FLUKE®

PVA-1500HE2/ PVA-1500T2/ SolSensor-300V3

Solmetric I-V Curve Tracer

Safety Information

1-Year Limited Warranty.
See the Users Manual for the full warranty.

To register your product, or to view, print, or download the latest manual or manual supplement, go to our website: www.fluke.com/productinfo.

Safety Information

A **Warning** identifies hazardous conditions and procedures that are dangerous to the user. A **Caution** identifies conditions and procedures that can cause damage to the Product or the equipment under test.

⚠⚠ Warning

To prevent possible electrical shock, fire, or personal injury:

- **Read all safety information before you use the Product.**
- **Do not alter the Product and use only as specified, or the protection supplied by the Product can be compromised.**
- **Carefully read all instructions.**
- **Do not use the Product if it operates incorrectly.**

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- **Do not touch voltages >30 V ac rms, 42 V ac peak, or 60 V dc.**
- **Do not work alone.**
- **Limit operation to the specified measurement category, voltage, or amperage ratings.**
- **Do not exceed the Measurement Category (CAT) rating of the lowest-rated individual component of a Product, probe, or accessory.**
- **Use Product-approved Measurement Category (CAT), voltage, and amperage-rated accessories (probes, test leads, and adapters) for all measurements.**
- **Do not make connections on hazardous live conductors in damp or wet environments.**
- **Comply with local and national safety codes. Use personal protective equipment (approved rubber gloves, face protection, and flame-resistant clothes) to prevent shock and arc blast injury where hazardous live conductors are exposed.**
- **Only to be used on Photovoltaic (PV) solar modules and arrays.**
- **Only use with isolated (ungrounded) PV circuits.**
- **For protection from hot surfaces, do not remove the enclosure from the canvas case. The Product dissipates stored energy in the form of heat in normal operation.**
- **Do not operate the Product with covers removed or the case open. Hazardous voltage exposure is possible.**
- **Remove the input signals before you clean the Product.**
- **Do not use test leads if they are damaged. Examine the test leads for damaged insulation, exposed metal, or if the wear indicator shows. Check test lead continuity.**
- **Disconnect the PV array from any load/inverter with a suitable disconnect switch before you connect the Product. Do not disconnect PV terminals (for example, MC4 connectors) or test leads when under load. Arcing, fire, electric shock, or connector damage may occur.**
- **Do not use the Product around explosive gas, vapor, or in damp or wet environments.**
- **Use only specified replacement parts.**
- **Have an approved technician repair the Product.**
- **Disable the Product if it is damaged.**
- **Examine the case before you use the Product. Look for cracks or missing plastic. Carefully look at the insulation around the terminals.**
- **Do not apply more than the rated voltage, between the terminals or between each terminal and earth ground.**

- **Do not use test leads if they are damaged. Examine the test leads for damaged insulation.**
- **Use only test leads and adapters supplied with the Product.**

Symbols

The table below lists the symbols that can be used on the Product or in this document.

Table 1. Symbols

Symbol	Description
	Consult user documentation.
	WARNING. RISK OF DANGER.
	WARNING. HAZARDOUS VOLTAGE. Risk of electric shock.
	This product contains a Lithium-ion battery. Do not mix with solid waste stream. Spent batteries should be disposed of by a qualified recycler or hazardous materials handler per local regulations. Contact your authorized Fluke Service Center for recycling information.
	ON/OFF
	DC (Direct Current)
CAT III	Measurement Category III is applicable to test and measuring circuits connected to the distribution part of the building's low-voltage MAINS installation.
CE	Conforms to European Union directives.
	This product complies with the WEEE Directive and its marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste. Do not dispose of this product as unsorted municipal waste. For information about take-back and recycling programs available in your country, see the Fluke website.

Safety Specifications

Complete specifications are at www.fluke.com

PV-1500HE2 and PV-1500T2

Voltage Range (V_{oc}) .....20 V dc to 1500 V dc

Maximum Current Range (I_{sc})

For Module Efficiency <19 %[1]....0 A dc to 30 A dc

For Module Efficiency ≥19 %[1]....PV1500HE2: 0 A dc to 30 A dc
PV-1500T2: 0 A dc to 10 A dc

Operating Temperature Range.....0 ° C to +45 °C

Operating Humidity ..... <90% RH, non-condensing. Avoid exposing a cold instrument to warm and humid air as condensation results. Store the instrument in the same conditions in which it will be used.

Altitude ..... 2000 m max

General ..... IEC 61010-1: Pollution Degree 2

Measurement

IEC 61010-2-030: CAT III 1500VDC

[1] High-efficiency modules have high capacitance which can cause a large in-rush current when I-V curves are measured. This can trigger an over-current warning in the PVA-1500T2 that prevents the measurement from completion when Isc is greater than 10 A. The in-rush current is increased by higher efficiency, higher current strings, higher voltage strings, higher bifaciality, and higher irradiance. For an explanation of flexibility in the 10 A limit and how to handle high-efficiency modules, see the Users Manual section: *Measure High-efficiency Modules*.

SolSensorV3

Operating Temperature ..... 0 °C to 45 °C

Storage Temperature Range ..... -20 °C to 65 °C

Electromagnetic Compatibility
IEC 61326-1: Basic Electromagnetic Environment
CISPR 11: Group 1, Class A

Group 1: Equipment has intentionally generated and/or use conductively coupled radio frequency energy which is necessary for the internal functioning of the equipment itself.

Class A: Equipment is suitable for use in all establishments other than domestic and those directly connected to a low voltage power supply network which supplies buildings used for domestic purposes. There may be potential difficulties in ensuring electromagnetic compatibility in other environments, due to conducted and radiated disturbances.

Caution: This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

USA (FCC) 47 CFR 15 Intentional Radiators:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. (15.19). Changes or modifications not expressly approved by Fluke could void the user's authority to operate the equipment. (15.21)

Wi-Fi

Frequency Range ..... 2412 MHz to 2462 MHz
Output Power ..... <100 mW