

Solar PV Microinverter-Based System Verification Test Procedure

Testing Procedure Steps:

1. Make sure that the PV system is online and the breakers are closed.
2. Measure and record customer service voltage line to line.
3. Using a clamp on ammeter, hook up the PV disconnect, across the AC wiring for the PV branch and **verify operational current as a baseline**. If the system has multiple branches, check them as well for their operational current. (This is a guideline for normal current flow for each branch.)
4. Place clamp on ammeter at the point of disconnect over the wiring for the branch you are going to perform the test on.
5. Open the AC point of disconnect to this branch. **Verify that the inverters shut down immediately and the current on the clamp on ammeter is now zero.**
6. Close the AC point of disconnect to the branch and note the VAR current present. Contact the manufacturer for the most recent VAR (Volt Amp Reactive) current for the inverter(s). For branches with multiple panels and inverters, the current shown will be equal to the **(# of inverters) x (amps per inverter)**. This current level must be present for at least 5 minutes.
 - For example, for a branch with 10 inverters/panels with a manufacturer's maximum reactive current of 0.074 amps per inverter, the allowable consumption current will be $0.074\text{A} \times 10 = 0.74\text{A}$
 - If using a directional meter, the sign on the current output will verify that the inverters are not exporting power.
 - If possible, visually verify that the inverters have stopped exporting power (during this five-minute interval) by looking at the LED's on each inverter and verifying that the amber LED is lit.
 - Additionally, if possible, verify with the Enphase Envoy System (or similar communication system) that during this five-minute interval the inverters are not exporting power. kWh output should be zero.
7. After at least five minutes, verify the current has increased to operational current observed earlier in the test procedure for the branch in question.

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Customer Name: _____

Customer CH Acct#: _____

Customer Address: _____

Please fill out the below form and submit. Keep instructions for reference.

Branch Circuit	# Of Inverters	Operational Current	Shutdown Immediately with 0 amps	Manufacturer's allowed reactive current for each branch = (# of inverters) x (allowed reactive current per inverter)	Reactive Current	Δ T = Time system reconnected (mm:ss) - Time AC point of disconnect is closed (mm:ss)	Operational current
1		A	<input type="checkbox"/> Yes <input type="checkbox"/> No	x A = A	A	Δ T = :	A
2		A	<input type="checkbox"/> Yes <input type="checkbox"/> No	x A = A	A	Δ T = :	A
3		A	<input type="checkbox"/> Yes <input type="checkbox"/> No	x A = A	A	Δ T = :	A
4		A	<input type="checkbox"/> Yes <input type="checkbox"/> No	x A = A	A	Δ T = :	A
5		A	<input type="checkbox"/> Yes <input type="checkbox"/> No	x A = A	A	Δ T = :	A
6		A	<input type="checkbox"/> Yes <input type="checkbox"/> No	x A = A	A	Δ T = :	A

Test Completed By:

Company Name _____

Date Test Performed _____

Name _____

Weather Conditions _____

Signature _____

Customer Service Voltage (line to line)