

Shanghai Liangxin Electrical Co., Ltd.

NDW2GZ-2500 (2P DC1500V) Disconnecting Switch

Product Specification

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

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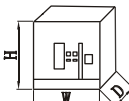
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Chapter 1 Product Overview

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)			(V)	DC1500	
Rated insulation voltage Ui (V)			(V)	1800	
Rated impulse withstand voltage Uimp (V)			(kV)	18	
Number of poles			2P		
Closing time ^{Note 1}			(ms)	≤85	
Opening time ^{Note 2}			(ms)	Conventional type	≤60
				Retention type	≤70
Rated short-time making capacity Icm			(kA)	50	
Rated short-time withstand current, Icw			(kA)	Conventional type	50kA/1s
				HD type	160kA/0.2s
Utilization category			DC-PV2、DC-22A		
Power loss in and out of the line (Ambient temperature +40℃)			(W)	≤160	
Operate performance (number of times)	Electrical life Operation frequency (20 times/h)	DC1500V	500		
	Mechanical life Operation frequency (60 times/h)	Maintenance-free	10000		
Installation type			Fixed type		
Wiring method of the main circuit			Horizontal wiring、Vertical wiring、Mixed wiring、Special wiring		
External dimensions: W×D×H (mm) 		Fixed type 2P		325×332×363(Horizontal wiring) 325×374×363(Vertical、mix、Special wiring)	
Weight (kg)		Fixed type 2P		Horizontal - gross weight:48, net weight:39; vertical - gross weight: 53, net weight: 44; Mixed wiring - gross weight: 51, net weight: 42; Special wiring - gross weight: 52, net weight: 43;	

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Notes: 1. Closing time: The time interval from the moment of the start of the closing operation of the disconnecting switch to the momentary stop when all contacts of all the poles are in contact in a room temperature environment, it is recommended to start the measurement after the system is stabilized (200ms);

2. Opening: The time interval between the start of the excitation feed to the disconnecting switch and the breaking of the contacts for all poles in a room temperature environment;



Chapter 2 Field of Application

2.1 Working environment

■ Ambient temperature

Table 2 Table of Working Environmental Parameters

Environmental requirements	Description of the specific parameters
Operating ambient temperature	The operating ambient temperature is $-25^{\circ}\text{C}\sim+70^{\circ}\text{C}$; the average within 24 h shall not be more than $+35^{\circ}\text{C}$. If it is above $+50^{\circ}\text{C}$, the user needs to reduce capacity to use (see Table 3 for details). The ambient temperature below $-40^{\circ}\text{C}\sim-25^{\circ}\text{C}$ can be specially customized (GD - Plateau low-temperature type) .
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 (see Table 4 for details).
Pollution degree	Pollution 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	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 under the environment condition without explosion danger, conductive dust or the possibility of corroding metal and damaging the insulation.

■ Derating factor

Table 3

Ambient 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 current ($I_e=2500\text{A}$)	1.0 I_n	1.0 I_n	1.0 I_n	0.9 I_n	0.88 I_n	0.84 I_n

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

■ 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	2000m	3000m	4000m	4500m	5000m
Power frequency withstand voltage	3500V	3500V	3500V	3500V	3000V
Rated current	1.0Ie	0.93Ie	0.88Ie	0.85Ie	0.82Ie
Short circuit breaking capacity correction coefficient	1	0.83	0.71	0.65	0.58

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

2.2 Anti-corrosion grade

Salt spray grade: Grade 2

2.3 Pollution level

Contamination 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 Requirements for shock resistance

The disconnecting switch can ensure resistance to mechanical shock, and has passed the GB/T 4798.3 standard test

- Amplitude: $\pm 1.5\text{mm}$ (2Hz-9Hz)
- Constant acceleration: 5m/s^2 (9~200Hz)

Super strong shock may result in damage to the parts, 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/T 14048.3-2017

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

2.6 Installation category

The installation category of disconnecting switch's main circuit and undervoltage release coils, power transformer primary coil is IV; the installation category of the remaining auxiliary circuit and control circuit is III.

2.7 Protection class

IP30.

2.8 Use category

DC-PV2.

2.9 Specification Reference of the Wiring Copper Bar for Disconnecting Switch's Main Circuit

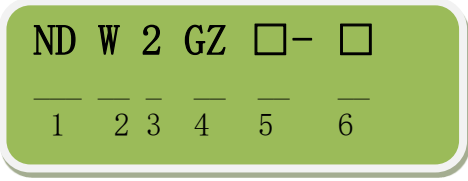
Table 5

Shell frame level	Rated current Ie (A) +40°C	Copper bar specification	
		Dimensions	Number
2500	800	50×5mm	2
	1000	60mm×5mm	2
	1250	80×5mm	2
	1600	100mm×5mm	2
	2000	100mm×5mm	3
	2500	100mm×5mm	4

Notes:

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/T 14048.3. If the temperature is higher than +50°C, the quantity of copper bar should be increased, or the derated use is required as shown in 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 (in the center of the bolt hole) is no more than +110°C.
4. The electrical gap of copper bar is $\geq 25\text{mm}$ 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 model description

		
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	Shell frame level	2500

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



Chapter 3 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 , the 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 $>200\text{ms}$. The user cannot connect it with the auxiliary switch point of the disconnecting switch in series.
- 4) $1.4U_s$ allows the energizing for 3s.
- 5) In case of no overvoltage protection and voltage being beyond $1.4U_s$, it will burn after long-time energization.

◆ The technical parameters of the closed electromagnet are shown in the following table

Table 6

Rated insulation voltage (U_i)	Rated control power 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, the operation of the shunt release can make the disconnecting switch disconnect.
- 2) Shunt tripper is short-time duty-type.
- 3) There is the control circuit inside to ensure the long-time energizing, which shall be $>200\text{ms}$. Do not connect to the auxiliary switch contact. The auxiliary switching contacts of the disconnecting switch itself.
- 4) $1.4U_s$ allows the energizing for 3s.
- 5) In case of no overvoltage protection and voltage being beyond $1.4U_s$, it will burn after long-time energization.



