

# Usage Manual



## Automatic Transfer Switch

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## 1. Product Overview

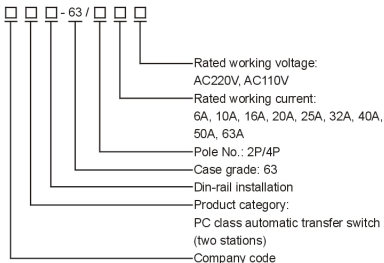
Automatic transfer switch is a PC class infrequent change-over switch, with two-station design (commonly used for A and standby for B), suitable for AC systems with AC 50-60Hz and rated current 6-63A. The main function of the automatic transfer switch is when the main power (common power supply A) fails, the ATS will automatically switch to the backup power (Backup power supply B) to continue working (switching speed <50 milliseconds), which can effectively solve the troubles caused by power outages.

## 2. Working Conditions

- ◇ The temperature range of the operating environment is  $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$ , and the average temperature within 24 hours shall be lower than  $+35^{\circ}\text{C}$ , and the temperature range of the storage environment is  $-25^{\circ}\text{C} \sim +55^{\circ}\text{C}$ , which can be reached  $+70^{\circ}\text{C}$  in a short time (within 24 hours).
- ◇ The altitude of the installation site should be lower than 2000m.
- ◇ The relative temperature at the installation site shall not exceed 50% when the ambient air temperature is  $+40^{\circ}\text{C}$ . Higher relative humidity is possible at lower temperatures. For example: when the average minimum temperature of the wettest month is  $+20^{\circ}\text{C}$ , the monthly average maximum relative humidity of that month can reach 90%. Appropriate measures should be taken to prevent condensation due to temperature changes.
- ◇ Pollution level 3 (conductive pollution, or dry non-conductive pollution becomes conductive due to condensation). ATS can be installed vertically or horizontally in the cabinet, if there are special installation requirements, contact us.

- ◇ The protection grade of ATS case is IP30.
- ◇ Overvoltage category  
Main circuit category III; control auxiliary circuit category II.

### 3. Model & Meaning

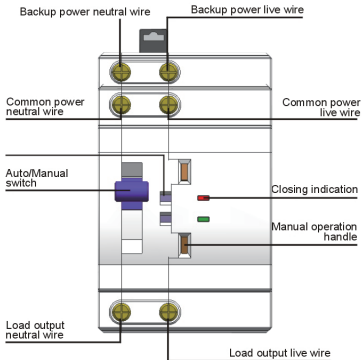


## 4. Main Technical Parameters

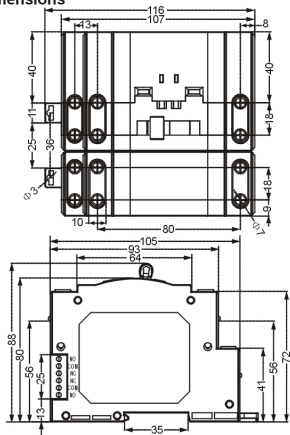
Case grade	63									
Rated operating current $I_e(A)$	6A	10A	16A	20A	25A	32A	40A	50A	63A	
Rated insulation voltage $U_i$	690V									
Rated impulse withstand voltage $U_{imp}$	8kV									
Rated working voltage $U_e$	AC220V/AC110V									
Rated frequency	50/60Hz									
Class	PC class: can be switched on an loaded without generating short-circuit current									
Pole number	2P, 4P									
Rated short-circuit current $I_q$	50kA									
Short circuit protection device (fuse)	RT16-00-63A									
Rated impulse withstand voltage	8kV									
Control circuit	Rated control voltage $U_s$ : AC220V, 50Hz Normal working conditions: 85% $U_s$ -110% $U_s$									
Auxiliary circuit	AC220V/110V 50Hz $I_e=5A$									
Contact change-over time	<50ms									
Operation change-over time	<50ms									
Return change-over time	<50ms									
Power off time	<50ms									
Change-over operation time	<50ms									
Mechanical life	$\geq 5000$ Times									
Electrical life	$\geq 1500$ Times									
Usage category	AC-31B									

\*: If the rated working voltage is AC110V, the product needs to be customized.

## 5. Wiring Instructions



## 6. Dimensions



Note: ◇ Terminal wiring area: fit for  $(1 \sim 25)\text{mm}^2$ .

◇ Wire connection screw is M5, torque: 2.5N.m

## 7. Installation

7.1 Before installation and wiring, please ensure that professionals have read this manual.

7.2 Before installation, please check the integrity of ATS. Then turn on the ATS with the operating handle, check the flexibility of the operating mechanism, and check the opening and closing status of each phase and normal power and backup power loads.

7.3 Please equip the ATS with a suitable circuit breakers according to the installation requirements of the power distribution system to ensure that personnel and equipment safety.

## 8. Notes

8.1 When manual operation the mode selection switch must be in 'manual' position.

8.2 Manual/automatic operation can ensure the opening and closing performance of electrical operation, but in manual operation, there is no guarantee due to the different opening/closing speeds of the operation. In manual operation, there is possible for excessive silver operation. In manual operation, there is possible for excessive silver alloy loss. Therefore, the selector switch should only be pulled to the manual position after all power has been cut off for inspection and maintenance of the operating system and contact information. Normally, pull the selector switch to the electric position. When manual operation is required, pull the

selector switch to the manual position. After manual operation is complete, pull the selector switch from the manual position to the automatic position.

8.3 The control circuit ATSE is immediately energized. After the change over is completed, the internal switch will damage the coil in the control circuit, and the coil can work normally at 85% ~ 110% of the rated operating voltage. Too low input voltage may cause the coil to overheat and burn out.

## 9. Maintenance

### 9.1 Maintenance and inspection should be carried out by professionals.

9.2 In order to ensure the good performance of the ATS, the first maintenance and inspection should be carried out within 6 months after use. Then do the maintenance and inspection at least once a year. In harsh installation conditions, the frequency of maintenance and inspection should be increased.

9.3 a: If the maintenance and inspection items fail, please remove the dust. b: Please check whether the electrical contact parts are deformed and damaged, and clean the surface. c: metal particle: and burnt around it. Rust, acidification and dust on the contact surfaces can cause poor contact, so do some manual work and measure the necessary contact resistance. d: If the ATS is wet or left unused for a long time, please dry it before turning on the power. After removing the dust, use a 500V megohmmeter to measure the insulation resistance of the normal power supply and the AC power supply. The load side and two poles, including the insulation resistance, when using live parts and metal plates, the insulation resistance should not be less than 10MΩ.