



MS-80SH

Class A Spectrally Flat and Fast-Response Pyranometer with Integrated Dome Heater



Overview

The MS-80SH, manufactured by EKO Instruments, is an innovative, next-generation ISO 9060 Class A spectrally flat and fast-response (secondary standard) pyranometer. The pyranometer features a compact design with internal desiccation, a single dome over a quartz diffusor, a thermally isolated thermopile detector, negligible thermal offsets, ultra-low temperature dependency, and exceptional non-linearity

characteristics. The MS-80SH has a five-year warranty and recalibration interval.

EKO instruments is the longest-operating ISO 17025-accredited pyranometer manufacturer in the world. This allows for the highest-quality calibration and for Campbell Scientific to comply with international standards (ISO/IEC 17025 for ISO 9847).

Benefits and Features

- › ISO 9060 Class A spectrally flat with fast response (secondary standard)
- › Integrated dome heater for dew and frost mitigation as per IEC 61724-1:2021 Class A monitoring requirements
- › Ability to be combined with MV-01 external heater and ventilator in more harsh conditions
- › Industry-leading stability
- › ISO 17025-certified calibration
- › Five-year warranty and recalibration interval

Specifications

Sensor	Internal desiccation, single-dome, isolated thermopile detector, quartz diffusor	ISO Classification	› ISO 9060 Class A spectrally flat and fast-response pyranometer (secondary standard) › ISO 17025 Class A pyranometer
Measurement Description	Monitors solar radiation for the full solar spectrum range	Output	Modbus RTU over RS-485 (digital)
		Sensitivity	~10 $\mu\text{V}/\text{W}/\text{m}^2$

Response Time	< 1 s (95%)
Zero Offset A	< 1 W/m ² (response to 200 W/m ² net thermal radiation)
Zero Offset B	±1 W/m ² (response to 5 K/h change in ambient temperature)
Non-Stability	±0.5% change per 5 years
Non-Linearity	±0.2% (at 1000 W/m ²)
Directional Response	±10 W/m ² (at 1000 W/m ²)

Spectral Selectivity	±3% (0.35 to 1.5 μm)
Temperature Response	› < 0.8% (-10° to +40°C) › < 1% (-20° to +50°C)
Tilt Response	< ±0.2% (0 to 90° at 1000 W/m ²)
Operating Temperature Range	-40° to +80°C
Irradiance Range	0 to 4000 W/m ²
Spectral Range	285 to 3000 nm
Ingress Protection	IP67

For comprehensive details, visit: www.campbellsci.cc/ms-80sh 