



## Overview

The MS-80M, 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; Modbus RTU 485 output; and a five-year warranty and recalibration interval.

The MS-80M 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).

## 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

ISO Classification	Secondary standard pyranometer (ISO 9060)	Directional Response	$\pm 10 \text{ W/m}^2$ (at $1000 \text{ W/m}^2$ )
Output	Digital (Modbus RTU)	Spectral Selectivity	$\pm 3\%$ (0.35 to $1.5 \mu\text{m}$ )
Response Time	$< 1 \text{ s}$ (95%)	Temperature Response	$> < 0.5\%$ ( $-20^\circ$ to $+50^\circ\text{C}$ ) $> < 0.4\%$ ( $-10^\circ$ to $+40^\circ\text{C}$ )
Zero Offset A	$< 1 \text{ W/m}^2$ (response to $200 \text{ W/m}^2$ net thermal radiation)	Tilt Response	$< \pm 0.2\%$ (0 to $90^\circ$ at $1000 \text{ W/m}^2$ )
Zero Offset B	$\pm 1 \text{ W/m}^2$ (response to $5 \text{ K/h}$ change in ambient temperature)	Operating Temperature Range	$-40^\circ$ to $+80^\circ\text{C}$
Non-Stability	$\pm 0.5\%$ change per 5 years	Irradiance Range	0 to $4000 \text{ W/m}^2$
Non-Linearity	$\pm 0.2\%$ (at $1000 \text{ W/m}^2$ )	Wavelength Range	285 to $3000 \text{ nm}$
		Power Supply	12 to $24 \text{ Vdc}$



Power Consumption 0.2 to 0.3 W

Ingress Protection

IP67



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