

MS-40S Pyranometer

Class C & Spectrally Flat



ISO 9060:2018 Overview

The performance characteristics of Class A, B, and C sensors established by the International Standards Authority in 'ISO 9060:2018' are the primary method of comparing different sensor classes and offer a helpful baseline when comparing sensors from different vendors.

ISO 9060:2018 was introduced in 2018, with major changes from the previous classification standard launched in 1990. The new class definitions and criteria were designed to be more consistent and compliant with available sensors, offering a clear overview of classes and specifications to help define selection criteria and support product comparison.

The MS-40S is an ISO 9060:2018 Class C pyranometer and part of the S-Series family of solar radiation sensors, including the Class A MS-80S and Class B MS-60S; for the highest quality, most accurate, and reliable pyranometer in each class.



ISO Specifications

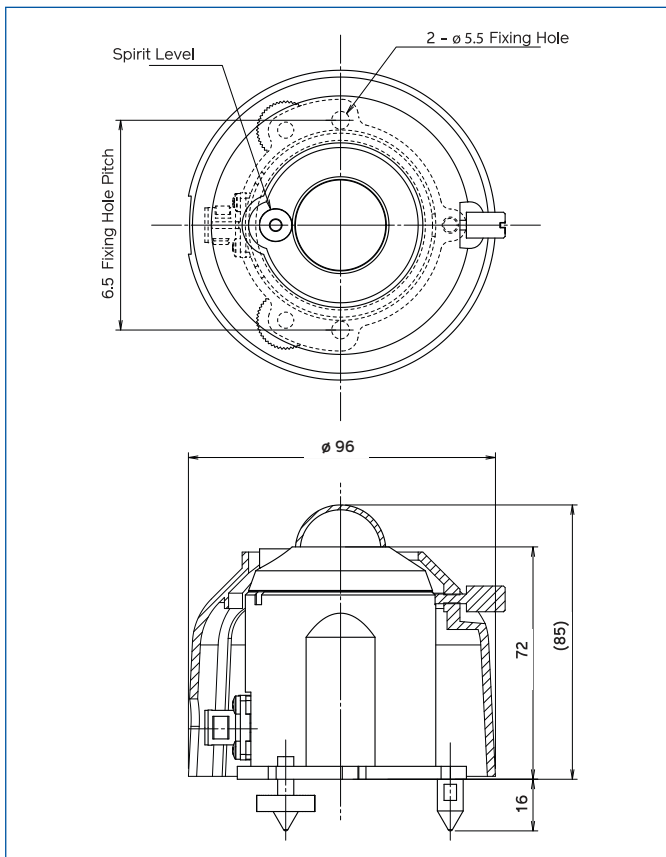
ISO 9060:2018 Parameters	CLASS C	MS-40S
Response time 95%	<30s	<18s
Zero offset A - Thermal Radiation (200W/m ²)	± 30W/m ²	± 12W/m ²
Zero offset B - Temperature change (5K/hr)	± 8W/m ²	± 5W/m ²
Zero offset C - Complete zero off-set	41W/m ²	± 17W/m ²
Non-stability (change/year)	± 3%	± 1.5%
Non-linearity (100 to 1000W/m ²)	± 3%	± 1%
Directional Response (at 1000W/m ² 0 to 80°)	± 30W/m ²	± 20W/m ²
Spectral Error (Spectral selectivity ± 3%)	± 5%	± 0.2%
Temperature Response (-20°C to 50°C)	± 4%	± 3%
Tilt Response (0-90° 1000W/m ²)	± 5%	± 1%
Additional Signal Processing error	± 10W/m ²	± 1.5W/m ²

Technical Features

Wavelength Range (nm)	285 - 3000 (50% points)
Irradiance range (W/m ²)	0 - 2000 W/m ²
Signal Output	MODBUS 485 RTU, SDI-12, 4-20mA, configurable 0-10mA / 0-1V*
Sensor Diagnostic	Relative Humidity ± 2% Temp. ± 0.1% / Tilt Angle ± 1°
Operating temperature	-40 to 80 °C
Supply voltage	5 - 30 VDC
Power Consumption	< 0.2 W
Standard Cable Length	20 / 30 / 50 m

*with external optional 100Ω precision shunt resistor

Technical Diagram



ISO/IEC 17025 Calibration

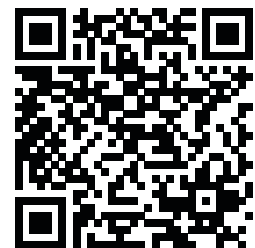
The EKO calibration laboratory in Tokyo is accredited & certified by Perry Johnson Laboratory Accreditation, Inc. (PJLA) to perform pyranometer and pyrhemliometer calibrations following the requirements of ISO/IEC 17025.

Our engineers perform the most accurate solar sensor calibrations possible, compliant with the international standards defined under ISO 9847.



QR

Use the QR code to visit our website, contact our team, or to find out more about the **MS-40S**, other related products, and the full range of Class and industry-leading S-Series pyranometers.



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