⚠ Dangerous Warning

This device can only professional installation, commissioning and maintenance.
Not require manual operation of all the caused losses , the manufacturers will not be held responsible.

a) the device can only professional installation, commissioning and maintenance
b) installation, commissioning and maintenance of the device to be cut off the two-way power (active fire control signals can cause electric shock, but also to confirm disconnect)
c) must use the Voltmeter testing to confirm the power has been disconnected
d) devices, as required reliable grounding
e) devices and power before cabinet dodr and interrupter cover reset
f) operated in violation of regulations could lead to electric shocks, burning or explosion!

Suggest send the instruction to final user

Automatic Transfer Switch

Instruction Manual

I. General

PC-class dual-supply automatically switch (hereinafter ATSE) is the latest company Technology development of high-tech products. It is in line with GB/T14048.1, GB/T14048. 11 superscript , And also with "high-rise buildings fire norms" and "Architectural Design fire norms", emergency Lighting Design Guide, "" civil electrical design specifications. " Product components, parts after martial law Screening of the aging grid, finished a continuous 168 hours of electricity a dry run, the final pass through the test load Before the factory. This is to ensure the product's reliability and security.

ATSE apply to AC 660 V, rated frequency of 50 /60Hz. 250 volts DC and the following Occasions.

The products are mainly used for the state of a load, widely applicable to the fire, postal communications, hospitals, hotels, Urban rail transport and high-rise buildings, industrial assembly line, television stations need electricity for the important parts.Main power、Emergency Power can be power grids, with Self-excitation generator sets, battery, and so on.

Ⅱ、Working Conditions:

2.1 Ambient air temperature

Ambient air temperature of -5 ℃ to +40 ℃, and a 24-hour average temperature does not exceed +35 ℃. Around +40 ℃air temperature is above or below -5 ℃ users should consult with the manufacturers.

2.2 Atmospheric humidity

The maximum temperature of +40 ℃ the relative humidity of not more than 50 percent, the largest of 90 % relative humidity, ability Humid air by the impact of the sea, at a lower temperature may allow a higher relative humidity,

Occasionally the temperature under Conqeal Dew should take special measures.

2.3 Iinstallation Altitude

Locations of not more than 2,000 meters above sea level. For a higher altitude, taking into account the air Xinhua strength and cooling down, in consultation with the manufacturer.

2.4 Pollution levels

Installation on grade Ⅲ

2.5 Installation sort

Installation sort Ⅳ type

2.6 Installed tilt

Products in the cabinet fixed installation, the largest inclination to ± 22.5° .

2.7 Flash Arc-distance

In AC 380 V-arc distance of 80 mm. ACat 660 V-arc distance of 100 mm. Under 125A installation can`t consider flash arc.

2.8 use category

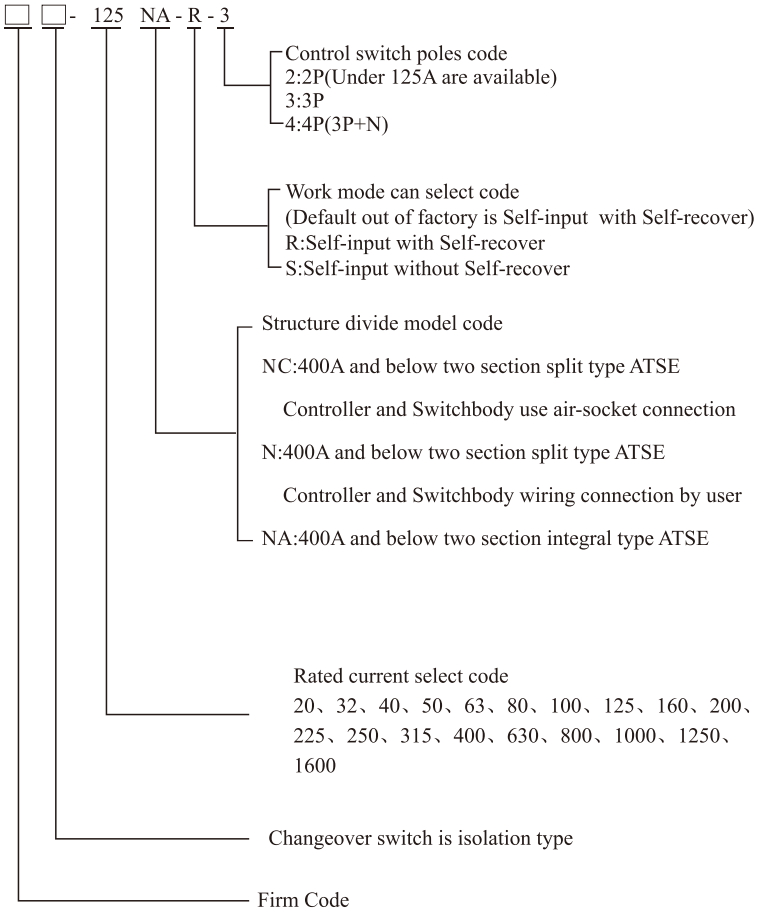
400A and the following is the AC-33B, 630A and above for the AC-33B.

