

MS-40S Pyranometer

Class C & Spectrally Flat



Overview

The S-Series MS-40S ISO 9060:2018 Class C pyranometer is a cost-efficient part of the most accurate, reliable and robust family of pyranometers in the world, and the class-leading solution for system integrators, agrometeorological networks, and professional small-scale PV sites.

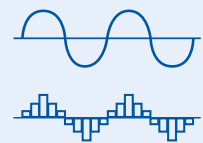
Built with the same unique S-Series features as the Class A MS-80S and Class B MS-60S, the MS-40S comes with EKO's 4-channel smart interface for compatibility with 99% of data loggers, DAQ, and SCADA systems, plus internal diagnostic sensors for remote visibility over internal temperature, humidity, tilt and roll angle; ensuring optimum performance with reduced maintenance costs.

With Level A EMI/EMC electronic surge filter and protection, 5-year warranty, lifetime desiccant, and ISO 17025 accredited calibration, the MS-40S is the toughest, most reliable, and advanced Class C pyranometer available.

Features



5-year warranty & recommended 2-year recalibration interval



Smart 4-channel Analogue & Digital Interface



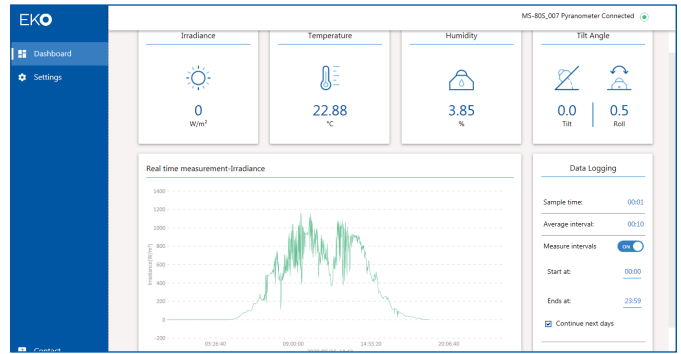
Level A EMI/EMC electronics surge filter & protection



Internal Diagnostics for temperature, tilt, roll, and relative humidity

Software

With 'Hibi', a new, custom-built programme developed by EKO, users can connect their pyranometer with a standard laptop for real-time access to the internal diagnostics, custom settings, and irradiance data, helping to make the MS-40S the most accessible Class C pyranometer available. Easy to use, deploy, and maintain.



Accessories



MV-01

Achieve IEC 61724-1 compliance with the MV-01 ventilator and heater, an optional add-on that keeps the MS-60S free from dew, ice and snow. Proven under all environmental conditions, the MS-60S plus MV-01 is the go-to option globally for rooftop solar stations, solar parks of all sizes, and large weather monitoring sensor networks.



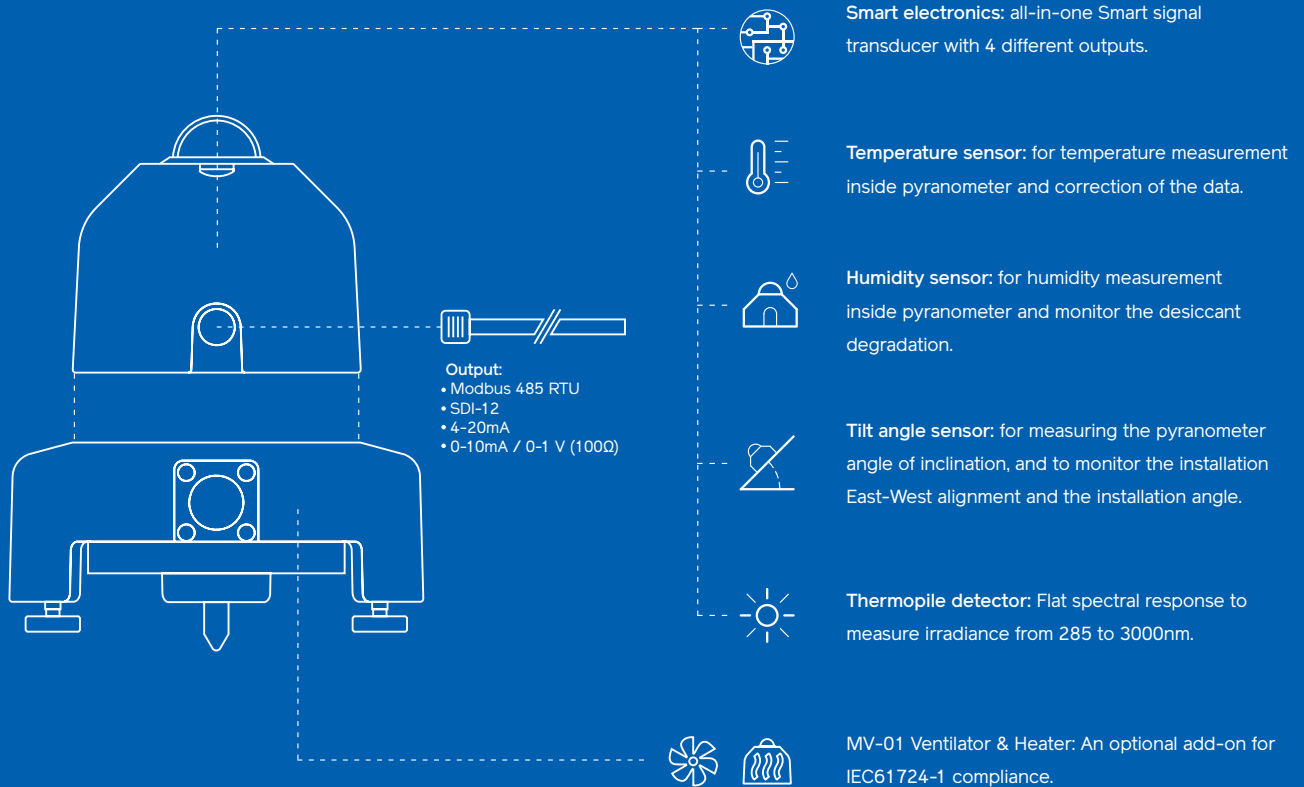
MS-Albedo Kit

The MS-Albedo kit can be used with any MS or S-Series EKO pyranometer, allowing two pyranometers to be deployed for albedo or reflected irradiance measurements for Bi-facial PV applications. The robust aluminium and stainless steel parts provide a reliable solution for easy, on-site assembly.

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

Feature Diagram



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

Application

The MS-40S is ideal for agrometeorological networks, professional small-scale PV sites where solar radiation is taken seriously, and for system integrators working with various industrial interface standards.

With the same industry-leading build quality, internal diagnostics, 4-channel analog & digital interface, and electronic surge protection as the Class A MS-80S, and Class B MS-60S, the MS-40S is a cost-effective option for larger applications aiming to deploy a wide network of sensors on a budget.



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.



Explore EKO

Made in Japan for over 90 years, EKO solar energy sensors and environmental instruments are built on a legacy of innovation, an uncompromising commitment to quality, and industry-leading accuracy.

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Albedometers



Pyranometers



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Temperature Sensors



Sky Scanners



Thermal Conductivity Testers

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