



Automatic Transfer Switch Instruction Manual

Please read the instructions carefully and pay attention to personal safety when installing and using.



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1. Overview

This model automatic switch is a special product developed by our company, which matches the GB/T14048.11 standard, and also matches the "Code for Fire Prevention of High-rise Civil Buildings", "Emergency Lighting Design Guide"ect. The components and accessory of the product though strict aging screening, and the finished product can be delivered after passing the confirmation inspection. Therefore, the reliability and safety of the product are guaranteed.

It is suitable for rated operating voltage AC400V power distribution system. Under the control of the controller, the transfer switch can quickly change the load from the normal power supply to the standby power supply (the standby power supply must be normal at this time) when the power supply has failure condition , such as loss of phase, over voltage or under voltage. The user can also make the load in an intermediate position when needed, so that the load is neither connected to the normal power supply nor to the standby power supply. This product is mainly used for the first and second level load stipulated by the state, widely used in fire posts and telecommunications, hospitals, hotels, urban rail transit, high-rise buildings, industrial assembly lines, television stations and other places requiring continuous power supply. It is used for the first and second level load stipulated by the state, and is widely used in fire posts and telecommunications, hospitals and hotel, urban rail transit, high-rise buildings, industrial assembly lines, television stations and other fields requiring continuous power supply ect. The backup power supply can be a power grid, a self-starting generator set, a battery pack, etc.

2. Product Feature

- 1). Three-position automatic transfer switch, after receiving the conversion signal, the switch can be immediately (or by a preset delay time in advance) transfer from one power supply to another power supply, also can be from one power supply switched to a middle disconnect position that is not connected to any power supply.

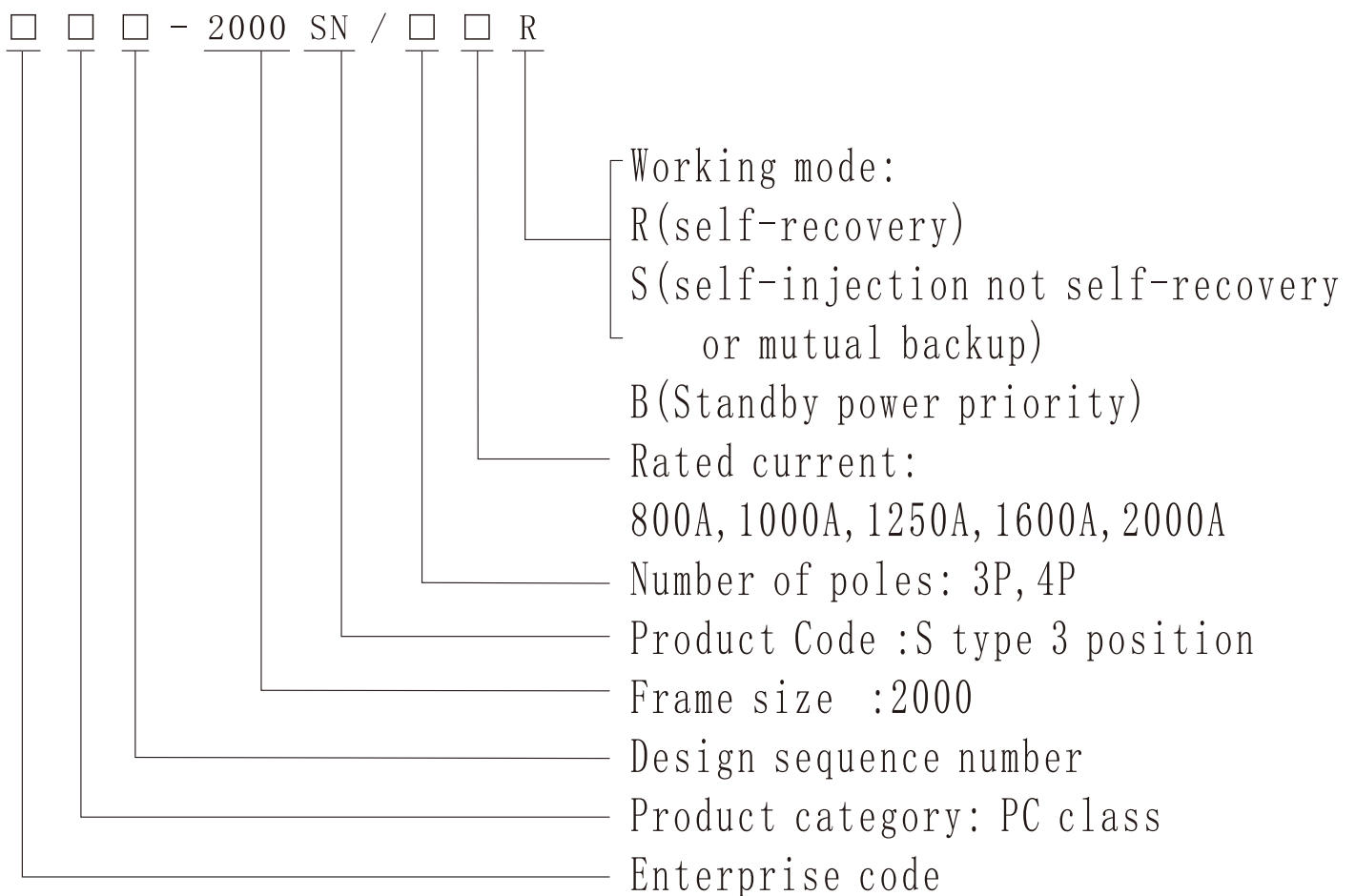
- 2). E-level : PC class.
- 3). Installation mode: fixed installation.
- 4). Wiring mode: horizontal wiring mode behind the board.
- 5). Usage category: AC-33B.
- 6). Rated operating voltage: AC400V.
- 7). Rated working current: 800A, 1000A, 1250A, 1600A, 2000A.
- 8). Rated insulation voltage: AC1000V.
- 9). Short-time withstand voltage: 50KA/60ms.
- 10). Impulse withstand voltage: 12KV.
- 11). Limit short circuit current: front fuse protection I_{q120KA} .
- 12). Number of poles: 3 poles, 4 poles.
- 13). Contact conversion time: $\leq 100ms$
- 14). Action conversion time: $\geq 100ms$ Add a specific delay (according to the controller, the delay is set Be sure).
- 15). Mode of operation: controller self/manual conversion, manual handle conversion, external control (also available over PLC control, other intelligent controller control, button remote control, etc.)
- 16). Auxiliary terminals: normal and standby power supply side, each comes with a group of passive auxiliary signals (one normal open, one normally closed), contact capacity 5A/AC230V.

