浙江省知名商号 国家高新技术企业

PICC

合格证

本产品经检验合格，
符合标准GB/T 14048.11，
准予出厂。

检 验 员：

出厂日期：见产品或包装

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浙江省知名商号 国家高新技术企业

C-Lin 欣灵

使用说明书
Products Instructions

XLDS2T Series

Automatic Transfer Switching Devices

Thank you very much for using C-Lin brand automatic transfer switching devices. Please read the instruction manual before using the product!

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Precautions

Please read and understand these instructions before operating this Automatic Transfer Switching Equipment (hereinafter referred to as ATSE).

⚠ Danger

Read and understand this manual before installing or operating the ATSE. Only professional personnel are allowed to install, adjust, repair and maintain this ATSE. Many parts of this ATSE, including printed circuit boards, operate under voltage. Do not touch these parts; only use insulated tools. Do not touch unprotected components or screws on live terminal blocks.

-Disconnect all power supplies.

-Place a "Do Not Close" sign on the switch.

-Lock the switch in the open position.

Warning

This is a patented product. Counterfeiting will be prosecuted!
Before powering on and configuring the ATSE, ensure that the line voltage is compatible with the power supply voltage range indicated on the ATSE nameplate.
If the line voltage is not consistent with the power supply voltage range, the ATSE may be damaged. Failure to follow the instructions for use may result in equipment damage.

I.Product Overview

The XLDS2T series products belong to PC - class (three - position) automatic transfer switching devices (hereinafter referred to as switches). They are mainly used in power supply systems with an alternating current of 50Hz/60Hz, a rated voltage of 400V, and a rated operating current ranging from 16A to 63A. They switch between power supplies when one power supply fails, ensuring the reliability and safety of power supply.
This switch has positions of "Normal (I) Closed", "Standby (II) Closed" and "Open (O)". It can be used in fire - fighting linkage and power supply systems that do not require frequent on - off operations. It is mainly applied in important places that do not allow power outages, such as hospitals, shopping malls, banks, chemical plants, metallurgical plants, high - rise buildings, military facilities and fire - fighting systems.
The product complies with the standard GB/T 14048.11 "Low - voltage Switchgear and Controlgear Part 6 - 1: Multi - functional Electrical Transfer - switching Devices".

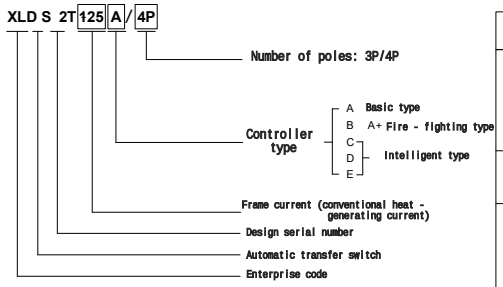
II.Operating Conditions

2.1 Ambient Air Temperature: The ambient air temperature ranges from - 5°C to + 40°C, and the average temperature over 24 hours does not exceed + 35°C.
2.2 Atmospheric Humidity: When the maximum temperature is + 40°C, the relative humidity does not exceed 50%. The maximum monthly relative humidity is 90%. Higher relative humidity is allowed at lower temperatures. Special measures should be taken for the condensation caused by temperature changes.
2.3 Installation Altitude: The altitude of the installation site does not exceed 2000 meters.
2.4 Pollution Degree: The environmental pollution degree at the installation site is grade 3.
2.5 Usage Category: AC - 33iB.
2.6 Electromagnetic Environment: It is suitable for Environment A. Using this product in Environment B may cause harmful electromagnetic interference to the product. If used in this environment, the user needs to take appropriate protective measures.

III.Transportation and Storage Conditions

3.1 During transportation, the product should not be exposed to rain or snow.
3.2 The storage environment temperature ranges from - 25°C to + 55°C, and the relative humidity is not more than 95% (at 25°C).

IV.Definition of Product Model



V.Product Function Introduction

Table 1 Introduction to Controller Functions

Controller Type	Function Introduction
Type A	1.Local standby power supply indication and closing - state indication. 2.Remote normal power supply indication and closing - state indication. 3. Three - phase sampling for normal power supply, single - phase sampling for standby power supply. 4. Detection for normal power supply with lack of phase A/B/C/N. 5. Detection for standby power supply with lack of phase A/B/C/N. 6. Auto - transfer and auto - restoration.
Type B	1. Has all the functions of Type A. 2. Passive fire - fighting forced zero - setting function. 3. Generator starting function.
Type C	1.Local standby power supply indication and closing - state indication. 2.Remote standby power supply indication and closing - state indication. 3.Three - phase sampling for normal power supply, three - phase sampling for standby power supply. 4.Auto - transfer and auto - restoration (default), auto - transfer without auto - restoration. 5.Passive fire - fighting forced zero - setting function. 6.Generator starting function. 7.DC24V auxiliary power supply input. 8.Can be externally connected with an LCD display for remote control.
Type D	1.Has all the functions of Type C. 2.RS485 communication function.
Type E	1.Has all the functions of Type D. 2.Equipped with a clock timing function.

