



Description:

It has been designed to provide the best economical solution for measuring solar efficiency. The pyranometers in this series are all based on the thermopile principle, very accurate. This principle provides a μV signal without the need of a power supply. To be able to transfer the signal over a longer distance and to prevent interference, mostly types are used with an integrated transmitter. When using a 4-20 mA, 0-10 VDC or RS485 Modbus-RTU output, an active power supply is necessary. The output of these series is always related to W/m^2 , making it possible to have a relation to the total solar panel surface.

Specifications :

Sensor	Thermopile
Typical Sensitivity	$5 \div 15 \mu\text{V}/\text{Wm}^{-2}$
Impedance	$33 \div 45 \Omega$
Measuring range	$0 \div 2000 \text{ W}/\text{m}^2$
Viewing angle	$2\pi \text{ sr}$
Spectral range (50%)	$300 \div 2800 \text{ nm}$
Operating temperature/ humidity	$-40 \div 80 \text{ }^\circ\text{C}$ $0 \div 100 \text{ \% RH}$
Output	Depending on the model: - Analog in $\mu\text{V}/\text{Wm}^{-2}$ - Analog $4 \div 20 \text{ mA}$ - Analog $0 \div 1 \text{ V}$, $0 \div 5 \text{ V}$ or $0 \div 10 \text{ V}$ - Digital RS485 Modbus-RTU - Digital SDI-12
Power supply	$10 \div 30 \text{ Vdc}$ ($4 \div 20 \text{ mA}$ - $0 \div 1 \text{ V}$ - $0 \div 5 \text{ V}$ outputs) $15 \div 30 \text{ Vdc}$ ($0 \div 10 \text{ V}$ output) $5 \div 30 \text{ Vdc}$ (RS485 Modbus-RTU) $7 \div 30 \text{ Vdc}$ (SDI-12)
Consumption	$< 200 \mu\text{A}$ for Modbus version
Connection	- 4-pole M12 connector for analog output models - 8-pole M12 connector for digital output models
Accuracy of levelling device	$< 0.2^\circ$
Protection Degree	IP 67
MTBF	$> 10 \text{ years}$

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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Sitapura Extension, Jaipur-302022, India.



info@tesca.in
www.tescaglobal.com

Classification	Spectrally Flat Class C
Response time (95%)	< 20 s
Zero offset	a) response to a 200 W/m ² thermal radiation
	< 15 W/m ²
	b) response to a 5 K/h change in ambiente temperature
	< ±4 W/m ²
Long-term instability (1 year)	< ±1 %
Non-linearity	< ±1.5 %
Response according to the cosine law	< ±20 W/m ²
Spectral error	< ±2 %
Temperature response (-10...+40°C)	< 3 %
Tilt response	< ±2 %

Dimensions:



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