3. Usage Environment

- Ambient air temperature: temperature is from $-5^{\circ}C$ to $+40^{\circ}C$, and the 24-hour average temperature will do not exceed $+35^{\circ}C$. Users with air temperatures above $+40^{\circ}C$ or below $-5^{\circ}C$ should consult with the manufacturer.
- Maximum temperature of atmospheric humidity: when the degree is $+40^{\circ}C$, the relative humidity doesn't exceed 50%, the maximum phase of the month humidity is 90%, resistant to the influence of humid air at sea, and can allow higher relative temperatures at lower temperatures Humidity, special measures should be taken for condensation occasionally caused by temperature changes.
- Installation height: The altitude of the installation site does not exceed 2000 meters. When it used over 2000 meters , it should consider that the dielectric strength and cooling effect of the air are reduced, please consult with the manufacturer.

- Arc distance: arc distance $\leq 30\text{mm}$ AC 400V.
- Installation inclination: The product should be fixed in the cabinet, the maximum inclination is $\pm 22.5^\circ$.
- Installation category: Installation category IV.
- Pollution level: The environmental pollution level of the installation site is level 3.

4. Product Model And Meaning

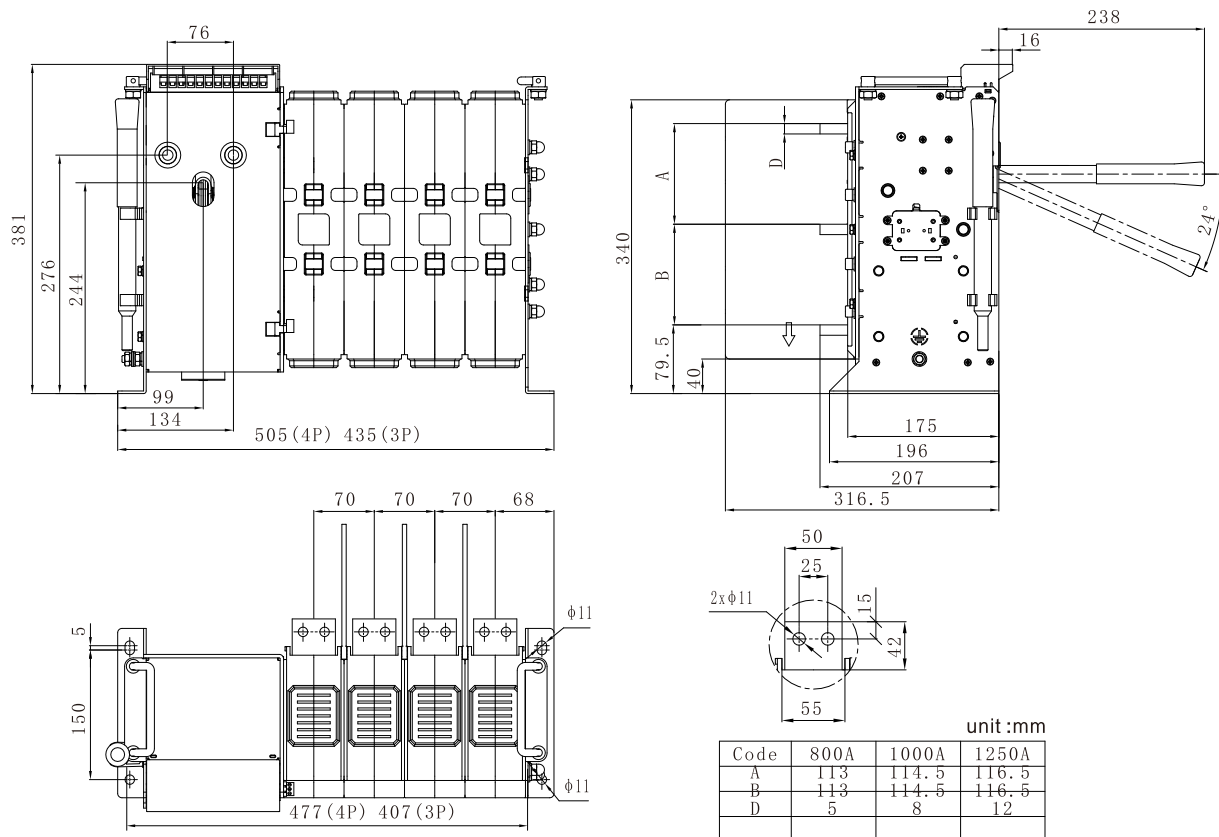


Note: The optional controller has its own power-generator start-stop port by default, and the communication can be configured with Y-700/701/702/703.