Table 2 Product Functional Parameters

Item \ Controller	Type A	Type B	Type C	Type D	Type E
Rated Operating Power Supply	AC230V 50/60Hz				
Auxiliary Operating Voltage	None		DC24V		
Voltage Measurement Range	None		40-300V		
Operating Positions	Three operating positions (Normal Closed, Standby Closed, Open)				
Operation Modes	Manual, Automatic		Manual, Automatic, Remote Control		
Display Modes	LED Indicator Tube State Display		LED Indicator Tube State Display / LCD Screen Display		
Transfer Modes	Auto - transfer and Auto - restoration		Auto - transfer and Auto - restoration (Default) / Auto - transfer without Auto - restoration		
Under - voltage Transfer Value	None		165 - 217V Adjustable		
Over - voltage Transfer Value	None		243 - 298V Adjustable		
Under - frequency / Over - frequency Detection of Power Supply	None				40 - 60 Hz Adjustable
Timed Start Function	None				Timed Transfer, Timed Generator Start
Transfer Delay Function	None		0 - 180s Continuously Adjustable		
Return Delay Function	None		0 - 180s Continuously Adjustable		
Phase - loss Detection	Three - phase for Normal Power Supply, Single - phase for Standby Power Supply		Three - phase (Phase A, B, C)		
Generator Control	None	Yes (One Set of Relay Dry Contacts)			
Fire - fighting Linkage Control	None	Fire - fighting Forced Zero - setting (One Set of Passive Contact Inputs, One Set of Normally Open Passive Signal Feedback)			
RS485 Communication Function	None			Yes	Default None (Optional)
Installation Modes	Integrated (Without Display Screen)		Integrated (Without Display Screen) / Split - body (With Display Screen)		

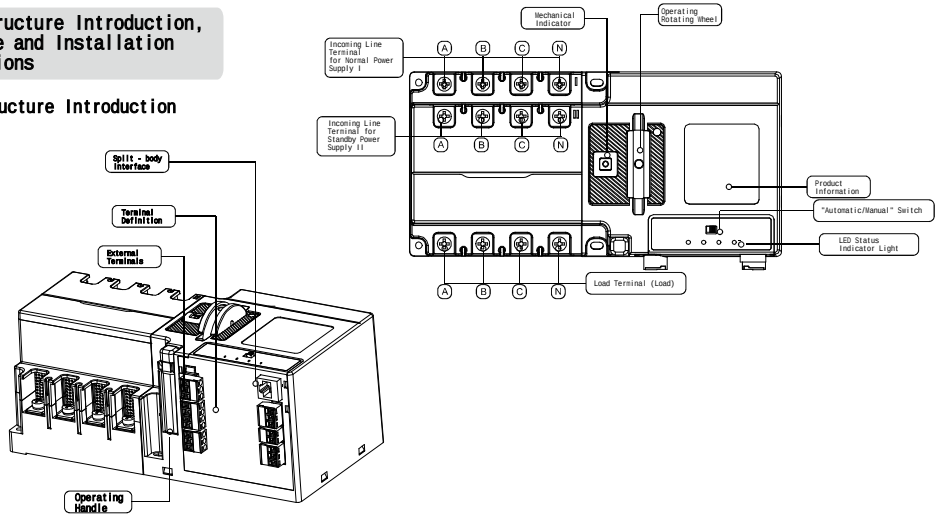
VI. Technical Performance Parameters

Table 3 Technical Parameters

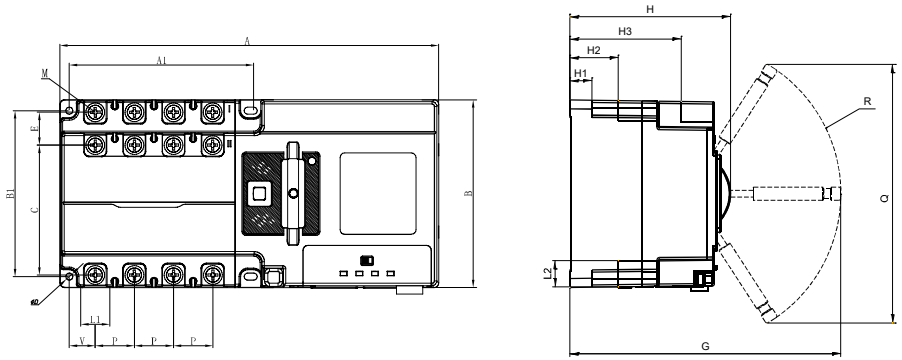
Model Specification	XLDS2T-125	XLDS2T-250	XLDS2T-630
Rated Operating Current Le (A)	16、20、25、32、40、50、63、80、100、125	125、160、200、225、250	250、315、350、400、500、630
Rated Supply Voltage Us (V)	AC230V		
Rated Insulation Voltage Ui (V)	800V		
Rated Impulse Withstand Voltage Uimp (kV)	8kV		
Rated Short - Circuit Making Capacity Icm (kA, Peak Value)	17kA		26kA
Rated Limiting Short - Circuit Current Iq	120kA		
Contact Transfer Time (s)	0.58s	0.56s	0.9s
Transfer Operation Time (s)	1.35s	1.3s	2.0s

