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Dual Power Automatic Transfer Switch

1. Application
ZMQ5 series automatic transfer switch (ATS) is an automatic transfer switch that integrates switch and logic control and realizes mechatronics. It is suitable for power distribution equipment of AC 50Hz, rated voltage AC 400V, and conventional thermal current to 1600A. It provides function of voltage detection, forcedly switch off “0” position, emergency manual operation, and widely used in the automatic conversion of the main power supply and backup power supply in the power supply system or the automatic conversion and safety isolation of the two load devices. The ATS is controlled by the control circuit board to send various logic commands to manage the motor. The motor drives the operating mechanism of the main part of the ATS to quickly turn on the breaking circuit or perform circuit conversion, and realize safety isolation through the visible state.

2. Model

- Corporate code
- Derived code
- Current: 32~3200A
- ATS poles: 3 or 4
- Controller mode: I type: full auto
  II type: full auto + forcedly switching off “0” position
  III type: full auto + remote control

3. Introduction of switch structure

3.1. Electric key: Control the power source of inner control circuit in the ATS, when electric lock is ON, full auto operation, remote control, forcedly switching off “0” operations can be executed; while electric lock is OFF, the ATS can only be operated by hand.
3.2. Operating handle: Before using the operating handle, please switch off electric lock.
3.3. Padlock: Special for inspection and repair, first use the operating handle to make the ATS in the “0” position, pull up the padlock mechanism for lockup and then do repairing. (Pull the padlock to cut off the internal control power of the switch, thus the ATS transfer switch cannot be automatically and manually operated.)
3.4. Indication parts: Indicate the working positions: (I, O, II)

4. Main technical date

- Conforming standard: IEC6094-6-1, GB14048.11-2008
- Rated operating voltage (Ue): AC 400V
- Rated insulation voltage (Ue): AC 690V
- Rated operating current (Ie): 10~3200A
- Control supply voltage: DC 24V, DC 48V, AC230V

Letter and symbol description
1. C1 and N1 are the live line and neutral line of normal power supply respectively.
2. C2 and N2 are the live line and neutral line of standby power supply respectively.
3. HL1 and HL2 are indications for normal power supply and standby power supply.
4. HD1 and HD2 are normal power supply and standby power input indications.
5. FU1 and FU2 are 2A fuses.
6. 101-106, 201-206 are the automatic transfer switch secondary terminals.
7. 301-306 are the automatic transfer switch external indicator terminals.
8. 401-406, 501-506 ATS terminals can be optional.
9. “Full auto” wiring method, 201, 206 must be short connection.
10. Forcedly switching off “0” contact (passive) can also be DC 24V power supply input.
11. K1 is the power generator signal output (when commonly-used power is cut off).
12. SA is the automatic/manual function selection switch.
13. SB1, SB2 are normal power supply, standby power manual input button (passive contact).

11. Wiring method of DC 24V/48V

1. Basic wiring method

2. Other terminal wiring

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5. Wiring diagram

5.1 Wiring method of 100–3200A ATS with full auto mode + starting generator signal output

6. Usage Method

1. Full auto function: When the commonly-used power is cut off, the ATS will automatically transferred to the standby power; when the common power recovers, ATS will automatically switched back to the common-used power from the standby power.
2. Forcibly switching off "0" position: Push "0" button forcibly, ATS will cut off two loops of power supply.
3. Remote control function: Push "I" button, normal power will be in service; push "II" button, then standby power will put into use; push "0" button, to cut off two loops of power supply.
4. Please select the switching function according to requirement and correctly connect the wires base on the switching function.
5. For ordering the product, please indicate the ATS model, current rating and the function you need.

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Dual Power Automatic Transfer Switch

<table>
<thead>
<tr>
<th>Conventional thermal current (A)</th>
<th>100</th>
<th>160</th>
<th>250</th>
<th>400</th>
<th>650</th>
<th>1000</th>
<th>1500</th>
<th>2000</th>
<th>2500</th>
<th>3200</th>
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<td>Rated impulse withstand current</td>
<td>8kV</td>
<td>12kV</td>
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<tr>
<td>Rated operating current (A)</td>
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<td>70kA</td>
<td>100kA</td>
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<td>1.2</td>
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11. Wiring diagram of external terminals

- Typical wiring method of 100A ATS

- Wiring method of 160~3200A ATS with full auto mode

- Wiring method of 160~3200A ATS with full auto mode + forcibly switching off "0"

7. Terminal wiring method

*** Use small screwdriver to push downside and lines are inserted as figure shown.

8. Correct mounting method

*** A, B, C above are correct (A is best), D is wrong.