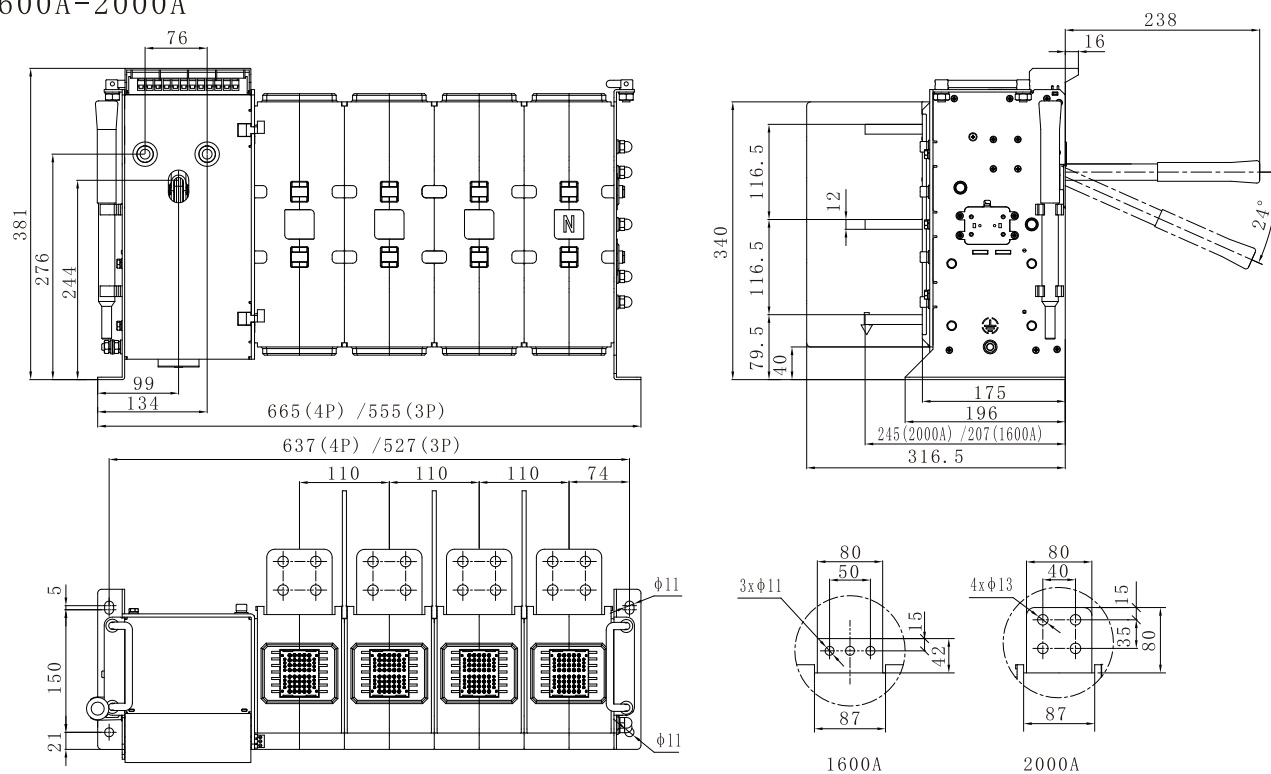
Name	Automatic transfer switch	Model	S1-2000SN
Picture			
			
No	Categories	Items	Exponent、Data
1	parameter	Rated working current	800、1000、1250、1600、2000
2			
3		Rated working current	AC400V
4		Rated insulation voltage	AC1000V
5			
6		Pole	3P、4P
7		Rated control power supply current	20A
8		Rated impulse withstand	12kV
9		Electrical level	PC
10		Working position	I/II/0
11		Limited short circuit current	120kA (Limited short circuit current)
12			
13		Usage Category	AC-33B
14		Usage Category	3000 times
15		Usage Category	3000 times
16		Mechanical life	7000 times
17	Use	Mechanical life	Mechanical life
18		Wiring mode	rear horizontal connection
19		Control mode	split type
20		Controller adaptation	Y-700、Y-701、Y-702、Y-703 etc.
21		Conversion mode	Handle Manual, electric conversion, etc. Controller automatic conversion
		Split harness connection	Split harness connection
		Split cable harness length	Split cable harness length
	executive standard	GB/T14048.11	3C certificate
		IEC60947-6-1	