VII.Structure Introduction, Outline and Installation Dimensions

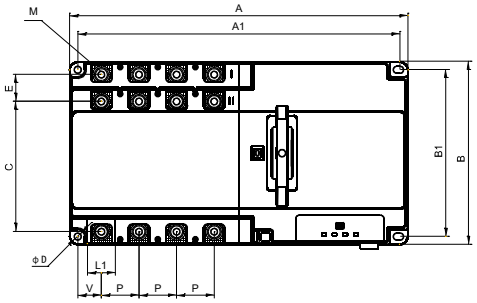
7.1 Structure Introduction

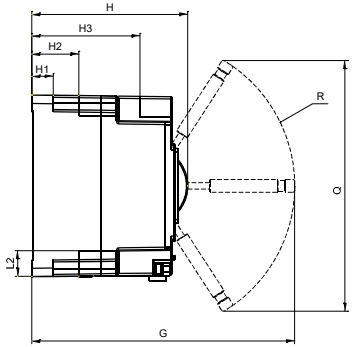


7.2 Outline and Installation Dimensions



XLDS2T - 125 Outline Diagram





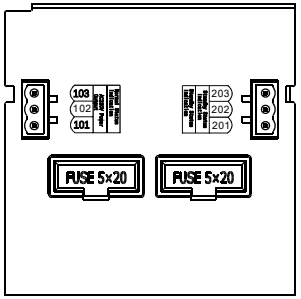
XLDS2T - 250/630 Outline Diagram

Specification	Outline Dimensions (mm)			Installation Dimensions (mm)													Handle Space Dimensions (mm)		
In	A	B	H	A1	B1	H1	H2	H3	L1	L2	C	E	V	P	D	M	G	R	Q
125	242	120	115	116	106	15.5	33	82.2	18.5	19	83	21	16.6	25	Φ4.5	M6	196	106	194
250	315	170	146	298.5	155	20	44	101	26	24	121	25	22	35	Φ6.3	M8	246	137	235
630/3P	417	230	202	386.5	203	16.5	62	130	48	32.6	173	27	45.5	58	Φ8.5	M10	305	163	240
630/4P	475	230	202	444.5	203	16.5	62	130	48	32.6	173	27	45.5	58	Φ8.5	M10	305	163	240

(Note: The dimensions for 3P and 4P of frame sizes 125 and 250 are the same.)

VIII.Terminal Definition

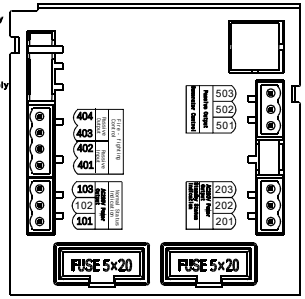
Type A Controller



101 : Neutral Line for Normal Power Supply
102 : Normal Power Supply
103 : Normal Closing

201 : Neutral Line for Standby Power Supply
202 : Standby Power Supply
203 : Standby Closing

Type B Controller



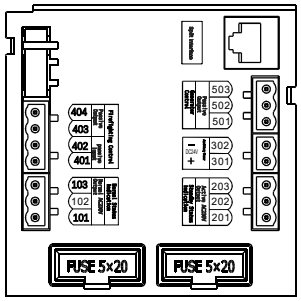
101 : Neutral Line for Normal Power Supply
102 : Normal Power Supply
103 : Normal Closing

201 : Neutral Line for Standby Power Supply
202 : Standby Power Supply
203 : Standby Closing

401 : Passive Fire - fighting Input
402 : Passive Fire - fighting Input
403 : Passive Fire - fighting Output
404 : Passive Fire - fighting Output

501 : Normally Open Terminal of Generator
502 : Common Terminal of Generator
503 : Normally Closed Terminal of Generat

Type C Controller



101: Neutral line
102: Live line
103: Closing signal

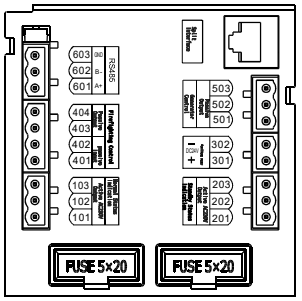
201: Neutral line
202: Live line
203: Closing signal

301: DC24V+
302: DC24V−

401: Passive fire - fighting input
402: Passive fire - fighting input
403: Passive fire - fighting output
404: Passive fire - fighting output

501: Generator Normally Open Terminal
502: Generator Common Terminal
503: Generator Normally Closed Terminal

