

CMP 22



CMP 22 is our highest quality pyranometer and it easily exceeds the requirements for an ISO Secondary Standard instrument. It has all the features of CMP 21 but uses very high quality quartz domes for a wider spectral range, improved directional response, and reduced thermal offsets. Because of the high optical quality of these domes the directional error is reduced below 0.5 % at 80° solar zenith angle.

A standard 10 kΩ thermistor sensor is fitted to monitor the housing temperature; a Pt-100 thermocouple sensor is optional. Each instrument is supplied with its own temperature and directional (cosine) response data. Kipp & Zonen is confident that CMP 22 is the best pyranometer currently available.

Specifications	
ISO CLASSIFICATION	Secondary Standard
Response time (95 %)	< 5 s
Zero offsets	
(a) thermal radiation (200 W/m ²)	< 3 W/m ²
(b) temperature change (5 K/hr)	< 1 W/m ²
Non-stability (change/year)	< 0.5 %
Non-linearity (0 to 1000 W/m ²)	< 0.2 %
Directional error (at 80 ° with 1000 W/m ² beam)	< 5 W/m ²
Temperature dependence of sensitivity	< 0.5 % (-20 °C to +50 °C)
Tilt error (at 1000 W/m ²)	< 0.2 %
Other specifications	
Sensitivity	7 to 14 µV/W/m ²
Impedance	10 to 100 Ω
Level accuracy	0.1 °
Operating temperature	-40 °C to +80 °C
Spectral range (50 % points)	200 to 3600 nm
Typical signal output for atmospheric applications	0 to 15 mV
Maximum irradiance	4000 W/m ²
Temperature sensor	10 K Thermistor (optional Pt-100)

Article	Part number
CMP 22 Pyranometer • 10 K • 10 m cable	0362930-012
Options for CMP 22	
CMP 22 Pyranometer • 10 K • 25 m cable	0362930-014
CMP 22 Pyranometer • 10 K • 50 m cable	0362930-015
CMP 22 Pyranometer • 10 K • plug only, no cable	0362930-018
CMP 22 Pyranometer • Pt-100 • 10 m cable	0362930-022
CMP 22 Pyranometer • Pt-100 • 25 m cable	0362930-024
CMP 22 Pyranometer • Pt-100 • 50 m cable	0362930-025
CMP 22 Pyranometer • Pt-100 • plug only, no cable	0362930-028
CMP 22 Pyranometer • AMPBOX • 10 K • 10 m cable	0362930-812
CMP 22 Pyranometer • AMPBOX • 10 K • 25 m cable	0362930-814
CMP 22 Pyranometer • AMPBOX • 10 K • 50 m cable	0362930-815
CMP 22 Pyranometer • AMPBOX • 10 K • plug only, no cable	0362930-818
CMP 22 Pyranometer • AMPBOX • Pt-100 • 10 m cable	0362930-822
CMP 22 Pyranometer • AMPBOX • Pt-100 • 25 m cable	0362930-824
CMP 22 Pyranometer • AMPBOX • Pt-100 • 50 m cable	0362930-825
CMP 22 Pyranometer • AMPBOX • Pt-100 • plug only, no cable	0362930-828
100 m cable	On request
<i>Note: AMPBOX is adjusted so that 4 - 20 mA output = 0 - 1600 W/m²</i>	

CMP 22 Albedometer	
CMP 22 Scientific Secondary Standard Albedometer	
A Secondary Standard Albedometer can be self-assembled by ordering: 2x CMP 22 Pyranometer + 1x CMF 1 or CMF 2 Mounting Fixture + 1x Glare Screen Kit	
<i>Note: CMP 22 Albedometer can be used with the AMPBOX but it has two individual outputs, so 2x AMPBOX are required.</i>	
<i>Each AMPBOX is adjusted so that 4-20 mA output = 0-1600 W/m²</i>	
<i>Note: Glare Screen Kit cannot be fitted when CVF 3 Ventilation Unit is used</i>	

Accessories for CMP 22	Part number
Desiccant Refill Pack , minimum order 10 packs	2643951
Extended Temperature Test for CMP 22 Temperature dependence from -40 °C to +50 °C in 10 steps of 10 °C	0999920-3
CVF 3 Ventilation Unit Recommended to reduce offsets and frequency of dome cleaning	See accessories
CMF 1 Mounting Fixture For 1 or 2 unventilated radiometers (1 upper / 1 lower) Diameter 88 mm. Mounting rod 350 mm long x 16 mm Ø	0362700
CMF 2 Mounting Fixture For 1 or 2 ventilated or unventilated radiometers (1 upper / 1 lower) Diameter 220 mm. Mounting rod 350 mm long x 16 mm Ø	0362701
CMB 1 Mounting Bracket In combination with mounting rod for easy attachment to a pole or a wall	0369701
CM 121B Shadow Ring for unventilated radiometers Manually adjusted device provides diffuse sky irradiance measurement <i>Note: CM 121B can not be used with CVF 3 ventilation unit</i>	0346900
CM 121C Shadow Ring for ventilated radiometers Manually adjusted device provides diffuse sky irradiance measurement Mounts the radiometer at the correct height when used with a CVF 3 <i>Note: AMPBOX is adjusted so that 4 - 20 mA output = 0 - 1600 W/m²</i>	0346901
Glare Screen Kit Sun protection screen for downward facing radiometers with fixings	0305722
METEON + CMP 22 Pyranometer • 10 m cable	0362930-712