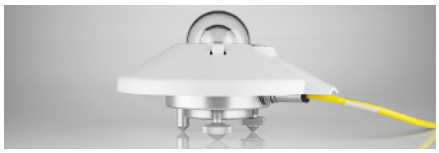
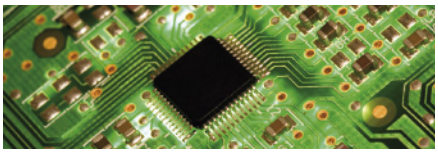
KIPP & ZONEN
SINCE 1830

The New SMP10 Pyranometer

the smartest way to measure solar radiation

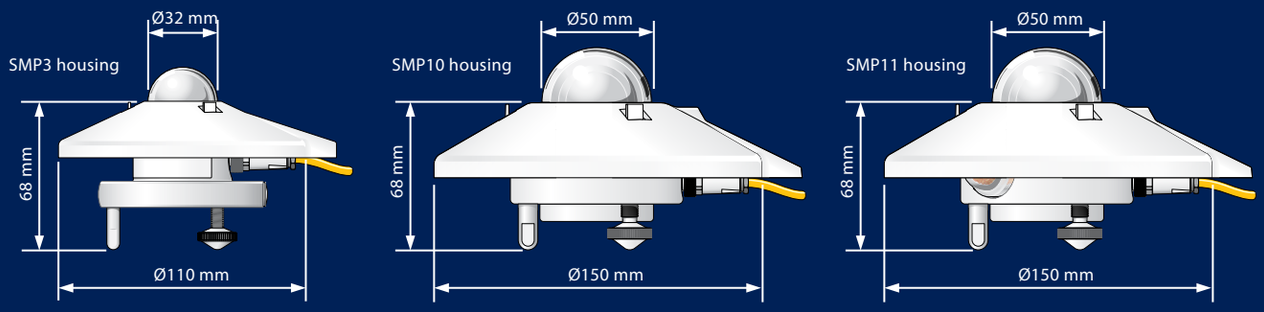




ISO 9060 Secondary Standard pyranometer
No change of desiccant for 10 years
Smart, more than just digital
RS-485 Modbus® communication

A perfect combination of two of our recent successful launches combined in one instrument; a low maintenance pyranometer with smart digital signal processing. Now with all-new Smart Sensor Explorer software that allows for set-up with RS-485 to USB or TCP/IP converters and data logging to a computer.

www.kippzonen.com



Specifications	SMP3	SMP10 & SMP11
Classification to ISO 9060:1990	Second Class	Secondary Standard
Spectral range (50% points)	300 to 2800 nm	285 to 2800 nm
Analogue output • V-version Analogue output range	0 to 1 V -200 to 2000 W/m²	0 to 1 V -200 to 2000 W/m²
Analogue output • V-version Analogue output range	4 to 20 mA 0 to 1600 W/m²	4 to 20 mA 0 to 1600 W/m²
Serial output	RS-485 Modbus®	RS-485 Modbus®
Serial output range	-400 to 2000 W/m²	-400 to 4000 W/m²
Response time (63%) Response time (95%)	< 1.5 s < 12 s	< 0.7 s < 2 s
Zero offsets (a) thermal radiation (at 200 W/m²) (b) temperature change (5 K/h)	 < 15 W/m² < 5 W/m²	 < 7 W/m² < 2 W/m²
Non-stability (change/year)	< 1%	< 0.5%
Non-linearity (100 to 1000 W/m²)	< 1.5%	< 0.2%
Directional response (up to 80° with 1000 W/m² beam)	< 20 W/m²	< 10 W/m²
Spectral selectivity (350 to 1500 nm)	< 3%	< 3%
Temperature response	< 3% (-20°C to +50°C) < 5% (-40°C to +70°C)	< 1% (-20°C to +50°C) < 2% (-40°C to +70°C)
Tilt response (0° to 90° at 1000 W/m²)	< 1%	< 0.2%
Field of view	180°	180°
Accuracy of bubble level	< 0.2°	< 0.1°
Supply voltage	5 to 30 VDC	5 to 30 VDC
Power consumption (at 12 VDC)	-V version: 55 mW -A version: 100 mW	-V version: 55 mW -A version: 100 mW
Detector type	Thermopile	Thermopile
Software, Windows™	Smart Sensor Explorer Software, for configuration, test and data logging	Smart Sensor Explorer Software, for configuration, test and data logging
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% non-condensing	0 to 100% non-condensing
Ingress Protection (IP) rating	67	67
Recommended applications	Economical solution for efficiency and maintenance monitoring of PV power installations, routine measurements in weather stations, agriculture, horticulture and hydrology	High performance for PV panel and thermal collector testing, solar energy research, solar prospecting, materials testing, advanced meteorology and climate networks

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

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Go to www.kippzonen.com for your local distributor

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SMP10-V1410