

SR05

Digital second class pyranometer

SR05 is the most affordable digital pyranometer meeting ISO 9060 requirements. It is ideal for general solar radiation measurements in (agro-)meteorological networks and PV monitoring. SR05 is easy to mount and install. Various outputs are available, both digital and analogue, for ease of integration.



Figure 1 SR05 with ball levelling and tube mount



Figure 2 Easy levelling of SR05 on its tube mount with ball levelling

Introduction

SR05 is a digital ISO 9060 second class pyranometer for measurement of solar radiation received by a plane surface, in W/m^2 , from a 180° field of view angle.

Different configurations are available, depending on its mounting and the output needed.

The combination of easy installation and its cost makes SR05 ideal for installation in (agro-) meteorology networks and PV power plant monitoring.

Benefits

- Industry standard digital outputs: easy implementation and servicing
- Easy mounting and levelling
- Pricing: second class pyranometers finally affordable for large networks

SR05 design

SR05 pyranometer employs a thermopile sensor with black coated surface, one dome and an anodised aluminium body with visible bubble level. Optionally the sensor has a unique ball levelling mechanism and tube mount, for easy installation. SR05 has a variety of industry standard outputs, both digital and analogue: SR05-DA1 offers Modbus over RS-485 and 0-1 V output, SR05-DA2 offers Modbus over TTL and 4-20 mA current loop output.



Figure 3 'Exploded view' of SR05. The optional ball levelling and tube mount allow for easy installation. The cable (standard 3 m) has an M12-A connector.

Suggested use

- general solar radiation measurements
- (agro-)meteorological networks
- PV power plant monitoring

Standards

Applicable instrument classification standards are ISO 9060 and WMO-No. 8.

See also

- view our complete [range of solar sensors](#)
- consult our [pyranometer selection guide](#)

SR05 specifications

Measurand	hemispherical solar radiation
ISO classification	second class pyranometer
Calibration uncertainty	< 1.8 % (k = 2)
Calibration traceability	to WRR
Spectral range	285 to 3000 x 10 ⁻⁹ m
Rated operating temperature range	-40 to +80 °C
Standard cable length	3 m
Rated operating voltage range	5 to 30 VDC
Levelling	ball levelling*
Output	
Model SR05-DA1	
Communication protocol	Modbus over RS-485
Digital output	-irradiance in W/m ² -instrument body temperature in °C
Analogue output	0-1 V
Transmitted range	0-1600 W/m ²
Model SR05-DA2	
Communication protocol	Modbus over TTL
Digital output	-irradiance in W/m ² -instrument body temperature in °C
Analogue output	4-20 mA current loop
Transmitted range	0-1600 W/m ²
* Optional	with / without tube mount

Options

- cable lengths: 10, 20 m
- extension cable with connector pair: 10, 20 m
- with ball levelling
- with ball levelling and tube mount (for tube diameters 25 – 40 mm)
- OEM versions



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