Ⅲ、Products structure

ATSE by the switch body and controller two major components. Switch body with electrical and mechanical Lock, closing instructions as the isolation of the indicators used.

Products using electromagnetic drive, M-type, Q-single-coil DC pulse operation, C-, N-type, T-type, NA - adopt Dual-coil DC pulse operation, transfer controller work power using the main power,backup power line voltage 220V AC, without add controller .

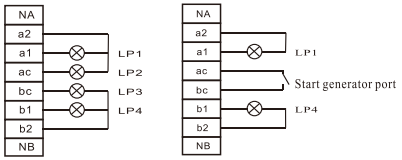
Ⅳ、Products Model and classify



NA Type ATS(two section of Integral type)

NA-ATSE an intelligent controller installed on the switch body within the compact structure, the user need only Will be connected to the main loop, you can put into use the automatic switch electrical system.(Limit 20 ~ 400A)

1,Indication of normail Power status;
2,Indication of back-up Power status;
3,Indication of normal Power closing status;
4,Indication of back-up Power closing status;
5,Indications of normal Power under-voltage,over volage, lose phase status;
6,Indications of back-upPower under-voltage,over volage, lose phase status;
7,Indication light of controller working mod:AUTO,MANUAL
8,Adjustive Change over delay time(0~30 seconds)
9,operation button
Main Manual:On Manual status,main power closing
Manual/Auto:Controller under Manual and Auto status transfer
Emergency Manual:On Manual status backup closing



Pic A: Utility-Utility Pic B:Utility-generator

Wiring explain:

1. NA : 3P special Main Power connect Neutral port
2.a1、a2:Main Power exterior closing indication
3.ac、bc:reserve backup
4.b1、b2:Emergency exterior closing indication
5.NB:3P special emergency connect neutral port
6.LP1、LP4:Main、Emergency Power closing Indication
7.LP2、LP3:Main、Emergency Power Indication
8.Pic B is the diagram of Utility to generator

NA series ATS Intelligent controller instructions Auto, manual conversion:

Panel on the automatic / manual conversion button, press this button in the state automatically switch to manual State manual lights, manual to automatic conversion under state automatically lights. - Or to automatic, to manual.

Automatic mode of operation:

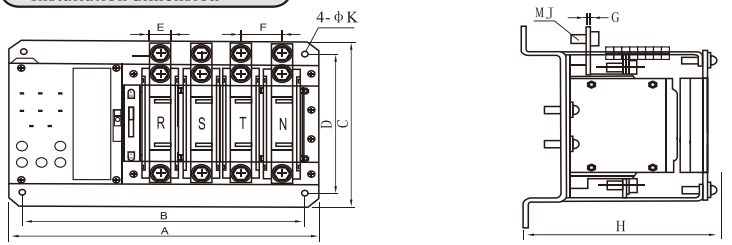
Automatic mode, for the vote of Self-input with Self-recover,Self-input without Self-recover mode,power supply situation under auto control complete two-way between the power conversion, ATSE conversion delay time, user according to power grid and load requested, set on panel, setting range 0 ~ 30 S (0-60S).

1、Both power are normal supply, conversion to the main power supply.
2、 The main power is abnormity and the normal backup power, cut off the main power switch to backup power supply; when main Source return to normal, then cut off the standby power to the main power conversion. Since a vote of Self-input withou Self-recover, the main power is restored Normal will not automatically switch to the main power.

