



MS-40S Smart Albedometer

Technical Specifications

ISO 9060:2018 Class C (Second class)

"Spectrally flat"

Quartz diffusor technology

ISO 17025 certified calibration

5 year warranty and recommended recalibration

MS-40S Albedometer consists of two MS-40S pyranometers and a special albedo kit with a glare screen to measure albedo and total reflectance. It is used in solar power plants with bi-facial PV modules and in meteorological applications.

This Smart Albedometer has internal temperature, humidity and a tilt sensors for remote diagnostics. These additional internal sensors will help the user to monitor the stability of the irradiance sensors as well as to ensure its proper installation and maintenance practices.

The new Smart signal transducer which allows selecting from 4 types of output in one unit (**MODBUS 485 RTU** , **SDI-12** , **4-20mA** , configurable 0-10mA / 0-1V with external optional 100Ω precision shunt resistor). The new electronics ensure a great benefit for system integrators who work with various industrial interface standards.

The MS-40S 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.

	MS-40S
ISO 9060:2018	Class C
ISO 9060:2018	(Second Class)
Sub-category "Spectrally flat"	Compliant
Sub-category "Fast response"	Not compliant
Output	(MODBUS 485 RTU, SDI-12, 4-20mA, configurable 0-10mA / 0-1V with external optional 100Ω precision shunt resistor)
Response time 95%	< 18 Sec.
Zero off-set a) 200W/m ²	+/- 12 W/m ²
Zero off-set b) 5K/hr	+/- 5 W/m ²
Complete zero off-set c)	+/- 17 W/m ²
Non-stability change/1 year	+/- 1.5 %
Non-linearity at 1000W/m ²	+/- 1 %
Directional response at 1000W/m ²	+/- 20 W/m ²
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 ²	+/- 1 %
Sensitivity	-
Impedance	-
Operating temperature range	-40 - 80 °C
Irradiance range	0 - 2000 W/m ²
Wavelength range	285 - 3000 nm (50% points)
Ingress protection IP	67
Cable length	10 m

Power supply	5 - 30 VDC
Power consumption	< 0.2 W
Additional signal processing errors	< 1 W/m ²

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

Specifications are subject to change without further notice.