

# On-Site Inverter Troubleshooting Checklist

## Revision history

- Version 1.2, October 2024: Reformatted
- Version 1.1, June 2023

## Overview

To make troubleshooting with SolarEdge Technical Support more efficient, gather the following information and submit it before contacting SolarEdge Support. A case number is created and provides live support to make troubleshooting more efficient.

The troubleshooting form records and provides details about site and inverter issues, and opens a case before you speak to SolarEdge Technical Support. Additional onsite maintenance may be required depending on the issue.



### NOTE

This form does not replace contacting SolarEdge Technical Support for troubleshooting. Submitting it does not guarantee a Return Merchandise Authorization (RMA).



### WARNING!

This guide is intended to aid in troubleshooting a SolarEdge installation that has a technical issue with SolarEdge devices/equipment. If you use this guide, familiarize yourself with SolarEdge systems, their concept of operation, safety features, and all applicable safety procedures and requirements. Do not attempt to troubleshoot without adequate safety equipment and understanding the procedures.

## Report issue

Include error codes, the behavior of the inverter, recent events, and so on. Be as specific as possible.


## Safety precautions

For safety purposes, perform the following steps before removing covers:

- Turn P/0/1 toggle switch to 0 (OFF) position and wait for the VDC on the inverter to drop below 30V.
- Turn the DC disconnect switch to the OFF position.
- Verify the AC breaker to the inverter is on and not tripped or off.



### WARNING!

If an AC breaker trips on site, do not power on the AC breaker before investigating the inverter for internal dynamic failure damage (debris/burned components/etc.). If internal

inverter damage is discovered, take photos of the damage and contact SolarEdge Technical Support.

## AC voltages

With the P/0/1 toggle in the 0 (OFF) position, and the DC disconnect switch off, remove the covers from the inverter and DC disconnect. Using a voltmeter measure, record voltages between each of the two points listed. It is recommended to take AC voltages at the inverter's DC and/or AC disconnect.



### **WARNING!**

If the inverter has a dynamic failure and/or a breaker trip, do not power on the AC, instead take AC voltages at the inverter AC disconnect or the main service panel.

Line	VAC
Line 1 – Neutral	
Line 2 – Neutral	
Line 3 – Neutral	
Line 1 – Line 2	
Line 2 – Line 3	
Line 3 – Line 1	
Line 1 – Ground	
Line 2 – Ground	
Line 3 – Ground	
Neutral – Ground	

## DC voltages

With the P/0/1 toggle and DC disconnect switches still in the OFF position, remove each PV string from the inverter and measure the DC voltage on the DC conductors, and record the voltage of each string up to the second decimal point.

String	VDC	# of optimizers installed
String 1		
String 2		
String 3		

Disconnect all strings from the inverter and record the VDC value seen on the LCD screen/SetApp status.

Inverter VDC	
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## Additional accessories

List any additional installed accessories including batteries, EV chargers, meters, generators, transformers, and so on. For SolarEdge products, provide the product type and serial number. For third-party devices (batteries, transformers, etc.), provide the product type, manufacturer, and model number.

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## Photos or screenshots

Provide photos from the following, as well as application screenshots from SetApp-enabled inverters:

- Inverters with top and DC covers removed, such as the full internal view of the unit.
- The inverter rating label with the serial number.
- If battery/backup is installed, provide photos of the wiring between batteries, backup interface, and inverters.
- The inverter ID, firmware versions, and selected country code.
  - **SetApp enabled inverter:** Navigate to **Status scroll** to see the ID, country, CPU, DSP1 and DSP2 fields and take a screenshot.
  - **LCD enabled inverter:** Locate the screen for ID, Country, CPU, DSP1 and DSP2 and take a photo.
- The temperature (with red IO switch on "1") of any hardware damage/issue detected.
  - SetApp enabled inverter: Found in the **Status menu** in SetApp.
  - LCD enabled inverter: Locate the screen that display VAC, VDC, PAC, Pac [Hz], Ops OK, and Temperature.
- The ICCID on the SIM card if there are communication issues with a cellular modem.
- The gateway serial number if there are issues with a Zigbee home gateway.
- All error log entries and records in the menu: **Information > Error Log > Show Log** if the inverter is not connected to the SolarEdge Monitoring platform.

## What to submit to SolarEdge support

Prepare all the relevant information for the SolarEdge technician to expedite resolving your issue. You can submit the troubleshooting form in one of three ways, when all the information is filled out:

- [SolarEdge Support Portal](#) – If registered, sign in and create a new case. Attach this filled-out form as well as any relevant photos. When the case is created, provide a case number to SolarEdge support.
- [Chat](#) – This is found at the bottom of the Support Portal page. Chat with a live agent to start a case. The agent assists in creating a case and reviews the supplied documentation.
- **Phone** – Notify the agent that you have this detailed form to send in. The agent assists you in submitting the attachments.



### NOTE

Depending on the issue, further information and troubleshooting may be required on site to resolve the problems seen and/or to be eligible for RMA. Be prepared to perform additional troubleshooting and information gathering if needed by SolarEdge support.