

# MS-95S

Precision Sunshine Duration Monitoring



## Overview

The MS-95S reinvents sunshine duration sensors, setting new standards for accuracy and stability. Low-cost, compact, light, and robust, the MS-95S does not require calibration and, paired with the MV-01 Ventilator & Heater, performs consistently in all weather conditions.

Static and easy to install, with no special mount, moving parts, or complex on-site adjustment required, the MS-95S, part of EKO's elite S-Series range of solar monitoring solutions, includes a unique 3-channel smart interface compatible with most data loggers, DAQ, and SCADA systems, plus internal diagnostic sensors for remote visibility over internal temperature, tilt and roll angle.

With an optical sensor design built around a new ultra-wide-angle lens that observes the sky in 180°, the MS-95S employs a unique method to distinguish and record direct beam radiation from total sky radiation. Unaffected by detector temperature effects, irradiance conditions, solar elevation angle or detector non-linearity, the MS-95S is the ultimate choice for maintenance-free, long-term operation.

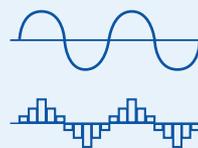
## Features



Full Hemisphere Ultra-Wide Angle Lens Design



Unmatched Stability, No recalibration required



Smart 3-channel Analog & Digital Interface



Internal Diagnostics for temperature, tilt, & roll

## Specifications

Threshold Value	120 W/m <sup>2</sup>
Measurement Accuracy	Total Monthly Sunshine Hours: >90%
Spectral Range	400 to 1100 nm
Operating Temperature	-40° to +80°C
Ingress Protection (IP)	IP67
Response Time	200 milliseconds
Signal Output	Modbus RTU / 4-20mA / 0-1V*
Voltage Supply	Modbus: 5V DC or 8 to 30 V DC 0-1V/ 4 - 20 mA: 8 to 30 V DC SDI-12: 9.6 to 16 V DC
Power Consumption	<0.2 W (Digital) / <0.7 W (Analog)
Diagnostic Function	Temperature / tilt angle / Internal humidity alert
Size and Weight	Φ 96 × 101H , 0.4 kg

\*Configurable with external 100Ω precision shunt resistor

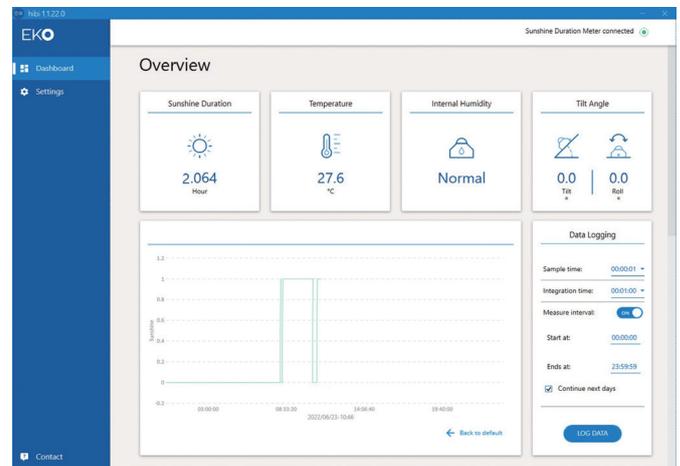
## Accessory



### MV-01

Compatible with all MS & S-Series sensors, the MV-01 is an optional add-on that helps to reduce sensor soiling, keeping sensors free from dew, ice and snow. Proven in challenging environmental conditions, the MS-95S plus MV-01 is a go-to option globally for sunshine duration measurement applications in weather monitoring sensor networks of all sizes. The MV-01 features a low-power fan and highly effective heater, with independent on/off settings for variable operating conditions, a standard tachometer output for fan speed monitoring and a temperature safety switch to protect the ventilator from overheating.

