



SOLAR IRRADIANCE PROBE PYR-2000

IRRADIANCE TRANSMITTER WITH SPECTRAL AND COSINE CORRECTION

The **PYR-2000** transmitter is a solar irradiance probe based in a monocrystalline silicon sensor with spectral curve correction for environmental measures on direct signal field. Suitable for placement in dispersed areas and transmit measured by a 4-20 mA separated transmitter IP65 box towards remote acquisition systems.

SENSOR TYPE	Monocrystalline silicon sensor Solar radiation spectrum: 300 nm to 2800 nm
SENSOR RANGE	0 to 2000 W/m2 incident irradiance Output: 4-20 mA 2-wire
ACCURACY	5 % to 20 °C Correction of the solar spectrum: 180 °V
CALIBRATION	Zero and Span: Adjustable inside Adjustment range: ±5 %
ELECTRICAL	Power supply: 24 Vdc by the same 2-wire signal line Enclosure: Aluminium painted - IP-65 except the inlet Outlet: IP65 gland nut. Cable Ø 5 mm min.. Connection: shielded cable 0,5 mm2
MOUNTING	Sensor bracket for attachment to flat surface Support mast flange for transmitter box
DIMENSIONS	Probe: Ø 100 mm x 16 mm alto Transmitter: 61 mm x 87 mm x 40 mm depth.



The **PYR-2000** transmitter measures the irradiance in W/m^2 of a solar installation, generating a 4-20 mA with corrected spectrum of solar radiation received.

These irradiance measurement equipment are usually in photovoltaic systems to evaluate the efficiency. A data processor connected to signal irradiance measured solar radiation compared with the electric current produced. Are very useful for analyzing the effectiveness angle and enable the proper functioning of the photovoltaic plant.

The **PYR-2000** sensor can receive a spectrum of solar radiation between 300 nm and 2800 nm which is corrected in the transmitter to cover the spectrum with a sensitivity as flat as possible.

It also has cosine correction, because the response to radiation flux varies with the cosine of the angle of incidence. That is, the maximum response occurs when radiation incident perpendicularly on the sensor (0° V), and a null response when the sun is on the horizon (90° V). For that, flat deck Teflon prevents radiation measured at an angle above the horizon.

Another function of the Teflon flat cover is to protect the sensor from direct heating or cooling convectional by wind. Moreover, Teflon construction prevents degradation by UV rays.

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