



**OPERATION MANUAL**  
PLEASE READ THIS MANUAL CAREFULLY.  
IT CONTAINS IMPORTANT SAFETY INFORMATION.

**ATS SERIES MUNICIPAL ELECTRICITY/POWER  
GENERATING AUTOMATIC STARTING AND  
TRANSFERRING DEVICE**

**An No.:ATS-5**

**ATS-20**

**ATS-30**

**ATS-40**

**ATS-50**

Applying microcomputer numerical controlling circuit, ATS series municipal electricity/power generating automatic starting and transferring device, and applicable for the automatic transferring of 3-50KW diesel engine generator featured in advanced technology, stable operation and its utility and appearance.

#### I. Working principle of ATS series automatic starting and transferring device:

1. There are three sets of electrical wiring terminals, which are respectively connected with municipal electric supplying power, generating unit power and electrical loading power. Another set of controlling wiring is connected into the panel of generating unit with multi-core cable and multi-core plug-in components, and connected with the throttle circuit, starting motor, fly wheel charging generator, battery and other relevant circuits.

2. Generally speaking, the device is under automatic control working state. The device will send the direction of connecting with municipal electric supply and loading circuit when under the condition of municipal power supply. And the generating unit doesn't work, the generating circuit is closed and the municipal electricity indicator lamp on the panel is turned on.

3. Under the automatic control working state, the device will send direction to starting generating process, open the throttle of diesel generating unit and start the motor when the municipal power is shut off. The motor is working to start generating. The 10KW generating unit is not equipped with idling system, so run the unit for 30-60 seconds after starting and it will operate with full speed. After confirmation of normal generating, the municipal electrical circuit is cut, and the generating circuit is connected. The generating indicator lamp on panel is turned on to indicate power supply for loading circuit.

4. The device starts generating unit according to the set process. As for the problem of startup in window, three-times set-up program is installed with 4 seconds' starting time. You have other two chances to start with 15 seconds of intervals if you fail with first time. The successful startup will close the starting motor. The alarm system on the device will be triggered when you fail to set up with all these three times. Check the oil supply system of the engine and select "manual control" to execute manual starting.

5. The device complies with the microcomputer pre-setting program to ensure the interlock of municipal power supply/ automatic generating. The circuit protection system of the generating unit guarantees the normal and correct working condition.

6. After the municipal electricity recovers to supply the power, the device transfers to municipal electricity automatically, and cut off the generating circuit. The generating unit will stop automatically after 30-60 seconds of unloading.

7. Under the working condition of municipal power supply, the charging of battery of generating unit can be finished automatically. Charging is not needed for the unit even the machine does not work for a long time.

#### II. Matters needing attention at the use of ATS series automatic starting and transferring device:

1. Select ATS device with different specifications according to the power of generating unit. The following specifications are available for different generating units:

- ATS-5 is applicable for 3-10KW diesel generating unit.
- ATS-20 is applicable for 12-20KW diesel generating unit.
- ATS-30 is applicable for 22-30KW diesel generating unit.
- ATS-40 is applicable for 35-40KW diesel generating unit.
- ATS-50 is applicable for 45-60KW diesel generating unit.

2. There are two kinds of ATS devices for 50/60Hz: single-phase and three-phase respectively for 200-240V and 360-440V. The 12V storage battery is mounted on the generating unit. If special voltage like 110V is required, please indicate for special manufacture.

3. Wiring diagrams and relevant information is attached to the device when delivery, users should operate in accordance with the wiring and other requirements when do installation.

4. For general condition, the device is under the automatic control working state, you can press automatic/manual button to select different working states. The automatic or manual indicator lamp will be on under corresponding state. Under automatic control state, the key switch of electric door on the panel should be on the phase of "OFF"; for the unit with DC power switch, the switch should be on the phase of "OFF"; and the output breaker of the device should also be shut off. Under the condition of installation or debugging or un-working, the emergency stop button or switch should be closed, or disconnect the multi-core cable of control wire with the panel of generating unit.

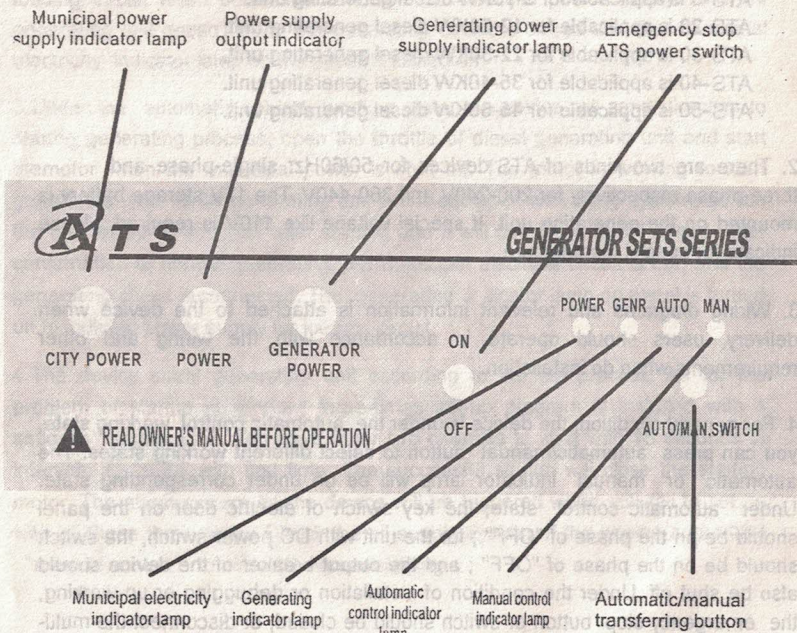
5. Under the working condition of automatic generating, if abnormal occurs and emergency stop is needed, press the emergency stop button or shut off the emergency stop switch, and then the generator will stop immediately.

