Megger

PVM210

Irradiance meter

User guide

⚠ Safety Warnings

Safety warnings should be read and undertstood before instrument is used.

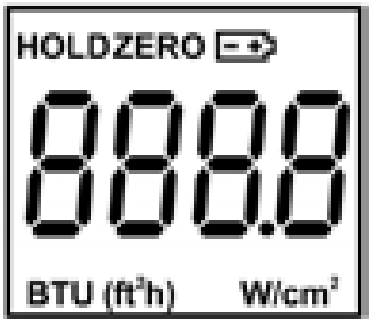
- **Do not** to cover or shield the solar detector situated on the top of the instrument while the unit is in use.
- **Do not** attempt to disassemble or modify the meter.
- Ensure the unit is free from moisture, grease and dust; clean unit with soft dry cloth only.
- **Do not** use if there is any damage to the PVM210.
- When using the camera mount **do not** over tightened thread.
- The battery cover **must be** in place whilst conducting tests.
- Avoid prolonged exposure of the meter to direct strong sunlight.
- Remove batteries when unit is not being used for a period of time.
- Store instrument in protective holster when not in use.

Note
This instrument should be used by suitably trained and competent persons.

Introduction

The PVM210 is a pocket size irradiance meter with the solar detector built into the top of the meter for single handed use.

With an easy to read display and a measurement hold function, the meter provides fast accurate readings of solar power for optimum positioning for the photovoltaic panel. In addition the meter can provide the solar power measurement for the calculation of short circuit current in conjunction with an ammeter, to confirm the stated short circuit current as provided by the manufacturer of the panel.



PVM210 Display

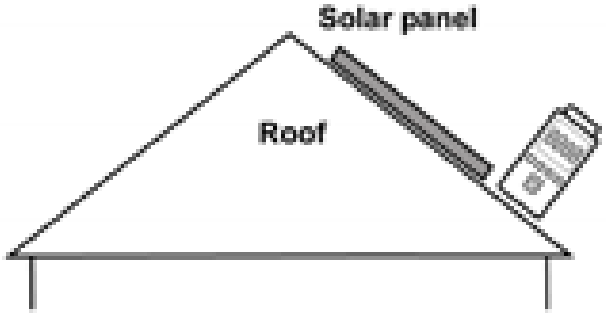
Instructions

To turn on the PVM210 press the power button ⏻.

The display will appear indicating the unit of measurement in watts per square metre (W/m²). If British Thermal Units (BTU (ft²h)) are required for measurement then press the UNIT button. Press the UNIT button once again to return to (W/m2).

Occasionally, when first switched on, the display may show random characters or symbols. To clear the display press the ZERO button, press the ZERO button once again to return to measuring mode.

Note the solar detector is situated in the top of the meter so to perform a measurement of the solar power hold the meter with detector pointing towards the sky at a 90 degree angle to the position of the solar panel.



For a more accurate measurement at the optimum angle or position, the universal camera mount on the rear of the meter may be utilised. For easy reading the measurement on the meter can be retained on the display by pressing the HOLD button.

Press this button once again to deactivate the hold feature.

The over range indicator ‘ OL’ may appear on the display when measurements exceed 199.9

The RANGE button can then be used to extend possible readings beyond 199.9 up to 1999

To switch the PVM210 off press the power button ⏻.

Battery replacement

When the  symbol is displayed, the batteries require replacement. To change batteries turn off the meter and carefully slide off the battery cover on the rear of the meter.

Remove depleted batteries and dispose of correctly.

Insert a new batteries of the same type (2 x 1.5V AAA MN2400 LR03) observing the proper polarity.

Carefully replace battery cover.

The instrument is now ready to use.

SPECIFICATION

Display:	3¾ digits LCD with maximum reading 3999
Range:	1999 W/m² /634 BTU/(ft²*h)
Accuracy:	typically within ±10 W/m² (±3 BTU/(ft²*h)) or ±5%, whichever is greater in sunlight; Additional temperature induced error ±0.38 W/m²/°C (±0.12 BTU/(ft²*h)/°C)) from 25 °C
Angular accuracy:	Cosine corrected <5% for angles <60 °C
Accuracy:	<±3% per year
Resolution:	0.1 W/m²/0.1 BTU/(ft²*h)
Sampling Time:	approx. 0.25 second
Over-input:	display shows ‘ OL ‘
Operating temp. & RH:	5 °C~40 °C, below 80% RH
Storage temp. & RH:	-10 °C~60 °C, below 70% RH
Dimensions:	134 x 48 x 27 mm
Weight:	approx. 90g
EMC:	EN61326
Battery life :	approx. 50 hours
	2 batteries 1.5 V AAA MN2400 LR03
Operating altitude:	below 2,000 m

Warranty

This instrument is guaranteed for one year against material or production defects.

Caution: this symbol indicates that equipment and its accessories shall be subject to a separate collection and correct disposal.