

Conditions for Normal Installation and Operation

The series is in compliance with the GB14048.11 and the IEC60947-6-1 *Low-voltage switchgear and controlgear—Part 6-1: Multiple function equipment – Transfer switch equipment*

- 1) Ambient air temperature
The temperature should be no higher than +40°C and no lower than -5°C, with a 24-hour average value of no more than +35°C.
- 2) Elevation
The altitude of the installation site should not be above 2000m.
- 3) Atmospheric conditions
The relative humidity of the air at the installation site should not exceed 50% at a maximum temperature of +40°C, and higher relative humidity is only allowed at lower temperatures. The average lowest temperature in the most humid month should not be above +25°C, while the average maximum relative humidity should not exceed 90%. Action should be taken to deal with dew condensation on the product surfaces resulting from temperature changes.
- 4) Pollution level
The pollution level conforms to Level 3 in the GB/T14048.1.
- 5) Installation category
The switch equipment installation complies with Category III as defined in GB/T14048.1
The transfer controller installation complies with Category II as defined in GB/T14048.1
- 6) Installation
Switching devices and transfer controllers can be installed vertically or horizontally in special control or distribution cabinets.
- 7) Use category

Table 1

Main circuit	AC-33B (infrequent operation)	Motor load or composite load inclusive of resistance load and incandescent lamp load of lower than 30%
Auxiliary circuit and transfer controller	AC-15	Load of controlling alternating electromagnet
	DC-13	Load of controlling electromagnet

- 8) Control circuit
The rated voltage of control power U_s for the control device and the transfer controller is AC 220V/230V/50Hz, and the operating condition is a control power voltage of $\geq 85\%U_s$ and $\leq 110\%U_s$. In the absence of special requirements with the customer order all the transfer controllers have a preset undervoltage value of $\sim 180V$ and an overvoltage value of $\sim 250V$.
- 9) Auxiliary circuit
The auxiliary contact circuit has a separate electrical structure of 4 normally open and 4 normally closed contacts. Refer to Table 2 for the rated values of auxiliary contacts.

Table 2

Conventional thermal current I_{th} (A)	Rated isolation voltage U_i (V)	Rated operating current I_e (A)	
		AC220V	DC200V
10	300	3	0.2

Refer to Table 3 for the connection and disconnection capacity of auxiliary contacts.

Table 3

Use category	Connection			Disconnection			Operation frequency and cycle times		
	I/I_e	U/U_e	$\cos \phi$ or T0.95	I/I_e	U/U_e	$\cos \phi$ or T0.95	Cycle times	Operation frequency (cycles/min)	Conduction time (s)
AC-15	10	1.1	0.3	10	1.1	0.3	10	2	≥ 0.05
DC-13	1.1	1.1	6Pe	1.1	1.1	6Pe			

Note: Upper limit of T0.95 $\approx 6Pe \leq 300ms$. The power time of DC-13, if T0.95 is greater than 0.05s, should be T0.95 minimum.