◆ Technical Parameters of Shunt Release

Table 7

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

3.1.3 Retention-type shunt release

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

◆ Action features of the retention-type shunt release

- 1) When the power supply voltage of the shunt release is maintained at 70%~110% of the rated control supply voltage, the retention-type shunt release can be operated to disconnect the disconnecting switch.
- 2) When the applied voltage is 85%~110% of the rated working voltage of the retention shunt release, the shunt striker ensures that the disconnecting switch is disconnected reliably and cannot be closed.
- 3) The retention-type shunt release is of long-term duty type, which can send closing signal with an interval of more than 500ms after power failure.
- 4) Each power-on trigger time $t > 200\text{ms}$.
- 5) 1.3Us withstand time is 9.5s without damage, 1.4Us withstand time is 0.5s without damage.



◆ Retention-type shunt technical parameters are shown in the following table

Table 8

Rated insulation voltage (Ui)	Rated control power voltage (Us)	Instantaneous power	Operating 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 circuit breaker 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: $t > 7\text{s}$, long-term energization is allowed for the secondary circuit input terminal.



5) In case of no overvoltage protection and voltage being beyond 1.4Us, it will burn after long-time energization. It is allowed to energize for 1s at 1.4Us during operation.

The operating power of the electric operating mechanism is shown in the table below.

Table 9

Rated insulation voltage (Ui)	Energy storage time	Rated control supply voltage (Us)	Operating consumption	Operating current	Maximum peak starting current
400V	3s~7s	AC380V/AC400V 50/60Hz	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 operating voltage, the undervoltage release will work to disconnect the disconnecting switch;

2) When the applied voltage is less than 35% of the rated operating voltage of the undervoltage release,

the undervoltage release will make the disconnecting switch unable to 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.

◆ Undervoltage delayed release

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 as required, and instantaneous.

◆ See the table below for the power consumption of undervoltage release

Table 10

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

3.1.6 No-voltage release

◆ Action features of the no-voltage release



- 1) When the applied voltage suddenly drops to 0~35% of the rated operating voltage, the undervoltage release will make the disconnecting switch opened;
 - 2) When the applied voltage is less than 30% of the rated operating voltage of the no-voltage release, the loss of voltage release will make the circuit breaker cannot be closed;
 - 3) When the applied voltage is 85%~110% of the rated operational voltage of the loss of voltage release, the loss of voltage release can guarantee the reliable closing of the disconnecting switch.
 - 4) When the applied voltage drops no less than 35% of the rated operational voltage, the loss of voltage release can be closed to guarantee the reliable closing of the disconnecting switch.
- ◆ The no-voltage release can be divided into instantaneous release and delayed release, which is mainly composed of coil, iron core component and electronic parts.



The no-voltage delay release sets the delay time of the release action through toggling the toggle switch on the no-voltage delay device. The delay time is set as 1s, 3s, 5s and instantaneous.

◆ Power Consumption of No-voltage Release

Table 11

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

3.2 Signal output device

◆ 3.2.1 Auxiliary switches

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

Auxiliary contact form: Four groups of conversion, four normally opened and four normally closed, six groups of conversion, six normally opened and six normally closed.



◆ Technical Parameters of Auxiliary Switches

Table 12

Technical Parameters				Remarks
Model interpretation		A44 indicates four open and four closed; A4 indicates four groups of conversion; A44S indicates small signal four open and four closed; others in order.		
Auxiliary contact form		A44, A66, A44S, A66S, A4, A6, A4S, A6S		
Electrical life (times)		≥6050		AC-15/DC-13/AC-12/DC-12
Switching stroke (mm)		5.5mm		
	Type of use	A44, A66, A44S, A66S	A4, A6, A4S, A6S,	

Breaking capacity	DC-12	1A/DC250V	0.3A/DC250V	
	AC-12	10A/AC400V	5A/AC400V	
	DC-13	0.2A/DC250V	0.2A/DC250V	
	AC-15	3A/AC400V	1.5A/AC400V	
Minimum load		AC, DC: DC30V/100mA Small signal: DC5V/1mA		
Conventional heating current Ith (A)		10A		
Rated Operating Voltage (V)		AC400V/AC250V/DC250V		
Rated insulation voltage (V)		AC400V		

3.2.2 Secondary wiring terminals

There are 32/48 groups in total for the secondary wiring terminals.

- ◆ See the table below for parameters of the secondary wiring terminal



Table 13

Project	parameters
Connection mode	Plug-in
Flame retardant rating, according to UL 94	V0
Pollution level	3
Voltage category	III
Material group	IIIa
Applicable connection standards	GB/T 14048.7-2016
Maximum load current	10A
Rated current	10A
Rated voltage	500V
Minimum cross section area of the rigid (flexible) conductor	0.5mm ²
Maximum cross section area of the rigid (flexible) conductor	1.5mm ²
Recommended striping length	10±1mm
Minimum test pull-force after the conductor connection	30N

3.3 Counter

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



3.4 Locks

3.4.1 Off-position key locks

◆ This off-position key lock is used to lock the disconnecting switch on the disconnected position. When the key is anticlockwise locked and pulled out, the disconnecting switch cannot carry out the 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

◆ When the off-position key lock is optionally selected, this accessory is sent to the user after being assembled with the disconnecting switch. As the off-position key 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 shown as follows.

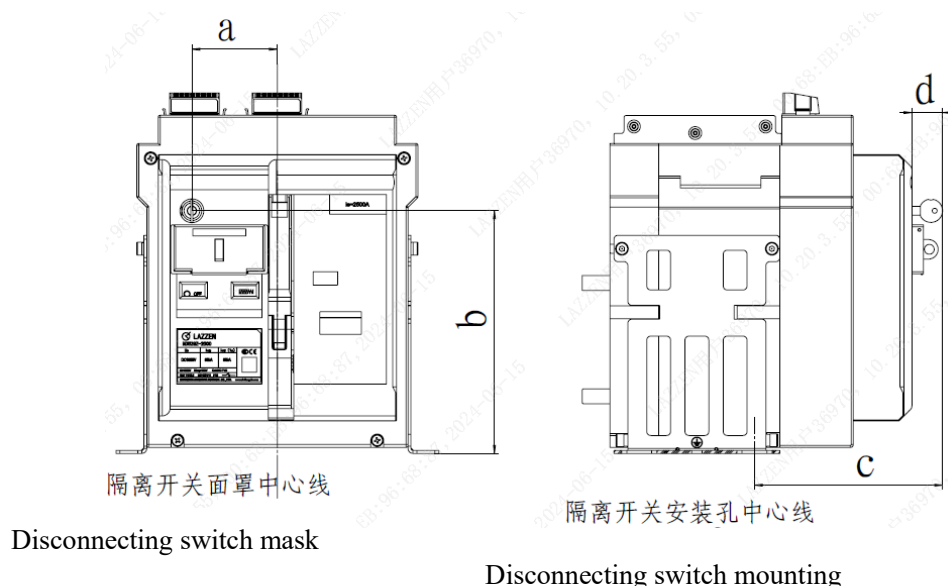


Table 15

Unit: mm

a	b	c	d
86	245	190	31

3.4.2 Pushbutton 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 button lock is selected, this accessory is sent to the user after being assembled with the disconnecting switch. As the button 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 shown as follows.

