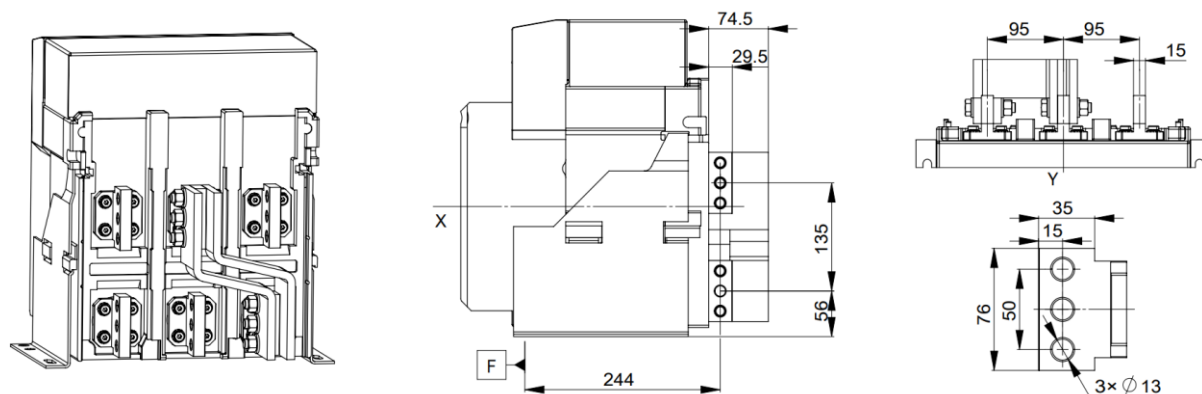
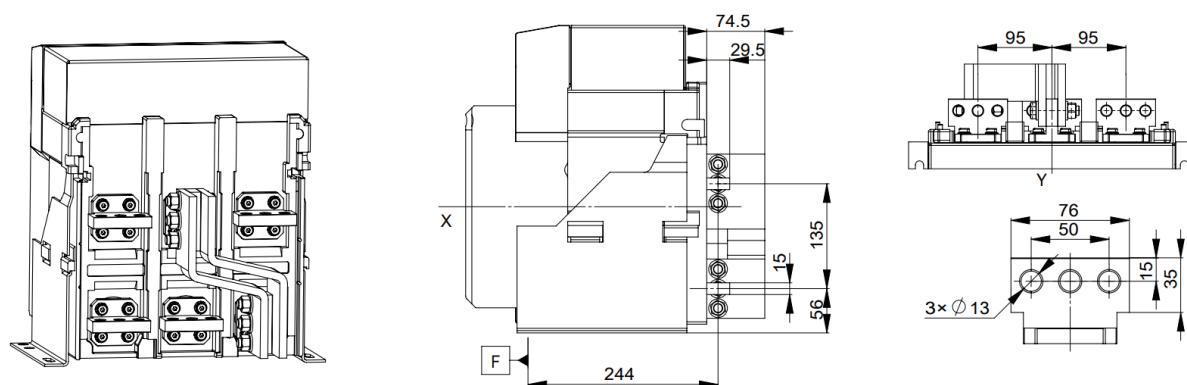
Note: X and Y are the symmetric axes of the front panel;

Wiring mode of 3P in series



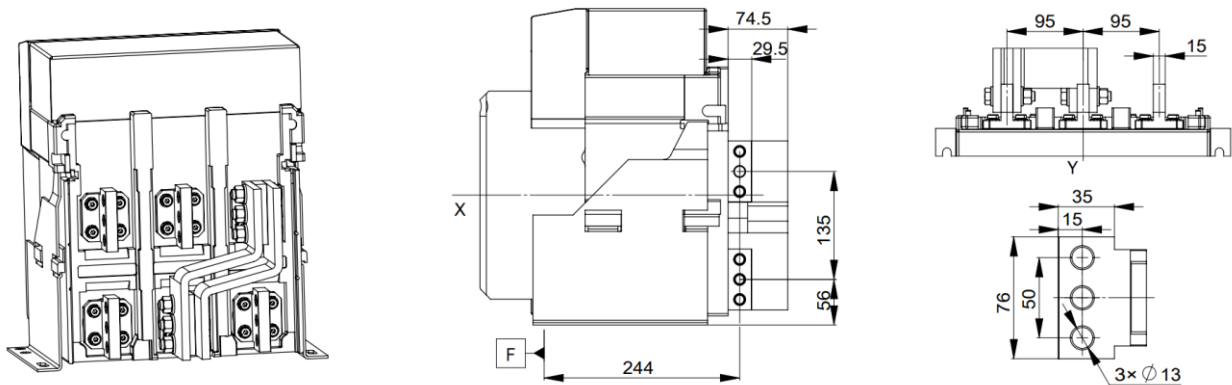
Power supply from upper terminals of 3P in series

