**SEAWARD SOLAR PV200**

The PV200 is a compact & cost effective I-V curve tracer that uses simple push button operation making it an efficient and versatile tester for PV systems. 999 datasets can be stored on the instrument and once downloaded to the SolarCert software comparison to the standard test conditions can be made. The tester measures ground (earth) continuity, open circuit voltage, short circuit current, maximum power point voltage, current and power (with AC/ DC clamp). The instrument will also give you the fill factor of the PV module or system under test. The PV200 has a separate 1kV insulation resistance test function, eliminating the need for a separate, expensive device. Meanwhile the high contrast display on the device is clearly visible in direct sunlight. The unit can also wirelessly capture and record real-time irradiance, ambient temperature and PV module temperature from the Solar Survey 200R. Using the Solar Survey 200R your data can be converted to standard test conditions, in SolarCerts, for you to compare to the manufacturer’s published data.

**KEY FEATURES**:

1. All-in-one commissioning tests and I-V curve tracing.
2. Automatic fill factor calculation.
3. Ground (earth) continuity measurement with test lead null.
4. PV string open circuit and maximum power point voltage measurements up to 1000V DC.
5. PV string short current up to 15ADC.
6. PV array insulation test at 250/500/1000V.
7. Tests individual PV modules or strings.
8. Memory for up to 999 records with USB download to PC.
9. Instant NFC data transfer using the PVMobile app.
10. High contrast display, visible in bright light.

**COMPLETE KIT INCLUDES:**

1. Seaward Installation PV200 instrument.
2. 2 x MC4 test lead adaptors.
3. 2 x Combiner box test probes and detachable alligator clips (MC4).
4. 2 x Test leads, with test probes and detachable alligator clips (4mm).
5. AC/DC current clamp.
6. Solar Survey 200R irradiance meter and temperature probe.
7. Solar Survey 200R mounting bracket.
8. Rugged carry bag.
9. Quick Start Guide.
10. UKAS Calibration Certificate (PV200).
11. 2 year warranty. > SolarCert PC software.
12. Solar Power Clamp.
13. MC4 fused / unfused test leads.

**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 UN x (1000Ω/V)

 Test Current Short Circuit

Display Range 0.05MΩ - 200MΩ

Measuring Range (EN 61557-2) 0.05MΩ - 200MΩ

Resolution 0.01MΩ maximum

 Accuracy 0.05MΩ - 100MΩ ± (5% + 5 digits) 101MΩ - 200MΩ ± (10% + 5 digits)

 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 tests

 **Insulation Resistance (Point to Point, 4mm Terminals)**

 Test Voltage Open Circuit 250V, 500V, 1000V (as per IEC61557-2)

 Test Voltage Specification -0% +20% (open circuit)

Test Voltage @ 1mA >1mA into UN x (1000Ω/V)

Test Current Short Circuit <2mA

Display Range 0.05MΩ - 300MΩ

Measuring Range (EN 61557-2) 0.05MΩ - 300MΩ

Resolution 0.01MΩ maximum

Accuracy ± (5% + 5 digits)

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 tests

**Rpe Voltage Measurement (4mm Terminals)**

Display Range 30V - 440VAC/DC

Voltage Measuring Range 30V - 440VDC

30V - 440VAC 50-60Hz

Resolution 1V

Accuracy ± (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

Operating Current (via AC/DC Current Clamp)

Resolution 0.1A

 Accuracy ± (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 ± (5% + 5 digits)

**GENERAL SPECIFICATION:**

**Instrument Dimensions and Weight**

1. Weight 1.04kg / 2.3lb
2. Dimensions 26.4 x 10.7 x 5.8cm / 10.4 x 4.2 x 2.3”
3. Display Custom LCD with backlight
4. Power Source 6 x 1.5V AA cells
5. Battery life >1000 test sequences
6. Auto power down User programmable
7. On-board memory Up to 999 complete test datasets
8. Connectivity USB download to PC (CSV format)
9. Wireless “Solarlink TM” to Survey 200R (range ~30m/100ft)
NFC transfer of data to PVMobile Android App
10. iOS device not supported
11. Compatible with Android version 4.2 Jelly Bean
12. iOS devices not supported
13. Software compatibility Compatible with SolarCert software (English language only)
14. 2 year warranty