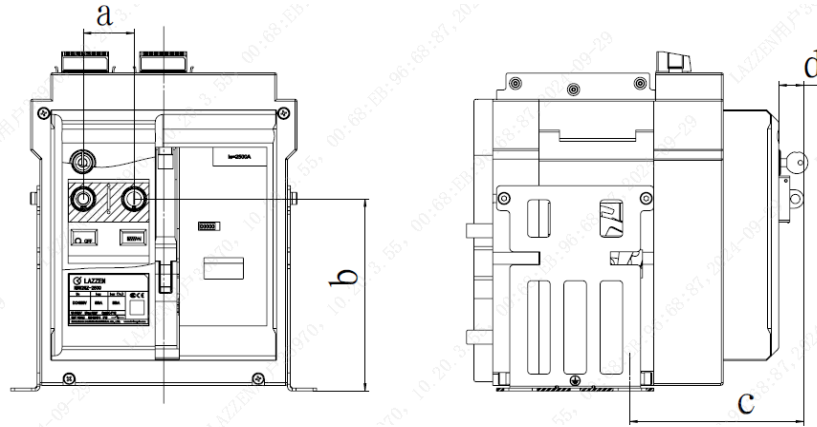


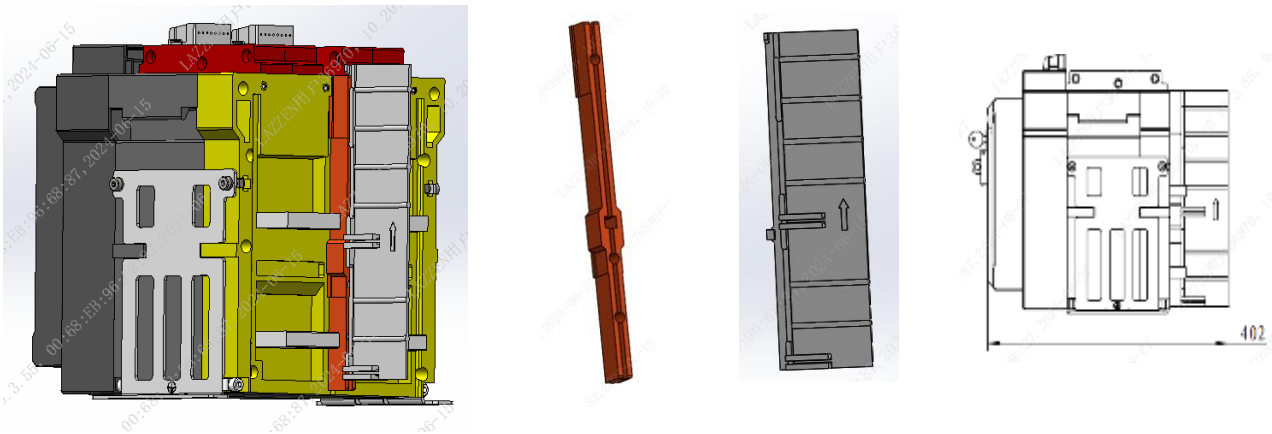
Table 16

Unit: mm

a	b	c	d
54	205	185	26.5

3.7 Interphase spacer

As part of the standard configuration for the product, phase partition is installed in the groove between all the phase bus bars, used to increase the insulation strength between phase to phase of the main circuit and improve the insulation performance, and the products are in standard configuration. See the figure below for installation positions.



Notes: The standard width of the interphase partition is 86mm, The width of the widened interphase partition is 160mm. (If you need to choose the widened interphase partition, please make a note in the special requirements of the selection table.)