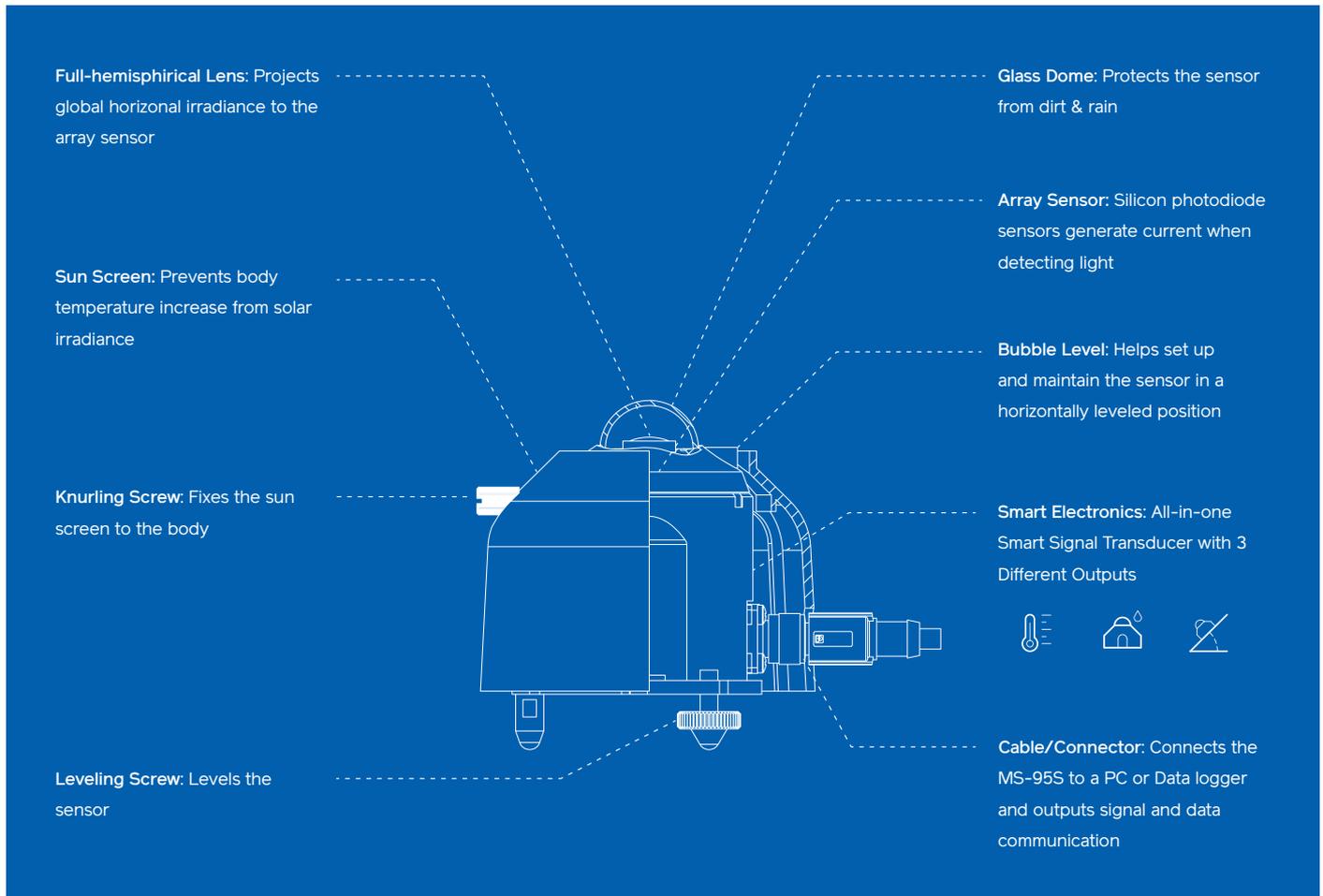
## Software



### Hibi

With 'Hibi', our custom-built software programme developed by EKO, users can connect their S-Series Sensor with a standard laptop for real-time access to the internal diagnostics, custom settings, and measurement data, helping to make the MS-95S the most accessible sunshine duration sensor available. Easy to use, deploy, and maintain. Hibi can be downloaded for free on the MS-95S product page.

## Feature Diagram



## Related Products



### S-Series Pyranometers

The IEC 61724-1 compliant and ISO 9060:2018 class-leading range of S-Series Pyranometers from EKO Instruments set a new standard in pyranometer performance and design, delivering unbeatable accuracy, reliability, and value.

The S-Series features onboard diagnostics, a 5-year warranty, 5-year recalibration interval, a unique 3-channel digital/analog interface, and superior electronic protection in every class, ideal for monitoring photovoltaic system performance, scientific research, meteorological applications, and more.



### S-Series UV Sensors

Setting a new standard in UV irradiance monitoring, the MS-10S UVA and MS-11S UVB radiometers with integrated transducers deliver precise temperature correction, outstanding stability, superior UV measurement range and unbeatable response times. Part of EKO's elite S-Series range of solar monitoring solutions, with a compact and lightweight design based on EKO's universal sensor platform, the MS-10S and MS-11S are easy to manage, tough, reliable, and an industry-leading option for material testing, medical research and industrial field monitoring applications.

## Applications



For climate research, meteorology and reporting, sunshine duration quantities are valuable to monitor seasonal variations between different locations, and are a popular indicator to express the number of sunny hours at tourist locations and places of interest.

Traditional sunshine duration measurement methods that use pyrheliometers or rotating sensors can be expensive, time-consuming solutions, requiring additional adjustment during installation. The MS-95S is a compact, low-cost, easy-to-install, high precision static sunshine duration sensor, making it the ideal choice for all situations.

### QR

Use the QR code to visit our website, contact our team, or to find out more about the **MS-95S** Sunshine Duration Sensor, other related products, and the full range of industry-leading EKO sensors and instruments.



## 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.



Pyranometers



Albedometers



Pyrheliometers



Spectro-Radiometers



Sky Imagers



DNI Sensors



Pyrogeometers



IV Measurement



Solar Monitoring Stations



Sun Trackers



Sensor Signal Converters



Heat Flux



UV Sensors



Temperature Sensors



Sky Scanners



Thermal Cond. Testers

### EKO Instruments Co. Ltd

info@eko.co.jp  
+81-3-3469-6713

### EKO Instruments Sales India

sales-in@eko-instruments.com  
+91 9869047721

### EKO Instruments Europe B.V.

sales-eu@eko-instruments.com  
+31-0-703050117

### EKO Instruments Sales China

sales-cn@eko-instruments.com  
+81-3-3469-6713

### EKO Instruments USA Inc.

sales-usa@eko-instruments.com  
+1-408-977-7751

eko-instruments.com