

PV Analyzer Z100



A new instrument for service and maintenance

- Precise fault localization in all types of PV arrays and related cabling.
- All weather diagnostic measurements possible with a minimum daylight intensity of 100 W/m².
- Insensitive to system specifications.

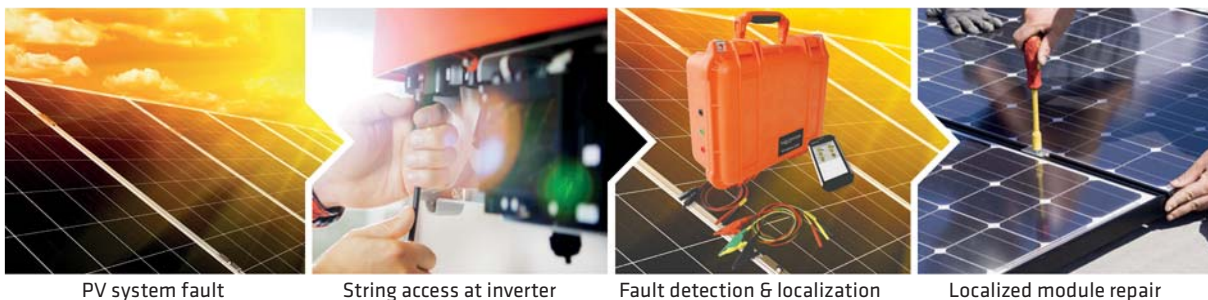
EmaZys PV Analyzer Z100 reduces maintenance and troubleshooting costs dramatically and simplifies the service operation at the PV installation site.

See it - Fix it

Technology

At EmaZys Technologies, we work with technology that can identify and easily position faults in a string of photovoltaic panels. The aim is to ensure that PV systems deliver the highest possible power production yield, operate safely, and are efficiently and inexpensively repaired when faults occur.

EmaZys Technologies has developed the PV Analyzer Z100 for fast and flexible localization of faults in PV systems. The instrument is based on an entirely new impedance measurement technology. The method and the technology have a number of advantages. Faults can be found with just one string measurement recorded at the inverter terminals, and therefore there is no need for single panel measurements to localize faults such as disconnects, ground faults/ R_{ISO} and broken bypass diodes.



Special features

The PV Analyzer Z100 is based on a new approach to PV testing. The technology makes it possible to perform diagnostic measurements under all weather conditions and with a minimum daylight intensity of 100 W/m^2 . Meanwhile various types of critical faults can be located at the panel level based on string measurements.

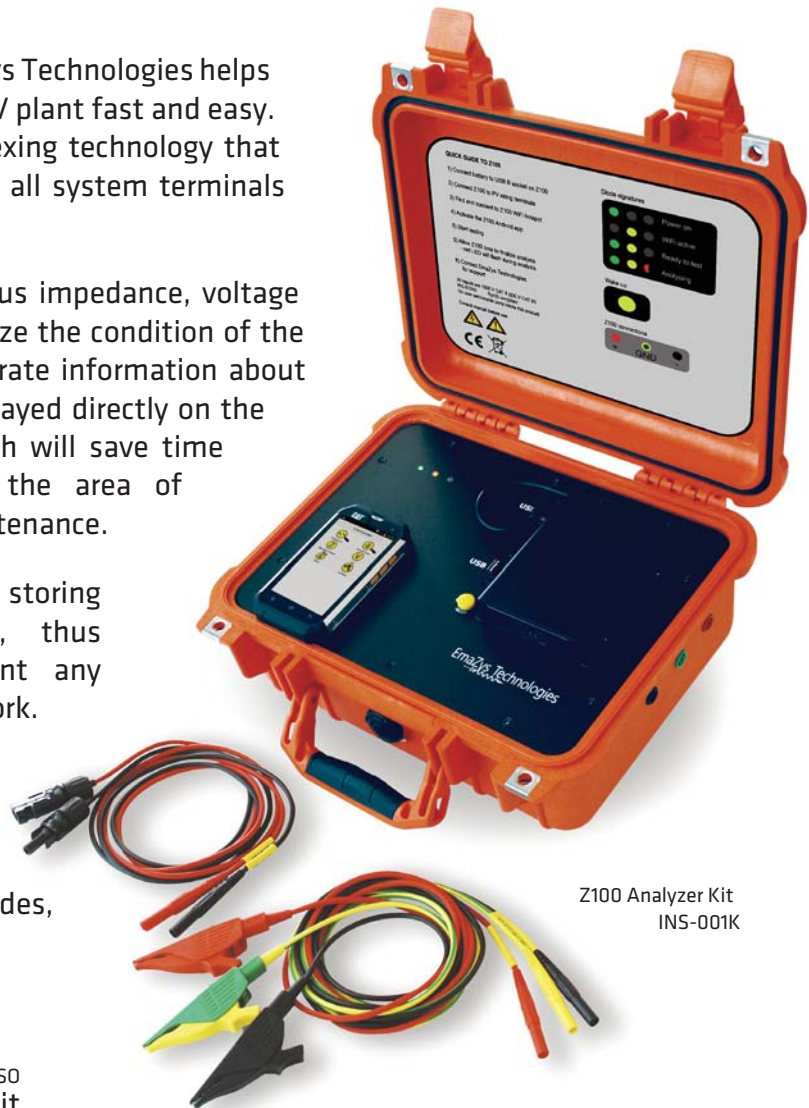
The impedance curve can be measured and analysed with the Z100. This is valuable in understanding the state of degradation within the PV system and hence the Z100 may also be applied within preventive maintenance.

Photovoltaic string test

The PV Analyzer Z100 from EmaZys Technologies helps you detecting problems on your PV plant fast and easy. The instrument features multiplexing technology that enables automatic testing across all system terminals with one “click”.

The PV analyzer will collect various impedance, voltage and current data and hence analyze the condition of the whole string. In many cases accurate information about failure mode and position is displayed directly on the user interface. This new approach will save time and money when working in the area of photovoltaic operations and maintenance.

The instrument is fully capable of storing data and generating reports, thus allowing the user to document any findings and subsequent repair work.



Z100 Analyzer Kit
INS-001K

Features:

- Locate open/shorted bypass diodes, and internal module faults
- Locate disconnect in PV strings
- Locate insulation faults
- Measure isolation resistance, R_{150}
- Measure string/panel open circuit voltage and polarity
- Measure string impedance curve
- Distinguish multiple strings
- Integrated timer function for periodic faults

Recommended accessories



TLK-001
MC4 Connector Kit



TLK-002
MC4-MC3 Adaptor Kit



TLK-003
MC4-SunClx Adaptor Kit



TLK-004
Banana 4 mm - crocodile
test lead Kit

Case story - AB Electric A/S

The company 'AB Electric' has been working with the PV Analyzer Z100 and used it especially for locating insulation faults (R_{iso}) in rooftop residential PV systems. This type of malfunction is normally time-consuming to locate and repair, but AB Electric is now able to solve out these problems fast.

The AB Electric case story shown in the photo concerns a residential system consisting of 24 panels in total. The inverter reported a " R_{iso} low" and the string was inactive.

By using the PV Analyzer Z100, an insulation fault/ R_{iso} could be located to the top string "Panel 4" in a matter of minutes.



"Compliment for the PV Analyzer Z100 instrument. We spent approximately 1 hour locating and replacing the broken panel. It was Panel 4 showing significant water intrusion leading to a ground fault. The PV Analyzer Z100 saved us 8-10 hours of fieldwork."

*Steen Matschke, Electrician
AB Electric*