

# 16131.5 PYRANOMETER



## “First Class” Pyranometer

16131.5 Digital pyranometer series is a range of high-accuracy digital solar radiation sensors.

It is “First Class” according to the WMO guide and ISO 9060:1990 standard and “Spectrally Flat Class B” in the 2018 revision.

Version 00.16131.501030, equipped with an on-board heater, is compliant in its standard configuration with the requirements for “Class B” PV monitoring systems of the IEC 61724-1:2017 standard.

The 16131.5 measures the solar radiation received by a plane surface, in  $W/m^2$ , from a 180° field of view angle. Various outputs are available, both digital and analogue, for ease of integration.

- Best measurement accuracy in “First Class”
- Improved response time
- With 00.16131.501030's on-board heater: compliant with IEC 61724-1 Class B in its standard configuration

## APPLICATIONS

- PV System Performance Monitoring
- Professional solar measurements
- Simulated solar tests (laboratory)
- Meteorological Networks

Professional Line	16131.5
Id-No.	00.16131.501040: Digital sensor with analogue 4-20 mA output 00.16131.501000: Analogue sensor passive millivolt (mV) output
Measuring range	0...3000 $W/m^2$ global radiation within a range of 285...3000 nm
Directional answer	$< \pm 20 W/m^2$
Resolution	0.01 $W/m^2$
Spectral sensitivity	$< \pm 3 \%$ (0.35...1.5 $\mu m$ )
Response time	$< 10 s$ (95 %)
Inclination error	$< \pm 2 \%$
Non-linearity	$< \pm 1 \%$ (100...1000 $w/m^2$ )
Range of application	Temperature: $-40...+80 \text{ }^\circ C$
Power supply	24 VDC (8...30 VDC)
Power consumption	$< 48 mW$ (at 12 VDC)
Measuring elements	Thermopile
Measuring principle	Thermal difference measurement
Dimensions	Max. $\varnothing 92 mm$ ; approx. H 95 mm
Protection class	IP67
Weight	Approx. 0.64 kg
Standards	ISO 9060 „First Class”
Accessories (order separately)	32.14581.060000 Cable 10 m, M12 plug connector. 5-pin 32.05005.001500 Cable 15 m, M12 plug connector. 5-pin