Application Note – Troubleshooting SolarEdge TerraMax™ Inverter Alerts

Version History

- Version 1.1: Change of product name April 2024
- Version 1.0: Release, August 2023

Contents

Introduction

This application note is intended to aid utilities and companies with large commercial PV installations troubleshoot the SolarEdge TerraMax Inverter. The inverter transmits alert messages to the SolarEdge Monitoring Platform and the mobile devices of SetApp users.

The list of alerts, provided in the following table, is accompanied by detailed alert descriptions and guidelines for the remediation of the alerts.

Alerts and Troubleshooting Guidelines

Error	Alert Type	Description	Troubleshooting
33xD	Fan Fault	The inverter fan is not working.	Perform the following steps to attempt to resolve this issue: 1. Check the physical cable connection 2. Clean the fan 3. Replace the fan If none of these steps successfully resolve your issue, contact the SolarEdge Support team.
33X86	DC SPD failure	The DC SPD is not functioning.	Validate that the DC SPD board is installed correctly as instructed in the installation guide. If the issue persists, it is possible that the DC SPD board absorbed an electrical surge. In this case, the board should be replaced. Upon remediation of the failure, the event 33XDB is received.
33X85	AC SPD failure	The AC SPD is not functioning.	Validate that the AC SPD board is installed correctly as instructed in the installation guide. If the issue persists, it is possible that the AC SPD board absorbed an electrical surge. In this case, the board should be replaced. Upon remediation of the failure, the event 33XDA is received.
TBD	Temperature warning on DC+ terminal	The temperature of the DC+ terminal block is high.	Validate that the DC wires are properly inserted into the terminal block and that there are no loose DC wire strands. If the DC wires are secured to the terminal block using screws, validate that the torque for the DC+ terminal block screws is set as specified in the installation guide. If the PV modules are connected to the inverter using aluminum wires, validate that the wires are not oxidized. For the aluminum deoxidization treatment, refer to the installation guide. If the issue persists, contact the SolarEdge Support team.
TBD	Temperature warning on DC- terminal	The temperature of the DCterminal block is high.	Validate that the DC wires are properly inserted into the terminal block and that there are no loose DC wire strands. If the DC wires are secured to the terminal block using screws, validate that the torque for the DC- terminal block screws is set as specified in the installation guide. If the PV modules are connected to the inverter using aluminum wires, validate that the wires are not oxidized. For the aluminum deoxidization treatment, refer to the installation guide. If the issue persists, contact the SolarEdge Support team.

33x9C	The DC+/- terminal has reached critical temperature levels.	The DC+/- terminal has reached critical temperature levels.	Validate that the DC wires are properly inserted into the terminal block and that there are no loose DC wire strands. If the DC wires are secured to the terminal block using screws, validate that the torque for the DC+/DC- terminal block screws is set as specified in the installation guide. If the PV modules are connected to the inverter using aluminum wires, validate that the wires are not oxidized. For the aluminum deoxidation treatment, refer to the installation guide. If the issue persists, contact the SolarEdge Support team.
33x9C	Temperature warning on AC terminal block	The temperature of the Y of the AC terminal block is high/critical. Y = L1 conductor, L2 conductor, L3 conductor	Validate that the AC lugs are properly installed. Validate that the torque of the screws in the AC terminal block is set to 35 Nm. If the issue persists, contact the SolarEdge Support team.
33X47	Production issue – inverter over temperature	Inverter temperature is critical, the production has stopped.	Check that the inverter has been installed according to the instructions in the installation guide. If the issue persists, contact the SolarEdge Support team.
TBD	Inverter not producing	The inverter is operating but not producing power.	Check the ON/OFF/P switch and make sure the toggle is in the ON position. Check the string voltage. It should be at least 24V.
8x3, 33x3	Night Mode	There is not enough solar energy to start generating power.	Wait until the sunlight hours tomorrow and check the strings.
2x25, 8x81, 2xA, 33x81	RCD	There is a higher leakage current than allowed in the system.	Check the strings connections, and check the AC connections.
8x58, 2x19, 18x86, 2x25, 2x19, 33x58	DC Isolation	Isolation problem between the optimizers.	Check the strings and make sure the connections are correct and properly reinforced.
TBD	Grid (Voltage, Freq)	A country-specific threshold may have been exceeded.	Make sure that the correct country grid is set in SetApp.
TBD	Low voltage	A country-specific threshold may have been exceeded.	Make sure that the correct country grid is set in SetApp.
TBD	No communication	There is no communication between the inverter and the network.	Check that the communication board LEDs are lit. Check that the communication board cable is connected properly. Check the string voltage. It should be at least 24V. If all the above tests pass, contact the SolarEdge Support team.
TBD	PID	PID is not working at night.	Contact the SolarEdge Support team.

Support Contact Information

If you are having technical problems concerning SolarEdge products, please contact us:

https://www.solaredge.com/service/support

Before contacting SolarEdge, make sure to have the following information at hand:

- The model and serial number of the product in question.
- The error indicated on the LEDs, the SetApp mobile application, the LCD screen, or on the monitoring platform, if there is such an indication.
- System configuration information, including the type and number of modules connected and the number and length of strings.
- The method of communications with the SolarEdge server if the site is connected.
- The product's software version appears in the ID status screen.