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WHEN MEASUREMENTS MATTER

SR30

Class A Pyranometer with RS-485 Modbus Communications with Integrated Heating and Ventilation

Overview

The SR30, an ISO 9060:2018 spectrally flat Class A (secondary standard) pyranometer manufactured by Hukseflux, features Recirculating Ventilation and Heating (RVH™) technology. As a standalone unit, the SR30 is fully compliant with IEC 61724-1 standards, whereas other pyranometers would require external ventilation/heating units to be compliant. The SR30 is an ideal instrument for solar resource and PV performance monitoring.

Benefits and Features

- Heated for high data availability, featuring RVH™ technology
- Compliant with IEC 61724-1:2021 Class A
- Remote sensor diagnostics

Specifications

Sensor	High-quality blackened thermopile protected by two glass domes with integrated heater and ventilation
Measurement Description	Monitors solar radiation for the full solar spectrum range

Hemispherical Solar Radiation

Heater	RVH™ (Recirculating Ventilation and Heating)
ISO Classification	Spectrally flat Class A (secondary standard) ISO 9060:2018
IEC 61724-1:2021 Compliance	Class A
Calibration Uncertainty	< 1.2% (k = 2)
Heating	Included
Ventilation	Included
Technology Employed	Recirculating Ventilation and Heating (RVH™)
Standard Operating Mode	Heated and ventilated
Power Consumption @ 12 Vdc	< 2.3 W
Zero Offset A	< 2 W/m^2
Calibration Traceability	To WRR
Calibration Registers	Accessible to users
Spectral Range	285 to 3000 x 10^{-9} m

Sensitivity	Digital output
Operating Temperature Range	-40 to +80°C (rated)
Temperature Response	< ±0.4% (-30 to +50°C)
Temperature Response Test of Individual Instrument	Report included
Directional Response Test of Individual Instrument	Report included
Rated Operating Voltage Range	8 to 30 Vdc

Sensor Tilt Angle

Tilt Measurement Uncertainty	±1° (0 to 90°)
Tilt Sensor Test of Individual Instrument	Report included

Operation in Low-Power Mode

Operating Condition	Heater and ventilator [OFF]
Zero Offset A	5 W/m^2 (unventilated)
Power Consumption @ 12 Vdc	< 0.1 W

Digital Output

Output	❱ Modbus RS-485 ❱ Ventilator speed in RPM ❱ Internal humidity in % ❱ Tilt angle in ° ❱ Instrument body temperature in °C ❱ Irradiance in W/m^2
Communication Protocol	Modbus over two-wire RS-485
Transmission Mode	RTU

For comprehensive details, visit: www.campbellsci.com/sr30