PHOTOVOLTAIC METER

PCE-SPM 5



- **I-V and P-V measurement with automatic and manual modes**
- **Display of characteristics and measured values (IV/PV)**
- **Colour-coded curve display with table**
- **Display of peak data and electrical characteristic values**
- **Memory for up to 10 measurements**

The photovoltaic meter is a measuring instrument for analysing and evaluating photovoltaic modules based on their electrical characteristics. The photovoltaic meter is used for the fast and reliable testing of solar modules directly on site and enables the recording of the key electrical measured values of a module.

With a DC voltage range of 0 ... 60V, a DC current range of 0 ... 30 A and a maximum power measurement of up to 800 W, the photovoltaic meter is suitable for common photovoltaic modules. The measured values are processed during the measurement and displayed on the device. The photovoltaic meter performs an I-V characteristic measurement and displays the measured values graphically on the screen as an I-V/P-V curve analysis. The measured values are shown visually as curves. The display is colour-coded: current (blue), power (violet) and voltage (black), allowing the parameters to be clearly distinguished.

In addition to the curve display, a data table is available in which the measured values are listed. Peak data are also highlighted there for quick evaluation of the power values. The photovoltaic meter determines the key electrical parameters, such as open-circuit voltage (Voc), short-circuit current (Isc), MPP voltage (Umpp), MPP current (Impp) and maximum power (Pmax).

The display is shown on an integrated 2.4-inch LC display, on which both the curves and the measurement data are displayed. In addition, module temperature is recorded.

Specification

Direct voltage DC	
Function	Open-circuit voltage (Voc)
Measuring range	0 ... 60 V
Resolution	0,001 V
Accuracy	±1 %
Direct voltage DC	
Function	MPP voltage (Umpp)
Measuring range	0 ... 60 V
Resolution	0,001 V
Accuracy	±5 %
Direct current DC	
Function	Short-circuit current (Isc)
Measuring range	0 ... 30 A
Resolution	0,001 A
Accuracy	±1 %
Direct current DC	
Function	MPP current (Impp)
Measuring range	0 ... 30 A
Resolution	0,001 A
Accuracy	±5 %
Temperature	
Measuring range	0 ... 60 °C
Resolution	0,1 °C
Accuracy	1 °C
Temperature	
Measuring range	32 ... 140 °F
Resolution	0,18 °F
Accuracy	±1.8 °F
Power	
Function	Maximum power (Pmax)
Measuring range	0 ... 800 W
Resolution	0,001 W
Accuracy	±5%

General technical data	
Inputs	MC4 PV
Display type	LC colour display with backlight
Display size	2,4 Inch
Measuring rate	3 x per second
Storage medium	Internal memory
Memory capacity (additional information)	Memory for the last 10 measured values, data is lost when switched off.
Interface	USB-C
Automatic power-off	5 min
Menu language	English, English (GB)
Protection class (device)	IP40
Power supply	5 V DC, 500 mA
(Rechargeable) battery	1 x 3,7 V internal , Lithium-ion battery
Capacity	1000 mAh
Operating conditions	-10 ... 50 °C , 0 ... 80 % RH
Storage conditions	-10 ... 60 °C , 0 ... 80 % RH
Dimensions (L x W x H)	155 x 73 x 38 mm
Weight	253 g