Manual mode of operation

1、 manual / automatic conversion button placed manually position, bright lights
2、 the main power is normal, according to the main power conversion button to cut off the standby power conversion to the main power supply.
3、 the normal backup power, backup power conversion according to the button to cut off the main power switch to standby power.

NA type ATSE appearance Installation dimension



Dimension / Model	A			B			C	D	E	F	G	H	J	K
	2P	3P	4P	2P	3P	4P								
32NA	216	243	270	196	223	250	184	167	12	27	3	110	5	9
63NA 125NA	237	275	311	217	254	291	184	167	20	37	3	110	8	9
160NA 200NA 250NA	——	322	372	——	302	352	294	200	20	49	5	146	8	10
315NA 400NA	——	352	402	——	332	382	294	200	30		6	146	10	10

NA type ATSE Technical character

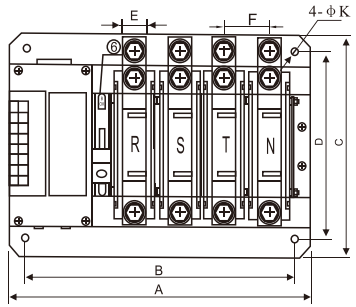
Model		32NA/63NA/125NA	160NA/200NA/250NA	315NA/400NA
Rated Voltage(V)		AC220	AC220	AC220
Rated Current(A)		3、5	7	7
Max Instantaneous Current(KA)		5	15	15
Use Life	Machine	8000	6000	5000
	Electric	3000	2000	2000
Max operate cycle(Second/Times)		10	12	15

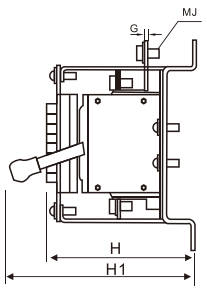
Ⅴ、Products Model Introduction

C type ATSE(Split two section type),to user easy installation,our firm connect the split ATSE controller and switchbody with special air-socket connection,user only need connect main loop well.put on the socket to use,take out the trouble of difficult to connection.

Controllers can be allocated:
C-socket type Switch, with socket typeCU-A, CU-B controller.
Connect terminal function refer to Intelligent controller as behind.

C type ATSE appearance Installation dimension





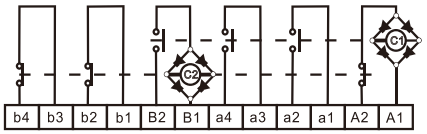
Model \ Dimension	A			B			C	D	E	F	G	H	H1	J	K
	2P	3P	4P	2P	3P	4P									
32C	170	197	224	150	177	204	184	167	12	27	3	110	155	5	9
63C 125C	191	228	265	171	208	245	184	167	20	37	3	110	155	8	9

C type ATSE Technical character

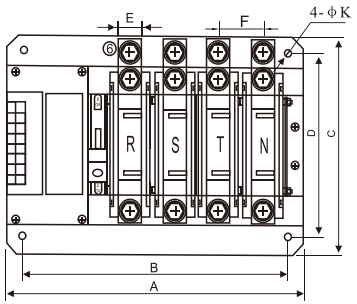
Model		20C	40C	63C	80C	100C	125C
Rated Voltage(V)		AC220					
Rated Current(A)		3.5					
Max Instantaneous Current(KA)		5					
Use Life	Machine	8000					
	Electric	3000					
Max operate cycle(Second/Times)		10					

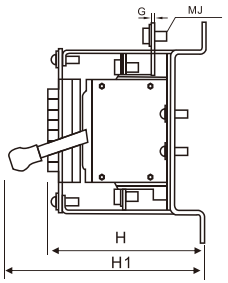
N type ATS(split two section type)

Controllers can be allocated:
N-wiring type Switch, meet L-801、L-700 wiring type controller .
Connect terminal function refer to Intelligent controller as behind.



