

Getting Started Guide: Troubleshooting Installation Issues Using Installer Toolkit

This quick guide is for the on-site Electrician or Foreman who is responsible for verifying Enphase system operations at the install site using the Envoy-S Metered and the Enphase Installer Toolkit mobile application.

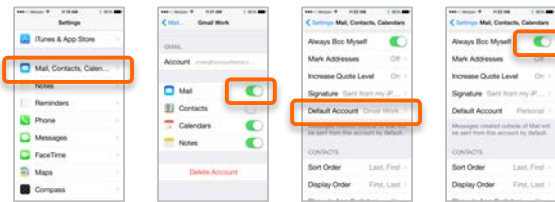
This guide applies to the Envoy model that looks like the Envoy pictured on the right, either in the Enphase AC Combiner Box or standalone.



Before You Start

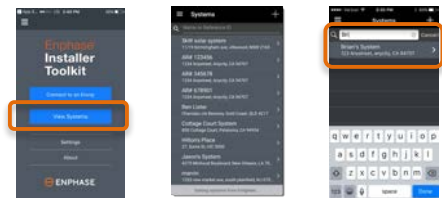
Download the latest version of Enphase Installer Toolkit (Toolkit) before you leave the office. If you have never logged into Toolkit do so using your Enlighten installer login credentials. This will unlock the application for your ongoing use. (If you do not know your Enlighten login credentials, please contact your company's Enlighten Administrator.)

Verify that you have set up the email client on your mobile device to send from your company email address. Access **Settings** on your mobile device. Confirm your mail client is turned on and your default address is correct. You may also wish to enable **Always Bcc Myself**.



In Office Preparations

Before you head out to the job site, confirm that your operations team has created an Enlighten site activation for the system you will be installing. You can verify this by accessing the systems view in Installer Toolkit and scrolling to or searching (by name) for the system you will visit.



If you have used the Toolkit before, be sure to check for updates while you're connected to the office or warehouse Wi-Fi network. This will ensure that you have the latest Envoy software package on your mobile device. You can use your mobile device to upgrade the Envoy in the field.

Update your list of systems by dragging down the list to load new systems into your list, or search for a single system to download.

Troubleshooting Steps

The following steps will guide you through troubleshooting some common installation issues on a new install.

You will **Connect to Envoy** using the Toolkit app to identify these issues.



Symptom: Not all microinverters were detected during initial scan.

Issue 1: System is large, and the Envoy has not had time to find all microinverters.

Resolution: Initiate a new device scan.



Issue 2: The missing microinverter is not connected to its module.

Resolution: Use the Toolkit list of inverters and your install map to find the missing module serial number on the roof. It will not appear on the list of **Detected** microinverters in Toolkit.



Verify that the module is connected to the microinverter and to the Engage cable.



Issue 3: The missing microinverter/module pair is in the shade.

Resolution: Use the Toolkit list of detected inverters and your install map to find the missing module serial number on the roof. It will not appear on the list of **Detected** microinverters in Toolkit.

Verify that the module is in full sun.

Issue 4: The module is not reaching start-up voltage to power the microinverter.

Resolution: If the microinverter LED is **not** lit, use a multi-meter to verify that module is reaching the start-up voltage required to power the microinverter (22V for the M215 and the M250). If not, you will have to replace the module.



Issue 5: The microinverter is malfunctioning.

Resolution: Verify that the microinverter LED is **not** lit. (You have already verified that the unit is connected to the module, and the module is reaching start-up voltage in the sun.)

Replace the microinverter with a spare unit from your truck. Label the mal-functioning unit for RMA by your installation support team.

Symptom: A single microinverter is not producing power.

Issue 6: The microinverter is not detecting correct AC voltage. In this example, 17 units have been detected, but only 16 are producing.



Resolution: Use your install map and the Toolkit power details to find the non-productive microinverter serial number on the array.

The non-producing unit will report 0W production.



On the roof, verify that the microinverter LED is lit red. Disconnect the microinverter from the Engage cable connector. Reseat the microinverter connection; be sure you hear two audible clicks upon reconnection. Wait 5 minutes to verify that the LED changes to green.

Issue 7: The microinverter is malfunctioning.

Resolution: Verify that the microinverter LED is lit. Replace the microinverter with a spare unit from your truck. Label the mal-functioning unit for RMA by your installation support team.

Troubleshooting Steps – *continued*

Symptom: An electrically contiguous group of microinverters is not producing power.

Issue 8: There is a wiring error and the branch or part of a branch is not delivering correct AC voltage to the microinverters.

Resolution: Verify that the microinverters LEDs are lit red. Measure L-N voltages and L-L voltages at points of connection, the J-box or at the PV sub-panel to find the error. (The most common cause is a loose wire-nut.) Correct the problem.

For any other issues, please contact your installation support team or Enphase technical support for guidance.