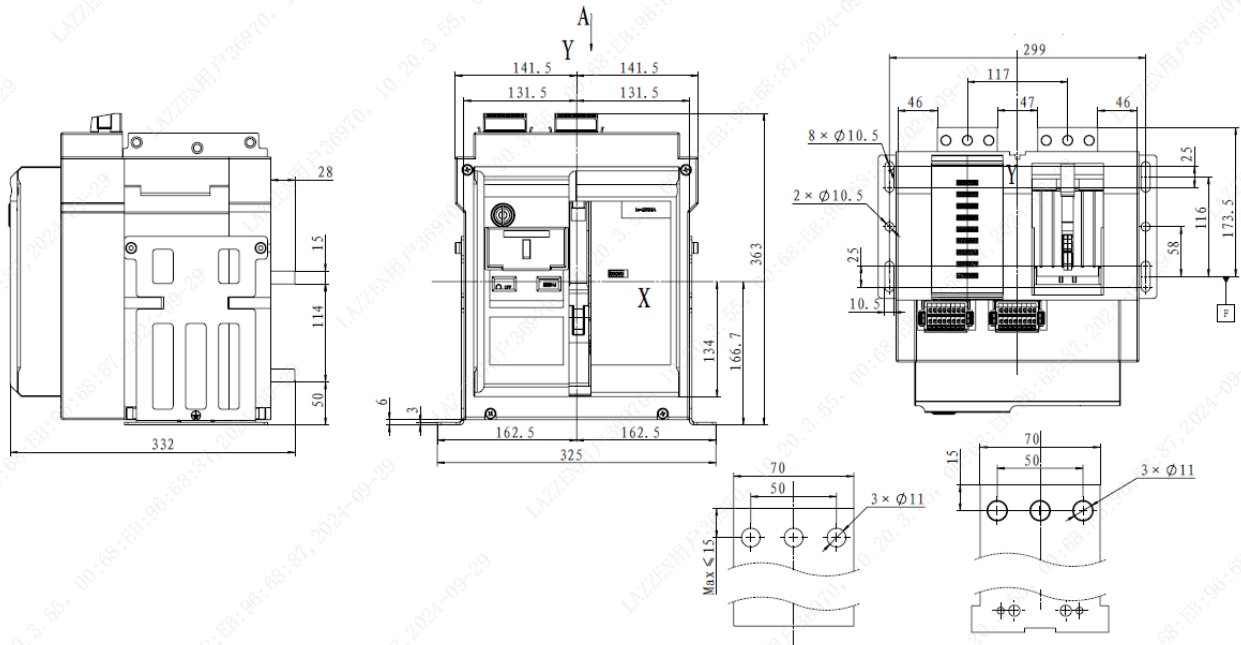


Chapter 4 Outline and Installation Dimensions

NDW2GZ-2500 (2P) fixed type

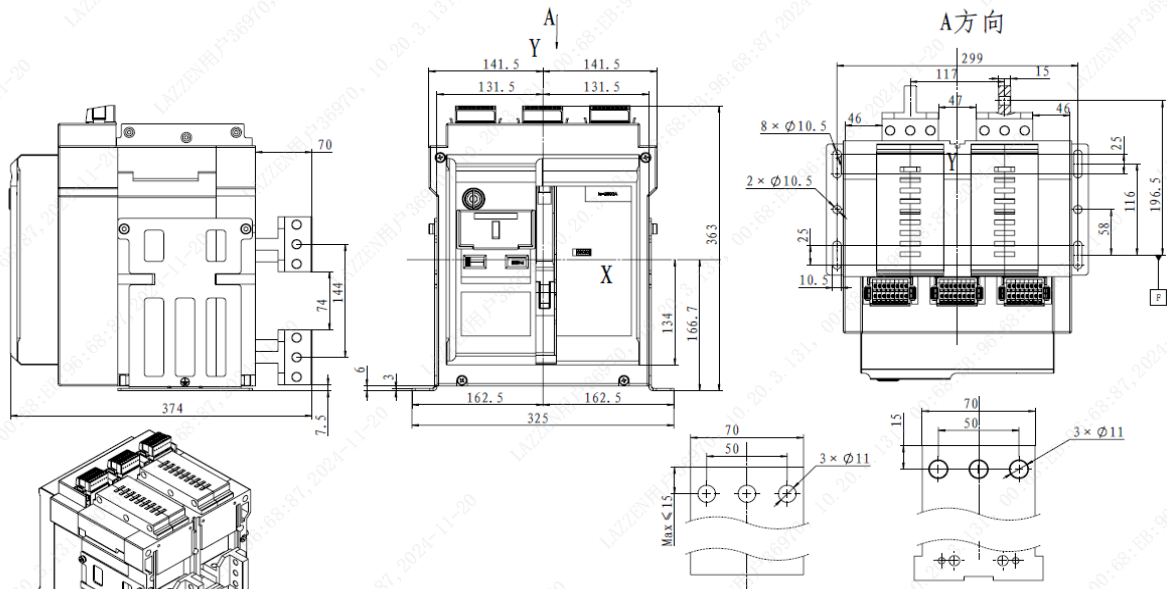
Dimensions (Horizontal wiring)

Fixed Details



Dimensions (Vertical wiring)

