



XLDS2

Thank you very much for using Clin brand automatic transfer switch. Please read the products instruction carefully before use!

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Foreword

Thanks for using our company products. We will provide reliable quality and dedicated service to allow you to rest assured to use our company products. Before installation, circuit connection, running and maintenance, please make sure to read carefully the user manual, to ensure the correct using, during using please also make sure know very well of relative safety and caution items.

Product Using Notes:

- 1) This device only allows professional person to install, commissioning and maintenance.
- 2) Before installation, commissioning and maintenance must cut off the two power sources.
- 3) Must use voltmeter to check to make sure the power is cut off.
- 4) The device must be reliable earthed as per requirement.
- 5) Before device electrify have to reset the panel door and arc shield.
- 6) Illegal operations may result in electric shock, fire or explosion.

1.Summary

XLDS2 series product is a PC class automatic transfer switching device, mainly used for the power supply system with two neutral pointed earthed and AC50Hz, rated voltage 440V and below, rated working current up to 3200A, transfer between two power system when one way power source is abnormal, to ensure the power supply reliable and safety.

This ATS have "Main Power ON", " Backup Power ON" and "OFF" position. Widely used for automatic transfer between main power and backup power supply system or auto transfer between two sets load equipment and safety isolation etc.

Product confirm to standard of IEC60947-6-1<<Low voltage switchgear and control equipment Part 6-1: Multi-function transfer switch device>>.

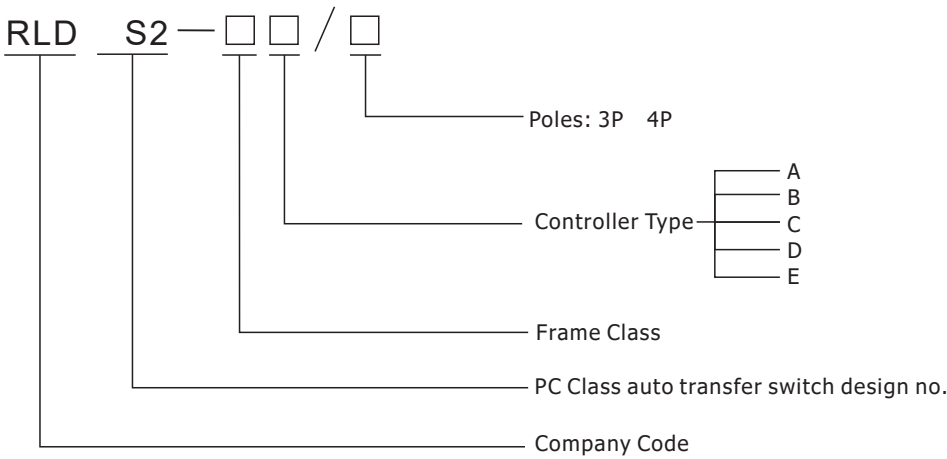
2.Working Conditions

- 2.1 Ambient temperature: -5℃ - +40℃ ; 24hours average not more than +35℃ ;
- 2.2 Atmospheric conditions:
humidity not more than 50% at max.+40℃ , max. Month humidity 90%,
higher humidity is allowed at lower temperature. It should take special treatment for the occasionally condensation due to the temperature variation.
- 2.3 Altitude: Not more than 2000m
- 2.4 Pollution Class: The installation site environment pollution Class 3
- 2.5 Use category: AC-33iB
- 2.6 Electromagnetic Environment
Suitable for A environment. Using in environment B, the product will produce harmful electromagnetic interference, under this situation, user should take proper safeguard procedure.

3.Transportation and Storage Conditions

- 3.1 During the transportation should not be expose in the rain and snow.
- 3.2 Storage ambient temperature should between -25℃ - +55℃ , relative humidity not more than 95% (under 25℃)