D-type and E-type Controllers



101: Normal Neutral Wire
102: Normal Power Supply
103: Normal Closing

201: Standby Neutral Wire
202: Standby Power Supply
203: Standby Closing

301: DC24V+
302: DC24V−

401: Fire-fighting Passive Input
402: Fire-fighting Passive Input
403: Fire-fighting Passive Output
404: Fire-fighting Passive Output

501: Generator Normally Open Terminal
502: Generator Common Terminal
503: Generator Normally Closed Terminal

601: RS485 A+
602: RS485 B−
603: RS485 GND

Wiring Instructions for External Terminals

101 - 103: Output of external status indication signals for the normal (I) power supply. (Active, AC230V/0.5A)
101: Input terminal for the common neutral line of signal lights and the 3P neutral line.
102: Output of the normal (I) power supply signal.
103: Output of the normal (I) closing - in signal.

201 - 203: Output of external status indication signals for the standby (II) power supply. (Active, AC230V/0.5A)
201: Input terminal for the common neutral line of signal lights and the 3P neutral line.
202: Output of the standby (II) power supply signal.
203: Output of the standby (II) closing - in signal.

301 - 302: Auxiliary power input. (DC24V)
301: Positive - pole input (+DC24V).
302: Negative - pole input (-DC24V).
The purpose of connecting the auxiliary power to the controller is mainly to control the generator's start - delay time in the "grid - generator" mode. If the auxiliary power is not connected, the generator's start - delay time is 0 seconds. The auxiliary power does not need to be connected when the generator start - delay function is not required.

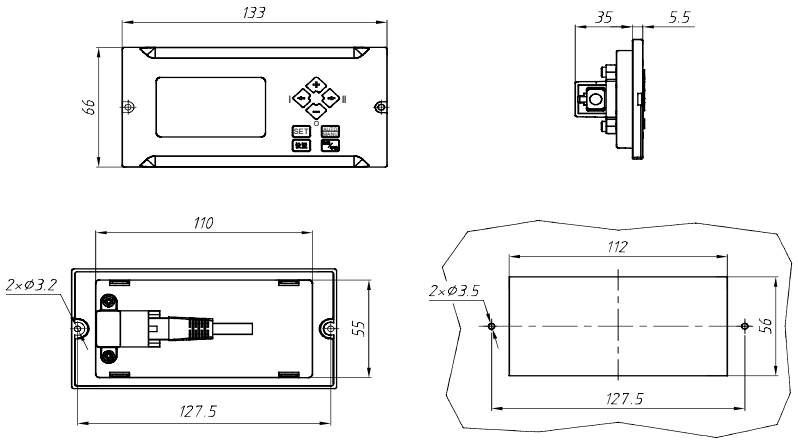
401 - 404: Input of fire - fighting linkage signals and output of feedback signals. (Passive input/output)
401 and 402 are the input terminals for fire - fighting linkage signals. Only one set of normally - open passive contacts can be connected externally. (If the signal sent by the fire - fighting equipment is an active signal, it must first be converted through a small relay, and then the normally - open contacts of the relay are connected to the controller; otherwise, the controller will be damaged.) When the external contacts are closed, the controller immediately controls the switch to turn to the double - open (0) position to cut off the load power, and at the same time, sends a signal back to the fire - fighting control center through terminals 403 and 404.

403, 404: Internally, they are a set of normally - open relay dry contacts for sending back fire - fighting action signals. These terminals are normally open. When a fire - fighting signal is sent to the controller and the switch is switched to the double - open (0) position, 403 and 404 are connected. (Note: When the fire - fighting linkage function is activated, the automatic transfer switch will stop working. To restore the normal switching of the switch, the fire - fighting signal must be removed first, and then the switch can return to the normal operation mode. If the controller is of type C or D, it is also necessary to switch the "manual/automatic control lock" once.)

501 - 503: Output of generator start - control signals (passive).
When the standby (II) power supply is a generator set, the user can connect to the generator controller through terminals 501 - 503 to achieve the function of automatically starting the generator. Internally, 501 - 503 are a set of 0.5A passive relay dry contacts. 502 is the common terminal of the relay, 503 is the normally - closed terminal of the relay, and 501 is the normally - open terminal. In the "grid - generator" operation mode, when the controller is in the automatic mode and the normal (I) power supply is normal, 502 is closed with 501, and 502 is open with 503. If the normal (I) power supply fails and the standby (II) power supply is out of power, after the generator start - delay time, 502 is closed with 503, and at the same time, 502 is open with 501, sending out a generator start signal. After the generator is successfully started, the switch automatically switches to the standby (II) power supply side to supply power to the load terminal (Load). During the power supply process of the standby (II) power supply, if the normal (I) power supply recovers, after the return delay, the controller controls the switch to switch to the normal (I) power supply. After the normal (I) power supply is closed, after the generator shutdown delay, 502 is closed with 501, and 502 is open with 503, sending out a shutdown signal.

