

# OPERATING MANUAL

## HYCQ5-63G SERIES

DOUBLE POWER AUTOMATIC TRANSFER SWITCH



## 1.Application

HYCQ5-63G is terminal type automatic transfer device. It's suitable for 3 phases 4 wires (or 1 phase 2 wire) dual power grid with AC 50/60Hz, rated voltage 240V/120V and rated current up to 63A. When one power goes wrong (only test normal Phase A voltage and reserve Phase A voltage, only test loss voltage or loss phase), it will automatic connect one or several load circuits from one power to the other power automatically, to ensure normal power supply of load circuits.

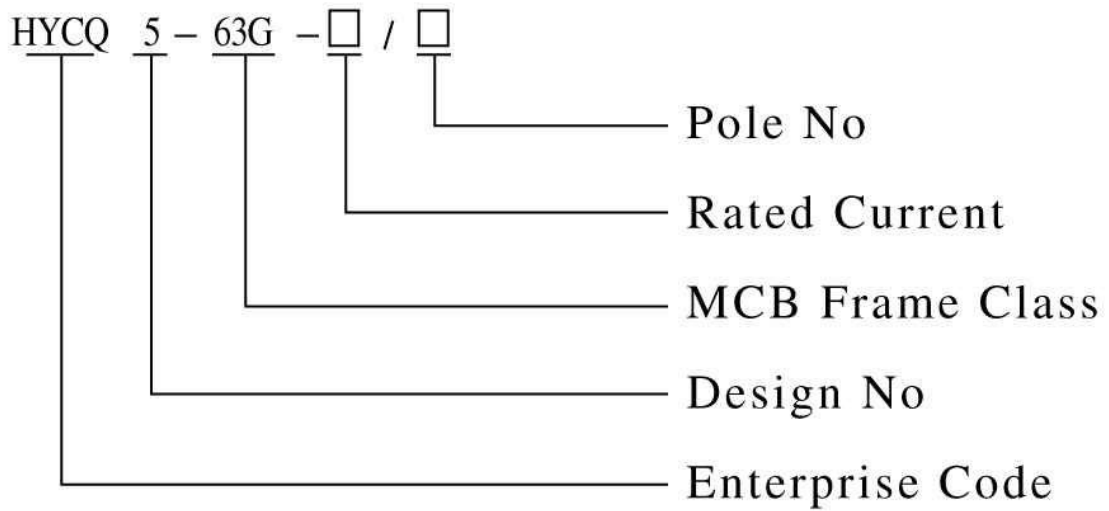
The automatic transfer switch conforms to IEC60947-6-1

## 2.Normal conditions for operation

and installation:

- 1)Environmental Temperature Condition:-5~+40°C;
- 2)Installation site is not more than 2000 meters above sea level;
- 3)PollutionLevel: Grade 3;
- 4)Installation Category: III
- 5)Vertical installation or horizontal installation.