4.Model Definition



5.Function Instruction 1

Controller Type	Function Introduction
A Type	1. Normal power(N) and Reserve power(R) indication and ON/OFF status indicate 2. Active output terminal Normal and Reserve power indication and ON/OFF status 3. One phase (A phase) phase monitoring 4. Auto transfer with auto recovery
B Type	1. N and R power indication and ON/OFF status indicate 2. Active output terminal for N and R power indication and ON/OFF status 3. One phase (A phase) phase monitoring 4. Auto transfer with auto recovery 5. Passive fire-linkage 6.Generator start function
C Type	1. N and R power indication and ON/OFF status indicate 2. Active output terminal for N and R power indication and ON/OFF status 3. Three phase over/under voltage and phase missing monitoring 4. Auto transfer with auto recovery(default), auto transfer no recovery as request. 5. Passive fire-linkage with passive feedback signal output. 6.Generator start function 7. DC24V aux. power input, 8. LCD split display is optional.
D Type	1. N and R power indication and ON/OFF status indicate 2. Active output terminal for N and R power indication and ON/OFF status 3. Three phase over/under voltage and phase missing monitoring 4. Auto transfer with auto recovery(default), can setting with auto transfer no recovery 5. Passive fire-linkage. 6.Generator start function 7. DC24V aux. power input, 8. With LCD split display. 9. With RS485 communication interface
E Type	1. N and R power indication and ON/OFF status indicate 2. Active output terminal for N and R power indication and ON/OFF status 3. Three phase over/under voltage and phase missing and phase sequence monitoring 4. Auto transfer with auto recovery(default), can setting with auto transfer no recovery 5. External remote control terminal. 6.Power fault alarm 7. Switch fault alarm 8. DC24V aux. power input, 9. LCD split display optional.

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5.Function Instruction 2

Item	Type	A Type	B Type	C Type	D Type	E Type
Rated Voltage		AC230V 50/60Hz				
Aux. Power		DC24V				
Voltage measuring Range		40~300V				
Power Loss		≤10W				
Working postion		(Normal power ON, Reserve power ON, OFF) Three working position				
Operation Mode		Auto, Manual			Auto, Manual, Remote	
Display mode		LED indicator			LCD Display	
Transfer mode		Auto Transfer auto recovery		Auto Transfer auto recovery / Auto transfer no recovery		
Under voltage transfer value		NO		187V	160~200V Adjustable	
Over voltage transfer value		NO		263V	240~290V Adjustable	
Transfer Delay Function		NO		Optional	0~180s Adjustable	
Recovery Delay Function		NO		Optional	0~180s Adjustable	
Phase missing detect		Single phase (A Phase)		Three phase (A, B, C Phase)		
Generator control		NO	Yes(one set relay contact)			
Fire-linkage control		NO	Yes(passive contact input, with one set NO passive feedback signal)			
Power underfrequency/Overfrequency detection		NO				40Hz~60Hz Adjustable
Timing start function		NO				Timing conversion, timing start generator
Isolation lock		Disconnect position has isolation function,It can be padlocked at the same time				
RS485 function		NO			Yes	
Installation mode		Integrated (No display)		Can make with integrated and split (Note: integrated type without display)		

5)