601 - 603: RS485 communication interface. (Protocol type MODBUS - RTU)
601 - A+; 602 - B-; 603 - GND;
Note: For the usage method of the RS485 communication port, refer to the communication protocol (in a separate volume).

IX. Outline of Display Controller and Dimensions of Split - body Mounting Cutouts



Split - body Mounting Cutout Dimensions

X.Introduction to the Controller System

10.1 Introduction to Controller Functions

♦Automatic monitoring of undervoltage, under - voltage, and over - voltage of the normal power supply.

♦Automatic monitoring of undervoltage, under - voltage, and over - voltage of the standby power supply.

♦LED display of the power supply status and the working position of the ATS (Automatic Transfer Switch).

♦When the switch is operating normally, the LCD displays switch information. When querying/setting system parameters, it shows the set values/modification results of the parameters. Before an action conversion, it displays the conversion/return delay in a countdown manner.

♦Fire - fighting linkage function: The controller is equipped with a set of passive fire - fighting signal input terminals, which can receive external passive fire - fighting signals. It operates in the double - open state and has a set of passive feedback signal output terminals, which can return the switch's in - place signal to the fire - fighting equipment.

♦Generator control function: The controller has a set of relay dry contacts to control the start and stop of the generator. The start delay and shutdown delay of the generator can be set (auxiliary power supply DC24V needs to be connected).

♦Communication function: Equipped with an RS485 communication port and using the Modbus - RTU communication protocol, it enables remote signaling, remote measurement, remote control, and remote adjustment. (For Type D controller)

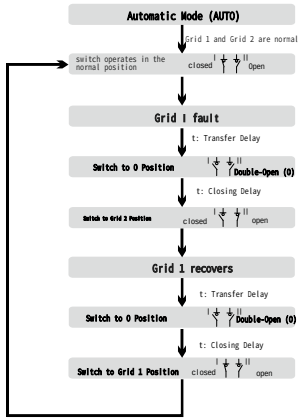
♦Power frequency detection: The under - frequency and over - frequency range is adjustable. (For Type E controller)

♦Timing function: When the switch is set to the grid - generator mode, it can send a timed generator start signal to achieve timed switching between the two power supplies. (For Type E controller)

10.2 Operation Process

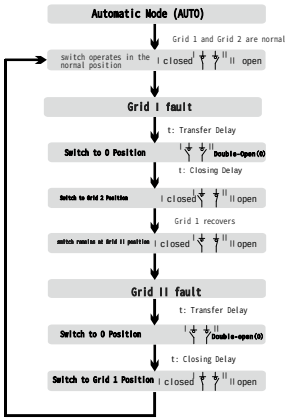
1. Grid - Grid

Conversion Mode: Self - switching and self - restoring, A - 9 - 001, with Power Source Priority



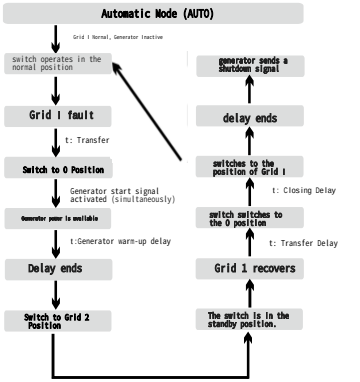
2. Grid-to-Grid

Transfer Mode: Auto-transfer without auto-restore (A-9-000, Mutual Standby)



3. Grid-Generator

Transfer Mode: Auto-transfer with auto-restore (A-9-001, Power Source Priority I)



Note:(1) In the grid - to - grid mode, Grid 1 is connected to Power Supply I and Grid 2 is connected to Power Supply II.(2) In the grid - to - generator mode, the grid is connected to Power Supply I and the generator is connected to Power Supply II.

10.3 Basic Operation Modes (Control Panel)

♦In the main interface state, press the "" key to enter the password input window. Enter the password. Press the "" key to exit the interface, and press the "" key to confirm the password entry. If the password matches correctly, enter the menu selection interface; otherwise, return to the main interface. In the system settings state, system parameter settings can be carried out.

♦In the menu selection interface, press the "" key to select the menu type. Press the "" and "" keys to page through the menu. In the state of a specific parameter, press the "" and "" keys to modify the current parameter value. Press the "" key to save the parameters and exit.

♦In the menu selection state, press the "" key to return to the main interface. In a non - main menu interface, if there is no operation for a certain period, it will automatically return to the main interface.

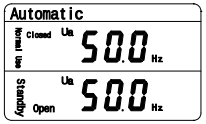
♦On the main menu interface, long - press the "" key until the password interface appears. Enter the password "888" in this interface to enter the voltage calibration page. Press the "" and "" keys to scroll up and down. In the state of a specific phase voltage display, press the "" and "" keys to calibrate the voltage.

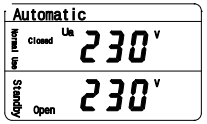
♦On the main menu interface, long - press the "" key for 5 seconds and then enter the password "888" to restore the factory settings. (Note: Do not operate this casually.)

