Global Radiation Sensor CM3

Description

Rugged pyranometer 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 electronical transducer converts the raw signal into a voltage linearly dependent on incident solar power.

The sensor meets „WMO Second Class“.

Technical Data

Sensor
- Sensing element: Thermocouples
- Transducer: Electronical transducer with voltage output
- Output signal: 0..1400 W/m² = 0..5 V
- Output load: > 10 kOhm
- Spectral response: 300..2800 nm
- Viewing angle: 2 PI steradian

Accuracy
- Non-linearity: 0..1000 W/m² ± 2.5 %

Power Supply
- Supply voltage: 9..18 VDC
- Current consumption: Approx. 10 mA

Casing
- Material: Aluminium
- Dome: Simple glass dome
- Protection class: IP 65
- Weight: Approx. 1 kg
- Mounting: 2 holes for fixing screws
**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 Second Class“ (WMO = World Meteorological Organisation).