



SunVue 30

ISO 9060:2018 Class A Spectrally Flat Thermopile Pyranometer with Integrated Dome Heating



A New Standard in Class A Pyranometer Performance

Overview

The SunVue™30 is an ISO 9060:2018 spectrally flat Class A pyranometer developed through a multi-year engineering effort to redefine the ownership experience. Designed for high-precision solar monitoring, it delivers premium measurement quality with a low-maintenance, field-ready design. It is fully compliant with IEC 61724-1 Class A performance monitoring requirements, with an integrated dome heater for dew and frost mitigation.

The SunVue 30 delivers superior thermal offset performance relative to other Class A pyranometers, without the need for internal air circulation. This results in lower power consumption, making it an excellent choice for both resource assessment and power performance monitoring applications. It is designed for ease of installation and maintenance, featuring an integrated mounting system and dual viewable bubble levels for precise alignment.

This digital sensor uses RS-485 Modbus communications. The SunVue 30 integrates seamlessly with Campbell Scientific data loggers and stations, including the SunScout™ and the SunSentry. It is compatible with any Supervisory Control and Data Acquisition (SCADA) system or other data-acquisition system capable of reading RS-485 Modbus.

The M12 five-pin connector for power and communications uses a harmonized pin layout to facilitate daisy-chaining of all sensors on a PV string. This simplifies the installation and reduces cost. The SunVue 30 is an excellent choice for measuring global horizontal irradiance (GHI), plane-of-array irradiance (POA), and rear-plane-of-array irradiance (RPOA). This makes it an ideal solution for solar resource assessment and photovoltaic (PV) performance monitoring.

Benefits and Features

- ▶ ISO 9060:2018 spectrally flat Class A pyranometer
- ▶ Compliant with IEC 61724-1:2021 Class A monitoring requirements
- ▶ Unique design for best-in-class thermal offset without the needed power consumption for internal air circulation
- ▶ Simple, low-maintenance design without moving parts or fans
- ▶ Simplest leveling experience with view from above and below
- ▶ Field-replaceable level arm
- ▶ Unmatched heater performance with low power requirement (1.5 W) and better dew/frost prevention than competitive products
- ▶ Integrated Class 4 industrial surge protection in accordance with IEC 61000-4-5
- ▶ Remote sensor diagnostics including irradiance, tilt (X,Y), instrument temperature, humidity, and barometric pressure

Detailed Description

What makes the SunVue 30 a new standard in Class A pyranometer performance?

› **Stand-Alone Class A Compliance:** Meets IEC 61724-1:2021 Class A monitoring requirements without the need for additional accessories

› **Top-Tier Thermal Offset:** Delivers thermal offset performance on par with the best in the market. An innovative insulating housing provides thermal stability without an internal or external fan.

› **Dew and Frost Mitigation:** Effective, low-power heater for dew and frost mitigation as required for Class A monitoring requirements

› **Smart Diagnostics:** Remote diagnostics include tilt, instrument temperature, humidity, pressure, and power consumption.

› **Open Compatibility:** RS-485 Modbus communications and Class 4 IEC 61400-4 surge protection for seamless use with SunSentry and SunScout stations, as well as other compatible solar monitoring systems, data loggers, and inverters

› **Backed by Campbell Scientific:** Supported by Campbell Scientific global service, calibration, and technical support

Specifications

ISO Classification	Spectrally flat Class A (ISO 9060:2018)
Spectral Range	285 to 2800 nm
Response Time	< 4 s
Zero Offset A	< 7 W/m ²
Zero Offset B	< 2 W/m ²
Directional Response	< 10 W/m ²
Temperature Response	< 1% (-30° to +60°C)
Operating Temperature Range	-40° to +80°C
Maximum Irradiance	2000 W/m ²
Power Consumption - Heated	< 1.8 W
Power Consumption - Unheated	< 0.25 W
Operating Voltage Range	12 to 24 V
Digital Output	› Irradiance W/m ² › Device monitoring (internal humidity, internal pressure, power consumption) › Modbus RS-485 › Tilt angle °

	› Body temperature °C
Communications	Modbus over two-wire RS-485
Surge Protection	IEC 61000-4-5 industrial-level surge protection
Transmission Mode	RTU
SunVue 30-AB (pn 44572) Dimensions	9.84 x 9.84 x 12.07 cm (3.875 x 3.875 x 4.75 in.)
SunVue 30-NB (pn 44573) Dimensions	8.89 x 8.89 x 10.41 cm (3.5 x 3.5 x 4.1 in.)
SunVue 30-AB (pn 44572) Weight	625.96 g (1.38 lb)
SunVue 30-NB (pn 44573) Weight	576.06 g (1.27 lb)

Internal Relative Humidity Sensor

Range	0 to 100%
Accuracy	±1.8%
Resolution	0.01%

Internal Pressure Sensor

Range	260 to 1260 mBar
Accuracy	±1 mBar
Resolution	0.25 mBar

For comprehensive details, visit: www.campbellsci.ca/sunvue30 