Manuals+ — User Manuals Simplified.

itsensor PYR-420 Class C Thermopile Pyranometer User Manual

Contents

itsensor PYR-420 Class C Thermopile Pyranometer

GENERAL DESCRIPTION

- PYR1-420 and PYR2-420 are ISO 9060:2018 CLASS B (First Class) and CLASS C (Second Class) thermopile pyranometers for measuring solar irradiance in PV plants.
- 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.

FEATURES

	PYR1-420	PYR2-420
Measurements:		
○ **spectral range:**	$300 \div 2900$nm	$300 \div 2900$nm
○ **input irradiance range:**	$0 \div 1600 \text{ W/m}^2$	$0 \div 1600 \text{ W/m}^2$
Response time:	< 20 sec	< 25 sec
Temperature response:	$< \pm 2 \%$ (-10 to +40°C)	
Zero offset		
○ **Thermal radiation** (at 200 W/m)	<14 W/m²	<20 W/m²
○ **Temperature change** (5 k/h)	$< \pm 3$ W/m²	$< \pm 6$ W/m²
Resolution		
○ **Smallest detectable change**	± 4 W/m²	± 8 W/m²
Outputs		
○ **serial**:	$4 \div 20$ mA current loop	
Output resolution:	1W/m^2	
Output precision:		

- **Tilt response (0 ÷ 90°):**   < ± 2%   < ± 4%
  - **Temp. Response (∆t = 50K)**   < 4%   < 8%
- **Working temperature**:   -40 ÷ +80 °C
- **Supply:**   9 ÷ 30 Vdc protected against short circuit
- **Encapsulation:**   Quartz [k5]
- **Double glass dome**   Single glass dome
- **Special glass transparent to:**   0,3 ÷ 3,0 µm   0,3 ÷ 3,0 µm
- **Case:**   Anodized aluminum
- **Connectors:**   standard M8 3-pin female
- **Dimensions:**   Φ 162 x h 104 mm

PIECE'S LIST

CALIBRATION:

- Date: .... Operator: ....

- S/N:. ....

-................ mA @0 W/m² STC   [pin 3]

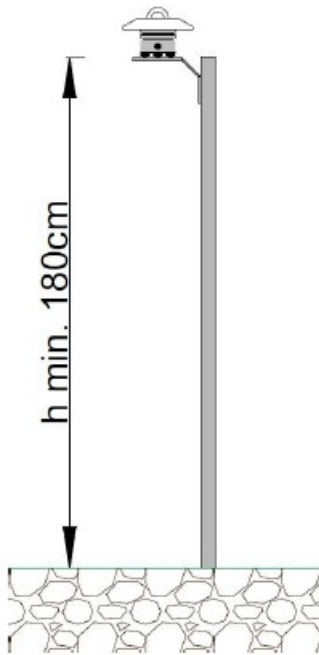- .... mA @ 1200 W/m² STC   [pin 3]

- Pyranometer with sunscreen
- M8 3pin male connector
- Instruction sheet
- Calibration Report
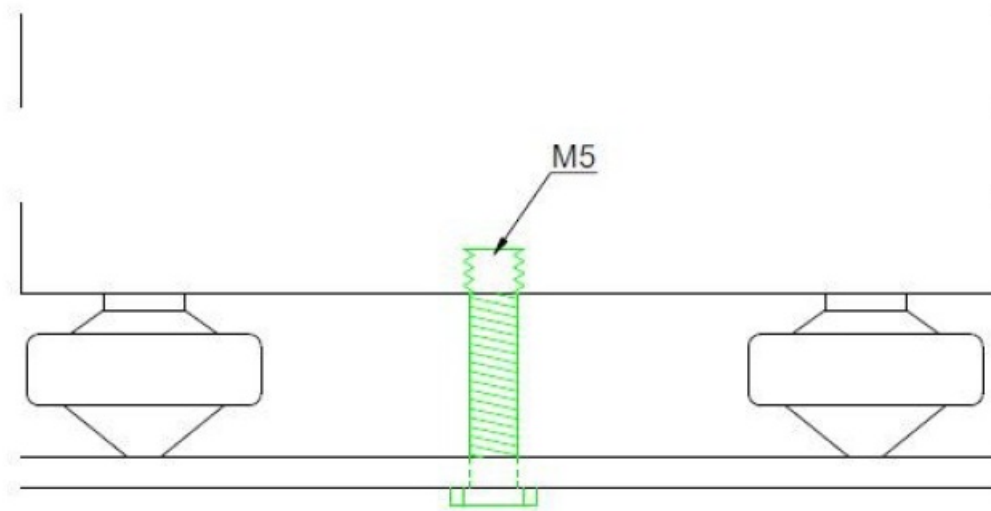
DIMENSIONS
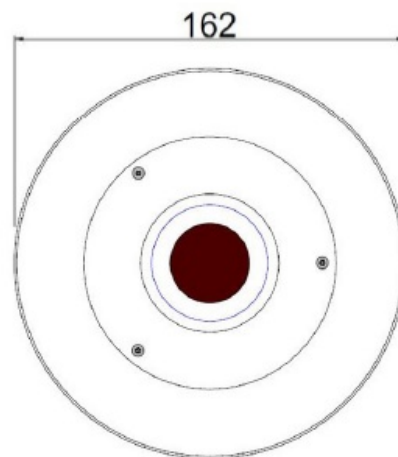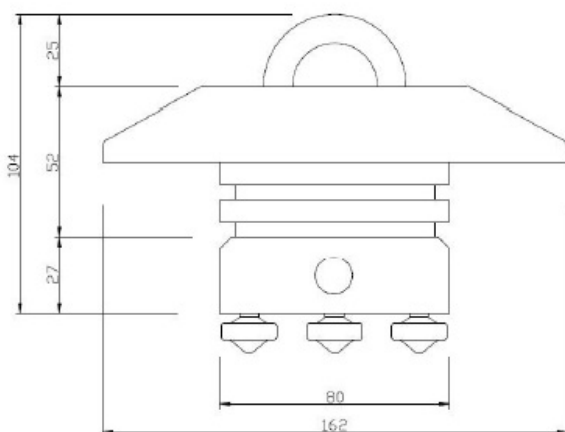
INSTALLATION

It is recommended to install the product at a minimum height of 180cm above the ground. There are the following fixing types:

- With M5 screw on flat bases;
- Bracket on a pole;
- Inclinable bracket in degrees

M5 screw on flat bases screw's thread must be 0,4cm + distance between the pyranometer and the base. (approx. 1,5 – 1,8 cm long.)

CALIBRATION

It is recommended to send to the factory for verifying calibration after 2 years of outdoor work.

MAINTENANCE

Reading is reduced if the dome is not clean.

1. Keep the dome clean using water or alcohol.

2. Keep instrument leveled.

3. Recalibrate every 2 years.

USER INFORMATION

Read this document carefully before installation. Warranty is 2 years from the date of invoice, subject to correct installation and use. Soluzione Solare accepts no liability for any loss or damage arising from the incorrect use of the product. This device conforms to the EU 'CE' guideline 89/336/EEC73/23/EEC. Unauthorized modifications may void the warranty and CE validity. Visit our website for the latest product support information.

CONTACTS
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Documents / Resources

itsensor PYR-420 Class C Thermopile Pyranometer [pdf] User Manual
PYR-420, Class C Thermopile Pyranometer, PYR-420 Class C Thermopile Pyranometer

References

- 🌐 **ITSensor - Industrial Technology Webstore - ITSensor**
- 🌐 **ITSensor - Industrial Technology Webstore - ITSensor**
- 🌐 **Prodotti Archives - Soluzione Solare**