

Testing requirements for warranty claim requests

Disclaimer

The material in this document has been prepared by Sungrow Australia Group Pty. Ltd. ABN 76 168 258 679 and is intended as a guideline to assist solar installers for troubleshooting. It is not a statement or advice on any of the Electrical or Solar Industry standards or guidelines. Please observe all OH&S regulations when working on Sungrow equipment.

Introduction

When lodging a warranty claim with Sungrow it is helpful to our warranty team if there is clear information and testing on the claim form to expedite the process. This is in the interests of getting the correct part sent to assist everyone. Also, many times it is found to be that the equipment is presenting the issue, but is only notifying of something happening elsewhere in the system. This also helps us locate the fault in these cases.

The testing requirements are directly from Australian Standards and do not require any special equipment. A voltmeter, clamp tester and an Insulation Resistance meter (megger) is all that is required.

This guide will be broken down into several sections to assist in ease of getting required information.

Inverter testing

Inverter issues can be diagnosed easily by seeing the error code.

Basic information required for these claims include;

- a. Voltage testing of all strings connected,
- b. Insulation Resistance testing of all strings (please see AS5033:2021 Section 4.7.3),
- c. Photos of the voltage at the AC terminal,
- d. Continuity of N-E (showing meter so we can see the setting) at the AC terminal.



Typical examples of what we wish to see on the testing photos



The above is a poor example of IR testing, as we can see that it reads infinite, and while a circuit might be high readings (200M) they will not read infinite

More information on this can be found at
<https://youtu.be/pJTFHlzSouY?si=EkPnZYigoeX5KhZr>

Batteries

Batteries require testing at several points and can help us greatly. Again, photos showing test probes help us ensure that the correct measurement is being taken.



Photos of battery voltages at the base and at the inverter

More information on battery testing can be found at

SBR series

<https://youtu.be/HxdGRFGb5dY?si=VzGu4BsRb10WouFZ>

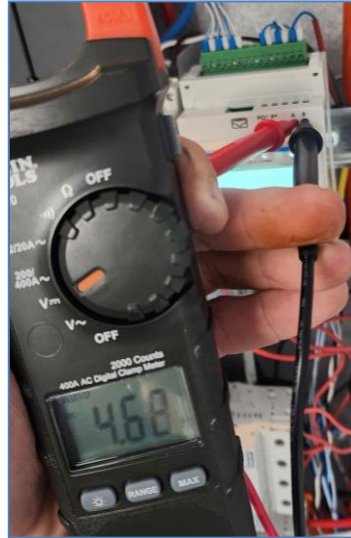
SBH series

<https://youtu.be/XiphMNZ0NKY?si=IZwAg2k4IS9SreaO>

Energy meters not communicating

It is found quite often that energy meters present an issue, but are not the issue. The following testing helps us tell if it is a faulty meter.

1. Disconnect all RS485 connections to the meter.
2. A photo of the Meter terminals DC voltage



A photo showing the meter communication with the cables clearly disconnected shows that the meter is communicating

3. Reinstall the RS485 cable into the meter and get a photo at the connection to the inverter.



A photo of the RS485 cable at the inverter end showing that the signal from the meter is getting to the inverter end

4. Test for a voltage of the meter A2+B2 terminals inside the inverter.



A photo of the RS485 terminal from the inverter shows that the inverter is capable of receiving the signal

More information can be found at https://youtu.be/pB_C-kNrctI?si=vMwJpzqfP_xlcfx2

Energy meters giving false readings

Quite often we see energy meters that “mirror” loads or show negative readings (ie generation) at night. This is a case where the meter is only as good as the information given to it.

More information on false readings can be found at

<https://youtu.be/viUJFTF-qQA?si=7Sxr49CCr5m7Oh11>

Please note: Sometimes it may be simpler to remove multiple service fuses to ensure that the correct phase is being tested.

Any other issues with information from the energy meter, please contact our service team.

If the issue still persists, please take photos testing on site and contact Sungrow Service Department on 1800 786 476 or email to service@sungrowpower.com.au.