

Inverter Checklist

For production related issues, the below measurements should be recorded prior to contacting SMA AUS for further support. More details on measurements are found on the next page.

Please also download all data and event logs for warranty claim submission.

Inverter

Inverter model
Current firmware version
Event number/message

Inverter serial number
LED status

DC side	String 1	String 2	String 3	String 4	String 5	String 6
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Voc

Earth fault w/ Multimeter:

Positive to Earth

Negative to Earth

Earth fault w/ Insulation Resistance Tester @1000V:

Positive to Earth

Negative to Earth

AC side	L - N	L - PE	N - PE
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1 phase:

3 phase:	L1 against	L2 against	L3 against	N against
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N

PE

L1

L2

L3

All inverter replacements processed through SMA must be justified by electrical measurements and observations performed at the inverter installation. The above measurements are general measurements and depending on the event number and the nature of failure, more measurements and pictures may be required.

These measurements should be taken and recorded before contacting SMA for support.

Upon arriving on site,

- 1) Record inverter model, serial number, firmware version, LED status, event number and messages shown on inverter.
 - a) For inverters with no display, you will need to access the inverter webUI for the firmware version, event number and message.
 - b) If the current firmware is not the latest version, a firmware update should be performed as it may resolve the issue.
- 2) Perform a full shutdown (turn off AC then DC) and remove the SUNCLIX connectors from the inverter, so that the PV strings are in open circuit.
- 3) Measure, on each PV string, the below. Ensure the DC isolator is switched on for these tests. If there are more than 6 strings in use, please add extra measurements in the white space below.
 - a) Open circuit string voltage (between positive and negative).
 - b) Voltage between the positive string to Earth.
 - c) Voltage between the negative string to Earth.
- 4) Perform an insulation resistance test on each PV string, using an insulation resistance tester (e.g. Megger) and applying 1000 V between positive to Earth, and then negative to Earth.
- 5) If necessary, open the lid to access inverter AC terminals, and turn on AC supply to measure voltages at:
 - a) Active to Neutral.
 - b) Active to Earth.
 - c) Neutral to Earth.
 - d) Additional AC measurements for 3 phase inverters:
 - i) Each Phase to Neutral.
 - ii) Each Phase to Earth.
 - iii) Phase to Phase.

Once the above measurements have been taken and recorded, if you still cannot resolve the issue, please contact SMA Service Line for further support on 1800 SMA AUS or 02 9491 4200. Please also gather the proof of purchase documents in the event it is requested for by SMA to confirm the inverter warranty status.