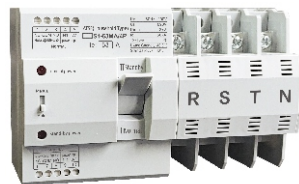


Automatic Transfer Switch Instruction Manual

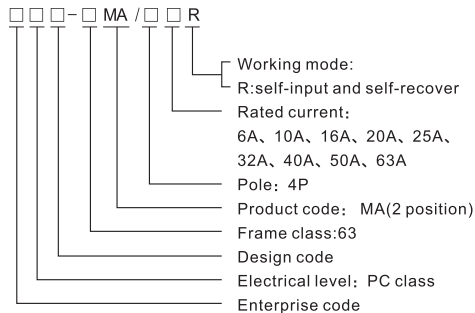


Suggest send the instruction to final user
No.ZXS163MACN22092104

1.Description

This series of household dual power automatic transfer switch is the latest micro household power transfer switch developed by our company. The switch belongs to the PC class infrequent transfer switch, two positions structure, suitable for AC 50 / 60Hz, rated current 6A - 63A AC power distribution system, mainly used to detect whether the user's power supply is normal or standby. When the common power supply is abnormal, immediately switch to the standby power supply. Switch inside the used mechanical and electric interlock, put an end to clear condition of two way power switch at the same time. so as to ensure the continuity, reliability and security of the power supply.

2.Type And Meaning



3.Performance And Features

- 3.1 The excitation electromagnet is adopted for actuation, the conversion speed is extremely fast, and the control voltage is AC220V(AC110V can be customized).
- 3.2 The switch body is provided with power-on indication of common power supply/standby power supply, and the switch state is clear.
- 3.3 Automatic mode has the function of self-input and self-recover. When two power supplies exist at the same time, the common power supply gives priority to power supply.
- 3.4 Rail installation mode, modular structure design, total weight < 0.9Kg, compact structure, small volume and convenient installation and maintenance.

4.Main Technical Parameters

Frame Class	63									
Rate Working Current Ie	6A	10A	16A	20A	25A	32A	40A	50A	63A	
Rated Insulation Voltage Ui	690V									
Rated Impulse Withstand Voltage Uimp	8kV									
Rated Working Voltage Ue	AC400V									
Rated Frequency	50/60Hz									
Using Category	AC-31B									
Transfer Time	20ms									
Mechanical life	≥ 6000 times									
Electrical life	≥ 1500 times									

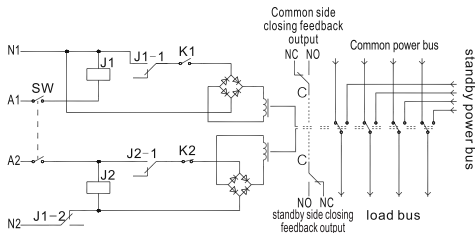
5. Working Conditions

- 5.1 The operating ambient temperature ranges from -5°C to $+40^{\circ}\text{C}$,and the average temperature within 24 hours does not exceed $+35^{\circ}\text{C}$. The storage ambient temperature ranges from -25°C to $+55^{\circ}\text{C}$, and can reach $+70^{\circ}\text{C}$ in a short time (within 24 hours).
- 5.2 The altitude of the installation site not exceed 2000m.
- 5.3 The relative humidity of the air at the installation site does not exceed 50% when the ambient air temperature is $+40^{\circ}\text{C}$.The relative humidity can be higher at a lower temperature. For example, when the average minimum temperature in the wettest month is $+20^{\circ}\text{C}$, the monthly average maximum relative humidity can reach 90%. Appropriate measures should be taken to prevent condensation due to temperature changes.
- 5.4 Pollution Class 3 (conductive pollution, or dry non conductive pollution to conductive due to condensation). ATS can be installed in the cabinet vertically or horizontally. If you have special installation requirements, please contact us.
- 5.5 The protection grade of the shell is IP30.
- 5.6 Overvoltage category: Main circuit Class III;
Control and auxiliary circuits, Class II.

6. Precautions Before Operation

- 6.1 Operate the clearance to check whether the input voltage is comply with requirements control voltage is AC220V, switch to normal working voltage range required for AC187V - AC253V; The control voltage for AC110V, switch to normal working voltage range for AC95V - AC125V required.
- 6.2 The switch does not have the function of over and under voltage detection, only has the function of phase conversion. When the power supply is out of power and the voltage of the power supply is not within the working voltage range of the switch, the switch will force conversion action. Too low or too high voltage is easy to cause damage to the internal excitation coil of the switch. Therefore, when used in the inverter scenario of mains-generator or mains- photovoltaic power generation, considering the voltage instability factors, it is necessary to add self-compound overvoltage and undervoltage protector between the switch and the power generation equipment, and set the overvoltage and undervoltage protection value to the normal working voltage range of the switch.
- 6.3 First, test whether the ATS works normally in the manual state. Then, set the toggle switch to the automatic position for testing. Only after the ATS is qualified can it be put into use.
- 6.4 If you need to operate the switch manually, you must first toggle the mode switch to the "manual" mode.