N type ATSE appearance Installation dimension



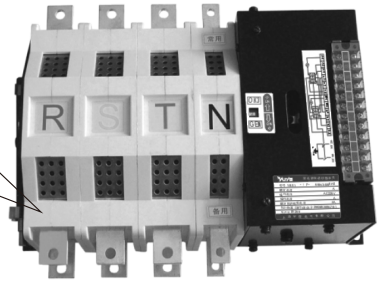


Model \ Dimension	A			B			C	D	E	F	G	H	H1	J	K
	2P	3P	4P	2P	3P	4P									
32N	170	197	224	150	177	204	184	167	12	27	3	110	155	5	9
63N 125N	191	228	265	171	208	245	184	167	20	37	3	110	155	8	9

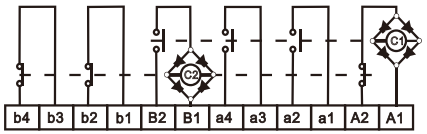
N type ATSE Technical character

Model		20N	40N	63N	80N	100N	125N
Rated Voltage(V)		AC220					
Rated Current(A)		3.5					
Max Instantaneous Current(KA)		5					
Use Life	Machine	8000					
	Electric	3000					
Max operate cycle(Second/Times)		10					

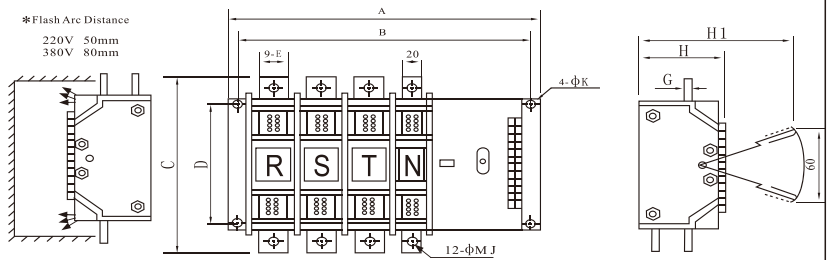
C/N type ATS(two section)



Controllers can be allocated:
C/N-wiring and socket type Switch, with wiring and socket type YCU-A, YCU-B,YDCUtype controller.
Connect terminal function refer to Intelligent controller as behind.



T type ATSE appearance Installation dimension



Dimension / Model	A		B		C	D	E	F	G	H	H1	J	K
	3P	4P	3P	4P									
160C/N	322	372	302	352	294	200	20	49	5	146	295	8	10
200C/N													
250C/N													
315C/N	352	402	332	382	294	200	30		6	146	295	10	10
400C/N													

T type ATSE Technical character

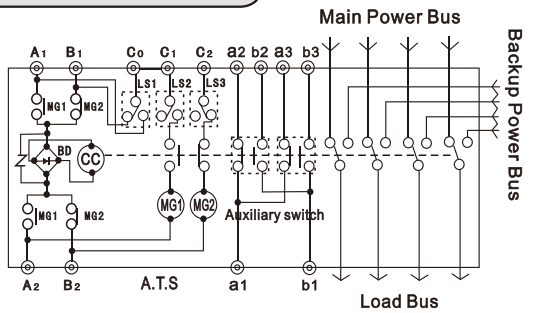
Model		160C/N	200C/N	250C/N	315C/N	400C/N
Rated Voltage(V)		AC220			AC220	
Rated Current(A)		7			7	
Max Instantaneous Current(KA)		15			15	
Use Life	Machine	6000			6000	
	Electric	3000			2000	
Max operate cycle(Second/Times)		12			15	

M type ATS

Main Function
1.ON and OFF are both by one electromagnetic winding;
2.The structure is simple,maintaining covenience;
3. The point has great capacity,newest move contact are stable,with strong overload capacity;
4.Eliminate conducting electricity of surplus part,structure simple,span long.

Controllers can be allocated:
M-type sub-wiring switch, with cable CU-A, CU-B,DCU-type controller.
Connection wiring and function refer to Intelligent controller as behind