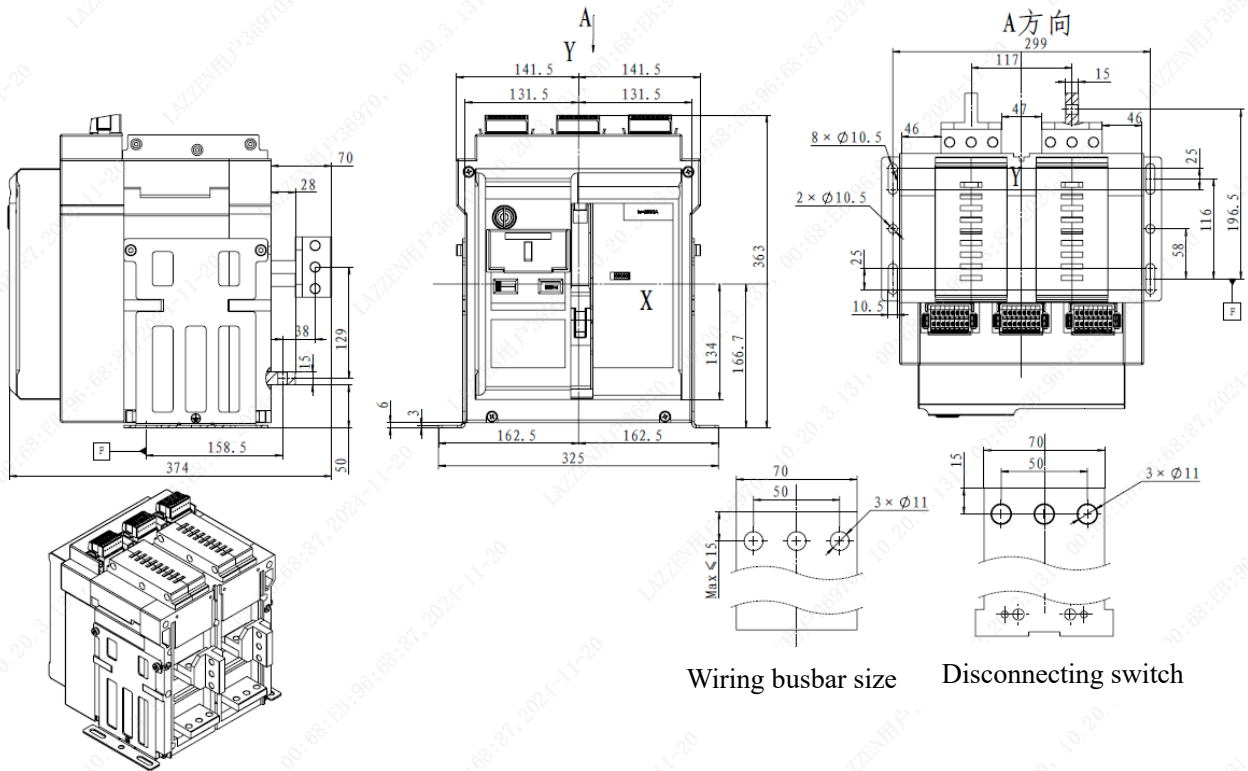
Fixed Details



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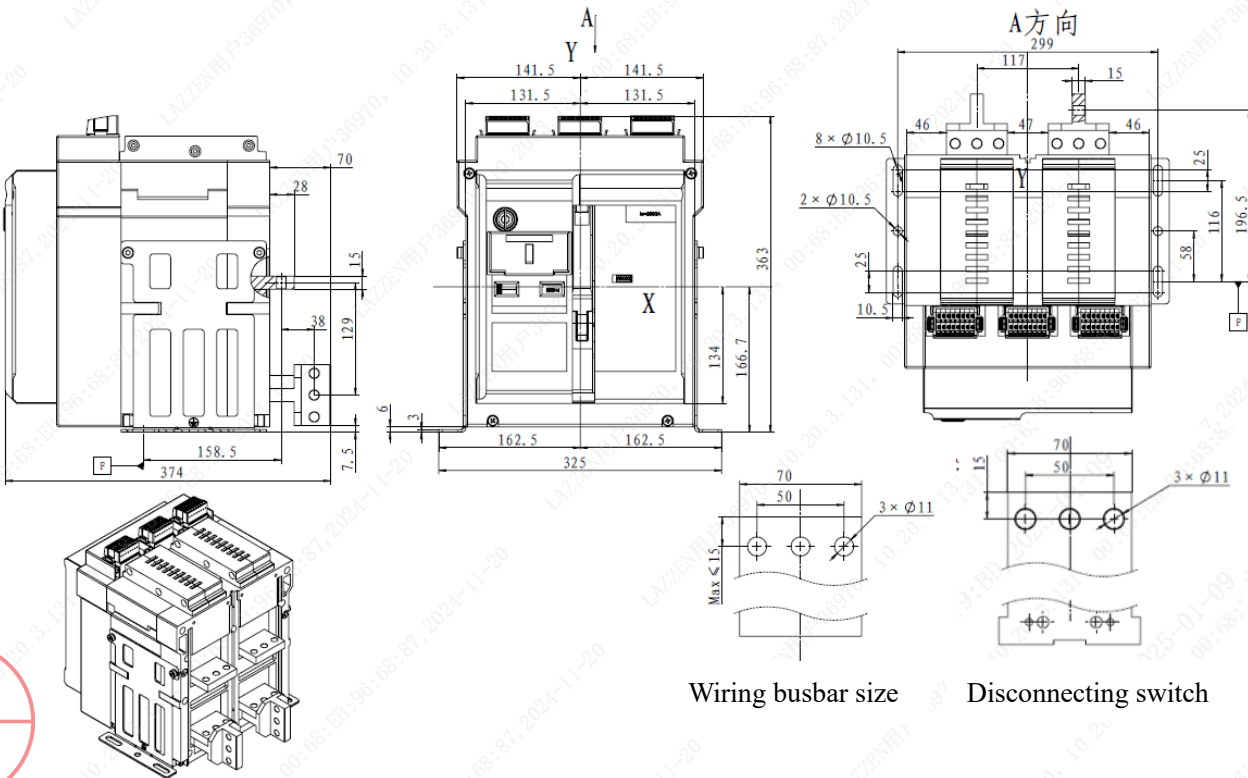
Dimensions (Mixed wiring, vertical above horizontal below)

Fixed Details



Dimensions (Mixed wiring, horizontal above vertical below)

