

Global Radiation Sensor economy



Description

Simple sensor for the measurement of global radiation, the sum of both the direct and diffuse components of solar irradiance.

A silicon photodiode captures incident radiation. An electrical transducer converts the raw signal into a voltage linearly dependent on incident solar power.

A bull-eye level indicator enables easy installation and adjustment of the sensor.

Technical Data

Sensor

Sensing element.....	Silicon photodiode
Transducer.....	Electrical transducer with voltage output
Output signal	0..1500 W/m ² = 0..2.5 V
Spectral range.....	400..1100 nm (10% points)

Accuracy

Absolute error	± 5%
Cosine error	± 3% of reading at 0..70° incident angle
	± 10% of reading at 70..85° incident angle
	± 2% of full scale at 0..90° incident angle
Long-term drift	< ± 2% per year
Temperature coefficient	< ± 0.07% per K

Power Supply

Operating voltage	5 VDC ± 10%
Current consumption	3 mA

Casing

Material.....	Plastic
Protection class.....	IP 65, hermetically sealed transducer
Dimensions	51 x 70 x 57 mm
Weight	0.34 kg
Mounting.....	Mounting on a plate, 3 spring-loaded mounting screws, bull-eye level indicator

Electrical Connection

Cable.....	4 x 0.14 mm ²
Cable length.....	12 m

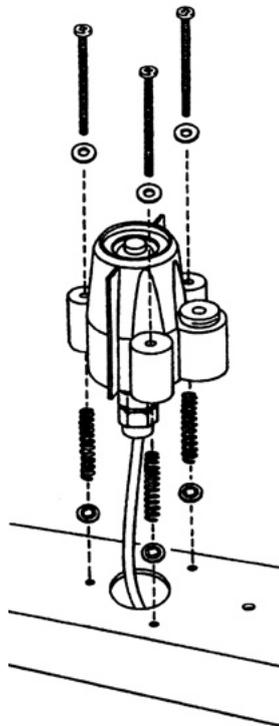
Colours of the Wires

black	(+) power supply
red	(-) power supply (ground)
yellow.....	Output signal
green.....	Ground

Environmental Conditions

Operating temperature	-40..+65 °C
Relative humidity	0..100%

Drawing



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