

SR05 series design

SR05 pyranometers employ 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-D1A3 offers Modbus over RS-485 and 0-1 V output, SR05-D2A2 offers Modbus over TTL and 4-20 mA current loop output. Version SR05-A1 offers a conventional analogue millivolt 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.

Standards

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



SR05 series 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	
-versions -D1A3 and -D2A2	5 to 30 VDC
-version -A1	passive sensor
Levelling	ball levelling, optional with / without tube mount

Output

Version SR05-D1A3

Communication protocol	Modbus over RS-485
Digital output	-irradiance in W/m ² -instrument body temperature in °C
Analogue output	0-1 V

Version SR05-D2A2

Communication protocol	Modbus over TTL
Digital output	-irradiance in W/m ² -instrument body temperature in °C
Analogue output	4-20 mA current loop

Version SR05-A1

Analogue output	millivolt
Sensitivity (nominal)	10 x 10 ⁻⁶ V/(W/m ²)

Versions

SR05 series offers various versions with industry standard outputs, both digital and analogue, each with several options:

- SR05-D1A3 digital second class pyranometer, with Modbus over RS-485 and 0-1 V output
- SR05-D2A2 digital second class pyranometer, with Modbus over TTL and 4-20 mA output
- SR05-A1 analogue second class pyranometer with millivolt output

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

For an overview of all versions and options, and how to order, please take a look at Table 1 on the next page.