M type ATSE Inner principle diagram

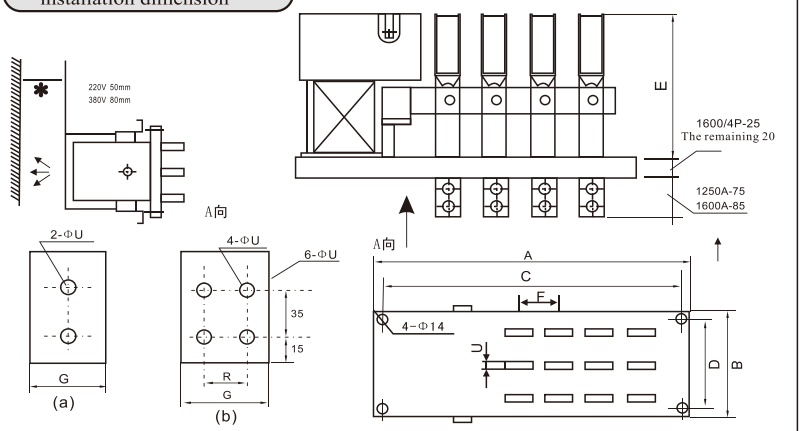


No.	Parts No.	Parts Name	Parts Model
4	MG	AC contactor	CJX2-1210
3	CC	Closing Coil	¢1.2×1035T
2	LS1，LS2，LS3	Limit switch	LXW20-11
1	BD	Rectifier	KBPC5010

M type ATSE Technical character

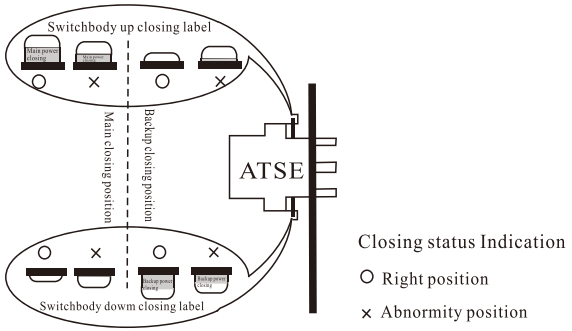
Model (ATS-)		630M	800M	1000M	1250M	1600M			
Rated Voltage(V)		AC220	AC220	AC220	AC220	AC220			
Rated Current(A)		16	16	16	16	16			
Max Instantaneous Current(KA)		15	18	20	25	32			
Use Life	Machine	3000	3000	3000	3000	3000			
	Electric	1000	1000	1000	1000	1000			
Max operate cycle(Second/Times)		15	20	25	25	25			

M type ATSE appearance installation dimension



尺寸 / 型号	A		C		B	D	E	F	G	R	U
	3P	4P	3P	4P							
630M	530	600	490	560	280	210	250	90	30(a)	--	12
800M								90	40(a)	--	
1000M								90	45(a)	--	
1250M								90	55(a)	--	
1600M	640	750	580	710				130	75(b)	40	14

M-ATSE manual adjustment, the use of special operations handle,along with closing direction of force to promote and hear the closing lock in "ge" of a sound,can open-operation, otherwise the closing is not in place, the main circuit Lack of phase phenomenon, check whether the main contacts in place under up and down closing signs to determine, as shown below:



Function Description

Over voltage: Main power or Back-up power have over-voltage fault.
Under voltage: Main power or Back-up power have under-voltage fault.
Lose Phase: Main power or back-up power have lose phase fault.
Self-input and self-recover: Main power failure to changeover to backup power ,when it normal ,will automatically changeover back to Main power.
Self-input without self-recover: Main power failure to changeover to backup power ,when it normal,won't automatically changeover back to Main power.
Automatic: Switches work in the auto state.
Manual: switch need to changeover to the manual then it can work.
Dual-break: in the middle state of switch.
NA, NB, NC: the voltage value of the current six-way power supply.
Main power clsoing: Main power of the switch for power.
Back-up power clsoing: Back-up power of the switch for power.
Main power prior: In the state of self-input and self-recover the main power priority to input.
Back-up power prior: In the state of self-input and self-recover the back-uppower priority to input.
Generator: show the switch working mode is utility to generator.
Generator: do not show the switch working mode is utility to utility.
Stop: do not blink show that the generator has already stopped.
Stop:blink mean generator is delay stopped.
Start:do not blink mean that it has already started the generator
Start: blick mean that it is delayed to start generator.
Settings: enter the settings model.

Ⅶ、Installation and wiring

ATSE the installation and commissioning of all the work should be professional and understand the switching equipment staff, must consider the appropriate protective and preventive measures, the switch of main circuit wiring without any pressure or strong power. Commissioning should be do before installed the switch without damage identification or any other harmful environmental impact,should check whether the transport process in the line head Loose; remove dirt,in particular the insulation pieces of dirt, a loop linking should be paid attention Main and Backup power in same phase, to connect the second control loop should be in strict compliance with the wiring diagram, while paying attention to control power supply voltage; switches must be installed a good grounding.

