CMP3 | SMP3

Applications

Solar Monitoring for PV
Weather Services
Agriculture
Horticulture
Industry

Pyranometer

For reliable entry-level measurement of solar irradiance

IEC61724 Class C
ISO 9060 Spectrally Flat Class C
Internal desiccant
Analog and digital outputs
5 year warranty

ISO 9060 & IEC 61724 Class C

If you are looking for reliable solar radiation measurement to comply with ISO 9060 Spectrally Flat Class C and IEC 61724-1 Class C the CMP3 or SMP3 are the right pyranometers to choose. They are compact, light and provide reliable and good quality data in a wide range of operational environments. SMP3 is ideal for efficiency monitoring in small commercial PV installations.

Internal desiccant

Both models are fitted with a maintenance-free internal drying cartridge to provide stable measurements and have an IP67 ingress protection rating. The pyranometers feature a snap-on white sun shield, integrated leveling and a high quality connector which is supplied pre-wired with 10 m of signal cable for simple installation.

Analog or digital outputs

CMP3 does not require any power. Incoming solar radiation generates a continuous millivolt output, which is converted in a data logger to irradiance in W/m^2 using the calibrated sensitivity. For easy integration into SCADA systems SMP3 has Modbus® RTU RS-485 serial communication, plus an amplified analog output. The sensitivity is stored inside for standardized outputs and it features improved response time and digital temperature compensation.

5 Year Warranty

All pyranometers from Kipp & Zonen come with a 5 year warranty and we have service and calibration centers around the world.

KIPP & ZONEN

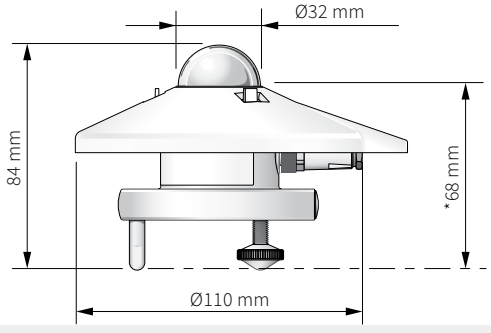
an OTT HydroMet brand

Technical Specifications

	CMP3	SMP3
Classification to ISO 9060:2018	Spectrally Flat Class C	Spectrally Flat Class C
Sensitivity	10 to 32 µV/W/m²	-
Impedance	20 to 200 Ω	-
Expected output range (0 to 1500 W/m²)	0 to 55 mV	-
Maximum operational irradiance	2000 W/m²	2000 W/m²
Analogue output • V-version	-	0 to 1 V
Analogue output range*	-	-200 to 2000 W/m²
Analogue output • A-version	-	4 to 20 mA
Analogue output range*	-	0 to 1600 W/m²
Serial output	-	RS-485 Modbus® RTU
Serial output range	-	-400 to 2000 W/m²
Response time (63 %)	< 6 s	< 1,5 s
Response time (95 %)	< 20 s	< 12 s
Spectral range (20 % points)	285 to 3000 nm	285 to 3000 nm
Spectral range (50 % points)	300 to 2800 nm	300 to 2800 nm
Zero offsets (unventilated)		
(a) thermal radiation (at 200 W/m²)	< 15 W/m²	< 15 W/m²
(b) temperature change (5 K/h)	< 5 W/m²	< 5 W/m²
(c) total zero offset	< 20 W/m²	< 20 W/m²
Additional signal processing errors	n.a.	< 3 %
Non-stability (change/year)	< 1 %	< 1 %
Non-linearity (100 to 1000 W/m²)	< 2 %	< 2 %
Directional response (up to 80 ° with 1000 W/m² beam)	< 20 W/m²	< 20 W/m²
Clear sky GHI spectral error	< 0.2 %	< 0.2 %
Spectral selectivity (350 to 1500 nm)	< 3 %	< 3 %
Tilt response (0 ° to 90 ° at 1000 W/m²)	< 1.5 %	< 1.5 %
Temperature response	< 4 % (-10 °C to +40 °C)	< 3 % (-20 °C to +50 °C) < 4 % (-40 °C to +70 °C)
Field of view	180 °	180 °
Accuracy of bubble level	< 0.2 °	< 0.2 °
Power consumption (at 12 VDC)	-	V-version: 55 mW A-version: 100 mW
Supply voltage	-	5 to 30 VDC
Software, Windows™	-	SmartExplorer Software, for configuration, test and data logging
Detector type	Thermopile	Thermopile
Operating and 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**
Ingress Protection (IP) rating	67	67
Recommended applications	Economical solution for routine measurements in weather stations, field testing, agriculture, horticulture and hydrology	Economical solution for efficiency and maintenance monitoring of PV power installations, routine measurements in weather stations

** adjustable with SmartExplorer Software ** extrapolated after introduction in January 2012*
Note: The performance specifications quoted are worst-case and/or maximum values

Dimensions



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