

SOLAR RADIATION SENSOR

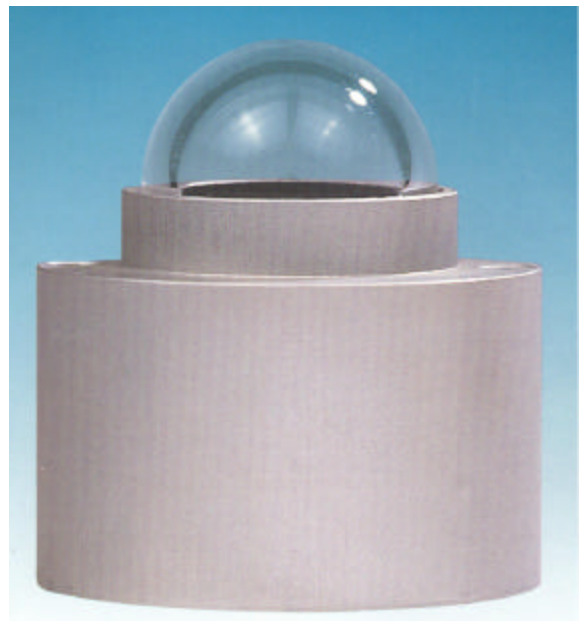
FEATURES:

- **ISO and WMO Compliance**
- **Good Cosine/Directional Response**
- **Excellent Long-Term Stability**
- **Good Linearity Performance**
- **Fast Response**
- **Moderate Cost**

The P/N 102318 Pyranometer is a thermopile-type sensor that meets WMO, ISO-9060, the EPA's SRDT specifications. The pyranometer measures global (direct and diffuse) solar radiation. Its directional response, spectral selectivity, and built-in temperature compensation, assure accurate and reliable measurement under normal environmental conditions.

The P/N 102318 pyranometer is rugged and weatherproof. With an airtight aluminum housing, it does not require a desiccant drying cartridge, lowering maintenance. The sensor is housed under a K-5 optical glass dome and has a flat spectral sensitivity (from 0.3 to 3.0 μm). The solar radiation sensor is designed to output a millivolt signal that is directly proportional to the incoming solar irradiance.

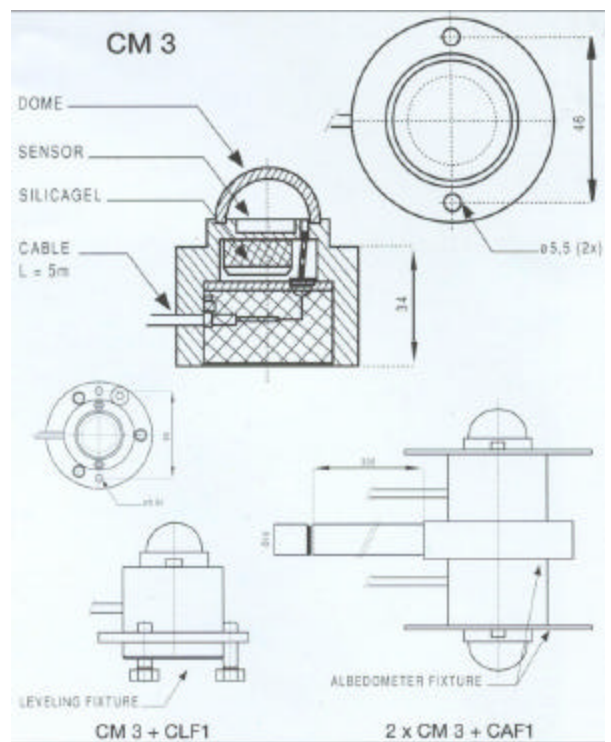
The sensor is provided with a mounting fixture which includes a built-in bubble level, a 5 meter cable, instruction manual, and a certificate of calibration.



SPECIFICATIONS

Response time (95%)	18 sec
Zero-offset due to thermal radiation	$\pm 15 \text{ W/m}^2$ at 200 W/m^2
Zero-offset due to temperature changes	$\pm 4 \text{ W/m}^2$ at 5°K/h temperature change
Non-stability (change per year)	$\pm 1\%$
Non-linearity (1000 W/m^2)	$\pm 2.5\%$
Directional Error (1000 W/m^2) (cosine response)	$\pm 25 \text{ W/m}^2$
Temperature dependence of sensitivity	$\pm 6\%$ (-10° to $+40^\circ\text{C}$)
Tilt Response (1000 W/m^2)*	$\pm 2.0\%$
Sensitivity	$10\text{-}35 \mu\text{V/Wm}^{-2}$
Impedance	100-200 ohm
Level Accuracy	$\pm 1^\circ$
Operating temperature	-40° to $+80^\circ\text{C}$
Cable length	10 m
Spectral range (50% points)	305-2800 nm
Signal Output	0 – 50 mV
Maximum irradiance	2000 W/m^2
ISO Class	Second class
Weight	343 gm

* Tilt response applies only when the sensor is out of the horizontal plane.



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