

## Aurora inverter problems

Power One, at one point were the second ranked solar PV inverter manufacturer in the world and there are many Power One Aurora solar Inverters installed in the UK. The most popular models being the Uno PVI-3.0-TL-OUTD and the Uno PVI-3.6-TL-OUTD. Power One was purchased by electrical equipment giants ABB in 2013. As part of their purchase ABB took over the guarantee responsibilities from Power One.

As a result of their popularity we have become very familiar with diagnosing faults with Power One solar Inverters. Power One Aurora solar inverters, both single phase (Uno) and three phase (Trio) have an LCD display on the front of the chassis. Identifying error codes shown on the display (assuming the display is working) is usually the best place to start in diagnosing the fault and getting systems using Power One solar inverters up and running again.

Some of the advice we give related to identifying, confirming and or resolving some of the faults detailed below, starts with safely shutting down and restarting the solar inverter and the solar PV system. This is something that nearly all solar PV systems installed in the UK would have been designed to be carried out safely by the solar PV system owner. However, paperwork, schematics and manuals are not always clear or available, so if you have any concerns about how to do this, Contact us and we will be pleased to talk you through the process over the telephone at no charge.

Leave everything near the supply meters turned on. At the solar inverter there will be an AC isolator, this is used to isolate the mains/grid supply from the solar inverter and to prevent the solar inverter from feeding solar power into the electrical system. Switch the AC isolator "off", if the solar inverter is running correctly you will hear a clunk inside the machine and after a while a "no-grid", "missing grid" warning or similar on the LCD display.

Near to and or built into the solar inverter will be a method of isolating the solar (DC) supply from the solar inverter. Often these are black and grey and will be labelled "DC isolator" or similar. There might be two or more of these if the system is fed by multiple strings. If there isn't a separate DC isolation device, there will be a way to isolate the DC supply built-in to the solar inverter itself (often a rotary style switch underneath), turn this "off".

If the restart is successful a green light will come on, sometimes flashing at first but once connected to the mains/AC supply remaining permanently on. The LCD display will show how much power the solar PV system is generating. The solar PV system can be verified as working at the solar generation / Feed in Tariff (FIT) meter which will count on the display, the red light will pulse as it counts.

If you have the correct tools and are comfortable in doing so, isolate the AC and DC power supplies from the solar inverter and confirm that the incoming DC voltages are as expected by measuring between the positive

and negative incoming terminals in DC isolators (if available) and or at the DC solar inverter inputs. Light conditions and the type of solar panel will affect voltages but as a rule of thumb anywhere from 30V-60V per panel x the number of panels connected in series in the string would be a reasonable voltage estimate.

\* W001 - Sun Low - The solar inverter is measuring low DC voltage that it believes is due to low solar irradiance. Low irradiance (sunlight) is to be expected in the mornings and evenings, if solar panels are in shade and on very cloudy days, if the fault passes on it's own relatively quickly the solar inverter might simply be responding to external conditions like this.

However should there be plenty of sunlight and assuming that this is an existing installation that has been specified correctly, no changes near the installation area have been made that might have caused damage or induced shading, and the system has operated before without problems. This could indicate either a problem with the solar panels or with the solar inverter. If you are concerned and or the fault doesn't clear itself, then we would advise that you book a solar repair engineer to test the DC side of the system including and excluding the solar inverter.

An RCD has a test button and is twice the width of a circuit breaker. An RCD that's switched itself "off" is an indication that it has picked up an earth fault somewhere on the circuit that it protects, this fault could be anywhere on the circuit and might have been temporary.

Contact us for free full report

Web: <https://sumthingtasty.co.za/contact-us/>

Email: [energystorage2000@gmail.com](mailto:energystorage2000@gmail.com)

WhatsApp: 8613816583346