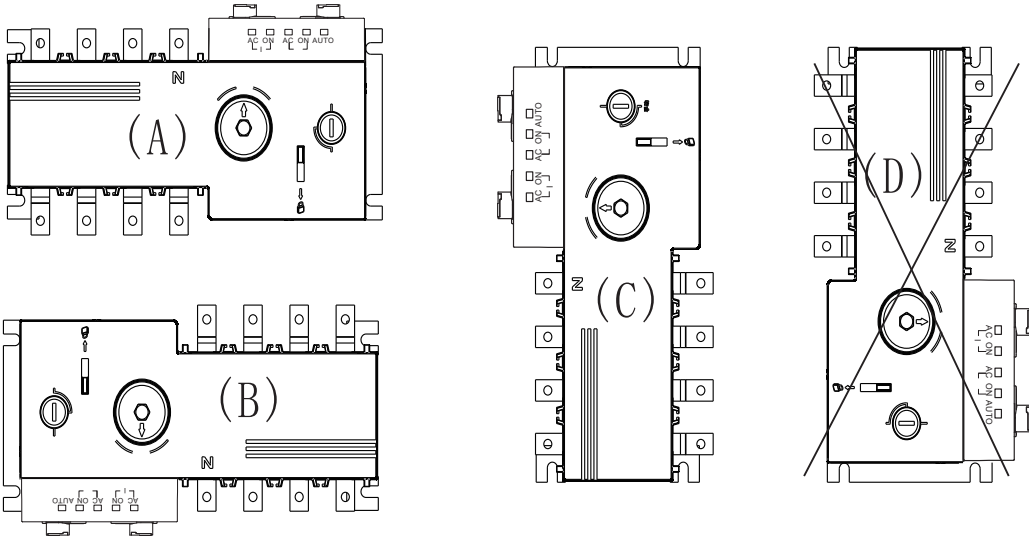
6.Technical Function Data

Technical Data Sheet

Frame Current (A)	100	160	250	630	1600
Rated Insulation Voltage	690V				
Rated Impulse Withstand Voltage	8KV				
Rated Working Current (A)	16A、20A 25A、32A 40A、50A 63A、80A 100A	125A、140A 160A	160A、200A 225A、250A	315A、400A 500A、630A	800A、1000A 1250A、1600A
Rated Short Circuit Making Capacity	8KA	17KA	17KA	26KA	55KA
Rated Limit Short Circuit Current	120KA				
Control power voltage	AC230V				
Power outage Time (s)	0.7	1	1.2	0.8	1

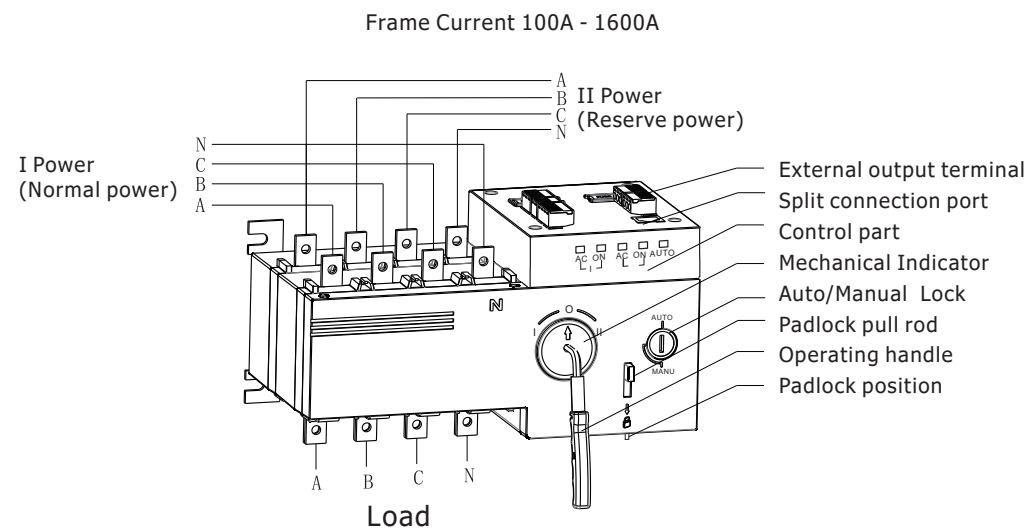
7.Product Installation and use introduction

