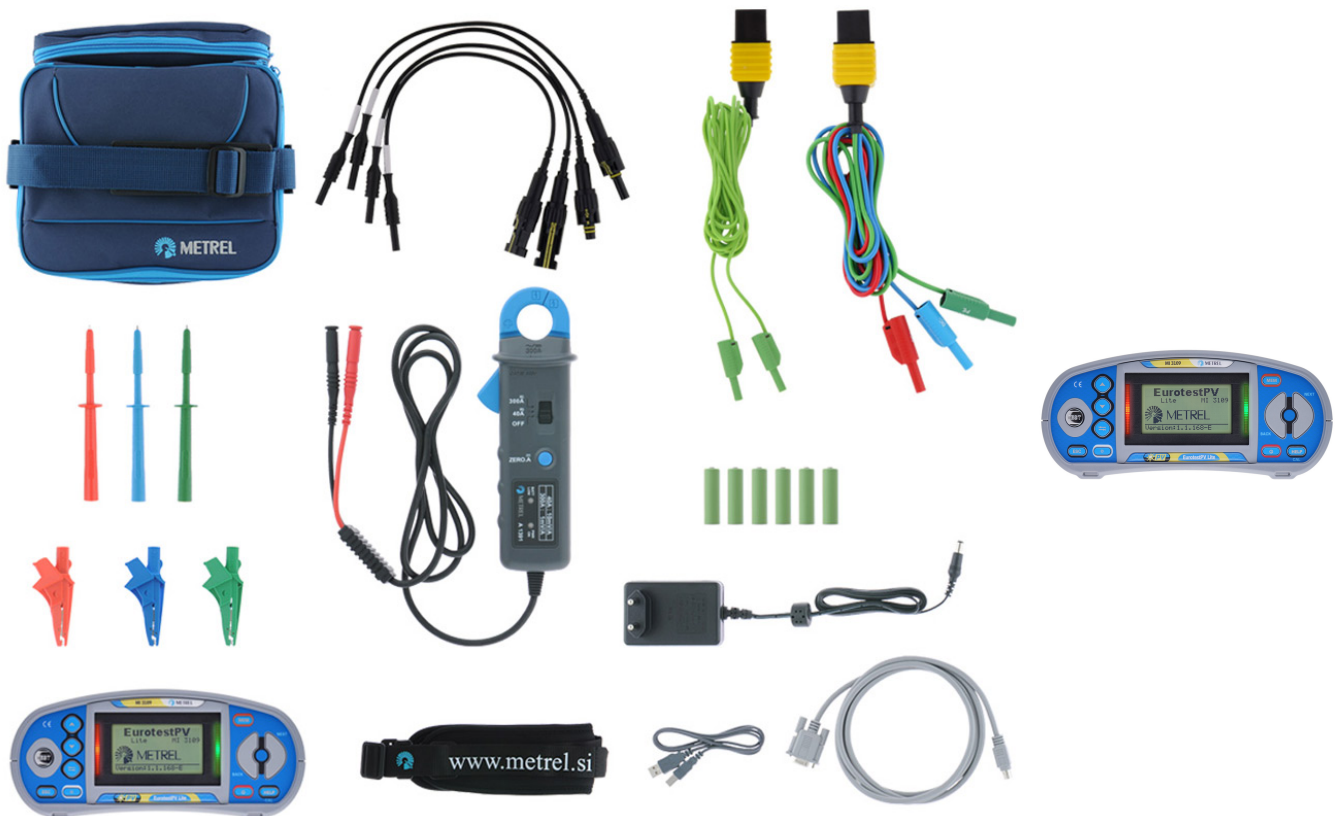


# Metrel MI 3109ST EurotestPV Lite Standard Kit

Product Images

Product Code: C70-2039



## Short Description

The Metrel MI 3109 EurotestPV Lite is a photovoltaic (PV) tester that performs all necessary tests

required on photovoltaic installations. This includes all of the tests as required by EN 62446, but also includes I - U characteristic measurements, calculation of STC values and power measurements on Inverter's DC and AC sides (single-phase only).

The MI 3109 EurotestPV Lite is optimized for PV tests therefore the Autotest operation mode is implemented which is intended to perform a complete set of tests needed for verification of PV installations according to EN 62446 with the pressing of only one button.

With this instrument, the tests for the first inspection of PV systems as well as periodic maintenance tests, evaluation tests or troubleshooting tests are possible.

