CX series-FAQ

Fault codes and troubleshooting steps

Applicable to: SGxxCX-series

Grid overvoltage (Code 002)

Fault name	Grid overvoltage (fault code: 002)
Fault type	Failure shutdown
Fault condition	The grid voltage is higher than the set protection value.
Steps and method of troubleshooting	1. Check whether the set inverter overvoltage protection value and the set HVRT protection value are correct. 2. Measure the AC voltage of AC output and compare the measured value with the displayed voltage and the set protection value. If the difference between the measured voltage and the displayed voltage is large, it can be inferred that the sampling is abnormal. Contact SUNGROW Service in order to replace the inverter.

Transient grid overvoltage (Code 003)

Fault Name	Grid transient v-over (fault code: 003)
Fault Type	Failure shutdown
Fault Condition	The instantaneous peak voltage of the power grid is excessively high (1.3 x rated voltage).
Troubleshooting steps and methods	1. Measure the AC voltage at the AC output. If the test voltage is greatly different from the displayed voltage, a sampling problem occurs, and it is recommended to replace the inverter. 2. Download the fault recorder of the inverter and analyse the peak voltage at the time of the fault. 3. Confirm with the customer whether any industrial load started or stopped at the time of the fault. 4. Check whether the length and cross-sectional area of the AC cable meets the requirement in the user manual. 5. If the sampling is normal, generally it can be inferred, that the grid is faulty.

Grid Undervoltage (Code 004)

Fault Name	Grid undervoltage (fault code: 004)
Fault Type	Failure shutdown
Fault Condition	The grid voltage is lower than the set protection value
Troubleshooting steps and methods	1. Check whether the inverter undervoltage protection setting is correct. 2. Measure the AC voltage at the AC output. If the test voltage is greatly different from the displayed voltage, a sampling problem occurs, and it is recommended to replace the inverter.

Grid Overfrequency (Code 008)

Fault Name	Grid Overfrequency (fault code: 008)
Fault Type	Failure shutdown
Fault Condition	The maximum value for the three-phase frequency of the grid exceeds the set overfrequency protection value and the duration exceeds the set time.
Troubleshooting steps and methods	1. Check whether the country is selected correctly (grid frequency is divided into 50Hz and 60Hz). 2. Check whether the overfrequency protection value is correctly set. 3. Check whether the displayed frequency is consistent with the actual value. If not, it is a sampling problem. It is recommended to replace the inverter.

Grid Underfrequency (Code 009)

Fault Name	Grid Underfrequency (fault code: 009)
Fault Type	Failure shutdown
Fault Condition	The minimum value of the three-phase frequency of the grid is lower than the set underfrequency protection value and the duration exceeds the set time.
Troubleshooting steps and methods	1. Check whether the country is selected correctly (grid frequency is divided into 50Hz and 60Hz). 2. Check whether the underfrequency protection value is correctly set. 3. Check whether the displayed frequency is consistent with the actual value. If not, it is a sampling problem. It is recommended to replace the inverter.

Islanding (Code 010)

Fault Name	Islanding (fault code: 010)
Fault Type	Failure shutdown
Fault Condition	Grid-side power disconnection or AC circuit breaker disconnection Any voltage on the grid side is lower than the set value (10% Un).
Troubleshooting steps and methods	1. Check whether the AC cables are firmly connected, including the cables in the AC cabinet. 2. Please check AC wiring and AC circuit breaker for tripping or failure. 3. Measure the three-phase AC voltage at the AC terminals. If the test voltage is inconsistent with the displayed voltage, it is a sampling problem. It is recommended to replace the control board.

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.