MS-56 Pyrheliometer

Technical Specifications

ISO 9060 First Class Pyrheliometer

Fast < 1 s response detector

ISO17025 / 9059 Outdoor calibration

Window heater to prevent dew and frost

5 years warranty

The ISO First Class MS-56 measures direct normal incidence irradiance (DNI). Also known as a pyrheliometer and used as a reference sensor for routine operation on a Solar Tracker. The all-weather MS-56 is sensitive to solar irradiance in the spectral range from 200 - 4000nm and works under the most extreme conditions in a temperature range from -40°C -80°C. The versatile MS-56 combines all features of a quick broadband detector enabled by an advanced technology thermopile detector.

The integrated low power window heater prevents dew deposition or frost on the outside window. The MS-56 has a robust but compact and smooth design which forms the new generation of EKO Instruments solar radiometers that are designed for most demanding Photovoltaic and Meteorological applications at any place on earth. Each MS-56 is calibrated and tested at EKO upon manufacture against EKO's reference sensors which are fully traceable to the WRR (World Radiometric Reference) maintained at the PMOD/WRC (Physikalisch-Meteorologisches Observatorium Davos/World Radiation Center) in Davos, Switzerland.

The MS-56 pyrheliometers are manufactured in a consistent way followed by strict quality inspection and performance evaluation. For each sensor the temperature dependency are measured and validated through a measurement report that comes with the sensor. EKO provides a unique calibration compliant to the international standards defined by ISO/IEC17025/9059.

	MS-56
ISO 9060:1990	First Class
Output	Analog (mV)
Response time 95%	< 1 Sec.
Zero off-set a) 200W/m²	0 W/m²
Zero off-set b) 5K/hr	< 1 W/m²
Complete zero off-set c)	< 1 W/m²
Non-stability change/1 year	< 0.5 %
Non-stability change/5 years	-
Non-linearity at 1000W/m²	< 0.5 %
Spectral selectivity 0.35-1.5µm	-
Temperature response -20°C to 50°C	< 0.5 %
Tilt response at 1000W/m²	< 0.2 %
Sensitivity	Approx. 10 µV/W/m²
Impedance	Approx. 5000 Ω
Operating temperature range	-40 - 80 °C
Irradiance range	0 - 4000 W/m²
Wavelength range	200 - 4000 nm (50% points)
Ingress protection IP	67
Cable length	10 m

Options	MS-56
Cable length	20 / 30 m

Specifications are subject to change without further notice.