

Figure 1
SR12 solar radiation sensor. Sensor (1), glass dome (2,3), desiccant (5), cable, standard length 5 m (10), heater (11), temperature sensor (12).

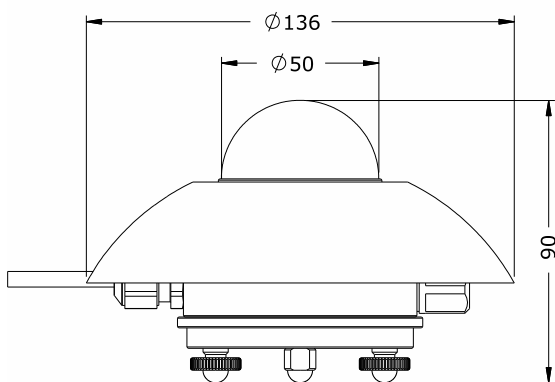


Figure 2
SR12 dimensions in mm.

SR12

FIRST CLASS SOLAR RADIATION SENSOR FOR SOLAR ENERGY TEST APPLICATIONS

SR12 is a solar radiation sensor that meets and exceeds the ISO-9060 Standard performance mandate for a First Class pyranometer, specific to "solar energy test applications".

INTRODUCTION

The SR12 is supplied standard with a laboratory characterised directional response report, built-in case temperature sensor, and low power resistive heater for dew/frost prevention. Ideally suited for solar renewable systems performance and solar energy resource validation, the SR12 is the first COTS (Commercial Off-The-Shelf) pyranometer of its kind meeting the ISO-9060 First Class performance mandate for solar energy test applications.

ISO 9060 covers "Solar energy - Specification and classification of instruments for measuring hemispherical solar and direct solar radiation". The official classification name for SR12 is "first class pyranometer for purposes of solar energy test applications" as defined by ISO 9060 paragraph 4.3.2. ISO recommends and approves this pyranometer type for outdoor testing related to solar energy use. The added temperature sensor is used for additional quality assurance. Also added is 1.6 W heating. Heating in the evening will help to keep dew and frost away and will promote evaporation of deposited rain and snow.

SPECIFICATIONS

| | |
|---------------------------|---|
| ISO classification: | first class for solar energy test applications |
| Spectral range: | 0.3 to 3 μm |
| Sensitivity (nominal): | 15 $\mu\text{V}/(\text{Wm}^{-2})$ |
| Operating temperature: | -40 to +80 $^{\circ}\text{C}$ |
| Irradiance range : | 0 to 2000 Wm^{-2} |
| Temperature response: | 4 % (interval 50 K) |
| Calibration traceability: | WRR |
| Required heater power: | 1.6 W @ 12VDC |
| Temperature sensor: | Pt100 (standard) 10kOhm Thermistor (optional) |
| Cable length: | 5 m (standard) extended in multiples of 5 m (optional) |

ACCESSORIES

AC100, AC420 amplifiers, LI19 handheld readout.

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