MS-80A 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 behaviour 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 recommended, particularly over areas impacted by dew, frost, snow, and dust.

The MS-80A is a MS-80 with built in 4-20mA converter, which is compatible to 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.

	MS-80A
ISO 9060 classification	Secondary Standard
Output	Digital (4-20mA)
Response time 95%	< 1.5 Sec.
Zero Offset A 200W/m²	< 1 W/m²
Zero Offset B 5K/hr	+/- 1 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 selectivity 0.35-1.5µm	+/- 3 %
Temperature response -10°C to 40°C	< 0.4 %
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	0.08 - 0.5 W
Ingress protection IP	67
Cable length	10 m

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

Specifications are subject to change without further notice.