

Current Transformer health check

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Enphase Installer App: Production and Consumption CT health check

This feature initiates a series of health checks for the Production and Consumption Current Transformers (CT). After the checks are completed, the user is informed of the results. If any checks fail, the user receives recommendations to rectify the situation. To use this feature, enable the meters and wait for 24-48 hours. This feature can be used to validate the Production and Consumption CTs in all regions.



NOTE: This feature is not available for Battery CT and Generator CT. Ensure batteries are not discharging while using this feature.

The following are the checks performed for the CTs:

- Production CT showing reversed polarity values (all negative)
- Production CT values become zero (less than 10 W) after the PV is turned OFF
- Consumption CT values are not zero when the PV value is zero and the load is turned ON
- Consumption CT values change when PV is turned ON for “Load + Solar” CT installation and do not change for “Load Only” installation



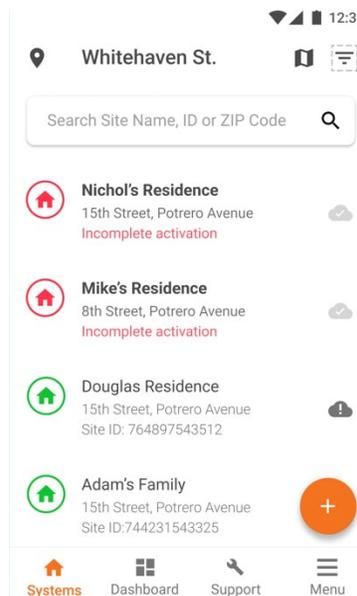
NOTE: To prevent CT issues, follow the instructions carefully while using the meter wizard.



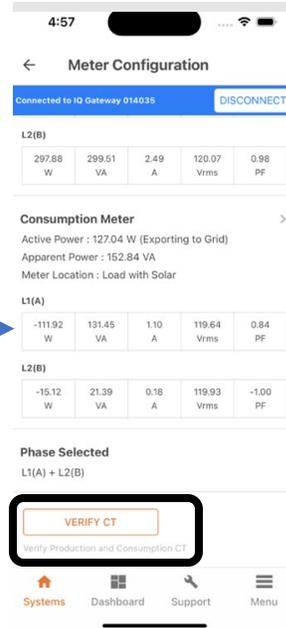
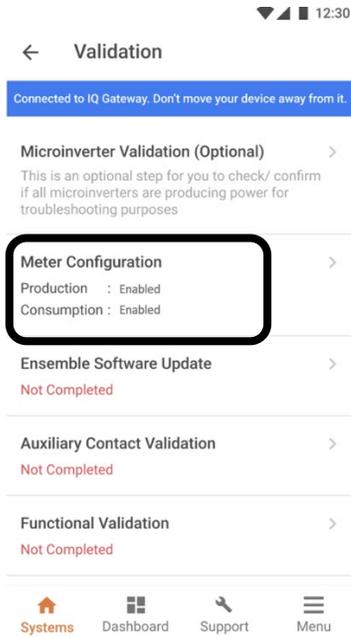
NOTE: Ensure both Production and Consumption CTs are enabled to use the Verify CT feature.

Health check using the Enphase Installer App

1. Log in to the Enphase Installer App and search for the site using one of the following: SITE NAME, SITE ID, ZIP CODE, and so on.