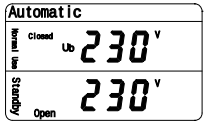
10.4 System Operation

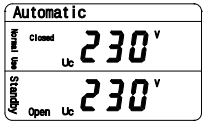
♦Main Interface: When the device is powered on, the screen will display the main interface.

♦Normal Interface: In the main interface, the controller is in the automatic state and the priority mode of Power Supply 1. The switch should be in the normal closed state. The display screen will cyclically display the voltage values and statuses of each phase, as well as the frequency of the power supply system, as shown in the following figures. (Note: At this time, both power supplies are in a normal state.)



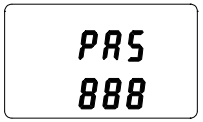






♦ ■Password Verification Interface：This interface verifies the entered password. Only when the password is correct can you enter the setting interface to adjust parameters, as shown in the figure.

■The default factory - set password is "888". If the entered password is incorrect, pressing the "Settings" key will automatically return you to the main interface. If the password is correct, you will enter the menu selection interface. Each time you return to the main interface and want to enter the setting interface again, you need to re - enter the password.



◆Factory Settings：For user convenience, the product has some conventional parameters that users can adjust on their own. These parameters have default settings set by the manufacturer when the switch leaves the factory. The default factory - set parameters are as follows:

A - 1: Under - voltage value for normal power supply: 176V
A - 2: Under - voltage value for standby power supply: 176V
A - 3: Under - voltage hysteresis value: 20V
A - 4: Over - voltage value for normal power supply: 264V
A - 5: Over - voltage value for standby power supply: 264V
A - 6: Over - voltage hysteresis value: 20V
A - 7: Under - frequency protection: OFF
A - 8: Under - frequency hysteresis value: 5%
A - 9: Over - frequency protection: OFF
A - 10: Over - frequency hysteresis value: 5%
A - 11: Unbalance protection: OFF
A - 12: Unbalance hysteresis value: 5%
A - 13: Phase sequence protection: 0

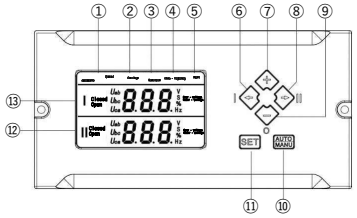
Note: If users need to set parameters on their own, they can adjust the parameters according to the parameter setting procedure instructions.

10.5 Controller Operation Instructions

10.5.1 Functional Introduction of Split - Screen Controller

1) Automatically monitors for open - phase, under - voltage, and over - voltage of the normal power supply.
2) Automatically monitors for open - phase, under - voltage, and over - voltage of the standby power supply.
3) Displays the power supply status and the working position of the ATS via LEDs
4) When the switch is operating normally, the LCD shows switch - related information. When querying/setting system parameters, it shows the set values/modification results of the parameters. Before an action conversion occurs, it shows the conversion/return delay in a countdown manner.
5) Fire - fighting linkage function: The controller is equipped with a set of passive fire - fighting signal input terminals, which can receive external passive fire - fighting signals. It operates in a dual - state mode and has a set of passive feedback signal output terminals, which can return the switch's in - place signal to the fire - fighting equipment.
6) Generator control function: The controller is equipped with a set of relay contacts to control the start and stop of the generator. The start delay and stop delay of the generator can also be set (auxiliary power supply DC24V needs to be connected).
7) Communication function: Equipped with an RS485 communication port and adopting the Modbus - RTU communication protocol, it enables communication, telemetry, remote control, and remote adjustment.
8) Power supply frequency detection: The over - frequency and under - frequency ranges are adjustable.
9) Timed generator start - up function: When the switch is set to the grid - to - generator mode, it can send a timed generator start - up signal, enabling timed switching between the two power supplies.

10.5.2 Description of Split - Screen Control Panel



Control Panel

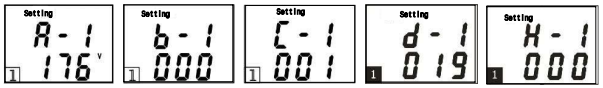
Function	Number		Function Description	
Display	1		Indication of automatic/manual working mode	
	2		Indication of setting status	
	3		Indication of generator start - up	
	4		Indication of fire - fighting start - up	
	5		Fault indication	
	12		Display area for status parameters of Power Supply II (standby) for fault indication	
	13		Display area for status parameters of Power Supply I (normal)	
Button	6		Normal power supply transfer button	In manual mode, pressing this button can force the switch to transfer to the normal power supply. In setting status, this button is used as the up - scroll button for setting items.
	7		Parameter +	In setting status, this button is used as the parameter increment button.
	8		Standby power supply transfer button	In manual mode, pressing this button can force the switch to transfer to the standby power supply. In setting status, this button is used as the down - scroll button for setting items.
	9		Parameter -	In manual mode, pressing this button can switch the switch to the open position. In setting status, this button is used as the parameter decrement button.
	10	AUTO MANU	Conversion mode selection button	In normal use, it is used to select the automatic/manual conversion mode. In setting status, it is used to save and exit the function.
	11	SET	Settings	Pressing this button can enter the parameter setting menu of the controller. In the menu interface, it is used for menu type selection.

