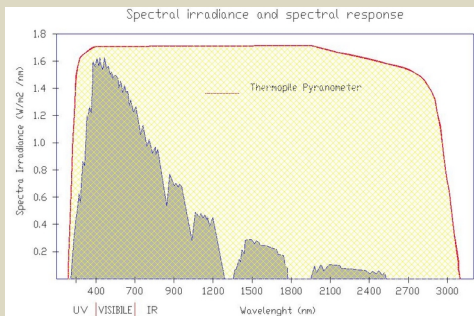


PYR1-485 / PYR2-485



PYR1-485 and PYR2-485 are thermopile pyranometer for measuring solar irradiance. Manufacturing and Calibrations are done following the ISO 9060 – WMO - ISO 9846 standards.

Spectrum of interest



Measurements features

PYR1-485 and PYR2-485 are equipped with the electronics board with a microcontroller to manage sampling, average of sampling, temperature reading and manager of RS485 transmissions. In order to guarantee noise immunity, constant behavior over time and temperature variations. The output signal is in Modbus RTU over RS485.

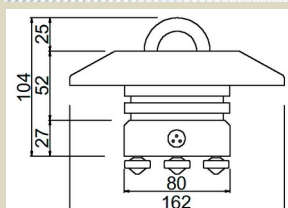
Most common uses

PYR1-485 and PYR2-485 are used in meteorological uses and for controlling the performance of PV systems.

Physical characteristics

Anodized aluminum casing, encapsulated with a special transparent glass and quartz [k5] dome.

Dimensions



Name		PYR1-485	PYR2-485
Type of product	Thermopile pyranometer		
Reference Standard	ISO 9060:1990 ISO 9060:2018	I Class Class B	II Class Class C
Output	Modbus RTU on RS485; selectable baud rates		
Calibration	Complies to ISO9847	By Secondary Standard Pyranometer calibration certificate	By First Class Pyranometer calibration certificate
Calibration traceability	WRR		
Spectral range		300÷2900nm	300÷2900nm
Typical sensitivity	6 ± 13 µV/(W/m²)		
Input Range	0 ÷ 1600 W/m²		
Response time		< 20 sec	< 25 sec
Temperature influence	on sensitivity	< ± 2 % (-10 to +40°C)	< ± 5 % (-10 to +40°C)
Directional response	At 1000W/m²	± 15W/m²	< 20 W/m²
Cosine response	< ±22 W/m²		
Zero offset	Thermal radiation (at 200 W/m²)	<14 W/m²	<20 W/m²
	Temperature change (5 k/h)	<± 3 W/m²	<± 6 W/m²
Resolution	Smallest detectable change	Irradiance: ± 1 W/m² Inclination: 0,1°	
Working range	-40 ÷ +80°C		
Field of view	180°		
Stability (along 1 year)		< ± 1%	< ± 1%
Output	Modbus	Adrs.257 Irradiance; Adrs. 34817 Pyr Temp Adrs. 259 Incl.. x axis, Adrs.260 Incl. y axis	
Output precision	Tilt response (0 ÷ 90°)	< ± 2%	< ± 4%
	Temp. Response (Δt = 50°K)	< 4%	< 8%
Non linearity		< 1%	
Supply	9 ÷ 30 Vdc protected against short circuit		
Additional signal processing errors	± 0,6 W/n²		
Encapsulation	Quartz [k5] dome	to: 0,3÷3,0 µm double	to: 0,3÷3,0 µm single
Case	Anodized Aluminum		
Connector	standard M8 4 pin female		
Dimensions	Φ 162 x h 104 mm		
Weight		1,1 Kg	0,7 kg
IP Code	IP 67		