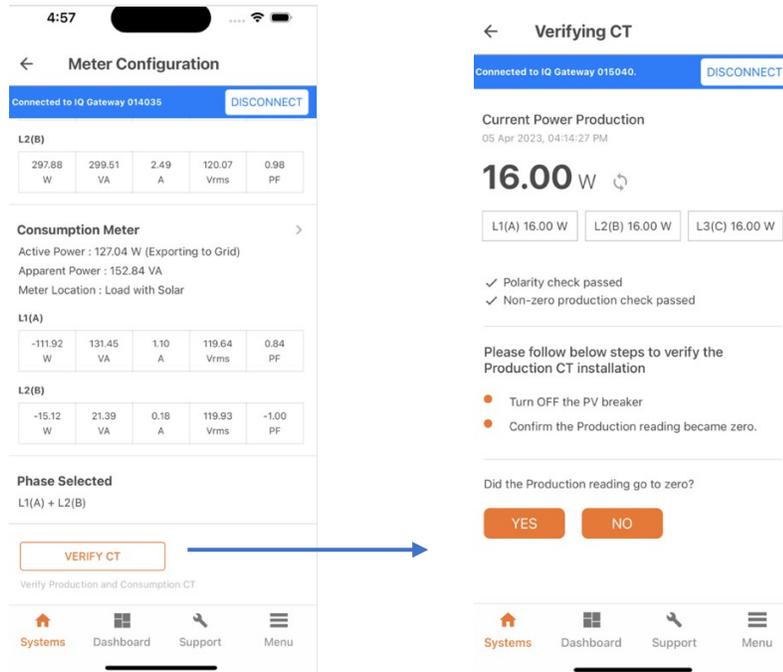


2. Connect to the Gateway AP mode. Refer to [this article](#) to learn how to accomplish this.
3. Go to **Validation** (Step 5) > **Meter Configuration** > **VERIFY CT**. The Enphase Installer App validates the Production and Consumption CTs.

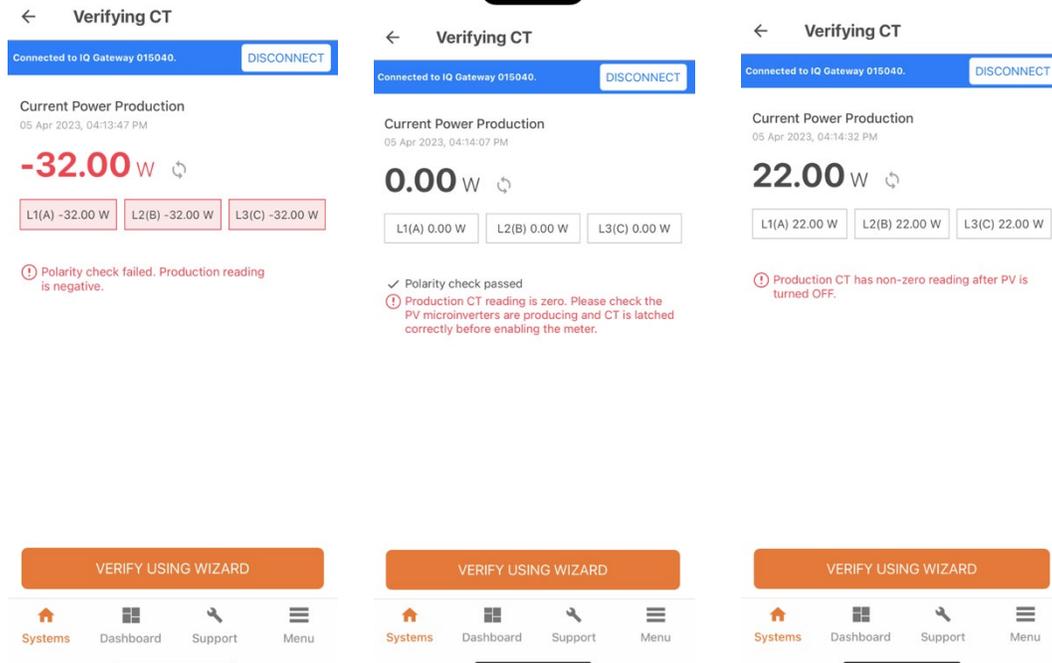


Validating Production CT

- Checks if the Production CT reading is positive and greater than 10 W.
- Instructs the user to turn OFF the PV and observe the value going to zero.

