

# MS-60S Pyranometer

Class B, Spectrally Flat



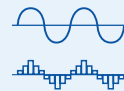
## Overview

Designed for agricultural research, meteorological applications and small to medium scale solar plants, the S-series MS-60S ISO 9060:2018 Class B Pyranometer is part of the most accurate, reliable and robust family of pyranometers in the world.

Built with the same industry-leading features as the Class A MS-80S, the MS-60S comes with EKO's unique 3-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.

Spectrally flat and with a new double-dome construction for lower offsets and cosine errors, the MS-60S also includes a 5-year warranty and advanced surge protection for a Class B sensor that combines the latest technology with the highest standards of quality, accuracy, and reliability.

## Features



Smart 3-channel Analogue & Digital Interface



5-year warranty & recommended 2-year recalibration interval



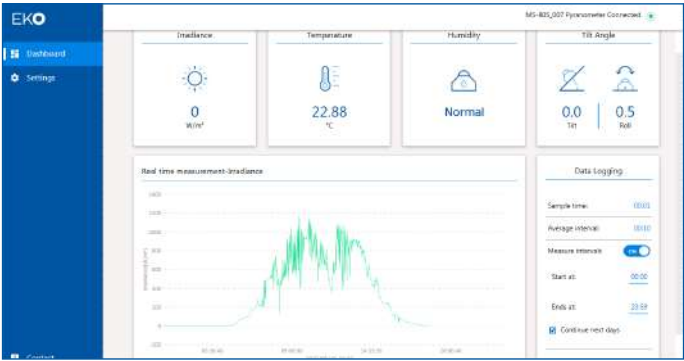
Level A EMI/EMC electronics surge filter & protection



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-60S the most accessible Class C pyranometer available. Easy to use, deploy, and maintain.



Accessories



MV-01

The MV-01 ventilator and heater keeps the MS-60S free from dew, dust, ice and snow. Proven in challenging environmental conditions, the MS-40S plus MV-01 is the go-to option globally for rooftop solar stations, solar parks of all sizes, and large weather monitoring sensor networks.



