



# MS-80SH-L

### **Class A Spectrally Flat and Fast-Response Pyranometer with Integrated Dome Heater**



#### Visão Geral

The MS-80SH, manufactured by EKO Instruments, is an innovative, next-generation ISO 9060 Class A spectrally flat and fast-response (secondary standard) pyranometer. The pyranometer features a compact design with internal desiccation, a single dome over a quartz diffusor, a thermally isolated thermopile detector, negligible thermal offsets, ultra-low temperature dependency, and exceptional nonlinearity characteristics. The MS-80SH has a five-year warranty and recalibration interval.

EKO instruments is the longest-operating ISO 17025accredited pyranometer manufacturer in the world. This allows for the highest-quality calibration and for Campbell Scientific to comply with international standards (ISO/IEC 17025 for ISO 9847).

#### Benefícios e Características

- ISO 9060 Class A spectrally flat with fast response (secondary standard)
- Integrated dome heater for dew and frost mitigation as per IEC 61724-1:2021 Class A monitoring requirements
- Ability to be combined with MV-01 external heater and ventilator in more harsh conditions
- Industry-leading stability
- ISO 17025-certified calibration
- Five-year warranty and recalibration interval

## **Especificações**

Sensor	Internal desiccation, single- dome, isolated thermopile detector, quartz diffusor
Measurement Description	Monitors solar radiation for the full solar spectrum range
ISO Classification	<ul> <li>ISO 9060 Class A spectrally flat and fast-response pyranometer (secondary standard)</li> <li>ISO 17025 Class A pyranometer</li> </ul>

Output	Modbus RTU over RS-485 (digital)
Sensitivity	$\sim$ 10 $\mu$ V/W/m <sup>2</sup>
Response Time	< 1 s (95%)
Zero Offset A	< 1 W/m² (response to 200 W/m² net thermal radiation)
Zero Offset B	±1 W/m² (response to 5 K/h change in ambient temperature)
Non-Stability	±0.5% change per 5 years



Non-Linearity	±0.2% (at 1000 W/m <sup>2</sup> )
Directional Response	±10 W/m <sup>2</sup> (at 1000 W/m <sup>2</sup> )
Spectral Selectivity	±3% (0.35 to 1.5 μm)
Temperature Response	<b>)</b> < 0.8% (-10° to +40°C) <b>)</b> < 1% (-20° to +50°C)

Tilt Response	< ±0.2% (0 to 90° at 1000 W/m <sup>2</sup> )
Operating Temperature Range	-40° to +80°C
Irradiance Range	0 to 4000 W/m <sup>2</sup>
Spectral Range	285 to 3000 nm
Ingress Protection	IP67