

PV210

The most compact I-V curve tracer around.



The **PV210** is a compact & cost effective I-V curve tracer that utilizes NFC technology, eliminating the need for a laptop on site. I-V curve tracing is made fast with simple push button operation; making the **PV210** an efficient and versatile tester for PV systems.

The tester measures ground continuity, open circuit voltage, short circuit current, maximum power point voltage, current and power. The instrument will also give you the fill factor of the PV module or system under test.

The **PV210** has a separate 1kV meggering function, eliminating the need for a separate, expensive device. Meanwhile the high contrast display on the device is clearly visible in direct sunlight, so you can test in any conditions without slowing down.

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 for you to compare to the manufacturer's published data.

These are just a few of the reasons we believe you'll want to invest in our **PV210**.

Why buy the PV210?

- > **Free product and solar O&M training for every user.**
- > **Small and Compact** – Robust, affordable, handheld PV diagnostic tool.
- > **Fully Compliant** – Complies with IEC 62446 and IEC 61829.
- > **Fast and accurate testing** – 1 button operation makes testing quicker and more controlled.
- > **Instantly view detailed I-V curves anywhere** – using the PVMobile Android app.
- > **User definable pass + fail to +10 %** – using the PVMobile Android app.

To see the **PV210** for yourself, request your live online demonstration today at seaward-groupusa.com/PV210



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Key Features:

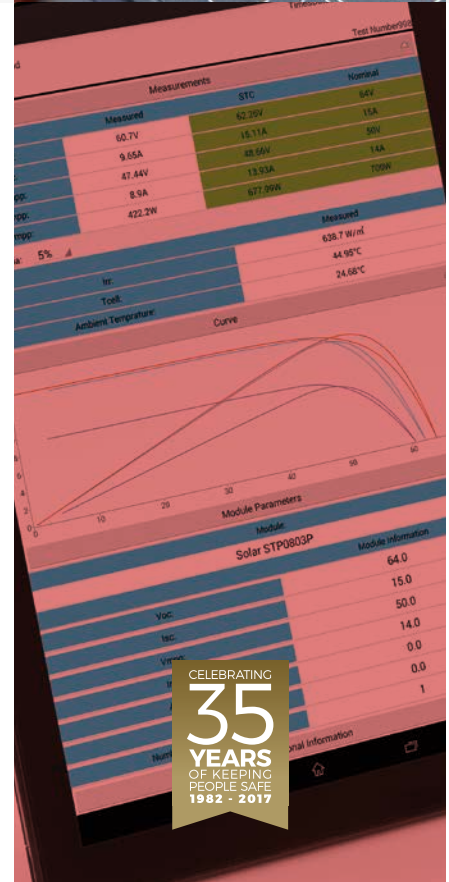
- > Instant NFC data transfer using the PVMobile app.
- > All-in-one commissioning tests and I-V curve tracing.
- > Automatic fill factor calculation.
- > Ground continuity measurement with test lead null.
- > PV string open circuit and maximum power point voltage measurements up to 1000VDC.
- > PV string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

Kit includes:

- > Seaward Installation PV210 instrument.
- > 2 x MC4 test lead adaptors.
- > 2 x test leads, with test probes and detachable alligator clips.
- > AC/DC current clamp.
- > Rugged carry bag.
- > Quick Start Guide.
- > UKAS Calibration Certificate.
- > Solar Survey 200R irradiance meter.
- > 2 year warranty.

Optional Accessories:

- > SolarCert Elements PC software.
- > Solar Power Clamp.
- > Combiner box test leads with alligator clips.
- > MC3 / MC4 / Sunclix / fused / unfused test leads.



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Technical Specification:

Ground Continuity

Display Range	0.00 Ω to 199 Ω
Measuring Range	0.01 Ω to 199 Ω
Accuracy	2 % + 5 digits
Resolution	0.01 Ω maximum
Open Circuit Test Voltage	4 VDC, nominal
Test leads zero	Zero up to 10 Ω , by Zero button
Number of measurements	5,000 1 second tests
Audible / visible warning	≥ 30 VAC/DC at inputs
User Protection	Test inhibited if ≥ 30 VAC/DC at input

Insulation Resistance (auto short circuit test)

Display Range	0.1 M Ω to 20 M Ω
Measuring Range	0.1 M Ω to 20 M Ω
Accuracy	5 % + 5 digits
Resolution	0.1 M Ω maximum
Open Circuit Test Voltage	250 V, 500 V, 1000 VDC (as per IEC 61557-2)
Test current	1 mA nominal (as per IEC 61557-2)
Short circuit test current	<2 mA
Number of measurements	5,000 1 second tests
Audible / visible warning	≥ 30 VAC/DC at inputs
User protection	Test inhibited if ≥ 30 VAC/DC at inputs

Insulation resistance (point to point)

Display Range	0.05 M Ω to 300 M Ω
Measuring Range	0.05 M Ω to 300 M Ω
Accuracy	5 % + 5 digits
Resolution	0.01 M Ω maximum

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Insulation resistance (point to point) continued...

Open circuit test voltage	250, 500, 1000V (as per IEC 61557-2)
Short circuit test current	<1 mA
Number of measurements	5,000 1 second tests
Audible / visible warning	≥ 30 VAC/DC at inputs
Circuitry protection	Test inhibited if ≥ 30 VAC/DC at inputs

Voltage measurement (via 4mm probes)

Display Range	30 V - 440 VAC/DC
Measuring Range	30 V - 440 VAC/DC
Resolution	1V
Accuracy	± (5 % + 2 d)

Vo/c voltage measurement (via PV test leads)

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

Is/c current measurement (via PV test leads)

Display Range	0.0 A - 15.0 ADC
Measuring Range	0.5 A - 15.0 ADC
Resolution	0.1 A
Accuracy	± (1 % + 2 d)

Operating current (via DC current clamp)

Display Range	0.0 A - 40.0 A AC/DC
Measuring Range	0.1 A - 40.0 A AC/DC
Resolution	0.1 A

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Operating current (via DC current clamp) continued...

Accuracy $\pm (5\% + 2\text{ d})$

DC power

Display Range 0.0 W – 40.0 kW

Measuring Range 10 W – 40.0 kW

Resolution 10 W max

Accuracy $\pm (6\% + 2\text{ d})$

I-V curve

Voltage measurement range 5.0 V – 1000 V

Voltage measurement accuracy $\pm (0.5\% + 2\text{ d})$

Current measurement range 0.5 A – 15.0 A

Current measurement accuracy 1%

Power measurement range 5 W – 15 kW

Power measurement accuracy 2 %

General Specification:

Case dimensions and weight

Weight 2.3 lb (unit)

Dimensions 10.4 x 4.2 x 2.3"

Display Custom LCD with backlight

Power source 6 x 1.5 V AA cells

Battery life >1000 test sequences

Auto power down User programmable

Onboard memory Up to 999 complete test datasets

Connectivity

USB download to PC (CSV format)

Wireless 'SolarLink™' to Survey 200R (range c. 30m / 100ft)

NFC transfer of data to PVMobile Android App

iOS devices not supported

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App compatibility

Compatible with Android version 4.2 Jelly Bean

iOS devices not supported

Software compatibility

Compatible with SolarCert Elements v2 software (English language only)

Services

2 year warranty (subject to terms and conditions, available at www.seaward.co.uk/warranty24)

Unit Part Number: 389A912

Kit Part Number: 389A916



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