



Overview

The MS-80, manufactured by EKO Instruments, is an innovative, next-generation ISO 9060 Class A spectrally flat and fast-response (secondary standard) pyranometer inspired by the combination of latest technologies and state-of-the-art thermopile sensor with an unprecedented low zero-offset behavior; fast sensor response; and a five-year warranty and recalibration interval.

The MS-80 features a compact design with internal desiccation, single dome, isolated thermopile detector, quartz diffusor, immunity to offsets, ultra-low temperature dependency, and exceptional non-linearity characteristics. EKO instruments is the only ISO 17025 accredited pyranometer manufacturer in the world, enabling highest-quality calibration, compliant to international standards (ISO/IEC 17025/9847).

For a similar pyranometer with RS-485 Modbus communication, refer to the [MS-80M](#).

Benefits and Features

- › ISO 9060 Class A spectrally flat and fast-response (secondary standard)
- › Exceptional stability, offset immunity, temperature dependency, and non-linearity
- › ISO 17025 certified calibration
- › Five-year warranty and recalibration interval

Specifications

Sensor	Internal desiccation, single-dome, isolated thermopile detector, quartz diffusor	› ISO 9060 Class A spectrally flat and fast-response pyranometer (secondary standard)	
Measurement Description	Monitors solar radiation for the full solar spectrum range	Output	
ISO Classification	› ISO 17025 Class A pyranometer	Output	Analog (mV)
		Sensitivity	~10 $\mu\text{V}/\text{W}/\text{m}^2$
		Impedance	< 45000 Ω
		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	> < 1% (-20° to +50°C) > < 0.8% (-10° to +40°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.eu/ms-80-l 



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