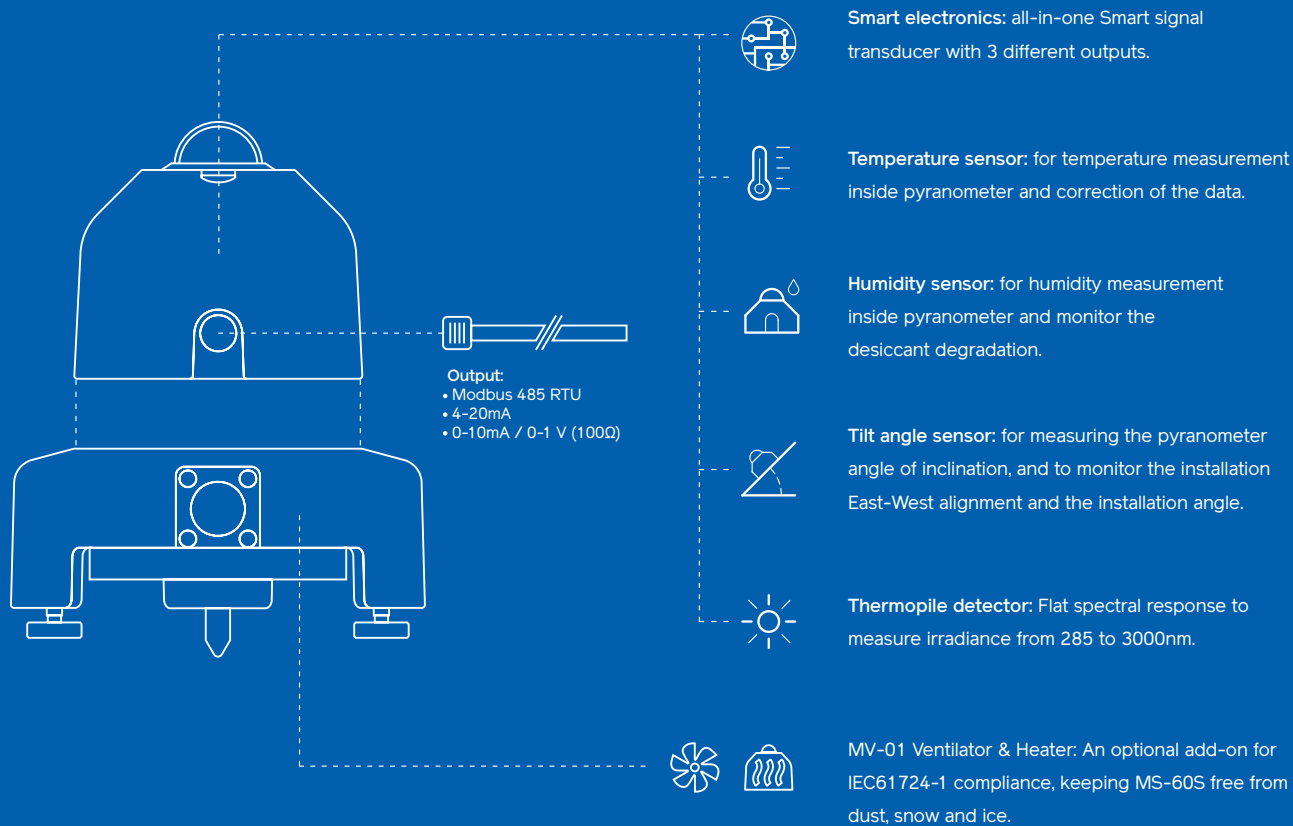
MS-Albedo Kit

The MS-Albedo kit can be used with any combination of MS or S-Series EKO pyranometers, compliant with IEC 61724-1:2021, 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 B	MS-60S
Response time 95%	< 20s	< 18s
Zero offset A - Thermal radiation (200W/m²)	± 15W/m²	± 5W/m²
Zero offset B - Temperature change (5K/hr)	± 4W/m²	± 2W/m²
Zero offset C - Complete zero off-set	21W/m²	± 7W/m²
Non-stability (change/year)	± 1.5%	< 1.5%
Non-linearity (100 to 1000W/m²)	± 1%	± 1%
Directional response (at 1000W/m²   0 to 80°)	± 20W/m²	± 18W/m²
Spectral error (Spectral selectivity ± 3%)	± 1%	± 0.2%
Temperature response (-20°C to 50°C)	± 2%	± 2%
Tilt response (0-90°   1000W/m²)	± 2%	± 1%
Additional signal processing error	± 5W/m²	< 1W/m²

## Feature Diagram



## MS-60S Technical Features

Wavelength range (nm)	285 - 3000
Maximum Operational Irradiance (W/m <sup>2</sup> )	2000
Signal output	MODBUS 485 RTU, 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	<0.2W (Digital) <0.7W (Analog)
Standard cable length	10m (Optional lengths 20m, 30m, 50m)

## Application

With the same industry-leading build quality, internal diagnostics, 3-channel analog & digital interface, and electronic surge protection as the Class A MS-80S, the MS-60S is an excellent option for agricultural research, meteorological applications and small to medium scale solar plants.

Add the optional MV-01 heater and ventilator to prevent a build-up of dew, ice, or snow, and the MS-60S is well suited to application in remote areas where accuracy and reliability are paramount.



## Learn More

Visit our website, contact our team, to find out more about the **MS-60S** Pyranometer, related products, and the full range of Class and industry-leading products from EKO.

## 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.

With a range of products and services to suit every project or application requirement, explore EKO now, or get in touch to find out how EKO Instruments can help you.



Albedometers



Pyranometers



Pyrhelioscopes



Spectro-  
Radiometers



Sky Imagers



DNI Sensors



Pyrgeometers



Thermal Cond.  
Testers



Solar  
Monitoring  
Stations



Sun Trackers



Sensor Signal  
Converters



Heat Flux



UV Sensors



Temperature  
Sensors



Sky Scanners

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