Power supply from lower terminals of 3P in series

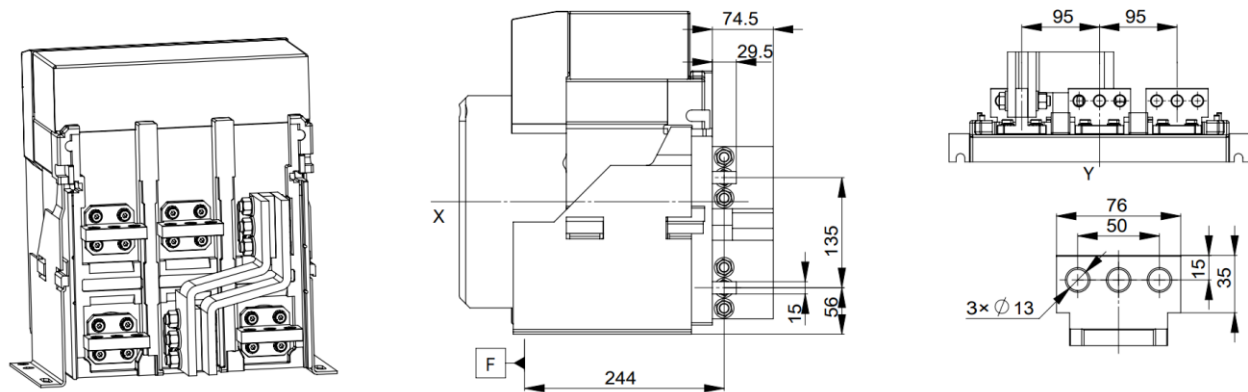
Power supply from vertical upper terminals of 3P in series**Detail****Power supply from horizontal upper terminals of 3P in series****Detail**

Note: X and Y are the symmetric axes of the front panel;

Detail

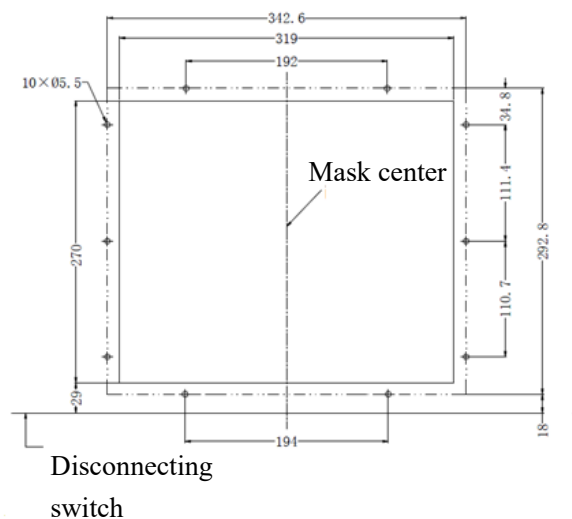


Detail



Note: X and Y are the symmetric axes of the front panel;

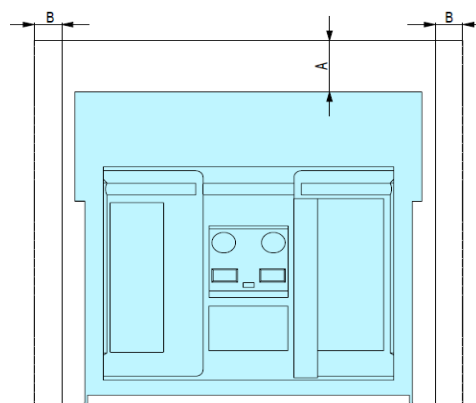
NDW2GZ-2500 Cabinet door open hole and installation pitch



Chapter5 Safe Distance and Flashover Distance

The disconnecting switch is installed in the cabinet, the safe distance between the disconnecting switch and the cabinet

When users install the disconnecting switch into the cabinet, the safe distance between the disconnecting switch and the cabinet is as shown in the figure below, and the installation dimensions are shown in Table below.



