1500 and no more 1000.

NEW

PV-ISOTEST

Instrument for the verification, maintenance and safety of photovoltaic systems up to 1500VDC

STANDARD IEC/EN62446

HT®

Building the future since 1983.

PV-**ISOTEST**

ORDER CODE **HV0PVISO**

1500 and no more 1000.

Photovoltaic technology is changing.
The design and production of installations increasingly takes into consideration the **increase** in **rated voltage**, which allows for the realization of strings up to 30% longer, for a **higher generated power** and, at the same time, uses a smaller number of components, which allows for the **reduction of energy loss** (BoS) up to 30%, while **improving profitability.**
In this way, an increasing number of photovoltaic installations are realized with a **rated voltage close to 1500VDC,** with a view to obtaining the maximization of all the relevant benefits, while falling, at the regulatory level, in the **classification** of **Low Voltage** systems.

Consequently, the probability of a stress on each part of the photovoltaic system generates **the need of having suitable and highly performing tools for an accurate** and appropriate **verification** of these **new parameters.**

This is why **HT Italia** has created and developed **PV ISOTEST**, the **first** and **only instrument suitable** to carry out, on a photovoltaic system **up to 1500VDC, the most important safety checks** required by standard IEC/EN62446-1, and to **guarantee the quality performance** a professional nowadays considers as highly indispensable.

PV-ISOTEST, the future is coming, and HT brings it.

FUNCTION
GFL

Identification and localization of the fault

Tests in
DUAL MODE
DUAL

INSULATION
1500 V

For photovoltaic systems

PV-ISOTEST

INSULATION IN DUAL MODE

VERIFIES

Verification with an **immediate result (OK | NO)** of the insulation resistance of the **active conductors** of a module, string or entire photovoltaic field, according to the requirements of standard IEC/EN62446, **with no need for an external switch** to short-circuit the positive and negative terminals.

IDENTIFIES

Automatic identification, with **one single test**, of the conformity of the total insulation of a whole photovoltaic field, with respect to expectations. PV-ISOTEST is **the only verification instrument** capable of simultaneously indicating the insulation resistance values of both the positive and negative poles, thus giving the **operator the possibility to direct his search to the real location of the fault.**

PV-ISOTEST

GFL (Ground Fault Locator) function

LOCALIZES

PV-ISOTEST provides the **precise position of a possible single fault** of low insulation found on a string of the PV system due, for example, to water or humidity infiltrations.

RPE FUNCTION

VERIFIES

Verification with an **immediate result (OK | NO)** of the **continuity of the protective conductors** and of the relevant connections with test current >200mA

INSULATION IN TIMER MODE

VERIFIES

Verification with **immediate result (OK | NO)** of the **insulation** resistance **of a cable** with calculation of the **Dielectric Absorption Ratio** (DAR = R1min / R30s) and of the **Polarization Index** (PI = R10min/R1min), which indicate the state of deterioration of the insulation.

IDENTIFIES

Evaluation of the values of parameters DAR and PI, specifically useful in case the insulation of particularly long or old cables is to be tested.

DMM FUNCTION

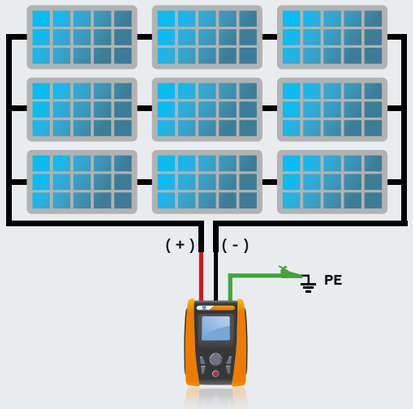
DISPLAYS

Immediate display of the DC and RMS voltages (also including possible AC components) between the poles and the earth.

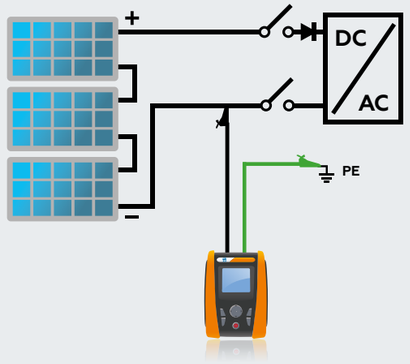
Insulation quality can be evaluated thanks to the following summary table:

DAR	PI	Insulation condition
<1.25	<1	Dangerous
	>1 and <2	To be checked
<1.6	>2 and <4	Good
>1.6	>4	Excellent

