SEAWARD
Experts in what we do

SOLAR

www.seawardsolar.com

PV150 Solarlink™ Test Kit

A complete solution to the testing and measurement requirements of photovoltaic installations.

The PV150 Solarlink™ Test Kit meets all of the commissioning test requirements of the international IEC 62446 standard. It combines the PV150 installation test kit with the advanced Solar Survey 200R multifunction irradiance meter.

The kit includes all of the necessary equipment to measure the electrical safety and performance of PV systems as well as irradiance.

The PV150 installation tester combines all test functions required to meet international standards into one safe, easy-to-use, hand-held device. The addition of USB and wireless Solarlink™ connectivity makes the PV150 the most versatile, safe and technically advanced solar PV tester on the market.

Transforming the way that PV systems are tested, the PV150 combines ground continuity, insulation resistance, open circuit voltage, short circuit current, operating current (uses supplied AC/DC current) and DC operating power test functions into one handheld unit. The kit includes MC4 and Sunclix test adaptors which enable quick, safe and easy connection of the tester to the PV modules, strings or array.

As well as a comprehensive range of electrical test functions, 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. When coupled with Seaward's SolarCert Elements software program professional test certificates and reports can be created.

KEY FEATURES:

- The comprehensive PV150 tester conducts all of the required electrical tests at the touch of a button.
- Solarlink™ connectivity between the PV150 tester and the Solar Survey 200R multifunction irradiance meter enables irradiance to be displayed and for irradiance, module and ambient temperature to be recorded within the PV150 in real-time as electrical tests are conducted.
- USB download of stored test results and irradiance measurements speeds up the completion of documentation and improves traceability of results.
- Solar Survey 200R uses a temperature compensated reference cell for accurate and representative irradiance measurements.
- When combined with SolarCert Elements software, the PV150 Solarlink™ Test Kit represents the complete solution in PV commissioning, containing all that is needed for testing and documenting installations to the requirements of IEC 62446.

SEAWARD
Experts in what we do

SOLAR

www.seawardsolar.com

Using Seaward Solarlink™ connectivity, the PV150 can wirelessly capture and record real-time irradiance, ambient temperature and PV module temperature measurements from the Solar Survey 200R multifunction irradiance meter. This means that you can take all measurements, as required by the IEC 62446 standard, simultaneously.

Solarlink™ Connectivity

Solarlink™ connectivity enables irradiance to be displayed and for irradiance, module and ambient temperature to be recorded with the PV150 in real time as electrical tests are conducted.

What is IEC 62446?

IEC 62446: 2009 Grid connected PV systems – minimum requirements for system documentation, commissioning tests, and inspection.

In short the standard sets out measures to ensure that:

- The PV panels and electrical supply connections have been wired up correctly
- That the electrical insulation is good
- The protective ground connection is as it should be
- There has been no damage to cables during installation
- That the PV installation performance is as expected

KIT INCLUDES:

- PV150 solar installation tester
- Solar Survey 200R irradiance meter
- AC/DC current clamp
- Rugged carry bag
- 2 x MC4 test lead adaptors
- 2 x Sunclix test lead adaptors
- Red and Black Test leads, with test probe with detachable alligator clips
- Quick Start Guides
- Support CD-Rom
- PV150 Calibration Certificate
- Solar Survey 200R Calibration Certificate

SEAWARD
Experts in what we do

SOLAR

www.seawardsolar.com

TECHNICAL SPECIFICATION: PV150 Solar Installation tester

GROUND CONTINUITY

Display Range	0.00Ω to 199Ω
Measuring Range	0.01Ω to 199Ω
Resolution	0.01Ω maximum
Open Circuit Test Voltage	4VDC, nominal
Short Circuit Test Current	>200mA (as per IEC 61557-4)
Test Lead Compensation	Null out up to 10Ω
User Protection	Warning and test inhibited if ≥ 30V AC/DC detected at inputs

