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Application Note – Inverter not responding



Sicherheitshinweise

Warning!

Denotes a hazard. It calls attention to a procedure that, if not correctly performed or adhered to, could result in injury or loss of life. Do not proceed beyond a warning note until the indicated conditions are fully understood and met. Opening the inverter and repairing or testing under live voltage must be performed only by qualified service personnel familiar with this inverter.



Warning!

The inverter cover must be opened only after shutting off the inverter ON/OFF switch located at the bottom of the inverter. This disables the DC voltage inside the inverter. Wait at least five minutes before opening the cover, the DC voltage must be below 50V_{DC}. Otherwise, there is a risk of electric shock and/or damage to the inverter from energy stored in the capacitors.

Troubleshooting steps



Please check whether the inverter responds by operating the internal buttons (above the LCD). The fault might be in the green button that is defective and/or not connected correctly.



Please check whether the inverter might be still feeding-in at the main electricity meter.

Step 1, AC-Voltage Check:

Check that all the single wires of the AC-Cable are connected to the correct terminal block.

PE	-	Ground	(regularly green-yellow)
Ν	-	Neutral	(regularly blue)
L	-	Conductor	(regularly brown, grey or black)

Check the voltage for all the wires:

L to N: L_x to L_v:

ca. 230 VAC ca. 400 VAC

(only valid for three-phase inverters)





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Step 2, Check the Fuse:

Every SolarEdge inverter comes with a fuse that is placed on the power board of the inverter. The position might vary for different inverter types and in some inverter types it might be replaceable.

Please contact the SolarEdge Technical Support if a fuse is not operational (high isolation value).



Step 3, Check smooth fit of the boards:

Please check visually whether the circuit boards fit perfectly onto each other and the flat cable connector (if available) fits onto the connector. All connectors must be put in all the way, there should not be any open pin headers.



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Step 4, Check Test-Voltage on the communication board:

The voltage between both shown points should be at around 5 VDC (+- 0,5 V).



Further steps

If the issue cannot be resolved on site, please contact the SolarEdge Technical Support Team. Please have ready the inverters serial number and all the results of the above tests.

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Non-responding Inverter's Procedure

This Procedure explains what needs to be checked before contacting the SolarEdge Support Center:

Steps:

1. Turn off the DC Switch of the Inverter and wait at least 3 Minutes for the DC Voltage will drop to Safety levels.

Measure the Voltage between Natural (N) and the Phase (L) (For 3-Phase Inverters – Between Natural (N) and Line 3 (L3)):



You should see around 220~230 Vac from the Mains. If there is no Measurement – Check the Mains Cabinet (There is no Power to the Inverter). If you see around 220~230 Vac Continue to Step 2.

 Measure The Voltages on the Digital Board – First remove the Communication Board – 2.1. For 3-Phase Inverters (Digital <u>AP1045C-DGJ-EU/US</u>)

Measure the +12V (TP 18) and +5V (TP 22) on the Digital Board:





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Italy:	VISMUNDA SRL- Corso Del Popolo 50/A – Treviso
Japan:	B-9 Ariake Frontier Building, 3-7-26 Ariake, Koto-Ku, Tokyo, 135-0063
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China:	City Center, 100 Zunyi Road, Building A, Unit 1204, Shanghai 200051

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2.2. For 1-Phase Inverters (Digital AP1020H-DGV-EU/US) Measure the 3.3V (TP 720) and 1.8V (TP 730) on the Digital Board:









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2.3. For 1-Phase Inverters (Digital AP1020G-DGV-EU/US) Measure the 3.3 VD and 1.5 Vref on the Digital Board:







If you are not getting any Measurement please first try to disconnect and re-connect the Digital board to its Main board and measure again.

If you are still not getting any Measurements please contact SolarEdge Support for further instructions.

If you are - Connect the Communication Board and Proceed to Step 3

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3. Measure the Communication Board Voltage:





If you are not getting any Measurement please first try to disconnect and re-connect the Comm. board to its Digital board and measure again.

If you are still not getting any Measurements please contact SolarEdge Support for further instructions.

Thank You! SolarEdge Support Team.

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