3-phase Hybrids-FAQ

Fault code and troubleshooting steps of SHxxRT

Applicable to: SHxxRT 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	Transient grid overvoltage (fault code: 003)
Fault type	Failure shutdown
Fault condition	The instantaneous peak voltage of the grid is too high. It is greater than 440V, and it is higher than the instantaneous overvoltage protection value for more than 5s.
Steps and method of troubleshooting	1. 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. It is recommended to replace the inverter. 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.
Steps and method of troubleshooting	1. Check whether the set inverter undervoltage-value and the set LVRT protection values are correct. 2. Measure the AC voltage of the AC air switch 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. It is recommended to replace the inverter.

Low grid voltage (Code 005)

Fault name	Low grid voltage (fault code: 005)
Fault type	Failure shutdown
Fault condition	The grid voltage is lower than the set secondary undervoltage-protection-value. (The fault is not reported if the protection level is an odd number)
Steps and method of troubleshooting	1. Check whether the set inverter undervoltage value and the set LVRT protection value are correct. 2. Measure the AC voltage of the AC air switch 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. 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 frequency of the grid exceeds the set over-frequency-protection-value and the duration exceeds the set time
Steps and method of troubleshooting	1. Check whether the country selection is correct (the grid frequency is 50Hz or 60Hz). 2. Check whether the set value of inverter over-frequency protection is correct. 3. Check whether the displayed frequency is consistent with the actual value. If the two values are different, it can be inferred that the sampling is abnormal. 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 frequency of the grid is lower than the set underfrequency-protection-value and the duration exceeds the set time.
Steps and method of troubleshooting	1. Check whether the country selection is correct (the grid frequency is 50Hz or 60Hz). 2. Check whether the set value of inverter underfrequency protection is correct. 3. Check whether the displayed frequency is consistent with the actual value. If the two values are different, it can be inferred that the sampling is abnormal. It is recommended to replace the inverter.

Island (Code 010)

Fault name	Island (fault code: 010)
Fault type	Failure shutdown
Fault condition	The grid is cut off or the AC circuit breaker is tripped.
Steps and method of troubleshooting	1. Check whether the AC wiring is secure, including the AC distribution cabinet wiring. 2. Measure the AC voltage of AC line bank and compare the measured value with the displayed voltage. If the measured voltage is abnormal, please check whether the AC wiring and the AC circuit breaker are tripped or failed; If the measured voltage is normal and the displayed voltage is wrong, it can be inferred that the sampling is abnormal. It is recommended to replace the inverter. 3. Check whether the AC wires are connected properly.

For further information, please download the user manual here.

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.

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