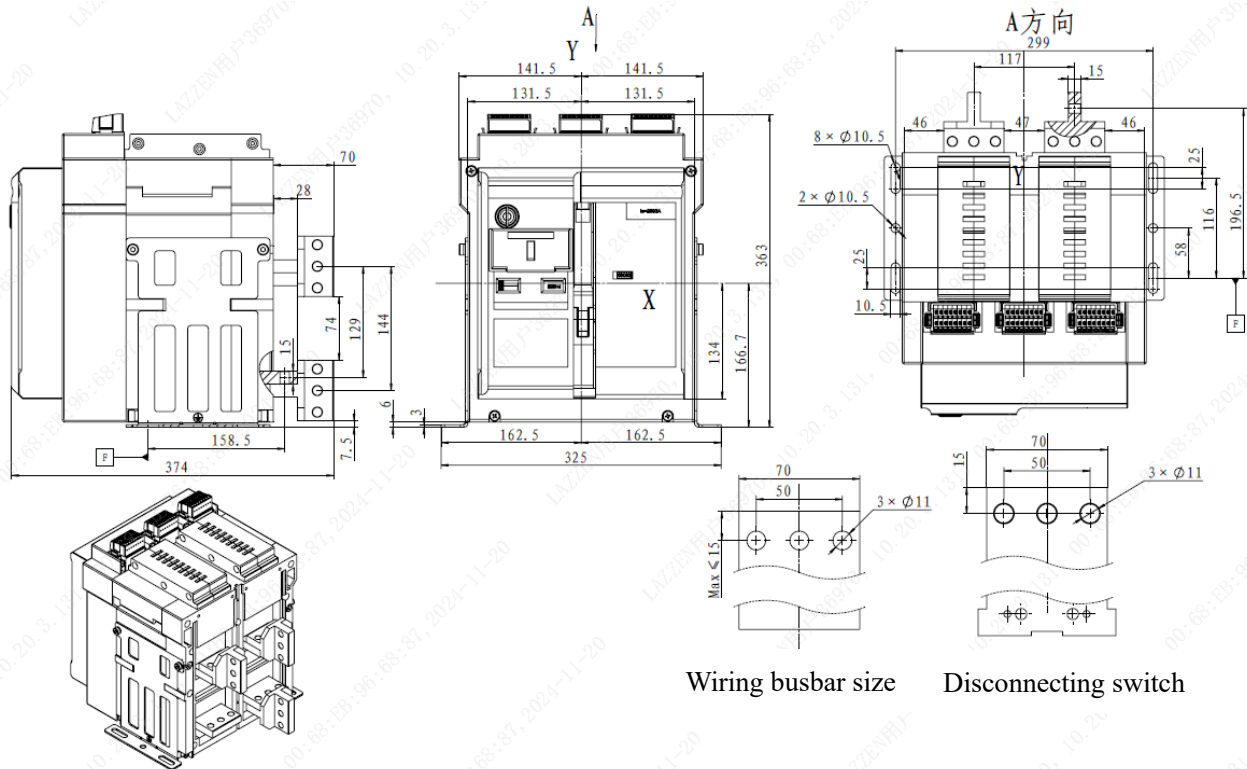
Fixed Details



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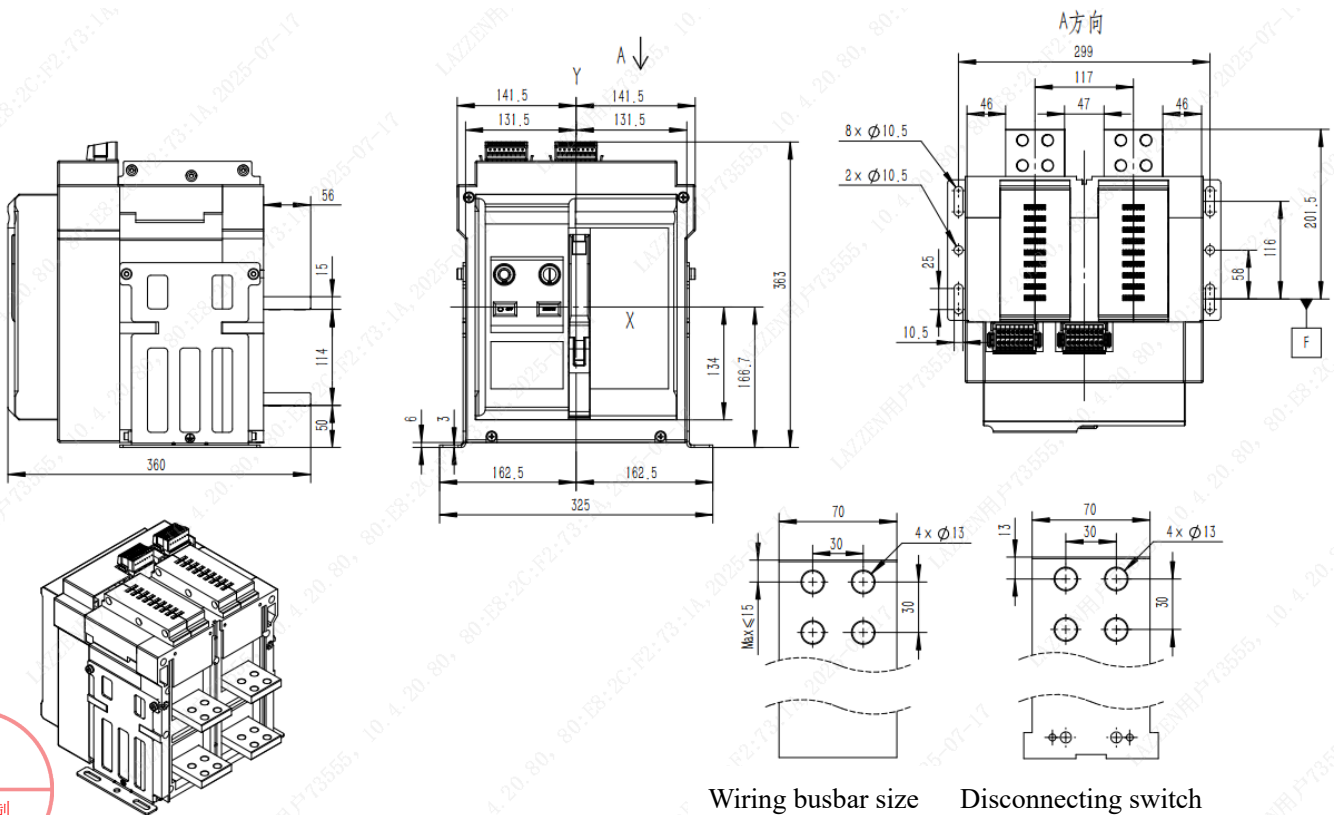
Dimensions (Special wiring)

Fixed Details



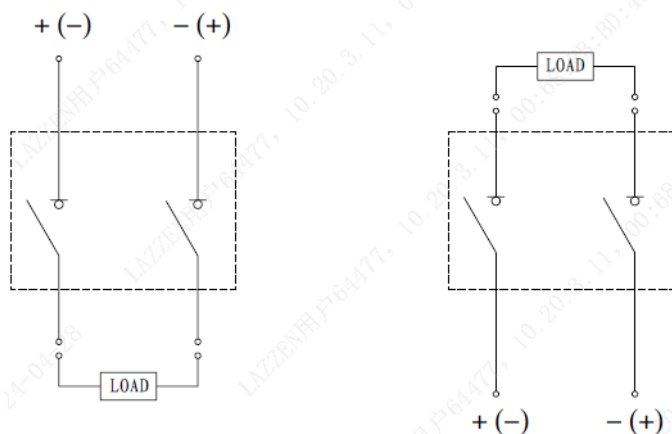
Dimensions (Horizontal extension)

Fixed Details



- Note: 1.Disconnecting switches X and Y are symmetrical axes of the front cover and F is the mounting hole;
2.All of mounting dimension tolerances of disconnect are defined as $\pm 3\text{mm}$, by default;
3.The dimensions of the installation surface must be measured based on the flat plane;