■ ATS correct installation mode



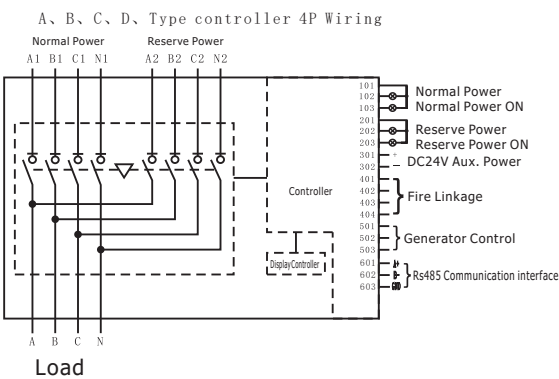
A B C Installation Correct, D wrong

■ ATS Wiring Instruction

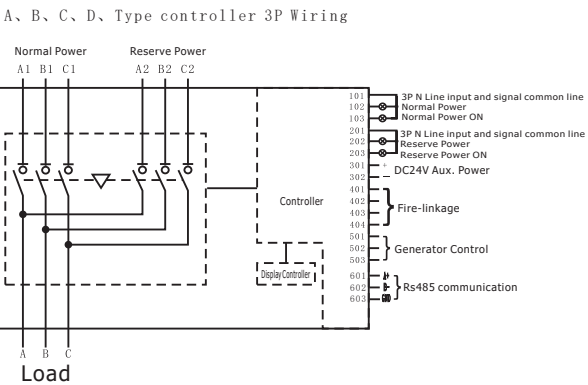


8.Terminal Difinition

■ Frame current 100A - 1600A

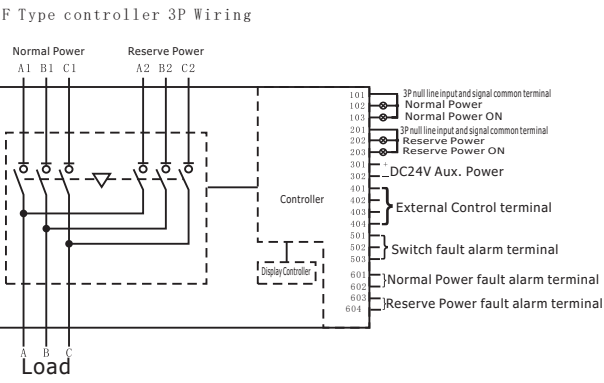
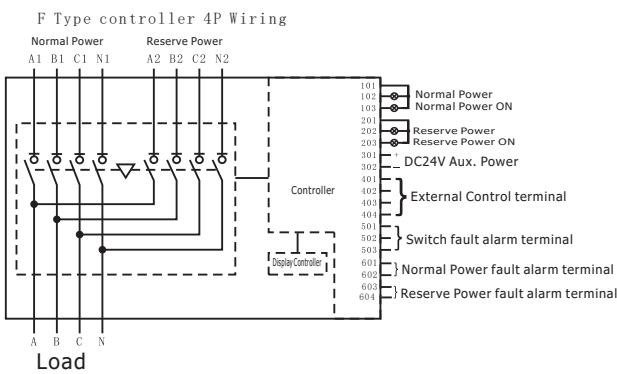


- 1.Controller terminal wiring instruction
- 101-103 : Main Power external Indicator signal output (Active AC230V 0.5A)
- 101—Indicator common null line and 3P null line input
- 102—Main power indicator signal output 103—Main power ON signal output
- 201~203 : Backup power external indicator signal (Active AC230V/ 0. 5A)
- 201—Indicator common null line and 3P null line input
- 202—Backup power indicator signal output 203—Backup power ON signal output
- 301~302 aux. power DC24V input
- 301--DC24V "+" input 302--DC24V "-" input
- 401~404 fire linkage control signal input and feedback signal output
- 401, 402-- Fire linkage signal passive input,
- 403, 404--Feedback signal when ATS transfer to OFF position
- 501-503 : Generator start control signal output
- 501--Control signal NC point 502--Control signal common point
- 503--Control signal NO point
- 601~603: RS485 Communication terminal 601--A+ , 602-- B- , 603--GND



- Note: 1. If fire-fighting equipment output signal is active power, the signal source need to change over the line connection, for example to connect through a relay to change the line connection, and connect the relay NO point to 401, 402, when NO contact point closed ATS transfer to OFF position. when the fire linkage function is active, the ATS will stop working, if want the ATS to working again, must first clear up the fire-fighting signal and then the ATS will recovery normal operation. If it is intelligent type , need switching Manual/Auto button one time.
2. When the backup power is Auto start generator, when normal power is good 501 and 502 closed, 502 and 503 open; When Normal power is fault, 501 and 502 open, 502 and 503 closed.
3. RS485 Communication interface manual please refer to communication protocol.

