Energy Management
Pyranometer for photovoltaic applications
Type PVS2

- **Global solar radiation sensor for photovoltaic applications and weather stations**
- **2nd Class Thermopile Pyranometer**
- **4-20 mA output for reliable connections**
- **Compact and rugged IP67 aluminium case**
- **Compliant with WMO (World Meteorological Organization) for environmental monitoring**
- **Compliant with ISO 9060 and IEC17025 for photovoltaic applications**
- **Calibration according to ISO 9847 certificate available**

Product description

PVS2 is a global solar radiation sensor based on a thermopile transducer designed to measure the global component of the sunlight spectrum between 0.3 µm and 3 µm. It complies with WMO (World Meteorological Organization) for environmental monitoring, being a worldwide valid reference for environmental monitoring. It is also the perfect fit for photovoltaic applications monitoring, according to IEC-9060 and IEC-17025.
Thanks to its sensing technology, the measurement features are stable, immune to environmental changes, subject to worldwide valid standards, allowing to rely on an absolute reference so as to compare measurement from different installations and locations.

How to order

PVS 2 A 1 W X C

Model
Sensing
Output
Power supply
Wiring
Input
Option

The 4-20 mA output allows a reliable communication of measurements to Carlo Gavazzi's VMU-P modules and dataloggers.

Type Selection

Sensing		Output		Power supply		Wiring	
2:	solar irradiance - pyranometer	**A:**	analog 4-20mA	**1:**	10-28 VDC	**W:**	wired connection

Input		Option	
X:	none	**C:**	Class 2 - with calibration certificate

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Specification

Hardware characteristics	
Case	Anodized aluminium and stainless steel
Mounting system	Optional aluminium clamp
Electrical connection	7 pin IP68 connector
Size	162 x 215 x 40 mm (not including clamp)
Sensor specification	
Sensor type	2nd Class Global Solar Radiation Sensor(according to ISO 9060) thermopile-based
Calibration	According to ISO9847
Measuring principle	The sensor is a high accuracy thermopile transducer protected by a quartz glass dome. An electric signal is generated by the solar radiation heating the sensor surface
Input	
Irradiation range	From 0 to 2000 W/m2 STC
Temperature range	From 0,3µm to 3,0 µm (AM 1.5G Solar radiation)
Working temperature range	From -40 to 80°C
Output	
Output range	4-20mA @ 0-2000 W/m^2
Long term stability	<± 2%
Resolution	<8 W/m^2
Response time	<25 sec
Cosine response	<± 22 W/m^2
Non linearity	<± 2%
Expected daily uncertainty	<10%
Tilt response (0° - 90°)	<± 4%
Temperature response (AT 50K)	<8%
Zero Offset	< 20 W/m^2 (at 200 W/m^2) < ±6 W/m^2 (ΔT=5K/h)
Supply	
Voltage	10 – 28 VDC
Power consumption	<0,1 W Note: The pyranometer cannot be supplied by the current loop and it requires a separate power supply unit
Connection	7 poles output connector
Mounting options	Aluminium fastening clamp with fixing screw for PV module frame mounting
Weight	< 600 g

Dimensions