1) Interface Display

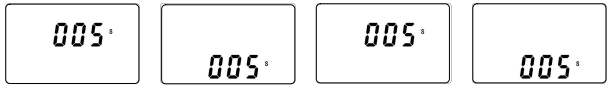
Main Interface: Displays the current normal and standby voltage, frequency, and unbalance parameters.
The interface scrolls to show the information.

2) Password Interface

3) Menu Interface



4) Delayed Conversion Countdown Interface



10.5.3 Operation Modes for the Split - screen Interface

1) Entering the Menu Interface

Main Interface State: Press the "SET" button to enter the password interface.	**Enter the password "888".** switch digit positions; adjust the numbers	Press the "SET" button. If the password is correct, enter the menu; if incorrect, return to the main interface.

2) Menu Parameter Settings

Menu Interface Example	Interface Explanation	Operation Meaning	
Setting A-1 176 V	A	Press "SET" to scroll the menu (A - b - c).	AUTO MANU Save parameters and exit.
	1	Use the arrow keys to page - flip the current menu.	
	176	Modify the current parameter using the arrow keys.	

3) Voltage Calibration

Main Menu Interface State: Long - press the "SET" button until the password interface appears.	**Enter the password "888"** switch digit positions; adjust the numbers	Under the state where a specific phase voltage is displayed, press the arrow keys to calibrate the voltage.

4) Restoring Factory Settings

Main Menu Interface State: Long - press the arrow key for 5 seconds until the password interface appears.	**Enter the password "888"** switch digit positions; adjust the numbers	AUTO MANU **Save the parameters and exit to restore the factory settings.**

5) System Time Setting

Main Menu Interface State: Press the key to view the system time.	**System Time Interface:** Press the "SET" button to enter the password interface.	**Enter the password "888"** switch digit positions; adjust the numbers	**Press the "SET" button. If the password is correct, enter the menu; if incorrect, return to the menu.**

10.5.4 Meaning of the Menu Interface

For user convenience, the product has some conventional parameters that users can adjust on their own. These parameters have default settings set by the manufacturer when the switch leaves the factory.

Menu	Meaning and Default Value	Adjustment Range
A-1	Under - voltage value for normal power supply: 170V	72%～95%、off
A-2	Under - voltage value for standby power supply: 170V	72%～95%、off
A-3	Under - voltage hysteresis value: 20V	5V～30V
A-4	Over - voltage value for normal power supply: 264V	105%～130%、off
A-5	Over - voltage value for standby power supply: 264V	105%～130%、off
A-6	Over - voltage hysteresis value: 20V	5V～30V
A-7	Under - frequency protection: OFF	80%～98%、off
A-8	Under - frequency hysteresis value: 5%	2%～10%
A-9	Over - frequency protection: OFF	102%～120%、off
A-10	Over - frequency hysteresis value: 5%	2%～10%
A-11	Unbalance protection: OFF	3%～30%、off
A-12	Unbalance hysteresis value: 5%	2%～10%
A-13	Phase sequence protection: 0	0: No protection1 : A-B-C 2: C-B-A
b-1	Power supply mode: 0	0: Grid - Grid; 1: Grid - Grid/Generator
b-2	Working mode: 0	0: Auto - transfer and auto - restore; 1: Auto - transfer without auto - restore (manual standby); 2: Auto - transfer and manual restore
b-3	Power supply priority: 1	1: Normal power supply priority (Power Supply 1); 2: Standby power supply priority (Power Supply 2)
b-4	T1 transfer delay: 0s	0～180s
b-5	T2 return delay: 0s	0～180s
b-6	Generator start - up delay: 5s	0～999s
b-7	Shutdown delay: 5s	0～999s
b-8	Frequent transfer alarm	0: Off; 1: On

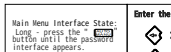
Continued in the following table

C-1	Communication address: 1	1～247
C-2	Parity check: 0 (no parity check)	0: No parity check; 1: Odd parity; 2: Even parity
C-3	Baud rate: 3 (9600)	1:2400 2:4800 3:9600 4:19200 5:38400
d-1	System time - Year	
d-2	System time - Month	
d-3	System time - Day	
d-4	System time - Week	
d-5	System time - Hour	
d-6	System time - Minute	
d-7	System time - Second	
H-1	Generator inspection control	0: Off; 1: Once; 2: Daily; 3: Weekly; 4: Monthly
H-2	Generator test - load control	0: No - load; 1: Loaded
H-3	Timing setting - Year	0~99
H-4	Timing setting - Month	1~12
H-5	Timing setting - Day	1~31
H-6	Timing setting - Week	0~6
H-7	Timing setting - Hour	0~23
H-8	Timing setting - Minute	0~60
H-9	Timing setting - Second	0~60
H-10	Duration of timed generator test - Hour	0~500
H-11	Duration of timed generator test - Minute	0~60

Note: If users need to set parameters on their own, they can adjust the parameters according to the parameter setting procedure instructions.