5. Outline Overall And Installing Dimensions

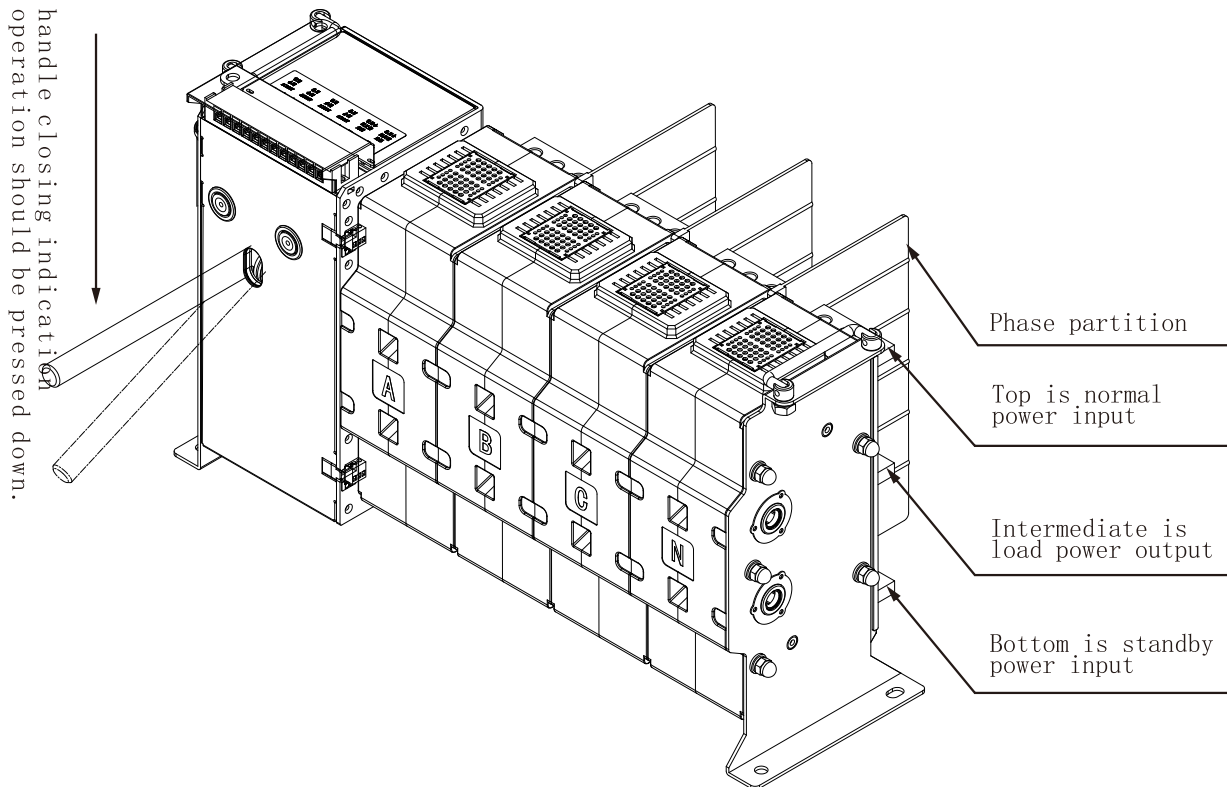
800A-1250A



1600A-2000A



6. Operating Instructions

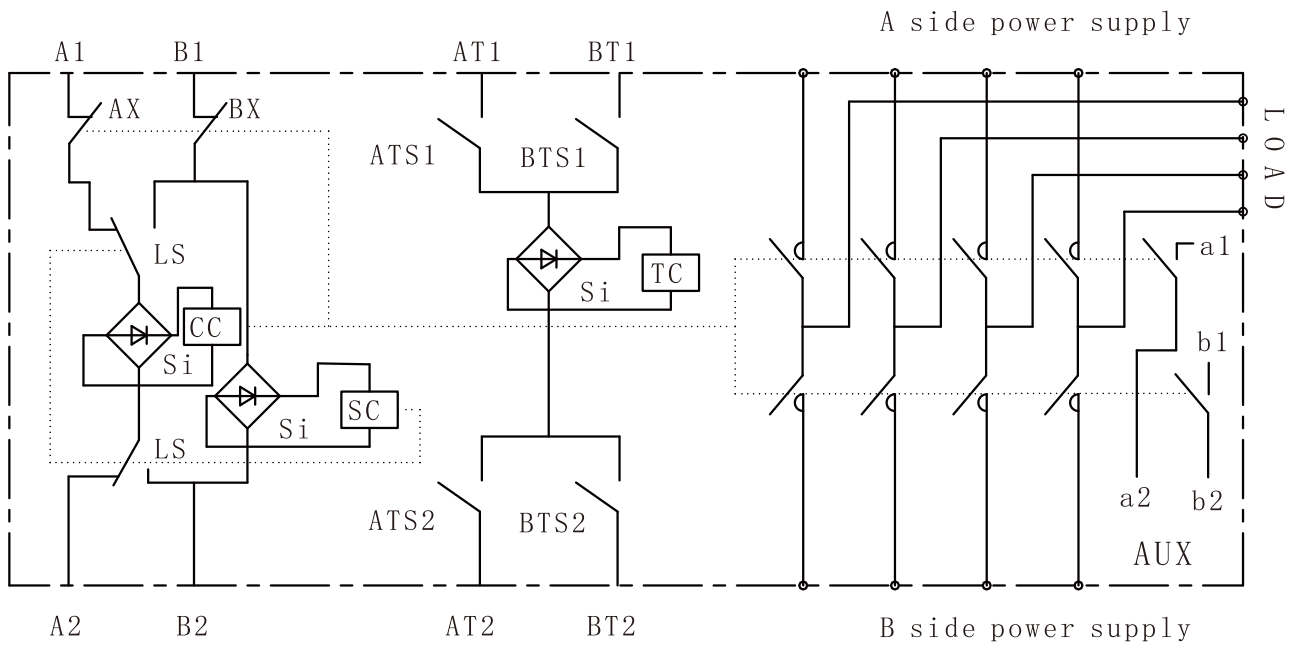


Maintenance, the power supply must be disconnected before manual operation. Must be removed the operation handle to avoid losing after finishing the operation, and fix it on the left side of the switch.

Operating instructions:

- I Common input method: Press the "II Power Off" button to ensure that both the normal power and standby power supply are on 0 position, using the handle to press the manual shaft in the direction indicated by the arrow, the switch has clear closing sound, I normally window is placed at position I, switch closing is complete.
- II Standby input method: Press the "II Power Off" button to ensure that both the common power supply and the standby power supply are on 0 Position, then press the "Guide II Standby" button and hold, while moving the manual shaft to the direction indicated by the arrow Press down the manual shaft, the switch has clear closing sound, II standby window is placed in position I, switch closing is completed.
- Manual two-way power off operation: To ensure safety, press "Two-way power off" when the power is off. Push the button to switch two ways (Please check the O/I indicator window to see if both switches are in the disconnected position 0).