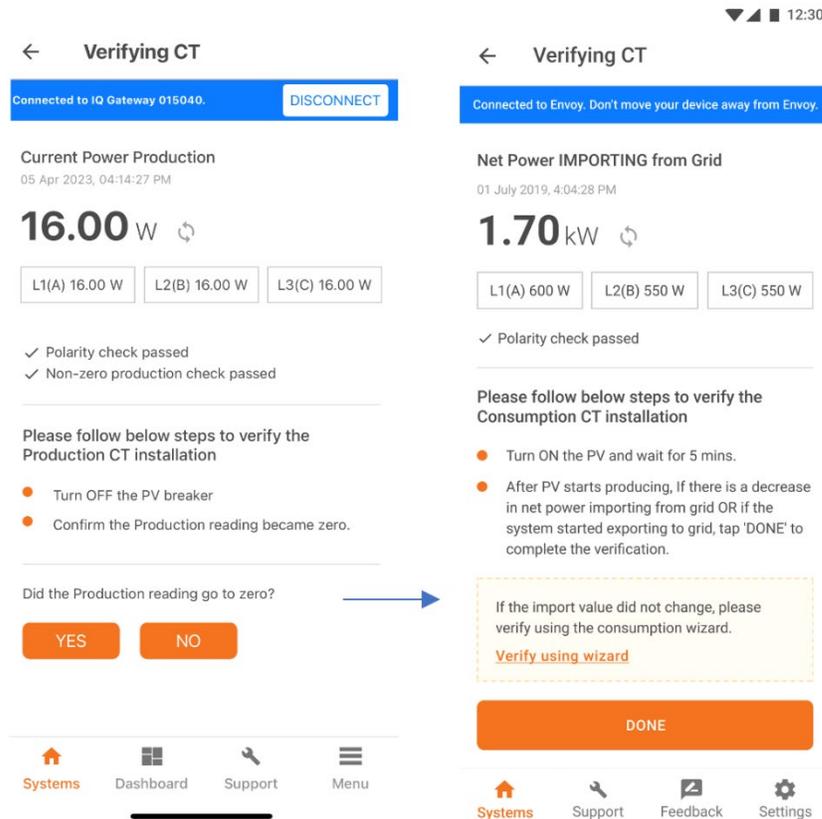


If the test fails, an error message appears (as shown below), and you can use the meter wizard to correct the error.

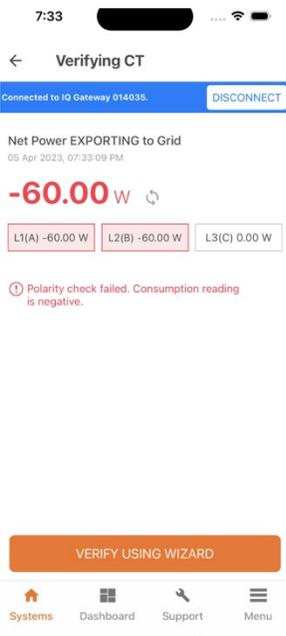


Validating Consumption CT

- Checks if the reading is positive and greater than 10 W on each line with a load turned ON and PV turned OFF.
- If the Consumption CT measures Net-Consumption (Load + Solar), instructs the user to turn ON the PV and observe a decrease in import (may take up to 5 minutes based on the grid profile).
- If the Consumption CT measures Load Only, instructs the user to turn ON the PV and observe no change in the reading (may take up to 5 minutes based on the grid profile). You can click **DONE** if no issue is observed.



If the test fails, an error message is shown, and you can use the meter wizard to verify the error.



Enphase Installer Portal: Production CT health check

Similar to the Enphase Installer App, a **Verify CT** button is available on the production meter device page of the Enphase Installer Portal. This option provides a series of production meter health checks. After the checks are completed, the user is informed of the results. If any checks fail, the user receives recommendations to rectify the situation. To use this feature, you must enable the Production CT and wait for 24-48 hours.

The checks performed for the production meter are as follows:

- Production CT shows reversed polarity values (all negative)
- Production CT values are lower than reported microinverter production values



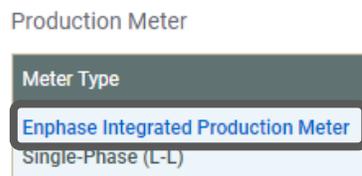
NOTE: To prevent meter issues, follow the instructions carefully while using the meter wizard in the Enphase Installer App.