10.5.5 Action and Fault Records

10.5.5.1 Interface Access Operation

Main Menu Interface State: Long - press the "SET" button until the password interface appears.	Enter the password "222"  switch digit positions adjust the numbers	Press the "SET" button. If the password is correct, enter the menu interface; if incorrect, return to the main interface.

Once in the menu interface, pressing the "SET" button can scroll through the menu cyclically: N (action count record), P (action cause record), F (fault record). Use the keys to switch serial numbers.

10.6.5.2 Meanings of Action and Fault Record Codes

1) N (Action Count Record)

N01	N02	N03	N04	N05
Number of normal closing operations	Number of standby closing operations	Maximum normal voltage value	Maximum standby voltage value	Maximum DC voltage value

2) P(Action Cause Record)

P11	P12	P13	P14	P15	P16	P17	P18
Action type	Cause	Year	Month	Day	Hour	Minute	Second
No action	0: Power - on						
Normal closing	1: Open - phase in normal power supply						
Standby closing	2: Under - voltage in normal power supply						
Normal opening	3: Over - voltage in normal power supply						
Standby opening	4: Under - frequency in normal power supply						
	5: Over - frequency in normal power supply						
	6: Phase - sequence error in normal power supply						

Continued from the previous table

P11	P12	P13	P14	P15	P16	P17	P18
Action type	Cause						
	7: Unbalance in normal power supply						
	8: Open - phase in standby power supply						
	9: Under - voltage in standby power supply						
	10: Over - voltage in standby power supply						
	11: Under - frequency in standby power supply						
	12: Over - frequency in standby power supply						
	13: Phase - sequence error in standby power supply						
	14: Unbalance in standby power supply						
	15: Fire - fighting						
	16: Remote transfer to standby						
	17: Remote transfer to normal						
	18: Remote transfer to double - open						
	19: Normal power supply recovery						
	20: Standby power supply recovery						
	21: Manual transfer to normal						
	22: Manual transfer to standby						
	23: Manual transfer to double - open						
	24: Abnormality in normal and standby power supplies						

3)F (Fault Record)

F01	F02	F03	F04	F05	F06	F07
Fault type	Year	Month	Day	Hour	Minnute	Second
0: No fault						
1: Normal closing fault						
2: Normal opening fault						
3: Standby closing fault						
4: Standby opening fault						
5: Normal wiring fault						
6: Standby wiring fault						
7: Memory fault						
8: Micro - motion fault						

XI.Usage and Maintenance

1.Operating Voltage
The rated operating voltage of this switch is AC400V; the rated operating voltage of the controller is AC230V.
2.Wiring
When wiring the switch, strictly follow the incoming line markings. For three - pole products, connect the neutral wire to the neutral terminal. Make the wiring for fire - fighting linkage and generator control according to the actual situation, and finally ensure the product is well - grounded.
3.Inspection and Maintenance
During the use of the product, conduct regular general inspections. Manually or automatically transfer the switch once to check if the product is operating normally.Carry out regular maintenance, remove dust, and maintain the insulation performance of the product.

XII.Precautions for Unpacking Inspection

When you receive the ordered product, please conduct an unpacking inspection of the following items:
1.Check that the product nameplate matches the order requirements
2..Inspect the appearance of the switch for any damage. Look for signs of damage caused by transportation or human - induced physical damage.
3.Read this instruction manual before installation, operation, and maintenance inspections.
If any issues are found, please contact our company or the local distributor as soon as possible.

XIII.After - sales Service

This product is manufactured under a comprehensive quality management system. In case of a malfunction, the following explanations regarding the warranty period and after - sales service are provided:
1.The switch should be inspected and maintained regularly as required. For switches that are not used for a long time, pay attention to moisture - proofing and dust - proofing. Before use, conduct commissioning as described above to ensure the switch can be put into operation.
2.Under normal storage and usage conditions, this product is covered by the "Three Guarantees" policy from the date of use for 12 months (but not exceeding 18 months from the date of shipment). During the "Three Guarantees"period, users must follow the specified usage and maintenance requirements of this product. If the product is damaged or fails to function properly due to quality issues, our company will repair or replace it for free.
For malfunctions caused by the following reasons paid repair or replacement will be carried out even within the warranty period:
1.Malfunctions caused by incorrect use, self - modification, and unauthorized disassembly.
2.Damage caused by drops during the installation process.
3.Use beyond the requirements of the standard specifications.
4.Damage caused by irreversible factors such as earthquakes, fires, lightning strikes, abnormal voltages, other natural disasters, and secondary disasters.