



## MS-40M Pyranometer

### Technical Specifications

ISO 9060:2018 Class C (Second class)

Sub-category "Spectrally flat"

Industrial sensor outputs (MODBUS RTU)

ISO 17025 certified calibration

Optional ventilator MV-01

The MS-40M is an ISO 9060:2018 Class C (Second Class) pyranometer which is based on EKO's universal sensor platform with Modbus 485 RTU output. This sensor can be used in many meteorological networks and professional small scale PV sites where solar radiation is taken seriously. The MS-40/40A/40M can be used with the optional MV-01 ventilator / heater or can be combined with the optional mounting kit for albedo measurements.

The MS-40M 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 year warranty with a 2 year re-calibration interval recommended and it is no longer necessary to change the desiccant.

	<b>MS-40M</b>
ISO 9060:2018	Class C
ISO 9060:1990	Second Class
Sub-category "Spectrally flat"	Compliant
Sub-category "Fast response"	Not compliant
Output	Digital (Modbus RTU)
Response time 95%	< 18 Sec.
Zero off-set a) 200W/m <sup>2</sup>	+/- 12 W/m <sup>2</sup>
Zero off-set b) 5K/hr	+/- 5 W/m <sup>2</sup>
Complete zero off-set c)	+/- 17 W/m <sup>2</sup>
Non-stability change/1 year	+/- 1.5 %
Non-linearity at 1000W/m <sup>2</sup>	+/- 1 %
Directional response at 1000W/m <sup>2</sup>	+/- 20 W/m <sup>2</sup>
Spectral error	+/- 0.2 %
Temperature response -10°C to 40°C	+/- 3 %
Temperature response -20°C to 50°C	+/- 4 %
Tilt response at 1000W/m <sup>2</sup>	+/- 1 %
Sensitivity	-
Impedance	-
Operating temperature range	-40 - 80 °C
Irradiance range	0 - 2000 W/m <sup>2</sup>
Wavelength range	285 - 3000 nm (50% points)
Ingress protection IP	67
Cable length	10 m

<b>Power supply</b>	12 - 24 VDC
<b>Power consumption</b>	0.2 - 0.3 W
<b>Additional signal processing errors</b>	+/- 1.5 W/m <sup>2</sup>

<b>Options</b>	<b>MS-40M</b>
<b>Cable length</b>	20 / 30 / 50 m
<b>Ventilation unit</b>	MV-01
<b>Albedo mounting kit</b>	MS-albedo Kit

Specifications are subject to change without further notice.