Health check using the Enphase Installer Portal

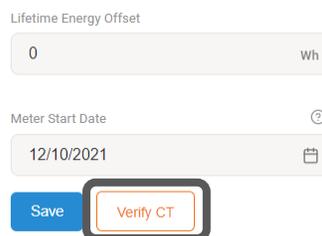
1. Log in to the Enphase Installer Portal and open the desired site.
2. Click the **Devices** tab.



3. Click **Enphase Integrated Production Meter**.



4. Click the **Verify CT** button.

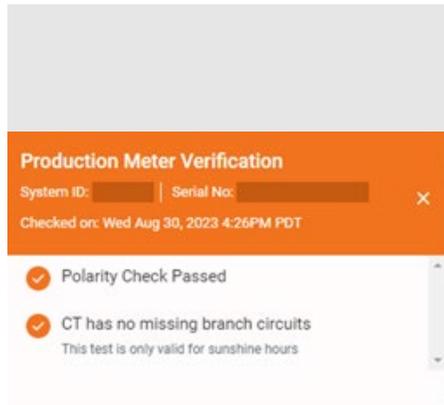


The results are displayed in a pop-up window at the bottom right of the page. The following figures show examples of successful and unsuccessful verifications.

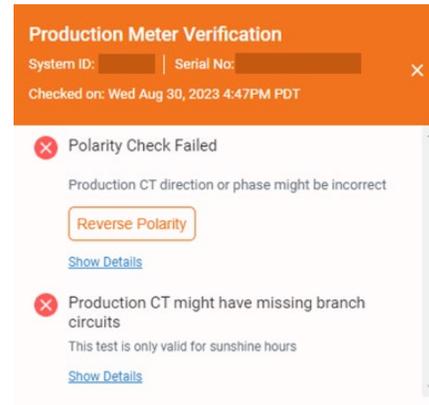
If the meter detects a polarity issue, use the **Reverse Polarity** button in the pop-up window, which takes you to the production meter device page to reverse the Production CT polarity. After reversing the polarity, allow 48 hours for new data before reusing this feature.

If it detects missing branches (the meter shows less production than the microinverter production values), then this must be resolved onsite.

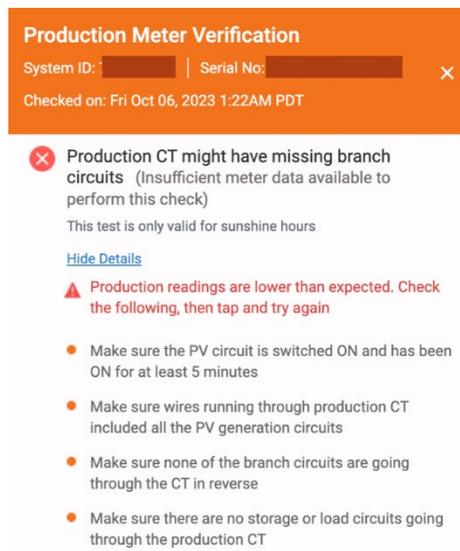
Successful verification



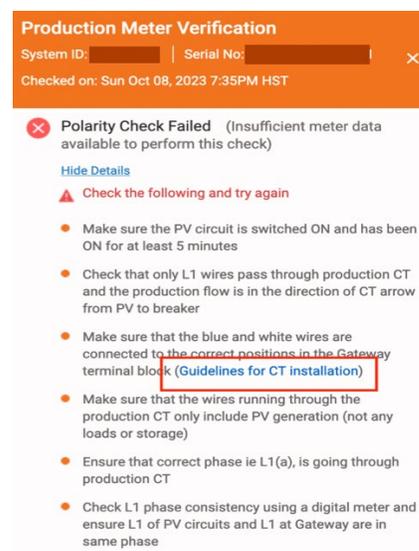
Unsuccessful verification



Unsuccessful verification



Unsuccessful verification



References

- [Guidelines for CT installation](#) (Technical Brief)
- [CT Troubleshooting](#) using the Enphase Installer App (Video)

Revision history

Revision	Date	Description
TEB-00079-1.0	October 2023	Initial release

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