

# PV150

The fast and simple PV tester.



The Seaward **PV150** Solar Installation Tester allows electrical safety and performance verification of photovoltaic installations in a safe and easy-to-use device.

Transforming the way PV systems are tested, the **PV150** combines ground continuity, DC operating power and operating current test functions in a hand-held device. It can also test insulation resistance, open circuit voltage and short circuit current at the push of a button. The unit can also wirelessly capture and record real time irradiance, ambient temperature and PV module temperature measurements from the Solar Survey 200R.

The **PV150** has memory to store up to 200 complete test records with USB connectivity to enable these to be quickly and easily downloaded to a PC. Professional test certificates and reports can also be created when used with Seaward's SolarCert software.

These are just a few of the reasons we believe you'll want to invest in our **PV150**.

## Why buy the PV150?

- > **Easy to use** – single key testing and measurement.
- > **Small and compact** – hand held, rugged and robust device.
- > **Safe test connection** – safely test energized PV arrays.
- > **Easy to manage data** – on board memory for test records with PC download.
- > **Combines PV commissioning tests** – required by IEC 62446.
- > **Free online product training and support.**

To see the **PV150** for yourself, request your live online demonstration today at [sewardsolar.com/PV150](http://sewardsolar.com/PV150)



**SEAWARD**  
ELECTRICAL SAFETY TESTING & MEASURING.

T: +44 (0) 191 587 8741 E: [sales@seaward.com](mailto:sales@seaward.com)

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## Key Features:

- > Ground (earth) continuity measurement with test lead null for long test-leads.
- > PV string open circuit voltage measurement up to 1000V DC with polarity indication.
- > PV string short circuit current measurement up to 15A DC.
- > PV array insulation test at 250/500/1000V.
- > Tests individual PV modules or strings.
- > Memory for up to 200 records and USB download to PC (CSV file).
- > High contrast display, visible in bright light.
- > 2 x MC4 test lead adaptors.
- > 2 x Combiner box test probes and detachable alligator clips (MC4).
- > 2 x Test leads, with test probes and detachable alligator clips (4mm).
- > AC/DC current clamp.
- > Solar Survey 200R irradiance meter and temperature probe.
- > Solar Survey 200R mounting bracket
- > Rugged carry bag.
- > Quick Start Guide.
- > UKAS Calibration Certificate (PV150).
- > SolarCert PC Software.

## Complete Kit Includes:

- > Seaward Solar Installation PV150 instrument.

## Optional Accessories:

- > Solar Power Clamp.
- > MC4 fused / unfused test leads.

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## Technical Specification:

### Open Circuit Voltage Measurement (PV Terminals)

Display Range	0.0VDC - 1000VDC
Measuring Range	5.0VDC - 1000VDC
Resolution	0.1VDC maximum
Accuracy	± (0.5 % + 2 digits)
Enunciators	DC voltage polarity correct or reversed

### Short Circuit Current Measurement (PV Terminals)

Display Range	0.00ADC - 15.00ADC
Measuring Range	0.50ADC - 15.00ADC
Maximum Power	10kW
Resolution	0.01ADC maximum
Accuracy	± (1% + 2 digits)

### Earth Continuity Resistance Measurement (4mm Terminals)

Test Voltage Open Circuit	>4VDC, nominal
Test Current into 2 Ω	>200mA
Display Range	0.00Ω - 199Ω
Measuring Range (EN 61557-4)	0.05Ω - 199Ω
Resolution	0.01Ω maximum
Accuracy	± (2% + 5 digits)
Test Leads Zero	Zero up to 10Ω, by zero button
Visible Warning	≥30V AC or DC at inputs
Circuitry Protection	Test inhibited if ≥30V AC or DC at inputs
Repeat tests as per IEC61557-4	Approx 4000 1 second test

### Insulation Resistance (Auto Test Sequence, PV Terminals and Red 4mm Terminal)

Test Voltage Open Circuit	250V, 500V, 1000V (as per IEC61557-2)
Test Voltage Specification	-0% +20% (open circuit)
Test Voltage @ 1mA	>1mA into $U_N \times (1000\Omega/V)$
Test Current Short Circuit	<2mA
Display Range	0.05MΩ - 199MΩ



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## Insulation Resistance (Auto Test Sequence, PV Terminals and Red 4mm Terminal Continued...

Measuring Range (EN 61557-2)	0.05M $\Omega$ - 199M $\Omega$
Resolution	0.01M $\Omega$ maximum
Accuracy	0.05M $\Omega$ - 100M $\Omega$ $\pm$ (5% + 5 digits) 101M $\Omega$ - 199M $\Omega$ $\pm$ (10% + 5 digits)
Visible Warning	$\geq$ 30V AC or DC at inputs
Circuitry Protection	Test inhibited if $\geq$ 30V AC or DC at inputs
Repeat tests as per IEC61557-4	Approx 3000 1 second tests

## Rpe Voltage Measurement (4mm Terminals)

Display Range	30V - 440VAC/DC
Voltage Measuring Range	30V - 440VDC 30V - 440VAC 50-60Hz
Resolution	1V
Accuracy	$\pm$ (5% + 2 digits)

## Operating Current (via AC/DC Current Clamp)

Display Range	0.1A - 40.0A
Current Measuring Range	0.1A - 40.0A DC 0.1A - 40.0A AC 50-60Hz
Resolution	0.1A
Accuracy	$\pm$ (5% + 2 digits)

## DC Operating Power (via AC/DC Current Clamp and PV Terminals)

Display Range	0.00kW - 40kW
Measuring Range	0.50kW - 40kW
Resolution	0.01kW
Accuracy	$\pm$ (5% + 5 digits)



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## General Specification:

### Instrument Dimensions and Weight

Weight	0.95kg / 2.11lb
Dimensions	26.4 x 10.7 x 5.8cm / 10.4 x 4.2 x 2.3"
Display	Custom LCD with backlight
Power Source	6 x 1.5V AA cells
Battery life	>1000 test sequences
Auto power down	User programmable
Onboard memory	Up to 200 complete test datasets

### Connectivity

- USB download to PC (CSV format)
- Wireless "Solarlink TM" to Survey 200R (range ~30m/100ft)

### Software compatibility

Compatible with SolarCert software (English language only)

### Service

2 year warranty (subject to terms and conditions, available at [www.seawardsolar.com/warranty](http://www.seawardsolar.com/warranty))

## Part Numbers:

### PV150 Complete Kit (including instrument, Solar Survey 200R and SolarCert software\*):

PV150 instrument, 2 x MC4 test lead adaptors, 2 x combiner box test probes and detachable alligator clips (MC4), 2 x test leads with test probes and detachable alligator clips (4mm), AD/DC current clamp, Solar Survey 200R irradiance meter and temperature probe, Solar Survey 200R mounting bracket, rugged carry bag, quick start guides, UKAS Calibration Certificate (PV150), 2 year warranty, SolarCert PC software\*.

\*note, String Data Report in SolarCert is not applicable (PV200/PV210 only).

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Rev 2

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