

## ATS (Automatic Transfer Switch):

# The Instructions for ATS

Clear and visible operating system, adopts Central control panel adopts Central design, Enhance visibility and operability, full protect the generator.



01

### Gensets automatic running

No main power or lack phase, the control panel will Issued a directive to run the genset.



02

### Automatic switching power supply

When the genset running stable , the control panel will automatically to genset power supply: the main power resume, automatically to main power supply.



03

### Real-time monitoring

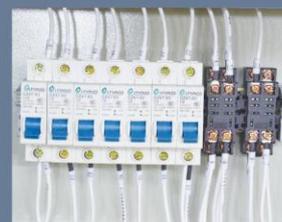


The control panel will show the temperature for water/oil, speed, frequency, voltage, current, malfunction.

04

### Genset automatically protection

It will Alarm Shutdown when it is high water temperature , low oil pressure , over speed ect...



05

### ATS Manual operation

When need Manual operation, you can choose main power or genset closing with your hand.



06

### Automatic floating charge

Internal Automatic floating charge, it will charge the battery as long as has main power.



Huaquan Auto transfer cabinet adopts high quality and reliable auto transfer switch. It's to transfer between prime power and standby power.

Huaquan has many types of ATS cabinet

1. Standard ATS. It has 2 road power connection : Generator power and mains power. 2 road power are with electrical and mechanical interlocking. So it just can supply power to the load by 1 road at one time. The Standard ATS has few seconds without power. It depends on generator start time or ATS transfer time.
2. By pass Transfer Cabinet. It's regular transfer test for ATS, and without power stop.
3. Instantaneous parallel transfer cabinet. It's for strict time for power stop. The load is the most import. The power supply systems can realize seamless transfer. It's usually used in hospital and data warehouse.

#### 4. Connecting method of ATS:

A: three phase four wires .

First method: city power supply power for electrical equipment not via ATS

ATS UVWN upper inside the terminal were connected to the generator UVWN

ATS upper outer terminals were connected to the city power ABCN ( $\geq 2m^2$ )

The bottom terminal on ATS connected to equipment, three fire wire will be through the current transformer.

When there is no electricity: Generator start, after the voltage is normal, ATS automatic gear position to electricity generators II

★in this situation, the input and output lines must be suitable with the power of the generator.

②wiring method 2: City electricity supply power to equipment via ATS

The upper terminal UVWN in ATS be connected to UVWN on generator

The terminal below is connected to equipment, three wires should through the current transformer.

When there is no city electricity, the generator starts, after the voltage is normal, ATS automatically turn on II position, the generator works successfully.

★:The generator input line, generator input line, city power input line and output line must be suitable with the power of the generator.

#### Installation of ATS:

A:module startup (when diesel temperature high, oil pressure low, less speed, speeding, generator voltage, over-voltage, under frequency, over frequency, etc., diesel will alarm shutdown), this time, to the right of the key ATS placed in an upright position

1. manual start

- ① Turn the ignition switch to II gear position, then the controller module light
- ② Press the button, the controller is in "stop" mode (top button lights)
- ② Press the button, the controller is in "manual" mode (top button lights)
- ③ Press the button, the controller is in the "start" status, then the diesel engine started, after a successful start, the diesel engine after idling - speed - power normal, then the bottom of the screen displays "generator running."
- ④ Press the left button (button below the lights), ATS switch to II gear position, the generator to supply electrical equipment, the operation is completed
- ⑤ When generation is complete, press the button, after a high-speed diesel engine - idle - flameout
- ⑥ Turn the ignition switch to I gear position, a cycle is complete

2: automatic start ( normal working state )

- ① Turn the ignition switch to II gear position, then the controller module light
- ② Press the button, the controller is in "Auto" mode (top button lights), now, if the mains

power cut or not working properly, start the generator set, diesel engine after idling - speed - power normal, ATS installed for the II gear position, generators to power electrical equipment, when the mains is normal, ATS I gear position switch to the mains supply to the electrical equipment, generator sets through high speed - idle – stop.

B:

Emergency start (now the diesel engine does not start after a module, the module does not control the starting and stopping a diesel engine, the alarm will not stop, but the module may detect voltage, current, etc.), this case, the right side of the key to be in ATS horizontal, before you start to check the engine oil, diesel oil, coolant is enough volume

- ① Turn the "high / low speed" control knob to the low position
- ② Turn the ignition switch to II gear position, press the key, (the module is shut down)
- ③ Turn the ignition switch, then the diesel engine started, (each start time is not more than 10 seconds, the two can't be less than two minutes to start interval) After a successful start, release the key, the ignition switch automatically returns II gear position
- ④ diesel engine running 5-10 minutes, the "high / low-speed" control knob to the high speed position, engine running about 10 minutes, until the normal operation of generating units
- ⑤ Then Special wrench with ATS, the ATS rotated to II gear position, then began to electricity generators supply power
- ⑥ Stop with special wrench ATS rotated to " I " gear position
- ⑦ Turn "high / low speed" cotton to the low position, engine running for about 10 minutes
- ⑧ Turn the ignition switch to " I " gear position, engine stop.

Note: The mechanical pump diesel generator manually turn off the flame