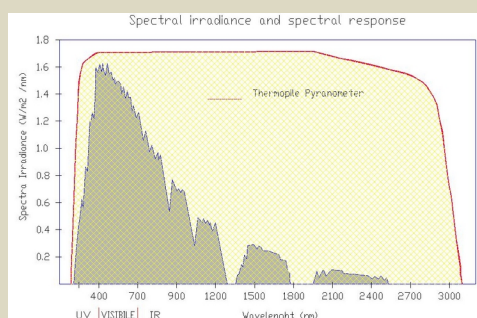


PYR1-420 / PYR2-420

PYR1-420 and **PYR2-420** are a thermopile pyranometers for measuring solar irradiance. Manufacturing and Calibrations are done following the **ISO 9060 – WMO - ISO 9846** standards.

Spectrum of interest



Measurement features

PYR1-420 and **PYR2-420** are equipped with electronics to amplify a very weak signal coming from the thermopile. They are composed of the best operational amplifiers on the market to guarantee linearity, noise immunity, constant behavior over time and temperature variations. They have a 4 to 20 mA output signal.

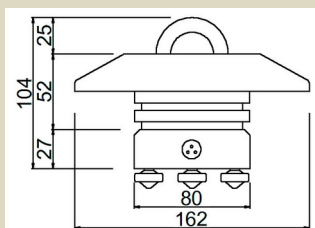
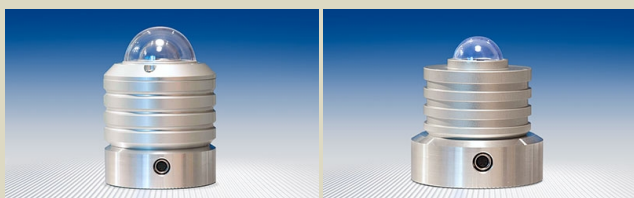
Most common uses

Pyr1-420 and Pyr2-420 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		PYR1-420	PYR2-420
Type of product	Thermopile pyranometer		
Reference Standard	ISO 9060:1990 ISO 9060:2018	I Class Class B	II Class Class C
Output	4 ÷ 20 mA current loop		
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 response	< ± 2 % (-10 to +40°C)		
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	± 4 W/m²	± 8 W/m²
Working Range	-40 ÷ +80°C		
Field of view	180°		
Stability (along 1 year)		< ± 1.5%	< ± 2%
Output		Current Loop	4 ÷ 20mA Output normalized
Output precision	Tilt response (0 ÷ 90°)	< ± 2%	< ± 4%
	Temp. Response (Δt = 50 K)	< 4%	< 8%
Supply	9 ÷ 30 Vdc protected against short circuit		
Additional signal processing errors	± 0,6 W/m²		
Encapsulation	Quartz [k5] dome	Special glass transparent to: 0,3÷3,0 µm double	Special glass transparent to: 0,3÷3,0 µm single
Case	Anodized Aluminum		
Connector	standard M8 3 pin female		
Dimensions	Φ 162 x h 104 mm		
Weight		1,1 Kg	0,7 Kg
IP code	IP 67		