

# MS-20SH

WISG traceable calibration



## Overview

More accurate and lower cost than competing 'budget' sensors, the MS-20SH Smart digital sensor is designed to capture downward atmospheric longwave radiation from  $4.5\mu\text{m}$  to  $42\mu\text{m}$ , and can measure the net radiation between the earth and the atmosphere by using two MS-20SH upward and downward-facing, with a specially hard carbon coated silicon window to block solar radiation wavelengths below  $4.5\mu\text{m}$ .

The low power consumption integrated solid-state window heater to prevent condensation or morning frost makes the MS-20SH one of the best value sensors available; ideal for hard-to-reach locations, and monitoring networks with restricted access. Now standard to all S-Series sensors, offering visibility over internal temperature, humidity, tilt, and roll angle; helping to ensure optimum performance without the need for regular physical checks.

The universal sensor design allows seamless integration with MV-01 and other EKO products and accessories. Use Hibi software for effortless setup and configuration, ensuring optimal performance and flexibility.

## Features



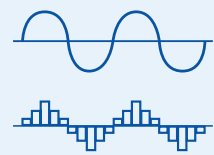
Low temperature dependency, excellent stability



Competition busting low window heating offset



5-year warranty & EKO quality guarantee



Smart sensor interface

## Specifications

Parameters	MS-20SH
Wavelength range	4.5 to 42 $\mu$ m
Response Time 95% output	< 18 Sec
Window heating offset	< 10 W/m <sup>2</sup>
Zero offset B	< 5 W/m <sup>2</sup>
Temperature response	< 4 % (-10 to +40°C)
Operating temperature	-40 to +80°C
Field of view	150°
Bubble level accuracy	0.3°
Sensor diagnostics	Relative Humidity $\pm$ 2%   Temp. $\pm$ 0.5°C   Tilt Angle $\pm$ 1°
Detector temperature sensor	PT100 Class A
Environmental protection (IP Code)	IP67 Equivalent (IEC60529)
Weight	0.45 kg
Output	Modbus RTU, SDI-12
Alert signal	Alert is issued when the internal humidity and current of the dome heating of the pyrgeometer is abnormal.
Supply voltage	8 to 30VDC
Power consumption	With heating < 1.4W Without heating < 0.2W

## Application

The MS-20SH Pyrgeometer is specifically designed for energy balance studies and climate change monitoring. Ideal for research, agricultural, and meteorological applications, this advanced sensor delivers exceptional accuracy at a lower cost compared to competing budget sensors. By measuring longwave radiation, it helps track the increasing temperatures on Earth caused by rising CO<sub>2</sub> and Methane levels. Enhance your climate research with reliable data to understand and combat global warming. The MS-20SH Pyrgeometer is your essential tool for precise environmental monitoring and impactful scientific studies.

### QR

Use the QR code to visit our website, contact our team, or to find out more about the **MS-20SH** and our full range of industry-leading, high-quality, scientific and meteorological measurements.



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