

CMP3

Solar Radiation Sensor



The CMP3* is an ISO second-class pyranometer that measures solar radiation with a high-quality blackened thermopile protected by a dome. The blackened thermopile provides a flat spectral response for the full solar spectrum range, which allows the CMP3 to be used under plant canopies or lamps, when the sky is cloudy, and for reflected radiation measurements.

The CMP3 produces a millivolt signal that is measured directly by a Campbell Scientific datalogger. Please note that the CMP3 is not compatible with our CR200(X)-series dataloggers.

Mounting

The CMP3 includes a bubble level and three adjusting leveling screws, which allows the sensor to be leveled without using a leveling base. The CM225 Solar Sensor Mounting Stand is used to attach the sensor to a mast, crossarm, or pole (1.0-in. to 2.1-in. outer diameter). The CM225 consists of rectangular plate, mounting bracket, U-bolts, lock washers, and nuts.

Ordering Information

Solar Radiation Sensor

CMP3-L Kipp and Zonen pyranometer with user-specified cable length. Enter cable length, in feet, after the -L. Must choose a cable termination option (see below).

Cable Termination Options (choose one)

- PT** Cable terminates in stripped and tinned leads for direct connection to a datalogger's terminals.
- PW** Cable terminates in a connector for attachment to a prewired enclosure.
- CWS** Cable terminates in a connector for attachment to a CWS900-series interface. Connection to a CWS900-series interface allows this sensor to be used in a wireless sensor network.

Mount

CM225 Solar Sensor Mounting Stand for attaching the sensor to a tripod or tower mast or to a CM202, CM204, or CM206 crossarm.



The CMP3 includes a white snap-on sun shield that reduces the sensor's temperature.

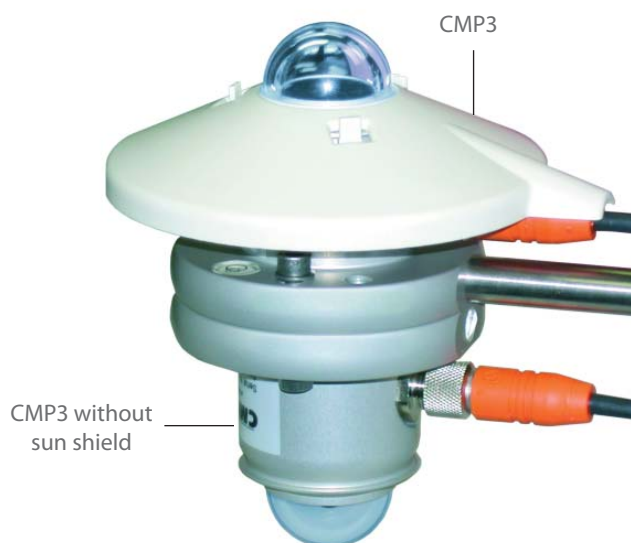


To attach the CM225 to a CM202, CM204, or CM206 crossarm, place the U-bolt in the holes on the bottom of the bracket (shown). If the CM225 is attached to a mast, place the U-bolt in the holes in the side of the bracket.

**The CMP3 is manufactured by Kipp and Zonen, and then cabled by Campbell Scientific. Prior to December 2008, the CMP3 included Kipp and Zonen's 10-m cable. Because the CMP3 is a second-class pyranometer, it is acceptable for providing the solar radiation data used in stability estimations (EPA Meteorological Monitoring Guidance for Regulatory Modeling Applications, pages 2-10).*

Specifications

Light Spectrum Waveband:	310 to 2800 nm
Maximum Irradiance:	2000 W m ⁻²
Sensitivity:	5 to 20 $\mu\text{V W}^{-1} \text{ m}^2$
Operating Temperature:	-40° to +80°C
Temperature Dependence:	$\pm 5\%$ (-10° to +40°C)
Non-linearity (0 to 1000 W m⁻²):	< $\pm 2.5\%$
Tilt Response ($\pm 80^\circ$):	< $\pm 2\%$ at 1000 W m ⁻²
Dimensions	
Width:	3.1 in. (7.9 cm)
Height:	2.6 in. (6.7 cm)
Dome Diameter:	1.3 in. (3.2 cm)
Weight (w/10 m cable):	1.2 lb (600 g)
ISO Classification:	Second Class



Two CMP3 pyranometers can be mounted back-to-back to make a low cost albedometer. Contact Campbell Scientific for more information.