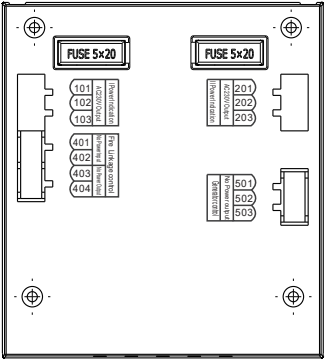
■ Frame current 100A - 1600A



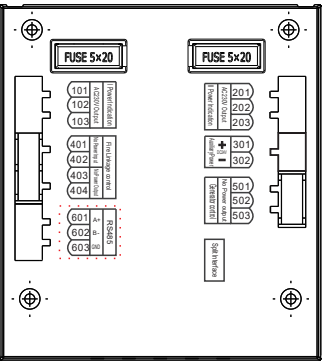
- 1.Controller terminal wiring instruction
101-103 : Normal Power external Indicator signal output (Active AC230V 0.5A)
101—Indicator common null line and 3P null line input
102- Normal power indicator signal output
103—Normal power ON signal output
201~203 : Reserve power external indicator signal (Active AC230V/0. 5A)
201—Indicator common null line and 3P null line input
202—Reserve power indicator signal output
203—Reserve power ON signal output
301~302 aux. power DC24V input
301--DC24V "+" input 302- DC24V "-" input
401~404 External Control terminal
401- Active fire-linkage Common terminal, 401 and 402 short connect- Normal power ON
401 and 403 short connect- OFF, 401 and 404 short connect-Reserve power ON
501-503 : Switch fault alarm terminal
501--Control signal NC point 502--Control signal common point
503--Control signal NO point

- 601~604: Normal/Reserve Power fault alarm terminal
601~602---Normal Power fault external terminal
603~604---Reserve Power fault external terminal

- Note: 1. If fire-fighting equipment output signal is active power, the signal source need to change over the line connection, for example to connect through a relay to change the line connection, when the function is active, the ATS will stop the auto mode, if want the ATS to working again, must first cancel the short connect signal and then the ATS will recovery normal operation.
2. Switch fault alarm terminal instruction: When the ATS is working good, 502 and 503 closed; When ATS is fault: for example, transfer switching jammed, not proper in position, the controlled detect ATS fault then 501 and 502 closed to send the signal (contact point)
3. Normal/Reserve power fault alarm terminal: when input power is correct , Normal and reserve power terminal in closed status. If phase sequence or phase missing, the terminal opened to give the signal.(contact point)



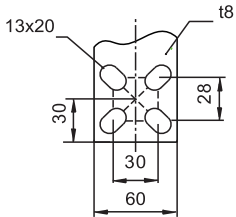
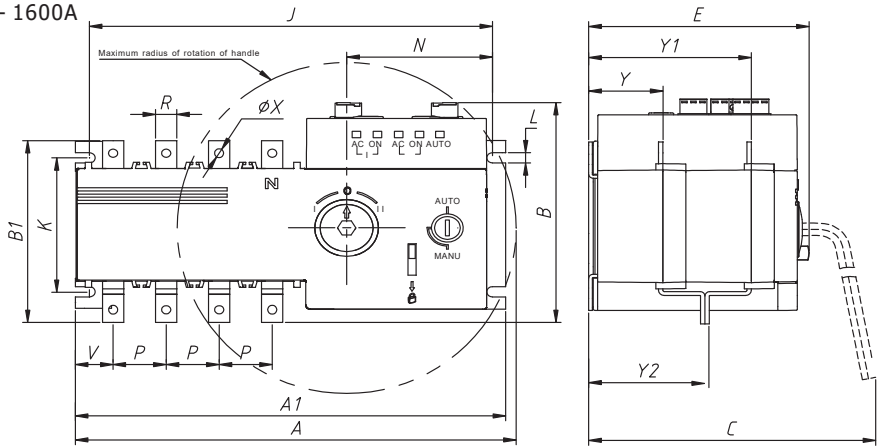
B Type Controller



