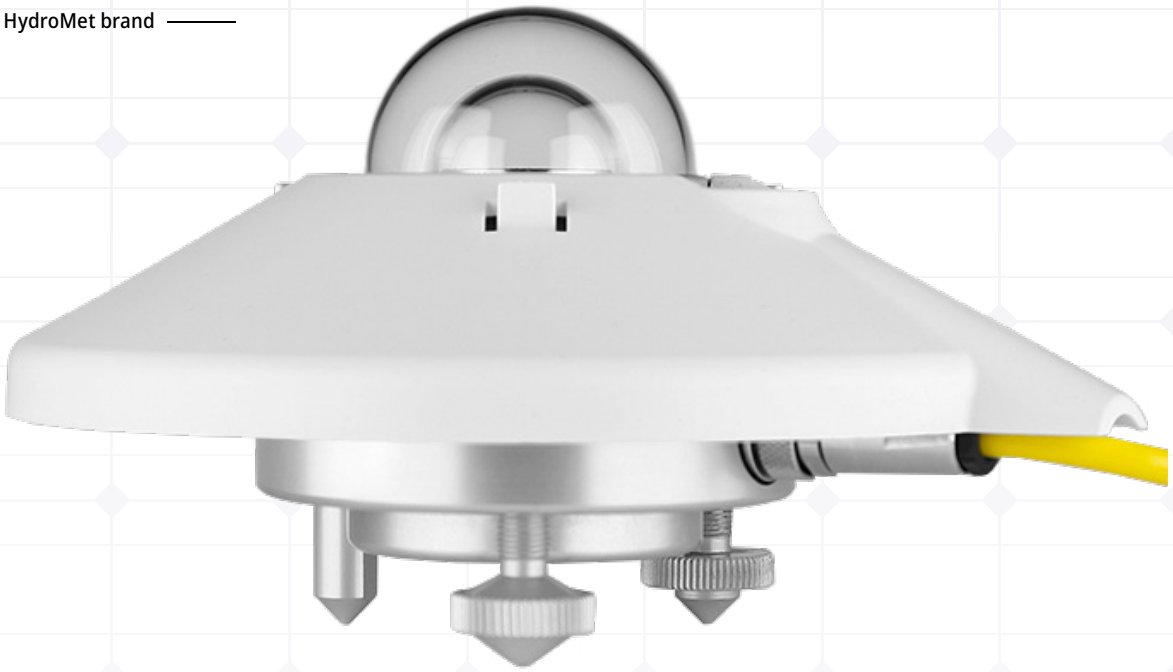
KIPP & ZONEN
an OTT HydroMet brand

CMP10x | CMP22



The CMP10x and CMP22

Best-in-Class Analog Pyranometers

- Spectrally flat ISO 9060:2018 Class A
- Trusted quality and accuracy
- Unmatched spectral range
- 5-year warranty

1 ISO 9060 & IEC 61724 Compliance

Fully compliant with ISO 9060:2018 spectrally flat Class A specifications, the CMP10x and CMP22 provide solar irradiance measurements with high accuracy and unmatched reliability. The CMP22, with its high-quality quartz dome provides a wider spectral range and makes it the most accurate analog pyranometer and sensor of choice for renowned research institutes around the world.

2 Minimal Maintenance

With a removable drying cartridge filled with easy-to-replace desiccant supplied in refill packets, the CMP22 allows for detailed desiccant monitoring, ensuring long-term sensor stability. The CMP10x has a maintenance-free internal desiccant that lasts for at least 10 years. Now you can meet the high-accuracy requirements of PV monitoring and scientific research, with minimal maintenance.

3 Analog Outputs

The CMP10x and CMP22 do not require power inputs. Incoming solar radiation generates a continuous millivolt output, which is converted to irradiance value in W/m^2 using the calibrated sensitivity. When a higher voltage output or a 4-20 mA signal is required, the AMPBOX can be used with any CMP model. The CMP10x and CMP22 have an internal thermistor to monitor their housing temperature.

4 Calibration and Service Warranty

Kipp & Zonen pyranometers automatically come with a 5-year performance warranty. With ISO and IEC accredited calibration labs, your pyranometers come with support from service technicians and access to global calibration labs that follow IEC, ISO, and ASTM standards.

Technical Specifications

Instrument Accuracy

	CMP10x	CMP22
Classification to ISO 9060:2018	Spectrally Flat Class A	Spectrally Flat Class A
Sensitivity	7 to 16 µV/W/m²	7 to 14 µV/W/m²
Impedance	10 to 100 Ω	10 to 100 Ω
Expected output range (0 to 1500 W/m²)	0 to 24 mV	0 to 21 mV
Response time (63 %)	< 1.67 s	< 1.66 s
Response time (95 %)	< 5 s	< 5 s
Spectral range (20 % points)	270 to 3000 nm	200 to 3600 nm
Spectral range (50 % points)	285 to 2800 nm	200 to 3600 nm
Zero offsets (unventilated)	-	-
(a) thermal radiation (at 200 W/m²)	< ±7 W/m²	< ±5W/m²
(b) temperature change (5 K/h)	< ±2 W/m²	< ±1 W/m²
(c) total zero offset	< ±9 W/m²	< ±7 W/m²
Non-stability	< ±0.5 % (per 5 years)	< ±0.5 % (per year)
Non-linearity (100 to 1000 W/m²)	< ±0.2 %	<± 0.2 %
Directional response (up to 80° with 1000 W/m² beam)	<± 10 W/m²	<± 5 W/m²
Spectral selectivity (350 to 1500 nm)	<± 3 %	<± 3 %
Tilt response (0° to 180° at 1000 W/m²)	<± 0.2 %	<± 0.2 %
Spectral Error	<0.1%	<0.05%
Temperature response	<± 1 % (-20°C to +50°C)	<± 0.5 % (-20°C to +50°C)
Field of view	180°	180°
Accuracy of bubble level	± 0.1°	± 0.1°
Detector type	Thermopile	Thermopile
Operating temperature range	-40 °C to +80 °C	-40 °C to +80 °C
Storage temperature range	-40 °C to +80 °C	-40 °C to +80 °C
Humidity range	0 to 100%	0 to 100%
MTBF (Mean Time Between Failures)	> 10 years	> 10 years
Desiccant Lifespan	> 10 years	-
Ingress Protection (IP) rating	IP67	IP67
Recommended applications	Scientific research requiring the highest level of measurement accuracy and reliability under all conditions.	

Dimensions	CMP10x	CMP22
Diameter x height	150 x 92.5 mm	150 x 92.5 mm
Diffusor height	68 mm	68 mm
Cable length	10, 25, 50, or 100 m	10, 25, 50, or 100 m

Note: The performance specifications quoted are worst-case and/or maximum values