Unit: mm

Installation type of the disconnecting switch	To the insulator		To the metallic body grounded safely		To the live part	
	A	B	A	B	A	B
Fixed type	0	0	0	0	60	60

Note: 1. 150 mm space needed for removing the arc-extinguishing chamber should be considered for the safe spacing of the fixed type disconnecting switch;

2. If dust cover is added, height space of 70 mm for installation and rotating of the dust cover should be considered;
3. The flashover distance is consistent with the safe distance.

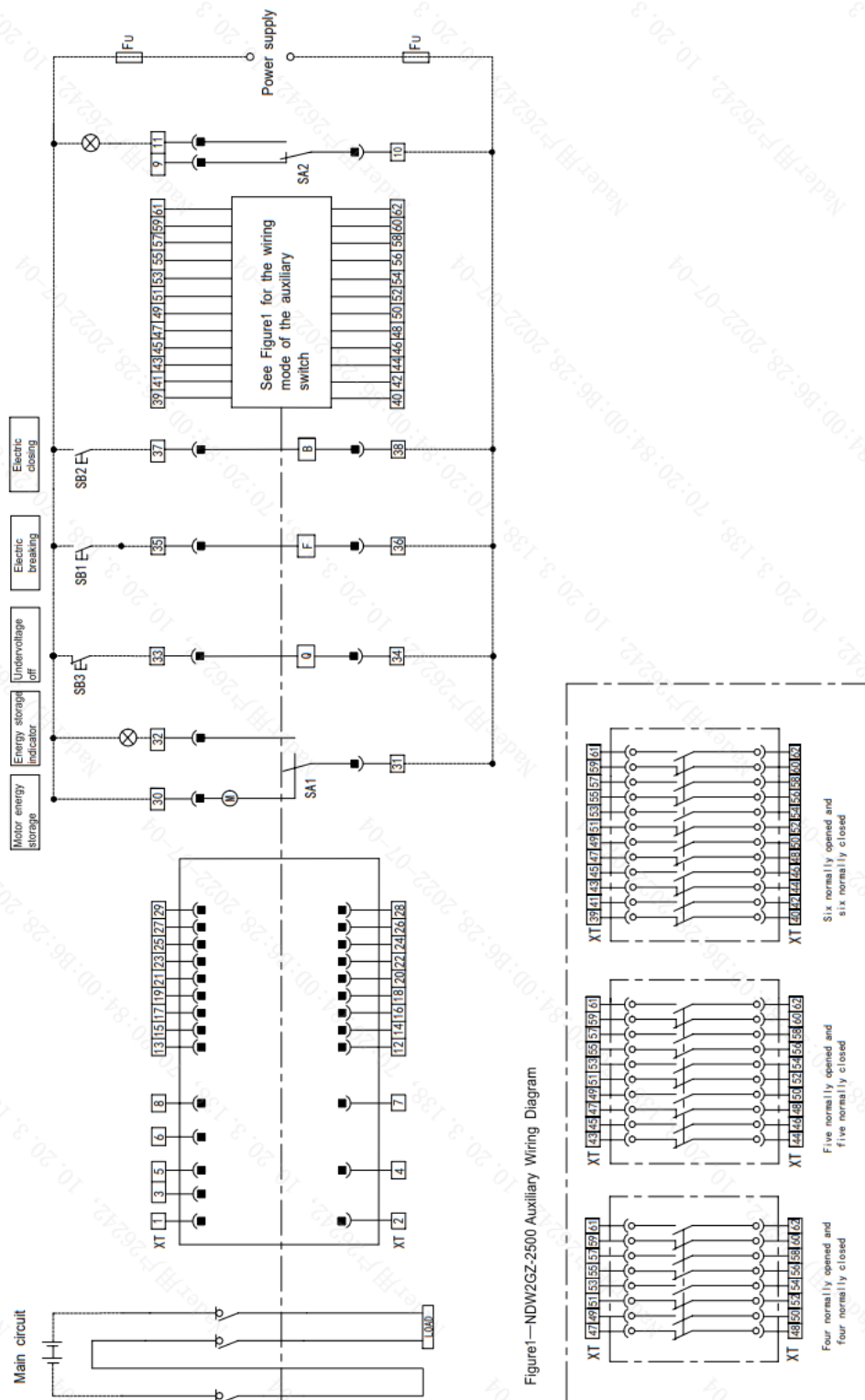
Chapter6 Installation Notes on Disconnecting switch