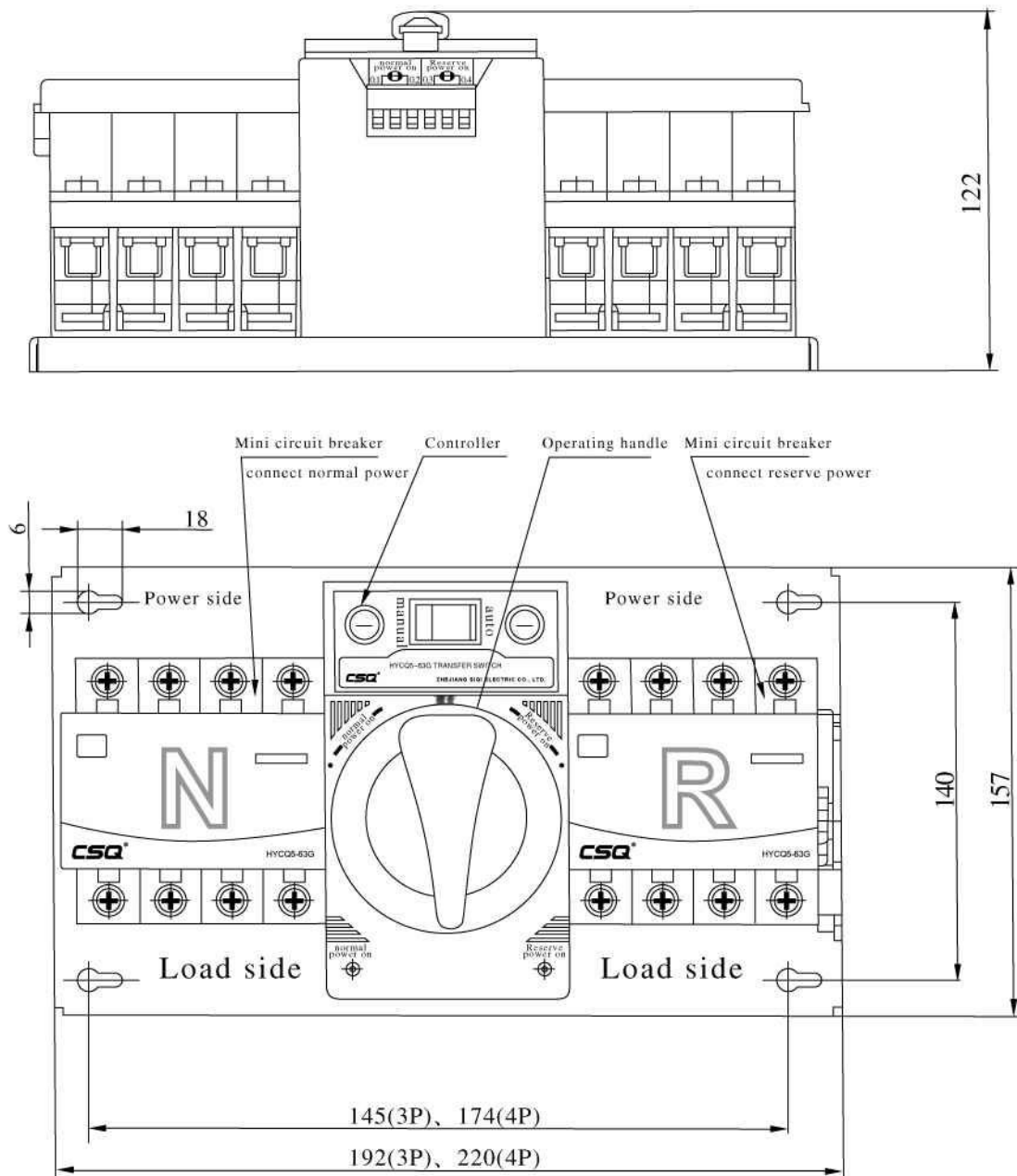
### 3. Model and meaning



### 4. Main parameter

Rated Current $I_e$ A	6、10、16、20、25、32、40	50、63
Electrical Appliances Class	CB	
Use Category	AC~33B	
Tripping Current	5~10 $I_n$ (Type C),10~15 $I_n$ (Type D)	
Rated voltage $U_e$	120V(2P)、240V(3P、4P)	
Rated frequency	50/60Hz	
Rated short circuit connecting ability $I_{cm}$ (Peak)	9.18kA	6.615kA
Rated short circuit breaking ability $I_{cn}$ (effective value)	6kA	4.5kA

## 5. Appearance & Installation Dimension



## 6. Installation and wiring

ATSE can be installed in power control cabinet directly. Users can wire after ATSE installation (refer to design and use). As per current value use suitable conductor to connect the mains side (top terminal) and load side (bottom terminal) of MCB of normal electric power and standby electric power. In-phase parallel connection at load side, and ensure the phase sequence of normal electric power and standby electric power must be accordant (Wire as per A,B,C,N sequence). For 3 poles ATSE should add one conductor with section not less than  $0.3\text{mm}^2$  to connect the neutral line of power supply correctly, thus ATSE can work properly. For 4 poles or 2 poles ATSE, N pole of normal electric power and standby electric power should be connected to N pole of MCB respectively. In addition, when install ATSE please ground reliably at grounding mark.

Auxiliary terminal is active contact signal, only used for external connection with indicator to display Off state, should be connected to the indicator directly. Can't put in power at auxiliary terminal (but for 3 poles ATSE should add one conductor with section not less than  $0.3\text{mm}^2$  to connect the neuter line of power supply and the terminals of neuter line on ATSE auxiliary terminal. Otherwise ATSE can't work properly.)

#### 8. Use

1) Normal use, please set the switch of controller at Automatic Function. Under Auto working the controller of ATSE monitor normal electric power and standby electric power and display running status of ATSE. When Normal power cut, no voltage, failure, ATSE will transfer load automatically from normal power to standby power. If normal power get right, ATSE will transfer load automatically from standby power to normal power. The luminous diode on switch panel indicate switch off situation.

2) If you don't adopt automatic transfer or need other manual operation please set the controller at manual. Under manual operation the controller stop work, and manual operation can make the breaker on off, and the switch doesn't transfer automatically.

3) When ATSE is short circuit or over load, The MCB of ATSE will protect tripping. If power display normally the handle of MCB is switching on. If the MCB has protected tripping users should set at manual and operate the switch to dual separating brake by hand, and check the reason of trip. After trouble clearing please set the controller at auto again to operate.

4) When ATSE transfer to auto from manual, if normal and standby power are normal ATSE will prior connect normal power to load (even if load connected standby power ago)

#### 9. Matters need attention

When users test or operate please follow relative rules and pay attention to the following matters to ensure use our ATES correctly.

1)Neutral conductor N can' t be connected in wrong way, must connect reliably, otherwise ATSE can' t operate properly, even burn controller and motor.

2)The protective grounding of ATSE must be connected reliablyto ensure safety.

3)Detection sampling signal for controller work power and main power supply is taken from Power supply side of main circuit, and work power of auxiliary connection terminal used for connect indicator is taken from main circuit, so can't have voltage test between spare terminals (unless dismantle the secondary wires). Can have power frequency voltage test between main circuit and shell or between secondary auxiliary terminals and shell.

## 10. Simple troubleshooting

When users find fault can request professional to test and deal with. Keep Away for Safety when operate. Or contact our Specialized Service Departments.

1) Double Power are both switched on, but ATSE can't transfer automatically

1. Check Auto/manual should be in automatic position.

2. Check if incoming line is correct or not, if phase sequence is accordance or not, and wiring is solid and reliable or not.

3. Check if the fuse is burned or not.

2) Double power are both switched on, ATSE standby power is switching on.

1. Check if normal power incoming line has voltage or not.

2. Check Commonly used insurance

3. Check if external light is connected in wrong way or not.