

Pyranometer EKO MS-80S

ISO 9060 Spectrally flat Class A + IEC 17025 calibrated



Description

- ISO 9060 Spectrally flat Class A + IEC 17025 calibrated
- 5-year warranty and re-calibration period
- Fast response time < 1s @ 95%
- Exceptional long-term stability $\pm 0.5\%$ /5 years
- MS-80 with analog voltage output

The MS-80 Secondary Standard pyranometer was inspired by the combination of latest technologies and state-of-the-art thermopile sensors, enabling a breakthrough in unprecedented low zero-offset behaviour and fast sensor response. The compact sensor with single dome, based on a isolated thermopile detector and Quartz diffuser is immune to offsets and integrates all optional value added functions such as a ventilator, heater and different industrial interfaces. The heater and ventilator are recommended, particularly over areas impacted by dew, frost, snow, and dust.

MS-80 is designed with analog voltage output. The analogue MS-80 pyranometer can be used as a reference sensor to measure the global broad-band solar radiation with a high accuracy. With excellent temperature response and non-linearity characteristics, it provides optimal performance throughout the year.

Specifications

Classification	ISO 9060:2018 Class A + IEC 17025 calibration ISO 9060:1990 Secondary Standard	
Order-Nr.	S64180	S64185
	Current Output 0 ... 10 mA	Modbus RTU via RS485
Typical Sensitivity	10 $\mu\text{V}/\text{W}/\text{m}^2$	
Wavelength range	285 ... 3 000 nm	

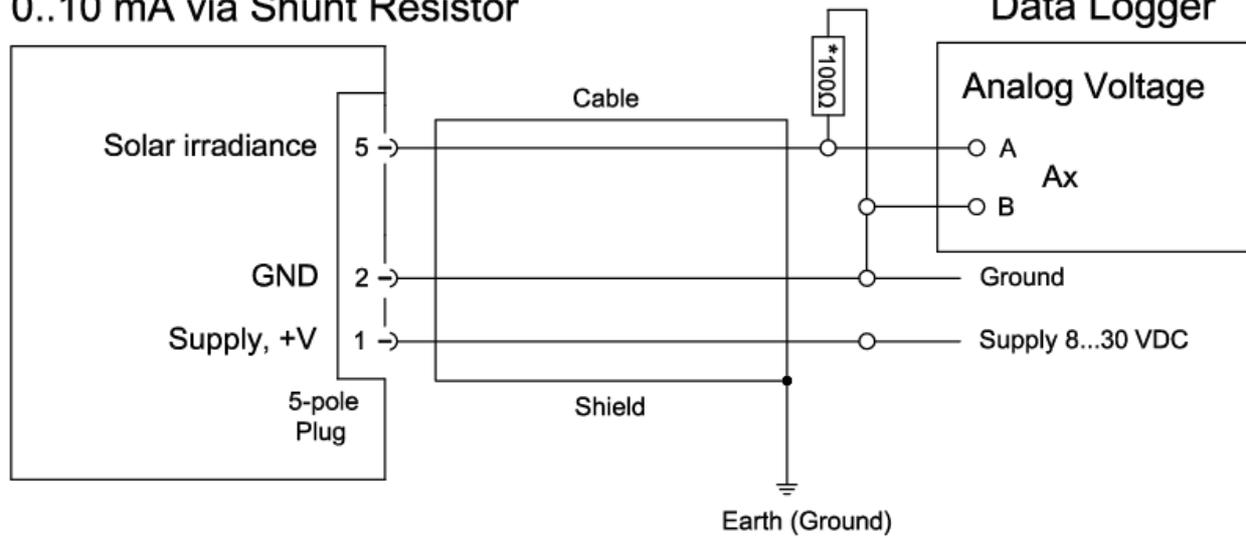
Classification	ISO 9060:2018 Class A + IEC 17025 calibration ISO 9060:1990 Secondary Standard	
Max. operational irradiance	4 000 W/m ²	
Response time (95%)	< 0.5 s	
Zero offset		
(a) 200 W/m ²	± 1 W/m ²	
(b) 5 k/hr	± 1 W/m ²	
(c) complete	± 2 W/m ²	
Non-stability change/5 years	± 0.5%	
Non-linearity at 1 000W/m ²	± 0.2 %	
Directional response at 1 000W/m ²	± 10 W/m ²	
Spectral error	± 0.2%	
Temperature response -10°C ... +40°C	± 0.5%	
Temperature response -20°C ... +50°C	± 0.5%	
Tilt response @ 1000 W/m ²	± 0.2 %	
Operating temperature range	-40 ... +80 °C	
Power supply	5 ... 30 VDC	
Power consumption	<0.2 W	
Cable length	10 m	
Protection class	IP67	
Warranty	5 years	
Manufacturer	EKO Instruments	
Accessory	Precision Shunt 100 Ω	M83570
	MV-01 ventilator / heater (Order-No. S64060)	

Delivery includes IEC 17025 calibration certificate.

Sensor connection diagram

Sensor	EKO Wire Color	Meteo-40 RS-485 Master	Sensor Supply	
0 ... 10 mA (-)	white		AVx B	(shunt)
0 ... 10 mA (+)	grey		AVx A	
RS-485 (+)	blue	B+		
RS-485 (-)	black	A-		
RS-485 GND	white		GND	
Supply	brown		12 V DC	
GND	white		GND	

Pyranometer EKO MS-80S
0..10 mA via Shunt Resistor



- * P_{min} = 2 W Tol. max. 1%
- 1 V @ 10 mA
- Voltage-Range M-40 +/- 1V