To ensure the safety of you and the electric equipment, before put the disconnecting switch into operation, users must:

- a. Carefully read the Operation Manual before installation and use of the disconnecting switch.
- b. Check whether the specification of the disconnecting switch is in line with the requirements before installation.
- c. Install the disconnecting switch under the environment condition without explosion danger, conductive dust or the possibility of corroding metal and damaging the insulation.
- d. Measure the insulation resistance of the disconnecting switch with a 1000V megohmmeter before installation of the disconnecting switch. When the surrounding medium temperature is $+20^{\circ}\text{C}\pm 5^{\circ}\text{C}$, the relative humidity 50%-70% should not be less than 20 mge; otherwise it needs to be dried, and it can be used until the insulation resistance meets the requirements.
- e. Prevent foreign matters from falling into the disconnecting switch when installing the disconnecting switch.
- f. Ensure the disconnecting switch is flat without additional mechanical stress when installing the conductive busbar.
- g. Conduct reliable grounding protection when installing the disconnecting switch. The grounding place of the disconnecting switch has an obvious grounding symbol.
- h. Carry out wiring of the control circuit according to the wiring diagram when installing the disconnecting switch; check whether the working voltage of the undervoltage, shunt, closed electromagnet, motor and related parts conforms to the actual voltage, and then carry out the secondary circuit energizing. In case of drawout disconnecting switch, the disconnecting switch should be shaken into the test position, then the undervoltage release will close and then the disconnecting switch can be closed.
- i. Pressing (or powering on) the closing button after the energy storage of the motor, the disconnecting switch will close.
- j. Pressing (or powering on) the opening button, the disconnecting switch will open.
- K. For manual storage of energy, pull the handle on the front panel up and down, a "click" sound can be heard after seven times, and the panel shows "storage of energy", the storage of energy ends. At this point, if there's undervoltage tripping, power on it (no need if without undervoltage tripping), then carry out closing operation.

Chapter7 Electrical Wiring Diagram

NDW2GZ-2500 electrical wiring diagram



Chapter8 Ordering Type Selection Specification

Disconnecting switch Model Explanation and Encoding Rules

ND W 2 GZ □ - □ □/□/□/□ □ □/□ □/□/□/□/□/□/□
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

SN	Name	Specification, type code	Description
1	Enterprise code	Nader brand low-voltage electrical appliance	
2	Product code	W - Universal	
3	Design code	2	
4	Derived code	G - Disconnecting switch Z - DC	
5	Derived code	Not-marked: Conventional	
6	Frame size	25-2500	
7	Installation structure	Not-marked - Fixed type	
8	Rated current	08-800A, 10-1000A, 12-1250A, 16-1600A, 20-2000A, 25-2500A	
9	Number of poles	3 - 3P in series	
10	Electric energy storage mechanism	D1- AC380V/AC400V 、 D2-AC220V/AC230V、 D3-DC220V、 DE-AC220V/AC230V/DC220V	
11	Shunt release	F1- AC380V/AC400V 、 F2-AC220V/AC230V、 F3-DC220V、 F6-AC220V/DC220V （maintained type）	
12	Closed electromagnet	B1- AC380V/AC400V 、 B2-AC220V/AC230V、 B3-DC220V BE-AC220V/AC230V/DC220V	
13	Under-voltage release/ Loss of voltage release /voltage-check closing device	Under-voltage release: Q1-AC380V/AC400V, Q2-AC220V/AC230V, Q3-DC220V, Q4-DC110V, Q5-DC24V	1. Chose one from under-voltage release, loss of voltage release and voltage-check switch device; 2. To be selected during ordering; this shall be omitted if without this accessory; 3. The special under-voltage release and closed electromagnet controlled by the voltage-check closing device are internal accessories, while the voltage-check closing controller module is the external accessory.
		Loss of voltage release: S1-AC380V/AC400V, S2-AC220V/AC230V	
		Voltage-check release: S1-AC380V/AC400V, S2-AC220V/AC230V	
14	Under-voltage release/loss of voltage release Delay time/voltage-check harness	Conventional undervoltage: 0-Instantaneous, 1-1s delay, 3-3s delay, 5-5s delay	
		Loss of voltage: 1-1s delay, 3-3s delay, 5-5s delay	
		voltage-check harness: 0 - with harness, 1 - without harness	