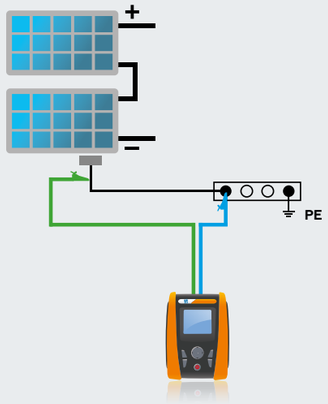
Insulation mode DUAL
Unearthed PV field



Insulation mode TIMER
Connection diagram



RPE FUNCTION
Connection diagram



Provided accessories

- **KITGSC4** Set of 4 banana cables 4mm + 4 alligator clips
- **KITPCMC4** Set of 2 MC4 banana adapters
- **VA507** Hard carrying case
- **SP-5100** Carrying straps
- **TOPVIEW2006** PC Windows software+ optical/USB connection cable (order code: C2006)
- **YAMUM0077HT0** User manual on CD-ROM
- **YAMUM0076HT0** Quick reference guide
- **ISO calibration report**

Optional accessories

- **606-IECN**
  Connector with magnetic terminal, black
- **1066-IECN**
  Connector for extension cables with 4mm banana connector, black
- **1066-IECR**
  Connector for extension cables with 4mm banana connector, red

Technical sheet

DC VOLTAGE

Range (V)	Resolution (V)	Accuracy
3 ÷ 1500	1	± (1.0%reading + 2digits)

AC TRMS VOLTAGE

Range (V)	Resolution (V)	Accuracy
3 ÷ 1000	1	± (1.0%reading + 3digits)

INSULATION RESISTANCE (MΩ) – DUAL MODE

Test voltage DC [V]	Range [MΩ]	Resolution [MΩ]	Accuracy
250, 500, 1000, 1500	0.1 ÷ 0.99	0.01	±(5%reading + 5digits)
	1.0 ÷ 19.9	0.1	
	20 ÷ 100	1	

INSULATION RESISTANCE (MΩ) – TIMER MODE

Test voltage DC [V]	Range [MΩ]	Resolution [MΩ]	Accuracy
250, 500, 1000, 1500	0.1 ÷ 9.99	0.01	±(5.0%reading+ 5digits)
	10.0 ÷ 99.9	0.1	

CONTINUITY OF PROTECTIVE CONDUCTORS (RPE)

Range (Ω)	Resolution (Ω)	Accuracy
0.00 ÷ 9.99	0.01	±(2%reading + 2digits)
10.0 ÷ 99.9	0.1	
100 ÷ 1999	1	

Test current: >200mA DC up to 5Ω (cables included)
Resolution: 1mA
Accuracy: ±(5.0%reading + 5digits)
Open-circuit voltage: 4 < Vo < 10V

GFL (GROUND FAULT LOCATOR) FUNCTION

Test voltage DC [V]	Range [MΩ]	Resolution [MΩ]	Accuracy	Accuracy of position
250, 500, 1000, 1500	0.1 ÷ 0.99	0.01	±(5.0%rdg + 5dgt)	± 1module
	1.0 ÷ 19.9	0.1		
	20 ÷ 100	1		

The GFL function provides correct results with the following conditions:

- Test carried out with Vtest ≥Vnom on a single string disconnected from the inverter, from possible overvoltage protections and earth connections
- Test carried out upstream of possible blocking diodes
- Single fault of low insulation located at any position in the string
- Insulation resistance of the single fault <0.1MΩ
  Environmental conditions similar to those in which the fault occurred

POWER SUPPLY
Battery type: 6x1.5V alkaline batteries type AA LR06 or 6x1.2V rechargeable batteries type AA LR06
Battery duration: approx. 500 tests (for each function)
Auto Power OFF: after 5 minutes' idling

OUTPUT INTERFACE
PC interface: optical/USB

REFERENCE STANDARDS:
Instrument safety: IEC/EN61010-1, IEC/EN61010-2-030 IEC/EN61010-2-033, IEC/EN61010-2-034
EMC: IEC/EN61326-1
Accessory safety: IEC/EN61010-031
General: IEC/EN62446
MΩ measurement: IEC/EN61557-2
RPE measurement: IEC/EN61557-4
Insulation: double insulation
Pollution level: 2
Measurement category: CAT III 1500VDC, CAT III 1000VAC MAX 1500VDC / 1000VAC between inputs

WATCH TUTORIAL VIDEOS

CONSULT THE PRODUCT DETAILS

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