INSULATION RESISTANCE

Display Range	0.05MΩ to 199MΩ
Measuring Range	0.05MΩ to 199MΩ
Resolution	0.01MΩ maximum
Open Circuit Test Voltage	250V, 500V, 1000VDC (as per IEC 61557-2)
Short Circuit Test Current	>1mA, <2mA s/c as per IEC 61557-2
Visible Warning	≥ 30V AC or DC at inputs

OPEN CIRCUIT VOLTAGE

Display Range	0.0VDC to 1000VDC
Measuring Range	5.0VDC to 1000VDC
Resolution	0.1V maximum
Enunciators	DC voltage polarity correct or reversed

SHORT CIRCUIT CURRENT

Display Range	0.0ADC – 15.00ADC
Measurement Range	0.5ADC – 15.00ADC
Resolution	0.01A

OPERATING CURRENT (USING AC/DC CURRENT CLAMP)

Display Range	0.0A – 40A
Measurement Range	0.5ADC – 40A
Resolution	0.1A max

DC OPERATING POWER

Display range	0.0kW – 40.0kW
Measurement ranges	0.1kW – 40.0kW
Resolution	0.1kW

DATALOGGING AND CONNECTIVITY

Datalogging	Up to 200 complete test datasets Download utility software included Compatible with SolarCert Elements software (version 1.1)
Connectivity	USB download to PC Wireless 'Solarlink™' to Survey 200R (range c. 100m / 330ft)

GENERAL SPECIFICATIONS

Display	Custom LCD with backlight
Power Supply	6 x 1.5V Alkaline LR06
Battery Life	>1000 test sequences
Auto Power Down	User programmable

ADDITIONAL INFORMATION

Warranty Period	2 years
Calibration Interval	1 year UKAS Calibration Certificate supplied as standard

OPTIONAL ACCESSORIES:

- MC3 test lead adaptors
- Tyco (TE) Solarlok test lead adaptors
- Fused test leads - 1 pair of fused red and black test probes with alligator clips
- SolarTags

ALSO AVAILABLE:

- SolarCert Elements Test Reporting & Certification Software
- Solar Power Clamp
- PV Inspection & test report and PV system Verification Certificate pads

SEAWARD
Experts in what we do

SOLAR

www.seawardsolar.com

TECHNICAL SPECIFICATION: Solar Survey 200R Irradiance Meter

IRRADIANCE

Display Range	0 – 1500 W/m^{-2} or 0 – 500 BTU/hr-ft^2
Measurement Range	100 – 1250 W/m^{-2} or 30 – 400 BTU/hr-ft^2
Resolution	1 BTU/hr-ft^2 / 1W/m^{-2}

TEMPERATURE

Display Range	-30°C to +125°C
Measurement Ranges	-30°C to +125°C
Resolution	1°

COMPASS BEARING

Display Range	0° to 360°
Measurement Ranges	0° to 360°
Resolution	1°

INCLINOMETER

Display Range	0° to 90°
Measurement Ranges	0° to 90°
Resolution	1°

DATALOGGING AND CONNECTIVITY (SURVEY 200R ONLY)

Datasets	5000
Sample Rate	1 to 60 minutes (user definable)
Datalogging	Download utility software included
	Compatible with SolarCert Elements software (version 1.1)
Connectivity	USB download to PC
	Wireless 'Solarlink™' to PV150 (range c. 100m / 330 ft)

GENERAL SPECIFICATIONS

Display	Custom LCD
Power Supply	2AA Alkaline Batteries
Battery Life	>20,000 Readings
Auto power down	After 2 minutes

SERVICEABILITY

Warranty	2 years
Calibration	1 year

ADDITIONAL INFORMATION

Supplied with calibration certificate

PV150 Solarlink™ Test Kit Part No: 388A915

Rev 1

Seaward, Bracken Hill, South West Industrial Estate,
Peterlee, County Durham
SR8 2SW United Kingdom

Tel: +44 (0) 191 586 3511
Fax: +44 (0) 191 586 0227
Email: enquiry@seawardsolar.com