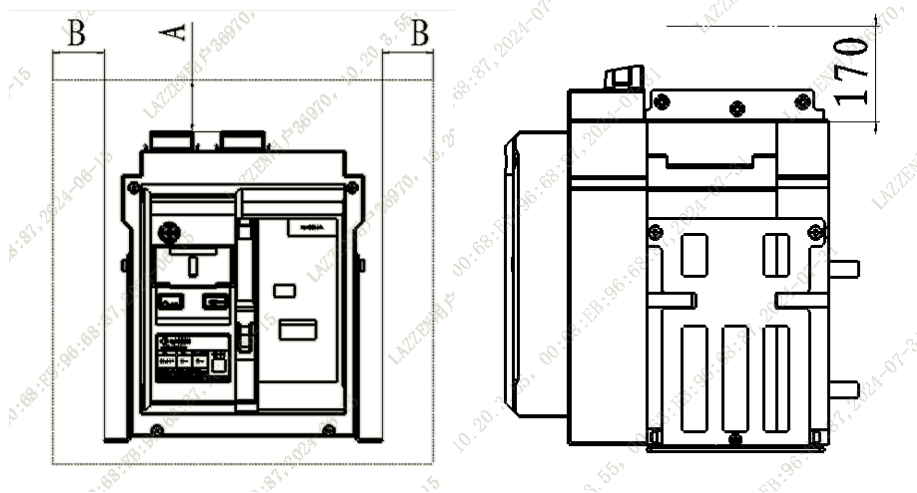
Wiring mode of 2P in series



Chapter 5 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, and the installation dimensions are shown in the table.



Fixed-type Disconnecting Switch

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	60	0	60	60

Unit: mm

Notes: 1. 170 mm space needed for removing the arc-extinguishing chamber should be considered for the safe spacing of the fixed-type disconnecting switch;

2. The flashover distance is consistent with the safety distance;

Chapter 6 Disconnecting Switch Installation Precautions

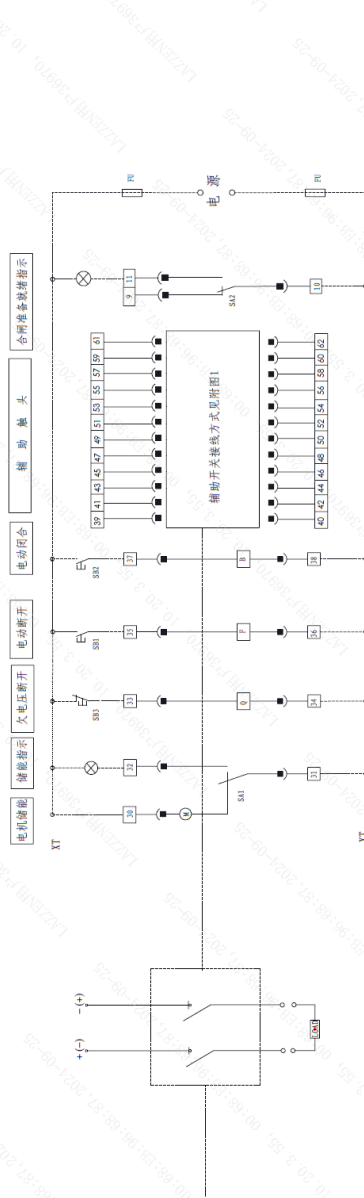
To ensure the safety of you and the electric equipment, before put the disconnecting switch into operation, users must:

- ◆ Carefully read the Operation Manual before installation and use of the disconnecting switch.
- ◆ Check whether the specification of the disconnecting switch is in line with the requirements before installation.
- ◆ Install the disconnecting switch under the environment condition without explosion danger, conductive dust or the possibility of corroding metal and damaging the insulation.
- ◆ Measure the insulation resistance of the disconnecting switch with a 1000V megohmmeter before installation of the disconnecting switch. The insulation resistance should not be less than 20 megohms at the surrounding medium temperature of $20^{\circ}\text{C}\pm 5^{\circ}\text{C}$ and the relative humidity of 50%-70%; otherwise, it needs to be dried, and it cannot be used until the insulation resistance meets the requirements.
- ◆ Prevent foreign matters from falling into the disconnecting switch when installing the disconnecting switch.
- ◆ Ensure the disconnecting switch is flat without additional mechanical stress when installing the conductive busbar.
- ◆ Conduct reliable grounding protection when installing the disconnecting switch. The grounding place of the disconnecting switch has an obvious grounding symbol and is preserved with the mounting anchor hole.
- ◆ 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.
- ◆ Pressing (or powering on) the closing button after the energy storage of the motor, the disconnecting switch will close.
- ◆ In the closed status, pressing (or powering on) the opening button, so that the disconnecting switch will be opened.
- ◆ For manual storage of energy, pull the handle on the front panel up and down, a “clack” sound can be heard after energy storage, and the panel shows “storage of energy”, the storage of energy is over. At this point, if there’s undervoltage tripping, power on it (no need if without undervoltage tripping), then carry out closing operation.
- ◆ See the table for recommended bolts to be used for the disconnecting switch busbar installation;

Mounting bolts

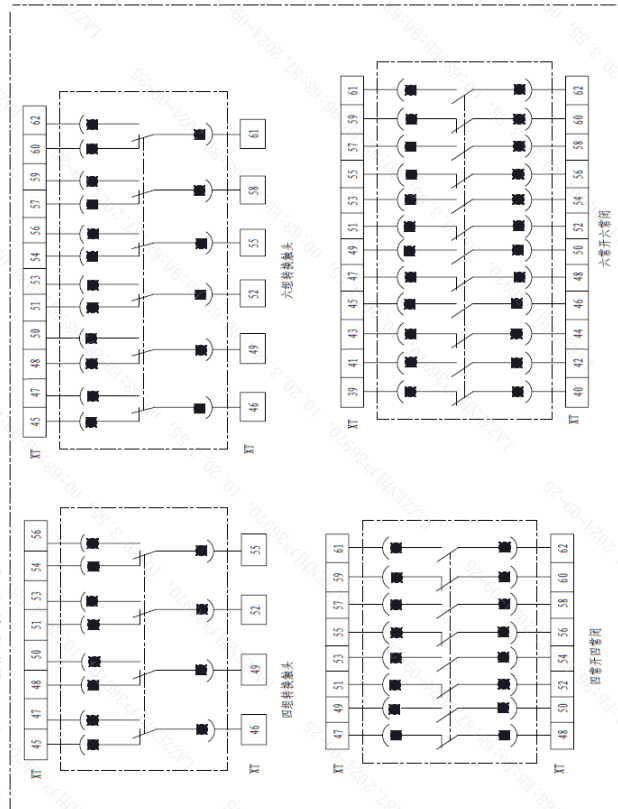
Disconnecting switch	Connection conditions between bus and terminal
NDW2GZ-2500 $\phi 11$ Mounting Hole	M10 combination bolts, grade 8.8, tightening torque 45~50N.m
NDW2GZ-2500 $\phi 13$ Mounting Hole	M12 combination bolts, grade 8.8, tightening torque 54~66N.m