7. Internal Schematic Diagram



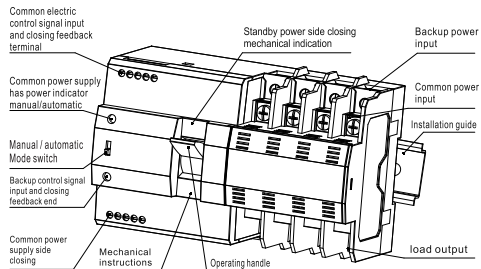
SW: Manual/automatic switch, K1, K2: internal position switch, J1, J2: 220V relay

This series of domestic ATS switches are driven by AC220V signal, and the AC signals at A1, N1(A2, N2) inputs are converted into DC signals through the rectifying circuit to drive the exciting electromagnet, so as to realize the inter-strand switching of the switch.

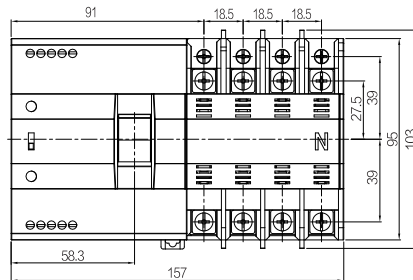
Mechanical and electrical double interlocking is adopted in the switch to prevent the common power supply and standby power supply from switching on at the same time, and to ensure the safety of users.

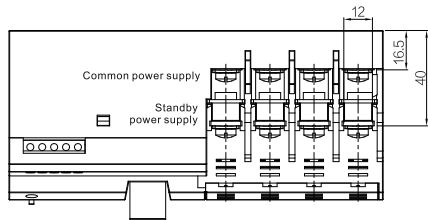
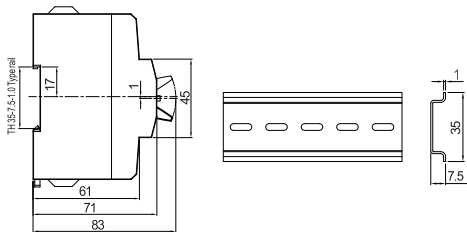
Two position auxiliary switches act simultaneously with the ATS moving contact, and can be used for external indicator lights.

8. Product Structure



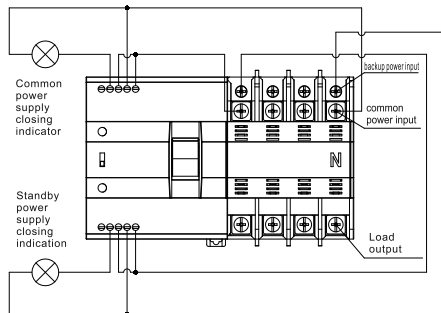
9. Outline And Installing Dimensions



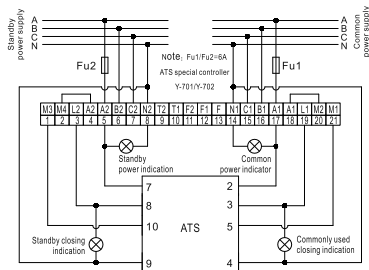


10. Product Installation And Wiring

□ One-piece:



□ With separate controller:



11.Maintenance

- 11.1 All external power supply must be cut off before maintenance and inspection, and professional personnel shall carry out the operation.
- 11.2 To ensure that the ATS is in good condition, perform the first maintenance and check within six months after installation and at least once a year thereafter. The frequency of maintenance and inspection should be increased when installation conditions are harsh.

12.Common Faults And Solutions

- 12.1 To prevent dust and dirt from causing malfunction, please remove them in time.
- 12.2 Please check whether the electrical contact parts are deformed and damaged, and remove the contact surface and metal particles and burn marks around it.
- 12.3 Rust, acidification and dust on the contact surface can cause poor contact. Please operate manually operate ATS several times, and measure the contact resistance when necessary.
- 12.4 If ATS is slightly damp or unused for a long time,it should be dried prior to power connection. After removing dust and dirt, use 500V megohmmeter to measure the insulation resistance between the common, standby and load terminals and their poles, including all the live parts and the installation guide rails. The insulation resistance should be no less than 10 m Ω before use.