Ⅷ、Running before Debugging

Taking into account the physical security and the rapid switch. Commissioning handle only for debugging purposes,user Do not use debugging handle in load operation. Before installed interrupter device also not allowed to load operation. Try to debug handle operations at the switch. Observation of the main contact closed, if not unusual, power-operation, to switch to observe the operation, no abnormal after a formal operation.

8.1 controller and electrical parts of the debugging After correct some mechanical adjustments then to do controller and electrical power adjustment, the process of debugging Prohibited loading.
8.2 will be the main power input. controller, A power normal indication lit, will be in line followed by backup power supply input. Control B normal power indicator lit, the middle panel controller auto / manual button on manually position,press A power switch on,ATSE switchbody quickly switch to the A Power, A ,closing and the corresponding external instructions lit at the same time, again click B switch, ATSE switchbody quickly switch to the B power, B, closing and the corresponding external lit at the same time, To TN-ATSE press double-OFF, Any of Two-way power, will enter the off state. The above buttons does not operate less than 5 times ,but can not exceed the operating frequency of tech-nology related products.
8.3 controller panel middle automatic / manual button in the automatic position.A, B, delay adjustive to fitness value,A power supply first disconnect , A delay closing, the indicator light flashes,up the settle value,ATSE switchbody transfer rapidly to the B Power, B, closing and the corresponding external lights will be lit at the same time, Input A power again, B, the indicator light flashes closing delay, delay up the value, ATSE switch body quick return to A power, A, closing and the corre sponding external lights will be lit at the same time (this item is not used in Self-input without Self-recover mode)
8.4 L-801,L-700-type controller, F, F1, F2 for a group of 220 V \ 0.5A relay contacts,F for the public, when in the main power normal, F and F1 disconnect, F and F2 closed; when in the main power anomaly F and F1 delayed 3 seconds closed, F and F2 delayed 3 seconds off. Mainly used in start and stop generators, If the current contacts didn`t up requirement, please use the intermediate relay or AC contacts with the access, to meet Generator requirements.

L-801-type controller, R1, R2 as a forbid control point, when the R1 and R2, TN-connected in an electric ATSE ,Under the conditions will be immediately cut off the electricity load, and ATSE not automatically change over.Forbid points main function is use in maintain the main circuit ,avoiding incorrect actions causing injury,quit the forbid status,only first disconnect between the R1 and R2 connection, and then press anauto/ manual button.

Ⅸ、ATSE use

9.1 normal use, the controller should be at "automatic" position. Work under automatic control, ATSE controller detect the main and backup power at the same time monitoring and display ATSE running.When the main power blackout, Undervoltage, over voltage, lack phase and these fault , ATSE go through "Backup power delay" time,put the load from the main power Switch to backup power by automatically; if the main power supply back to normal while the "Main power delay" time (0-30 s adjustable) since Dynamic load from the standby power will return to the main power (Self -input without Self-recover ATES,However the main power recover normal,ATES remain connected to load and standby power will not be changed load from the backup power back to the main power, only when the backup power supply anomaly, it will be loaded from the backup power supply to return to the main power). Controller with LED panels on the instructions of switching and power status.
9.2 If we do not wish to switch automatically switch, or other need for manual operation, the controller should be at "Manual". When at manual switch no longer automatically changeover but through the operation by people.
9.3 ATSE from "manual" to "auto" if the main power supply and backup power supply are normal, since the self an no-self modes ATSE are priority will connected to main power supply and load.

Ⅹ、Common Faults and ruled out

ATSE no or unusual action, first check the following:

① switchbody and controller if in good connections,or loose ?Is correct?
② power is open ?
③ controller is in a state of manual ?
④ voltage is normal ?
⑤ switchbody and controller, main and backup power input is contrary ?
⑥ fuse is intact ?
⑦ debugging, debugging line is too long ?wire diameter is too small?
⑧ debugging, Neutral N line, phase wire and PE connect earth line is distinction ?

ⅩⅠ、After service

ATSE is a design, installation, testing has been a mature product,Operation at abnormal situation that may arise,Up table such as by failure can not be ruled out,Please contact the Department of my company after-sales service.