

MS-80 Pyranometer

MS-80 Pyranometer

EKO's new generation sensors broke with the rules of traditional pyranometer architecture. 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 is immune to offsets and integrates all value added functions such as a ventilator, heater and different industrial interfaces. The MS-80A is an MS-80 with built in 4-20mA converter and MS-80M with built in MODBUS converter are 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 year warranty, 5 years recommended re-calibration interval and no longer need to change the dessicant.

Features

- ISO 9060
- Fastest Detector Response
- Lowest Temperature Coefficient
- Lowest Offsets A And B
- Industrial Sensor Outputs
- 5 Year Warranty and Recommended Recalibration



MS-80 Pyranometer

Specifications (typical)	MS-80	MS-80A	MS-80M
Output	mV	4-20mA	MODBUS
ISO 9060 classification	Secondary Standard	Secondary Standard	Secondary Standard
Response time 95% (sec)	< 0.5	< 1.5	< 1
Zero offset - Thermal radiation (200W/m ²)	< 1 W/m ²	< 1 W/m ²	< 1 W/m ²
Zero offset - Temperature change (5K/hr)	+/- 1 W/m ²	+/- 1 W/m ²	+/- 1 W/m ²
Non-stability (change/5 years)	+/- 0.5%	+/- 0.5%	+/- 0.5%
Non-linearity (at 1000W/m ²)	+/- 0.2%	+/- 0.2%	+/- 0.2%
Directional response (at 1000W/m ²)	< 10 W/m ²	< 10 W/m ²	< 10 W/m ²
Spectral selectivity (0.35-1.5μm)	+/- 3%	+/- 3%	+/- 3%
Temp. response (for 70°C band)	< 1%	< 0.4%	< 0.4%
Tilt response (at 1000W/m ²)	+/- 0.2%	+/- 0.2%	+/- 0.2%
Sensitivity (μV/W/m ²)	Approx. 10	1mA / 100 W/m ²	-
Impedance (Ω)	Approx. 45kΩ	-	-
Operating temperature range (°C)	-40 to +80	-40 to +80	-40 to +80
Irradiance range (W/m ²)	0 - 4000	0 - 4000	0 - 4000
Cable length	10m	10m	10m
Wavelength range in nm	285 to 3000	285 to 3000	285 to 3000