

BESTEK

TROUBLESHOOTING GUIDE

--- INVERTERS ---

APPLIES TO ALL MODELS

Troubleshooting for inverters

In order to facilitate customers to inspect inverters on their own, in this article we will list common faults and fault analysis from the aspect of exterior indicators. Exterior indicators include a green light, a red light and a cooling fan. In the following we will analyze these faults from three indications.

Table 1 Illustration of exterior indications

	Green light	Red light	Cooling fan
Work normally	on	off	on
Over-high temperature	off	on	on
breakdown	off	on	off

(1) In the case of no-load, common faults are:

- A. When the power is turned on, both the green light and the red light are not on. The cooling fan doesn't run.

Analysis:

- 1) The input power may not be connected or abnormal;
- 2) The power cord of the equipment may be connected reversedly.
- 3) The switch is not on.

Solution:

- 1) Check whether the input power supply can work normally;
- 2) Check whether the power cord of the equipment is connected reversedly.
- 3) Check whether the switch is on.

- B. After the power is turned on, the green light is off, the red light is on and the fan doesn't run.

Analysis:

- 1) There may be a short circuit inside the inverter. The red light is on, which indicates that the inverter may switch to be in the state of overcurrent protection;
- 2) The input voltage may be insufficient or too high so that the inverter switches to be in the state of under voltage or over voltage protection.

Solution:

- 1) Check whether the input wiring of the device is short circuited;
- 2) Check whether the input power voltage is normal. The equipment should be connected to the matching DC voltage.

(2) In the case of load, common faults are:

- A. When the power is turned on, the green light is on, the cooling fan runs, but the inverter does supply power after being connected.

Analysis:

The device may have been damaged or broken;

Solution:

Detect whether the device has broken down; Replace the device with others.

- B. After the power is turned on, the green light becomes dim, the red light is on and the fan stops running as soon as a device is connected.

Analysis:

- 1) The total load is too high, which starts the overload protection.
- 2) The output may be short-circuited, which starts the overcurrent protection;
- 3) The load may be an inductive load. Equipments such as refrigerator may not be suitable to be used on the inverter.

Solution:

- 1) Reduce the total load.
- 2) Check whether the load is short circuited.
- 3) Have a look at the user manual to check whether the load is within the applicable scope.

When the power is on, after a period of normal work, the red light is on and the fan stops running.

Analysis:

- 1) The output may be short-circuited and the inverter may switch to be in the state of overcurrent protection;
- 2) The input voltage may be insufficient or too high so the inverter switches to be in the state of under

voltage or over voltage protection.

Solution:

- 1) Check whether the device is short circuited;
- 2) Check whether the input power voltage is normal. The device should be connected to the matching DC voltage.

When the power is on, after a period of normal work, the green light stays on, the fan runs and makes a noise.

Analysis:

The inverter works continuously, the temperature inside the shell rises. In order to cool down faster, the fan runs with higher speed, which leads to larger noise. It is normal phenomenon.

When the power is on, after a period of normal work, the red light turns on, the fan runs and makes a noise.

Analysis:

The inverter works in a high temperature environment for a long time and switches to be in the state of high temperature protection.

Solution:

The temperature inside the inverter may be too high. Please turn it on again when it has been cooled down.

When the power is on, after a period of normal work, both the green light and the red light are off. The fan stops running.

Analysis:

- 1) The input power may be broken;
- 2) The internal parts of the inverter may have been damaged;

Solution:

Check whether the input power supply is working properly;

Check whether the inverter is short circuited and check whether the fuse is damaged. If there is no short circuit, the internal failure needs to be further figured out.