



## MS-80 Pyranometer

### Technical Specifications

ISO 9060 Secondary standard

Fastest detector response

Quartz diffusor technology

ISO 17025 certified calibration

5 years warranty and recommended recalibration

EKO's new generation sensors broke 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 behavior and fast sensor response.

The compact sensor with a single dome, based on an 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 suggested, particularly in areas impacted by dew, frost, snow, and dust.

The MS-80A is an MS-80 with a built-in 4-20mA converter and MS-80M with built-in MODBUS converter. They are compatible with 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 a 5 years warranty, 5 years recommended re-calibration interval and no longer the requirement for the desiccant to be changed.

	<b>MS-80</b>
<b>ISO 9060 classification</b>	Secondary Standard
<b>Output</b>	Analog (mV)
<b>Response time 95%</b>	< 0.5 Sec.
<b>Zero Offset A 200W/m<sup>2</sup></b>	< 1 W/m <sup>2</sup>
<b>Zero Offset B 5K/hr</b>	+/- 1 W/m <sup>2</sup>
<b>Non-stability change/1 year</b>	-
<b>Non-stability change/5 years</b>	+/- 0.5 %
<b>Non-linearity at 1000W/m<sup>2</sup></b>	+/- 0.2 %
<b>Directional response at 1000W/m<sup>2</sup></b>	< 10 W/m <sup>2</sup>
<b>Spectral selectivity 0.35-1.5µm</b>	+/- 3 %
<b>Temperature response -10°C to 40°C</b>	< 0.8 %
<b>Temperature response -20°C to 50°C</b>	< 1 %
<b>Tilt response at 1000W/m<sup>2</sup></b>	+/- 0.2 %
<b>Sensitivity</b>	Approx. 10 µV/W/m <sup>2</sup>
<b>Impedance</b>	< 45000 Ω
<b>Operating temperature range</b>	-40 - 80 °C
<b>Irradiance range</b>	0 - 4000 W/m <sup>2</sup>
<b>Wavelength range</b>	285 - 3000 nm
<b>Ingress protection IP</b>	67
<b>Cable length</b>	10 m

Options	MS-80
Cable length	20 / 30 / 50 m
Ventilation unit	MV-01

Specifications are subject to change without further notice.