## Description

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

A set of thermocouples measure the temperature of a horizontal surface exposed to sunlight. An electronic transducer converts the raw signal into a voltage linearly dependent on incident solar power.

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

The sensor meets „WMO First Class“.

## Technical Data

### Sensor
- **Sensing element**: Thermocouples
- **Transducer**: Electronical transducer with voltage output
- **Output signal**: $0.1400 \text{ W/m}^2 = 0.5 \text{ V}$
- **Output load**: $> 10 \text{ kOhm}$
- **Spectral response**: $300..2800 \text{ nm}$
- **Viewing angle**: $2 \pi \text{ steradian}$

### Accuracy
- **Non-linearity**: $0..1000 \text{ W/m}^2 \pm 1.5 \%$

### Power Supply
- **Supply voltage**: $9..18 \text{ VDC}$
- **Current consumption**: Approx. $10 \text{ mA}$

### Casing
- **Material**: Aluminium / plastic temperature shield
- **Dome**: Double glass dome
- **Desiccation**: Replaceable desiccators
- **Protection class**: IP 65
- **Weight**: Approx. $1 \text{ kg}$
- **Mounting**: Mounting plate, 3 adjustable screws, bull-eye level indicator
Electrical Connection

- **Cable**: 4 x 0.25 mm², shielded
- **Cable length**: 2 m
- **Terminals**: Open wires

**Wiring**
- white: (+) power supply
- brown: (-) power supply
- green: (+) output
- yellow: (-) output (ground)
- yellow/green: Cable screen

Environmental Conditions

- **Operating temperature**: –45..+80°C
- **Relative humidity**: 0..100%

Compliance

The sensor meets „WMO First Class“ (WMO = World Meteorological Organisation).