



MS-60S Pyranometer

Technical Specifications

ISO 9060:2018 Class B (First class)

Sub-category "Spectrally flat"

ISO 17025 certified calibration

5 years warranty and recommended recalibration

Smart interface: Modbus 485 RTU, SDI-12, 4-20mA, 0-1V (100Ω)

The MS-60S is an ISO 9060:2018 Class B with smart sensor technology and onboard diagnostic functions now standard for all smart sensors. Preserve the high accuracy of the sensor while complying with the various output standards used in the industry. The new Smart signal transducer which allows selecting from 4 types of output in one unit. The new electronics ensure a great benefit for system integrators who work with various industrial interface standards.

Solar irradiance is calculated by relating the pyranometer sensitivity with the input voltage then convert the result to a digital signal for the Modbus 485 RTU and SDI-12 outputs. In the case of the 4-20mA and 0-10mA/0-1V outputs, the results is converted into a current corresponding to the solar irradiance within the specified range. Temperature and Linearity Compensation Functions are embedded to maximize the sensor performance.

The new double dome constructions provides lower

offsets and cosine errors. The MS-60S can be used with the optional MV-01 ventilator / heater.

The MS-60S pyranometers are manufactured in a consistent way followed by strict quality inspection and performance evaluation. EKO provides a unique calibration compliant to the international standards defined by ISO/IEC17025/9847. The sensor has a 5 years warranty with a 2 years re-calibration interval recommended and it is no longer necessary to change the desiccant.

	MS-60S
ISO 9060:2018	Class B
ISO 9060:1990	(First Class)
Sub-category "Spectrally flat"	Compliant
Sub-category "Fast response"	Not compliant
Output	Modbus 485 RTU, SDI-12, 4-20mA, 0-1V (100Ω)
Response time 95%	< 18 Sec.
Zero off-set a) 200W/m²	+/- 5 W/m ²
Zero off-set b) 5K/hr	+/- 2 W/m ²
Complete zero off-set c)	+/- 7 W/m ²
Non-stability change/1 year	+/- 1.5 %
Non-linearity at 1000W/m²	+/- 1 %
Directional response at 1000W/m²	+/- 18 W/m ²
Spectral error	+/- 0.23 %
Temperature response -10°C to 40°C	+/- 2 %
Temperature response -20°C to 50°C	+/- 2 %
Tilt response at 1000W/m²	+/- 1 %
Sensitivity	-
Operating temperature range	-40 - 80 °C
Irradiance range	0 - 2000 W/m ²
Wavelength range	285 - 3000 nm
Power supply	5 - 36 VDC
Power consumption	< 0.2 W
Ingress protection IP	67

Cable length	10 m
Additional signal processing errors	< 1.7 W/m ²

Options	MS-60S
Cable length	20 / 30 / 50 m
Ventilation unit	MV-01
Albedo mounting kit	MS-albedo Kit

Specifications are subject to change without further notice.