MS-80M Pyranometer

Technical Specifications

ISO 9060:2018 Class A (Secondary standard)

Sub-category "Spectrally flat"

Quartz diffusor technology

ISO 17025 certified calibration

5 years warranty and recommended recalibration

MS-80M is a "Spectrally flat" ISO 9060:2018 Class A pyranometer. The innovative patented design was inspired by the combination of latest technologies and state-of-the-art thermopile sensor, enabling a breakthrough in unprecedented low zero-offset behaviour and fast sensor response.

The compact sensor with single dome, based on a isolated thermopile detector and Quartz diffusor is immune to offsets and integrates all optional value added functions such as a ventilator, heater and different industrial interfaces. The heater and ventilator are recommended, particularly over areas impacted by dew, frost, snow, and dust.

The MS-80M is a MS-80 with built in MODBUS RTU 485 converter, which is compatible to the industrial output standards. Due to the ultra-low temperature dependency and exceptional non-linearity characteristics, the converter guarantees an optimal sensor performance, under any environmental conditions.

The MS-80 pyranometers are manufactured in a consistent way followed by strict quality inspection and performance evaluation. For each sensor the directional response and temperature dependency are measured and validated through a measurement report that comes with the sensor. EKO provides a unique calibration compliant to the international standards defined by ISO/IEC17025/9847.

The sensor has 5 years warranty, 5 years recommended re-calibration interval and no longer the requirement for the desiccant to be changed.

	MS-80M
ISO 9060:2018	Class A
ISO 9060:1990	(Secondary Standard)
Sub-category "Spectrally flat"	Compliant
Sub-category "Fast response"	Not compliant
Output	Digital (Modbus RTU)
Response time 95%	< 1 Sec.
Zero off-set a) 200W/m²	+/- 1 W/m²
Zero off-set b) 5K/hr	+/- 1 W/m²
Complete zero off-set c)	+/- 2 W/m²
Non-stability change/1 year	-
Non-stability change/5 years	+/- 0.5 %
Non-linearity at 1000W/m²	+/- 0.2 %
Directional response at 1000W/m²	+/- 10 W/m²
Spectral error	+/- 0.1 %
Temperature response -10°C to 40°C	+/- 0.5 %
Temperature response -20°C to 50°C	+/- 0.5 %
Tilt response at 1000W/m²	+/- 0.2 %
Operating temperature range	-40 - 80 °C
Irradiance range	0 - 4000 W/m²
Wavelength range	285 - 3000 nm
Power supply	12 - 24 VDC
Power consumption	0.2 - 0.3 W
Ingress protection IP	67

Cable length	10 m
Additional signal processing errors	+/- 1.5 W/m²

Options	**MS-80M**
Cable length	20 / 30 / 50 m
Ventilation unit	MV-01
Albedo mounting kit	MS-albedo Kit

Specifications are subject to change without further notice.