CAMPBELL SCIENTIFIC®
WHEN MEASUREMENTS MATTER

SR05-L
ISO 9060 Second Class Pyranometer with Analog and RS-485 Modbus Communications

Overview

The SR05-L, manufactured by Hukseflux Thermal Sensors as the SR05-D1A3, is an ISO 9060:2018 spectrally flat Class C (second class) pyranometer designed for general solar radiation measurements in agricultural and meteorological networks and PV monitoring. Both analog output and Modbus over RS-485 are supported.

Benefits and Features

❯ Industry-standard analog and digital outputs for easy implementation and servicing

❯ Affordable second class pyranometer, suitable for large networks

❯ Employs a thermopile sensor with black-coated surface, one dome, and an anodized aluminum body with visible bubble level

Detailed Description

The SR05 measures solar radiation received by a plane surface, in W/m², from a 180° field of view angle with a high-quality blackened thermopile protected by a glass dome. The blackened thermopile provides a flat spectral response for the full solar spectrum range, which allows the SR05 to be used under plant canopies or lamps, when the sky is cloudy, and for reflected radiation measurements.

The SR05 produces two different outputs that are measured directly by a Campbell Scientific data logger: a 0 to 1000 mV signal and a Modbus over RS-485 signal.

Specifications

Sensor	Blackened thermopile protected by a dome	Heater	No
Measurement Description	Measures hemispherical solar radiation	ISO Classification	Spectrally flat Class C (second class) ISO 9060:2018

For comprehensive details, visit: **www.campbellsci.com/sr05-l**

IEC 61724-1:2017 Compliance	Class C		Operating Temperature Range	-40° to +80°C
Digital Output	Modbus over two-wire RS-485		Rated Operating Voltage Range	5 to 30 Vdc
Voltage Output	0 to 1 V		Communication Protocol	Modbus over RS-485
Analog Output	0 to 1600 W/m^2		Transmit Range	0 to 1600 W/m^2
Calibration Uncertainty	< 1.8% (k = 2)		Power Consumption (Digital)	< 75 x 10^{-3} W (at 12 Vdc)
Calibration Traceability	To WRR			
Spectral Range	285 to 3000 x 10^{-9} m			

For comprehensive details, visit: www.campbellsci.com/sr05-l