## Features

- Insulation and I-U curve measurements in one instrument: with MI 3109 only one instrument is needed to perform insulation measurements with up to 1000V for proofing the PV installation safety and I-U curve measurements needed for evaluation and troubleshooting of PV modules or strings.
- Autotest: This function is intended to perform a complete set of tests according to EN 62446 on PV modules or strings with pressing only one button:
  - insulation resistance between positive output and earth;
  - insulation resistance between negative output and earth;
  - open circuit voltage;
  - short circuit current.
- Calculation to STC values: the measured current and voltage values are, according to environment conditions, recalculated to Standard Test Condition values which makes possible to compare the results of different measurements even if they were taken under different test conditions.
- Efficiency calculations: 2 voltage & 2 current channels for simultaneous AC & DC parameters measurements.
- PV Remote Unit: Optional unit for simultaneous measurements of solar irradiation and temperature of PV module.
- Graphical representation of module's I - U curve: the I-V characteristic of PV module or string is graphically represented on LCD display.
- Memory: Up to 1800 test results or up to 500 graphical results with timestamp can be stored in internal memory.
- BT connectivity: it enables BT communication with Android tablets and smart phones via optional BT dongle.
- Android application: enables advanced data management APP EuroLink PV.
- Downloadable: PC SW EuroLink PRO enables downloading, review, analyses and printing of test results.

## Measuring Functions

### PV Installation

- Measurements on DC side of PV installation:
  - Insulation resistance;
  - Continuity of PE conductors;
  - Uoc (Open Circuit Voltage) and Isc (Short Circuit Current);
  - I - U curve of PV modules and strings;
  - Voltage, current and power of strings and inverters;

- Irradiance;
- Module temperature.
- Measurements on AC side of PV installation:
- Voltage, current, power;
- Efficiency of PV module, inverter, PV system calculation.

#### Electrical installations:

- Insulation resistance;
- Continuity of PE conductors;
- Line impedance;
- Loop impedance (sub-functions with high current and without RCD tripping);
- RCD testing (type AC, A and B);
- Earth resistance;
- AC current (load and leakage);
- TRMS voltage, frequency, phase sequence;
- Power, energy, harmonics.

#### Contents

- Instrument MI 3109 EurotestPV Lite
- Soft carrying bag
- Universal PV test lead, 3 x 1.5 m
- PV Continuity test lead, 2 x 1,5 m
- Test probe, 3 pcs (red, blue, green)
- Crocodile clip, 3 pcs (red, blue, green)
- PV MC3/4 male/female adapters
- AC/DC current clamp
- Power supply adapter + 6 NiMH batteries, type AA
- USB and RS232 - PS/2 cable
- PC SW EuroLink PRO
- Carrying strap
- Short instruction manual
- Instruction manual and handbook on CD
- Calibration certificate

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With this instrument, the tests for the first inspection of PV systems as well as periodic maintenance tests, evaluation tests or troubleshooting tests are possible.

## Features

Insulation and I-U curve measurements in one instrument: with MI 3109 only one instrument is needed to perform insulation measurements with up to 1000V for proofing the PV installation safety and I-U curve measurements needed for evaluation and troubleshooting of PV modules or strings.

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- insulation resistance between positive output and earth;
- insulation resistance between negative output and earth;
- open circuit voltage;
- short circuit current.

Calculation to STC values: the measured current and voltage values are, according to environment conditions, recalculated to Standard Test Condition values which makes possible to compare the results of different measurements even if they were taken under different test conditions.

Efficiency calculations: 2 voltage & 2 current channels for simultaneous AC & DC parameters measurements.

PV Remote Unit: Optional unit for simultaneous measurements of solar irradiation and temperature of PV module.

Graphical representation of module's I - U curve: the I-V characteristic of PV module or string is graphically represented on LCD display.

Memory: Up to 1800 test results or up to 500 graphical results with timestamp can be stored in internal memory.

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## Measuring Functions

### PV Installations

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Continuity of PE conductors;

Uoc (Open Circuit Voltage) and Isc (Short Circuit Current);

I - U curve of PV modules and strings;

Voltage, current and power of strings and inverters;

Irradiance;

Module temperature.

Measurements on AC side of PV installation:

Voltage, current, power;

Efficiency of PV module, inverter, PV system calculation.

### Electrical installations

Insulation resistance;

Continuity of PE conductors;

Line impedance;  
Loop impedance (sub-functions with high current and without RCD tripping);  
RCD testing (type AC, A and B);  
Earth resistance;  
AC current (load and leakage);  
TRMS voltage, frequency, phase sequence;  
Power, energy, harmonics.

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