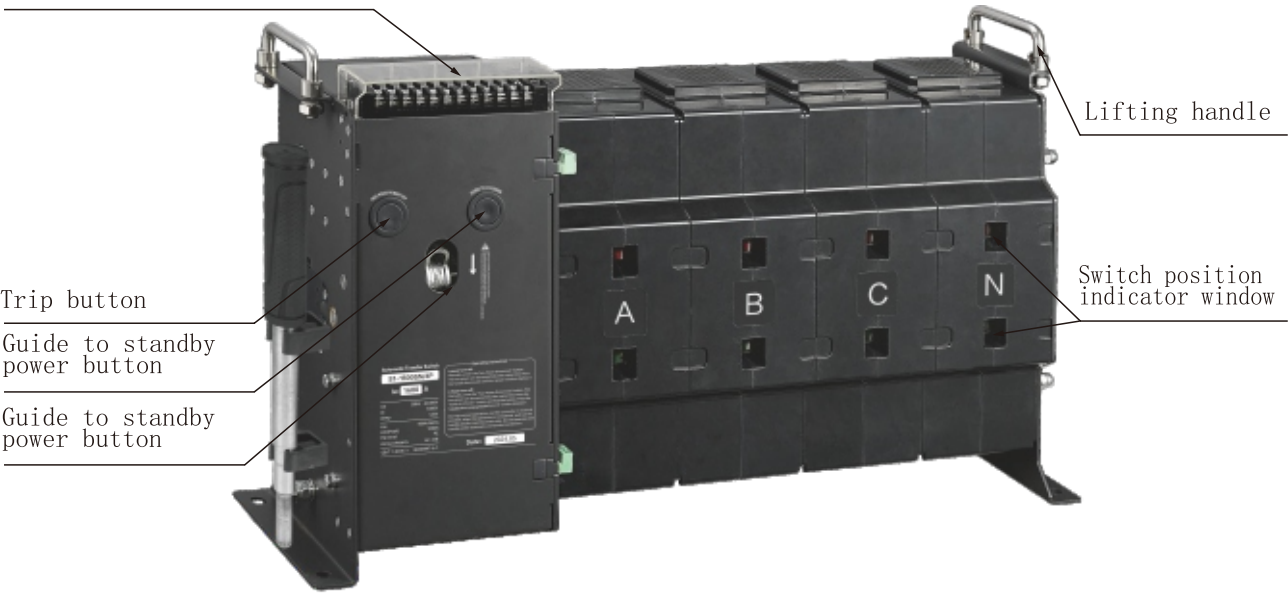
7. Internal Schematic Diagram



A1-A2	A power Input terminal
B1-B2	B power Input terminal
AT1-AT2	A power tripping terminal
BT1-BT2	A power tripping terminal
CC	Closing coil
AX、BX	Control switch
Si	Silicon rectifier
SC	Directional coil
LS	Selector switch
TC	Trip coil
ATS1、ATS2、BTS1、BTS2	Trip control switch
AUS	Trip control switch

8. Appearance Introduction

External control terminal,
and insulating cover



9. Connecting Method

Wire connection instruction of Optional Y-701-702 ATS controller.

Noted:

1、the power input terminal fuses FU1-FU2-20A

2、External signal light is externally connected from the controller terminal

A1/17 — N1/14

L1/19 — N1/14

Normal power indicator

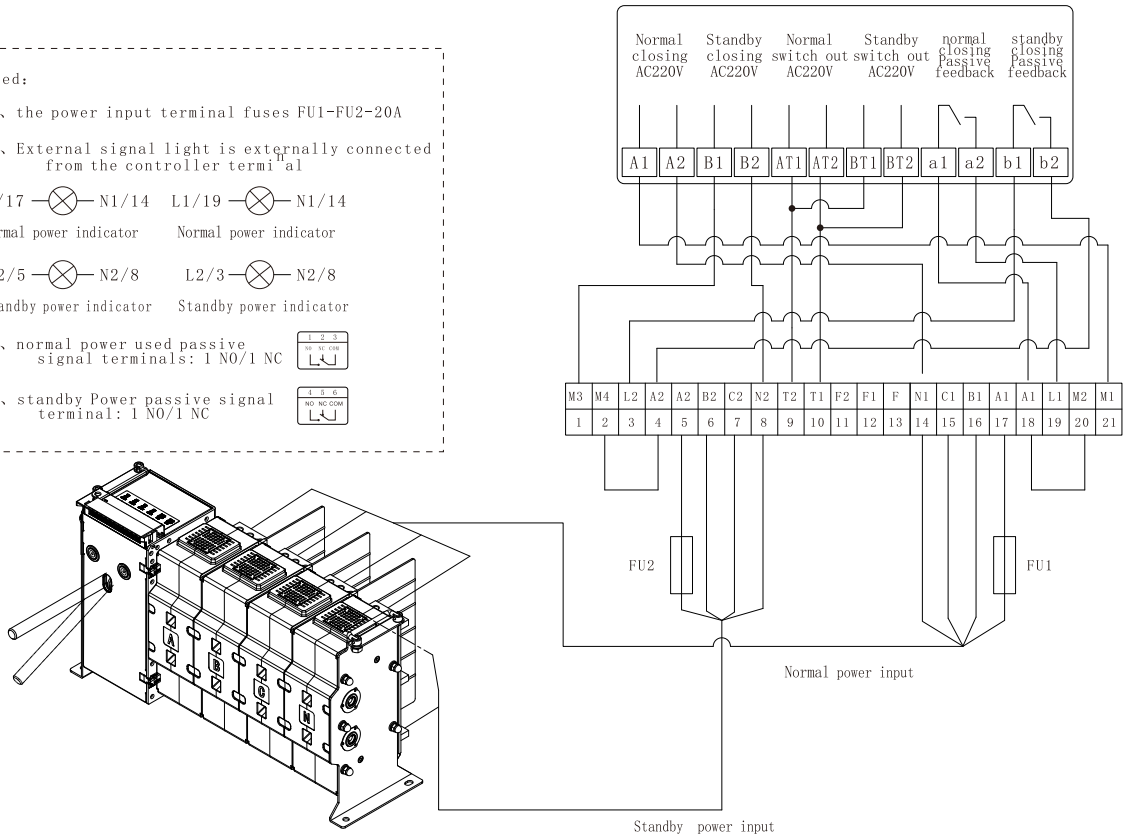
A2/5 — N2/8

L2/3 — N2/8

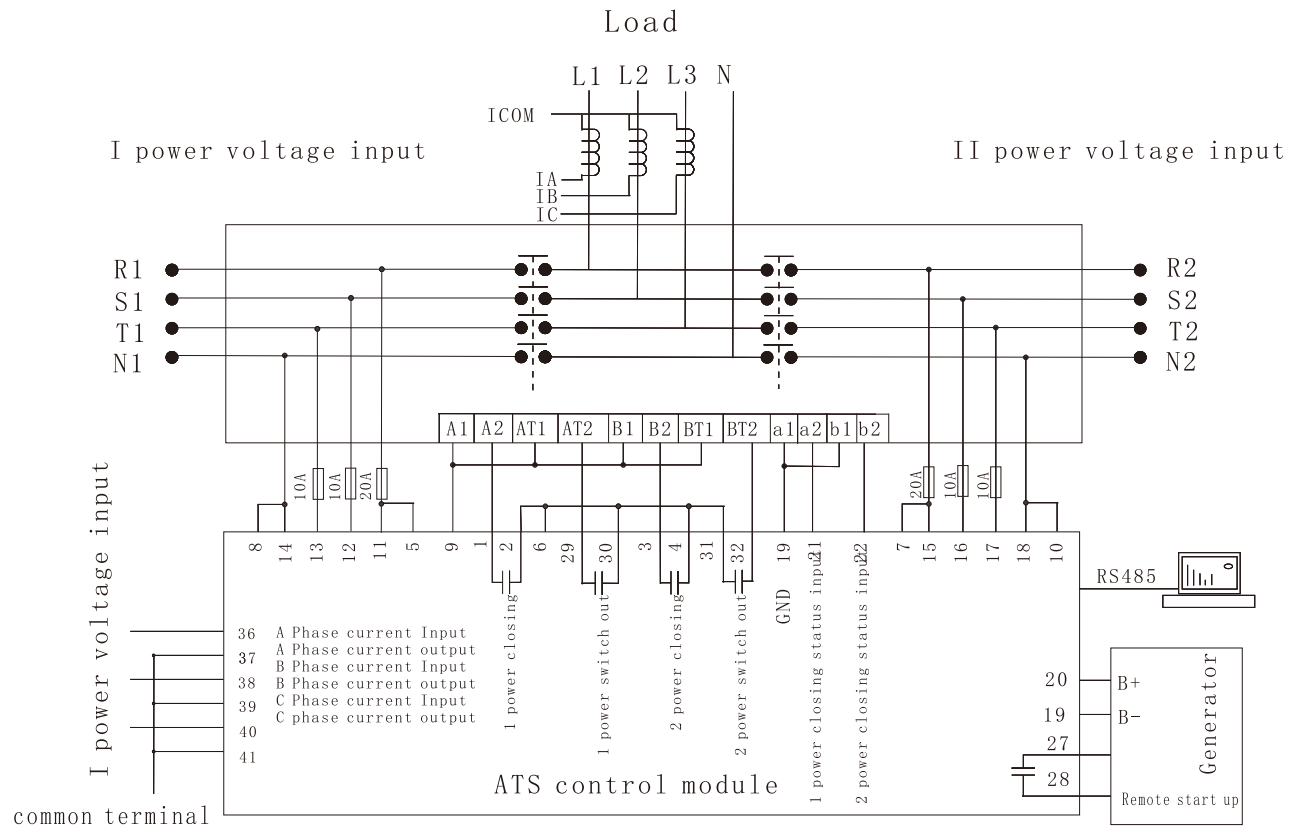
Standby power indicator

3、normal power used passive signal terminals: 1 NO/1 NC

4、standby Power passive signal terminal: 1 NO/1 NC



Optional Y-701-702 Cable connection Description



Note: Please refer to controller manual instruction about the specific function of controller.

10. Maintenance And Storage

The method of manual operation and precautions, it must be noticed that the switch should cut off all external power by professional worker when the switch needs to inspection and maintenance. In order to keep the dual automatic transfer switch performance and stay in good condition, the first maintenance should be done within one year after installation. Regular maintenance should be done at least once a year.

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Suggest sending the manual to the final user!