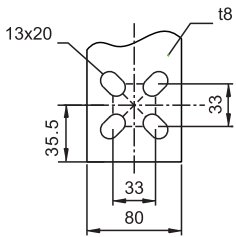
D Type Controller

9 Outline Drawing Size

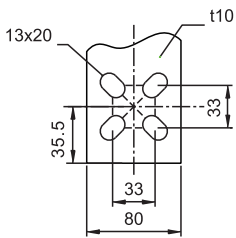
■ Frame Current 100A - 1600A



800-1000A



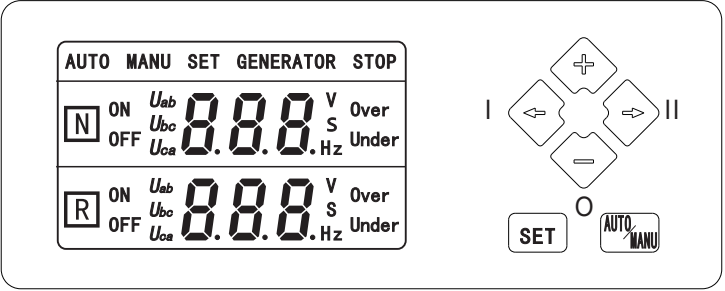
1250A



1600A

specifications	Contour dimension(mm)						Mounting dimensions(mm)										
	In	A	A1	B	B1	C	E	J	K	L	N	P	R	V	ΦX	Y	Y1
100	330	244	135	125	165	125	228	85	6.5	83	30	12	21	6.5	41.5	91.5	44
160	374	301	175	140	200	150	285	102	7	94	36	20	31	8.5	55.5	125.5	92.5
250	436	373	200	178	250	198	344	108	6.5	99	50	24	37	11	72	157	116
630	502	433	265	260	295	244	416	180	9	101	65	40	47.5	12	83	193	140
1600	1050	636	390	380	373	320	612	220	11	83.5	120	80	71	13	109	241	108

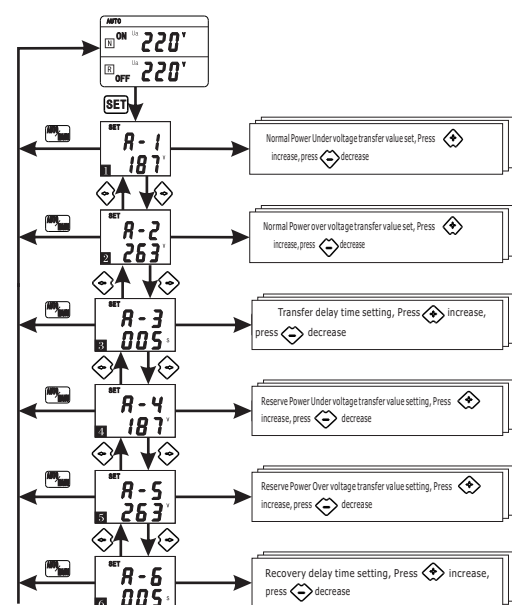
10 Split controller operating instruction



Note: Only frame current 100A-630A have

In order for user easy to use, the product have provide some frequently used transfer data for users to modify, these data before the switch leave factory have been proceed with default setting, the default setting data as followings:

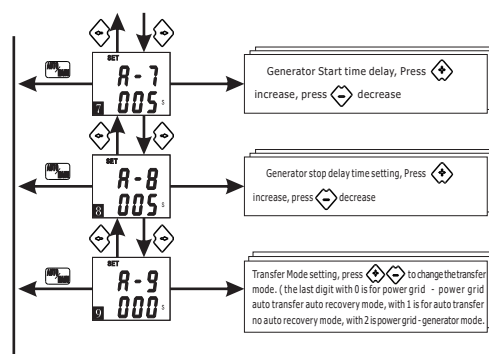
1. Normal power under voltage transfer value: 187V
2. Normal power Over voltage transfer value: 263V
3. Reserve power under voltage transfer value: 187V
4. Reserve power Over voltage transfer value: 263V
5. Transfer delay time: 5S
6. Recovery delay time: 5S
7. Generator start delay time : 5S
8. Generator Stop delay time: 5S
9. Transfer Mode: Power Grid -- Power Grid



Key-press instruction

When controller is working, press Set button, LCD display setting interface as picture above, under setting menu, press " " " " button can up-page and down-page setting item, if press " " button will escape setting menu; press " " " " button can modify the data value.

Continued



11.Using and Maintenance

1. Working Voltage

This product rated working voltage is : AC230V 50/60Hz.

2. Wiring

Product wiring should strictly as per input wiring mark, 3P product should connect the neutral line to neutral terminal. As per actual need to wiring the fire linkage and generator control, and at last make sure the product is well earthed.

3. Inspection and maintenance

During the product working, should periodically make normal inspection, manually or auto transfer the ATS one time to check whether product is working normally.

Periodically maintenance, clear out the dust, keep the product insulation performance.

12.Open-case inspection notes

After received the ordered product, please open the case to check the following items:

1. Please check the name plate whether it is same as you ordered;
2. Check the ATS out-looking whether is in good condition, check whether have man-made physical damage due to transportation;
3. Check the operating mechanism and switch part whether have loose or not ;
4. Before installation, running, maintenance please must read this user manual

If any problem found, please immediately contact with our company or our local agent.