6. These series devices are external set and table-type installed, and can be controlled 15 m away. The device should be installed in ventilated places without high temperature, moisture, corrosive gas or intensive shaking. The cover should be separately earthed to ensure safety operation.

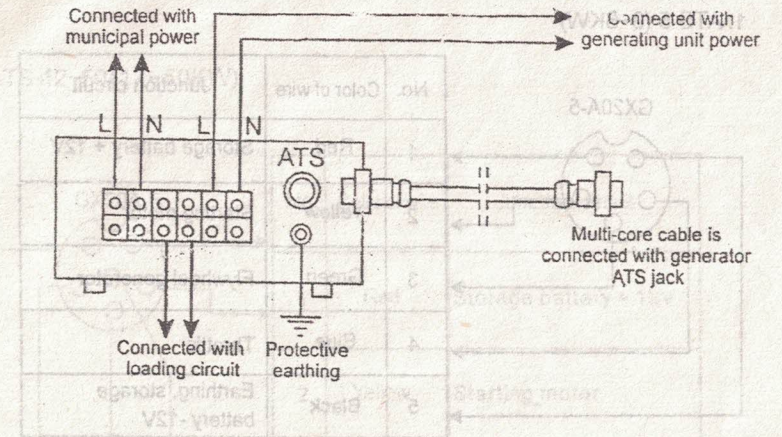
7. It is prohibited for non-professional workers to open the cover to avoid any severe results.

8. Attachment: panel diagram, external wiring diagram, partial panel wiring diagram of generating unit.

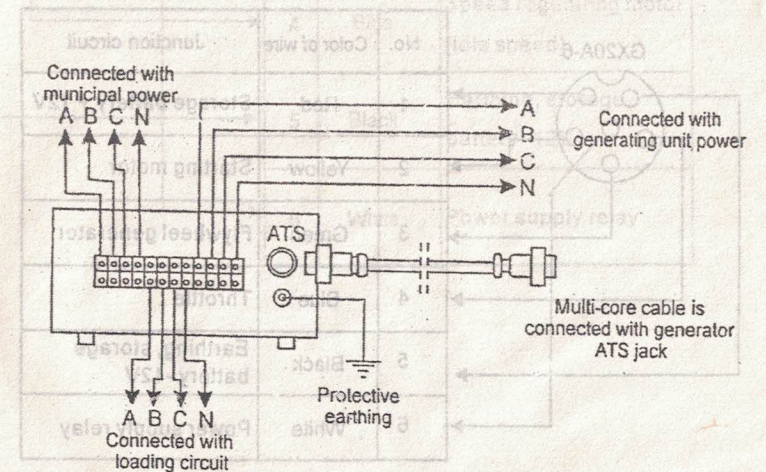
### ATS-5 (single-phase/three-phase) panel diagram



### ATS-5 (single-phase) external wiring diagram

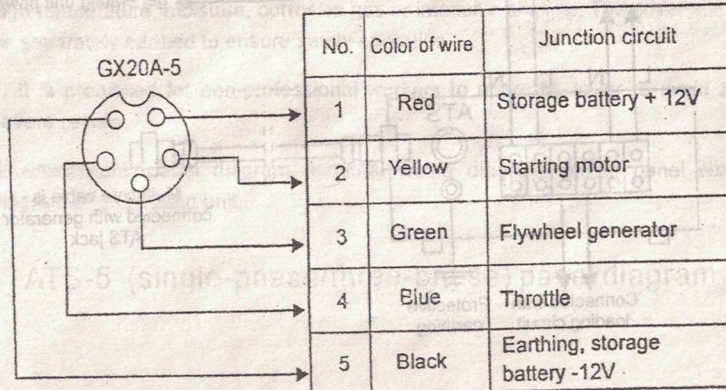


### ATS-5 (three-phase) external wiring diagram

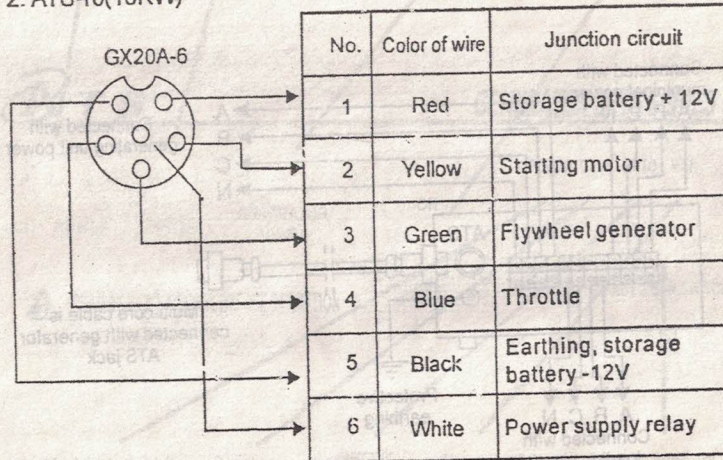


Partial panel wiring diagram of generating unit with  
ATS interface

1. ATS-5 (3~6KW)



2. ATS-10(10KW)



Partial panel wiring diagram of generating unit with  
ATS interface

3. ATS-12~50(12~50KW)