Chapter 7 Electrical Wiring Diagrams for Disconnect Switches



- 9, 10, 11 - Closing ready electric indication;
30, 31, 32 - Motor energy storage and energy storage indication;
33, 34 - Undervoltage tripper;
35, 36 - Shunt tripper;
37, 38 - Closed electromagnet
39-62 - Auxiliary switch connection terminals;
F - Shunt tripper;
B - Closed electromagnet;
Q - Undervoltage (instantaneous or delayed) tripper;
- SB1 - Shunt button (to be prepared by users);
SB3: Closing button (to be prepared by the user);
SB2 - Undervoltage disconnection button (to be prepared by users);
SA1 - Motor travel switch;
SA2 - Closing ready travel switch;
X - secondary terminals;
Fu - Fuse (to be prepared by users);
M - Energy storage motor.
- Notes:
1. The current state of the disconnecting switch is de-energized, and disconnected, with no energy stored;
2. The dashed part shall be wired by users;
3. When the power supply of Q, F, B, M is not the same, they shall be powered on separately;

附图1—NDT2022-25/2P辅助开关接线方式



Chapter 8 Ordering Type Selection Specification

8.1 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 21

S N	Name	Specification, type code	Description
1	Enterprise code	ND-“ 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	Shell frame level	25-2500	
7	Installation Mode	Not-marked - Fixed type	
8	Rated current	08-800A, 10-1000A, 12-1250A, 16-1600A, 20-2000A, 25-2500A	
9	Number of poles	2-2P strings	
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, FE-AC220V/AC230V/DC220V, F6-AC220V/DC220V (retention type)	
12	Closed electromagnet	B1- AC380V/AC400V, B2-AC220V/AC230V, B3-DC220V, BE-AC220V/AC230V/DC220V	
13	Undervoltage release/ Loss of voltage tripper	Undervoltage release: Q1-AC380V/AC400V, Q2-AC220V/AC230V, Q3-DC220V	Undervoltage release or alternative no-voltage release
		No-voltage release: S1-AC380V/AC400V, S2-AC220V/AC230V	
14	Undervoltage release/ Loss of voltage tripper	Conventional undervoltage delay: 0-Instantaneous, 1-1s delay, 3-3s delay, 5-5s delay	
		No-voltage delay: 0-Instantaneous, 1-1s delay, 3-3s delay, 5-5s delay	
15	Auxiliary contact	A44-four normally open and four normally closed, A44S-small signal four normally open and four normally closed, A66-six normally open and six normally closed, A66S-small signal six normally open and six normally closed, A4-four groups of switching, A4S-small signal four groups of switching, A6-six group switching, A6S-small signal six groups of switching	
16	Internal Accessories	JS - Counter functional unit	This shall be omitted if
		BX - Closing ready signal output unit	

		Disconnecting position lock SF11 (one lock, one key)	without this accessory
17	External accessories	G-interphase separator (standard) S - Button lock	This shall be omitted if without this accessory
18	Wiring mode	Not marked - Horizontal、J1- Horizontal extension 、 J3-Vertical straight line 、J5- Mixed wiring (horizontal above、 vertical below)、J6- Mixed wiring (vertical above、 horizontal below)、J9- Special wiring (3 vertical 1 horizontal)	
19	Product usage type	Not marked - Conventional, GD - Plateau, low temperature type	
20	Product Short-Time Withstand Type	Unmarked - Conventional 50kA,1s, HD - Enhanced 160kA, 200ms	
21	Special notes	Customer's special requirements	



8.2 Ordering specification

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

User unit			Number of units ordered:	Date of ordering:
Product Model		NDW2GZ-2500		
Rated current (A)		☐ 800 ☐ 1000 ☐ 1250 ☐ 1600 ☐ 2000 ☐ 2500		
Number of poles		☐ 2-2P		
Installation Mode		☐ Fixed type		
Required accessories	Motor-operated 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) ☐ FE(AC220V/AC230V/DC220V) ☐ F6(AC220V/DC220V) (retention type)		
	Auxiliary contact	☐ A44-Four Normally Open and Four Normally Closed ☐ A4-Four Groups of Switching ☐ A66-Six Normally Open and Six Normally Closed ☐ A6-Six Groups of Switching ☐ A44S-Small signal four normally open and four normally closed ☐ A4S-Small signal four groups of switching ☐ A66S-Small signal six normally open and six normally closed ☐ A6S-Small signal six groups of switching		
Optional accessories	Undervoltage release	Voltage Specification	☐ Q1(AC380V/AC400V) ☐ Q2(AC220V/AC230V) ☐ Q3(DC220V)	
		Delay Time	☐ 0-Instantaneous (0s) Delay: ☐ 1 (1s delay) ☐ 3 (3s delay) ☐ 5 (5s delay)	
	Loss of voltage tripper	Voltage Specification	☐ S1(AC380V/AC400V) ☐ S2(AC220V/AC230V)	
		Delay Time	☐ 0-Instantaneous (0s) Delay: ☐ 1 (1s delay) ☐ 3 (3s delay) ☐ 5 (5s delay)	
	Signal output Function		☐ BX - Closing ready	
	Counter		☐ JS - Counter	
	Disconnected Position Key lock		☐ SF11 - One lock with one key	
	Phase partition		☐ G Interphase spacer (standard);	
	Button lock		☐ S Button lock	

Wiring mode	Not marked - Horizontal, ☐ J1- Horizontal extension、 ☐ J3- Vertical straight line、 ☐ J5- Mixed wiring (horizontal above、vertical below)、 ☐ J6- Mixed wiring (vertical above、horizontal below)、 ☐ J9- Special wiring (3 vertical 1 horizontal)
Product usage type	☐ Not marked - Conventional, GD - Plateau, low temperature
Product Short-Time Withstand Type	☐ Not marked - Conventional type 50kA,1s, ☐ HD - Enhanced type 160kA, 200ms
Special requirements	Other Requirements
Note: If you have special requirements, please indicate in the special requirements column.	

