CX series-FAQ

Fault codes and troubleshooting steps

Applicable to: SGxxCX-series

Module Overtemperature (Code 036)

Fault Name	Module overtemperature (fault code 036)
Fault Type	Shut Down
Fault Condition	The temperature of one or more IGBT modules differs from the others
Troubleshooting steps and methods	1. Check whether fans work normally through the fan self-check. Replace the fan if necessary. 2. Check whether the IGBT module is normal. If it is damaged the module.

Excessively High Ambient Temperature (Code 037)

Fault Name	Excessively high ambient temperature (fault code: 037)
Fault Type	Failure shutdown
Fault Condition	The maximum temperature in the SG110CX-P2 and SG125CX-P2 inverter exceeds 83.5°C.
Troubleshooting steps and methods	1. Make sure, the inverter is shaded properly and kept away from direct sun and heat. 2. Check whether the fan works normally. Replace the fan if necessary. 3. If the displayed temperature inside the inverter is greatly different from the measured temperature is large, it is a temperature sampling fault. It is recommended to replace the inverter.

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Relay Fault (Code 038)

Fault Name	Relay fault (fault code: 038)
Fault Type	Failure shutdown
Fault Condition	The relay is normally closed and normally open. There is a relatively low ground impedance in the external power grid.
Troubleshooting steps and methods	1. Check whether there is a clear pull-in sound of the relay during grid-connected operation. If there is no switching sound, but the inverter runs with no output current and the inverter turns into a standby status after a period of operation, please check whether the cable is loose. If the cable is normal, please replace the inverter. 2. Use a multimeter to measure the voltages between L1 and the ground, L2 and the ground, L3 and the ground respectively, and whether there is a relatively low voltage. If the line-to-ground voltage is less than 100 V, a relay fault will be reported. Check whether the external cable is broken and grounded. 3. If the whole array reported the relay fault at the same time, check whether the circuit breaker and SPD of the low voltage cabinet are normal and measure the three-phase voltage to ground as above.

Insulation Impedance Fault (Code 039)

Fault Name	Insulation impedance fault (fault code: 039)
Fault Type	Failure shutdown
Fault Condition	The impedance to ground is less than the set value (Default value in China: 50 kΩ).
Troubleshooting steps and methods	Check for external PV panel grounding: Remove all PV strings connected to the inverter and use a multimeter to measure the positive and negative voltages of the strings to ground one by one to determine whether the panel is grounded.

Hardware Overvoltage and Overcurrent Protection (Code 040)

Fault Name	Hardware overvoltage and overcurrent protection (fault code: 040)
Fault Type	Failure shutdown
Fault Condition	1. Boost module or inverter module fails. 2. DC over-current, AC over-current. 3. The bus voltage and the half bus voltage are excessively high. 4. The 12V power supply is overloaded. 5. DC over-voltage, AC over-current
Troubleshooting steps and methods	1. If the inverter can resume operation, download the DSP auxiliary record and fault recorder of the inverter, and check More Parameters - Display Information 4 to confirm the fault causes. 2. Check the bottom of the cabinet. If there are black silica gel particles adhering to the bottom, the power module fails and the power board needs to be replaced. If it is severely damaged, replace the inverter. 3. If the fault is not recoverable and the interior of the inverter slightly fails, it is recommended to replace the inverter. 4. If the interior of the machine seriously fails, it is recommended to replace the inverter.

For further information, please download the user manual for:
SG30-50CX
SG110CX

This manual is intended for professional technicians who are responsible for installation, operation, maintenance and troubleshooting of inverters, and users who need to check inverter parameters. The inverter must only be installed by professional technicians.
The professional technician is required to meet the following requirements:

- Know electronic, electrical wiring and mechanical expertise, and be familiar with electrical and mechanical schematics.
- Have received professional training related to the installation, commissioning and troubleshooting of electrical equipment.
- Be able to quickly respond to hazards or emergencies that occur during installation, commissioning and troubleshooting.
- Be familiar with local standards and relevant safety regulations of electrical systems.
- Read this manual thoroughly and understand the safety instructions related to operations.