15	Auxiliary contact	Not-marked - four normally opened and four normally closed, A55 - five normally opened and five normally closed, A66 - six normally opened and six normally closed		
16	Internal Accessories	JS - Counter functional unit		This shall be omitted if without accessory;
		BX - Closing ready signal output unit		
		Off-position key lock	SF11 - key lock device (one lock and one key), SF21 - key lock device (two locks and one key), SF31 - key lock device (three locks and one key), SF32 - key lock device (three locks and two keys), SF53 - key lock device (five locks and three keys)	
17	External accessories	M - Doorframe		1、 This shall be omitted if without accessory; 2、 The safety lock can't be selected with the off-position key lock simultaneously.
		G - Phase partition (standard configuration)		
		F - Dust cover		
		A- Safety lock		
		S - Button lock		
		U-short-connected busbar		
		L-Terminal bolt		
18	Wiring mode	JCS – Power supply from vertical upper terminals JSS - Power supply from horizontal upper terminals JCX - Power supply from vertical lower terminals JSX - Power supply from horizontal lower terminals		Omitted when the customers install the short-connected busbar
19	Product usage type	Not marked - Conventional, GD - Plateau, low temperature		
20	Special notes	Customer's special requirements, HD-Enhanced 150kA/200ms		

Disconnecting Switch Ordering Notes

(Please fill in numbers in _____, and check ☒ in ☐. Related contents can be found in the Manual)

User unit		Number of units ordered:		Date of ordering:
Shell frame level		☐ NDW2GZ-2500		
Rated current (A)		☐ 800 ☐ 1000 ☐ 1250 ☐ 1600 ☐ 2000 ☐ 2500		
Number of poles		☐ 3 (3P in series)		
Installation structure		☐ Fixed type		
Required Accessories	Electric operating mechanism	☐ D1(AC380V/AC400V) ☐ D2(AC220V/AC230V) ☐ D3(DC220V) ☐ DE-AC220V/AC230V/DC220V		
	Closed electromagnet	☐ B1(AC380V/AC400V) ☐ B2(AC220V/AC230V) ☐ B3(DC220V) ☐ BE-AC220V/AC230V/DC220V		
	Shunt release	☐ F1(AC380V/AC400V) ☐ F2- AC220V/AC230V ☐ F3(DC220V) ☐ F6-(AC220V/DC220V) (maintained type)		
	Auxiliary contact	☐ Not-marked- Four normally opened and four normally closed ☐ A55 - five normally opened and five normally closed ☐ A66 - six normally opened and six normally closed		
Optional Function Accessories	undervoltage release	Voltage specification	☐ Q1(AC380V/AC400V) ☐ Q2(AC220V/AC230V) ☐ Q3(DC220V) ☐ Q4(DC110V)	
		Delay time	☐ 0-Instantaneous (0s) Delay: ☐ 1 (1s delay) ☐ 3 (3s delay) ☐ 5 (5s delay)	
	Loss of voltage release	Voltage Specification	☐ S1(AC380V/AC400V) ☐ S2(AC220V/AC230V)	
		Delay Time	☐ 0-Instantaneous (0s) Delay: ☐ 1 (1s delay) ☐ 3 (3s delay) ☐ 5 (5s delay)	
	Voltage-check closing device		☐ J1(AC380V/AC400V) ☐ J2(AC220V/AC230V)	
	Signal output function		☐ BX - Closing ready	
	Counter		☐ JS - Counter	
	Off-position key lock		☐ SF11-One lock one key ☐ SF21-Two locks one key ☐ SF31-Three locks one key ☐ SF32-Three locks two keys ☐ SF53-Five locks three keys	
	Door frame		☐ M Door frame	
	Dust cover		☐ F Dust cover	
	Phase partition		☐ G Phase partition (standard configuration)	
	Safety lock		☐ A Safety lock Note: Can't be selected with the off-position key lock simultaneously.	
	Button lock		☐ S Button lock	
	Short bus bar		☐ U short-connected busbar	
	Terminal bolt		☐ L-Terminal bolt	
	Wiring mode		☐ JCS - Power supply from vertical upper terminals ☐ JSS - Power supply from horizontal upper terminals, ☐ JCX - Power supply from vertical lower terminals, ☐ JSX - Power supply from horizontal lower terminals ☐ Not-marked-To be installed by customers	
Special usage occasions		☐ GD-Plateau, low temperature		
Special requirements		☐ HD-Enhanced 150kA/200ms		
		Other requirements		

Note: If you have special requirements, please indicate in the special requirements column.
