0872

Wilmers Meßtechnik

PAR Sensor *standard*

Description

Sensor for the measurement of the photosynthetically relevant portion of the solar radiation.

A silicon photodiode captures the global radiation, the sum of both the direct and diffuse components of solar irradiance. An electronical transducer converts the raw signal into a voltage linearly dependent on incident PAR (Photosynthetically Active Radiation).

An adjustable levelling plate and a bull-eye enable simple installation of the sensor.

Technical Data

Sensor

Sensing element	Silicon photodiode
Transducer	Electronical transducer with voltage output
Output signal	0..2000 μmol/m²s = 0..5 V (PPFD)
Output load	> 10 kOhm
Spectral response	400..700 nm
Viewing angle	2 PI steradian

Accuracy

Absolute error	± 5 %
Cosine error	± 6 % at 0..80° incident angle
Long-term stability	± 2 %/a
Temperature coefficient	± 0.2 %/K

Power Supply

Supply voltage	12..30 VDC
Current consumption	10 mA

Casing

Material	Aluminium
Protection class	IP 65, sealed electronic circuitry
Dimensions	65 x 59 x 68 mm
Weight	0.3 kg
Mounting	The sensor mounts on a plate, central fixing screw M6, 3 adjustable screws, bull-eye level indicator

Electrical Connection

Cable ..... 4 x 0.22 mm² , shielded
Cable length ..... 2 m
Terminals ..... Open wires

Wiring

red ..... (+) power supply
blue ..... (–) power supply
yellow ..... (+) output
green ..... (–) output (ground)
black ..... Cable screen

Environmental Conditions

Operating temperature ..... –30..+60°C
Relative humidity ..... 0..100 %

Compliance

CE label ..... The sensor meets European recommendations concerning electrostatical discharge protection.

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