

PVCHECKs

Multifunction instrument to check **safety, parameters** and **performance** of a PV plant.



- › **Automatic test sequence (IVCK):**
 - › **Insulation check up to 1000V**
 - › **Isc and Voc measurement up to 15A and 1000V**
 - › **Continuity check of protective conductor with 200mA**

The perfect check-up

- **Quick and safe testing** of electrical safety on a PV installation (DC section).
- Control on working of modules/strings in accordance with IEC/EN62446 guidelines.
- **PVCHECKs** carries out insulation resistance measurement of active conductors of a module, **a string** or **a PV array** according to guidelines **without the need of using an external switch to short-circuit positive and negative terminals**.
- **PVCHECKs** is provided with “**IV Check**” mode capable of evaluating **insulation**, values for **open circuit voltage Voc** and **short circuit current Isc** (both referred to **STC** through radiation measurement) as well as continuity of protective conductors on each string, with a single measurement.

Check of PV array performance under operating conditions

- **PVCHECK** carries out **performance analysis** of PV array (DC) under operating conditions (connected to the inverter) providing an indication of the power generated and **the efficiency of the PV field** depending on irradiation condition and temperature measured by the very instrument.

Testing outcome: OK or NOT OK

- **PVCHECKs** compares test results with the values required by standards, so **granting immediate testing outcome**.

Functions

- Safety test of PV installation
- Continuity test on protective conductors with 200mA
- Insulation test with test voltage of 250, 500, 1000VDC
- DC voltage - DC current - DC Power
- Solar irradiation [W/m²] with reference cell HT304N
- Environmental and module temperature by means of PT300N probe
- SOLAR-02: remote unit for irradiance and temperature measurements (RF connection).
- Recording of PV plant parameters (DC side) with programmable IP (5s – 60min)
- Use of PDC compensation ratios according to environmental and module temperature
- Use of relationship to maximize the DC efficiency
- Outcome OK/NO
- Check of PV string's working
- Measurement of open circuit voltage up to 1000V DC
- Measurement of short circuit current up to 15A DC
- Measurement of temperature, automatic or by means of PT300N probe
- Mechanical inclinometer for the detection of solar radiation incidence angle
- Comparison with standard conditions (STC 1000 W/m², 25°C)
- Database to manage up to 30 types of photovoltaic modules (30000 managed by PC software)
- Internal memory for data saving
- Optical/USB port for PC connection
- Help on line on display

12/06/09 14:52:47		
RPE max	2	Ω
Rcal	0.01	Ω

Rpe	0.23	Ω
Itest	210	mA
Outcome: OK		
Selection LOW Ω		

Continuity Test

12/06/09 14:52:47		
RPE max	2	Ω
Rcal	0.01	Ω

Rpe	> 200	Ω
Itest	0	mA
Outcome: NO		
Selection LOW Ω		

Continuity Test

12/06/09 14:52:47		
Ins.Test	1000	V
Ri min	1.0	MΩ
Mode	Field	

Vtest	1025 V	1020 V
Ri (+)	>100	MΩ
Ri (-)	>100	MΩ
Rp	69	MΩ
Outcome: OK		
Selection M Ω		

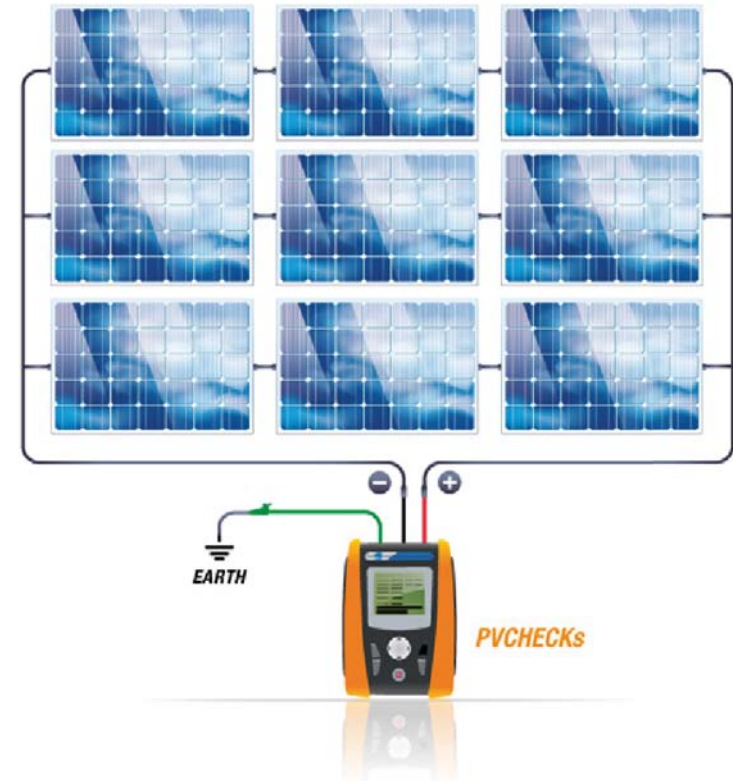
Insulation test

12/06/09 14:52:47		
Module: SUNPOWER210		
Vdc	548.0	V
Irr	0	W/m2
Tc	Auto	°C

Voc, Isc		OK
Ri (1000V)	11.6	MΩ OK
Rpe (Cal)	2.00	Ω OK
Outcome: OK		
Selection IVCK		

IVCK: automatic test sequence

PVCHECKS 1 Insulation measurement in a PV field



PVCHECKS 2 Measurement of DC efficiency on PV installations