



NEW

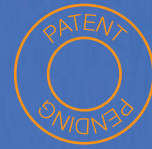
MS-80 PYRANOMETER
New generation
ISO 9060 Secondary standard



Something very new under the sun.

Revolutionary new standard,
lowest measurement
uncertainty.

- Secondary Standard pyranometer
- Immune to zero offsets
- Fastest analog response time
- Lowest temperature dependency
- 5 years warranty & re-calibration period
- No need for dessicant inspection or change.
- ISO 17025 accredited calibration
- Optional built in 4-20mA or MODBUS 485 RTU interface
- Optional ventilator / heater (MV-01)



“High-end” made for industrial application.

If you believed that “High-end” Solar sensors are only meant for research purposes, the EKO MS-80 secondary standard pyranometer will prove you wrong. In order to assure well-founded decisions in designing and operating profitable solar power plants, the solar irradiance should be continuously and accurately measured. As a matter of fact, quantitative irradiance measurements is the most crucial parameter for assessing a site, designing a solar plant and ensuring its long term profitability. As of today, there are a myriad of Solar sensors available in the market. To choose the best value sensor it

requires expert understanding of sensor properties and knowledge of the on-site environmental and atmospheric conditions (wind, rain, snow, soiling, spectral effects, re-calibration, not to mention communication and compatibility). Those are all the factors EKO had in mind while designing the MS-80 as a new standard for solar monitoring applications. The NEW MS-80 is a unique combination of EKO’s isolated detector architecture and novel optical design. It pushed the limits of traditional pyranometer characteristics to become a new reference in its class. The compact sensor with single dome is

	MS-80
ISO 9060 classification	Secondary standard
Detector	Thermopile
Response time 95%	< 0.5 s
Zero offset A - Thermal radiation (200W/m ²)	< 1 W/m ² (unventilated or ventilated)
Zero offset B - Temperature change (5K/hr)	+/- 1 W/m ²
Long-term stability (change/yr)	< 0.5 % / 5 yr
Non-linearity (100 to 1000W/m ²)	+/- 0.2 %
Directional response (at 1000W/m ² 0 to 80°)	+/- 10 W/m ²
Spectral selectivity (0.35 to 1.5µm)	+/- 3 %
Temperature dependency (-20 to 50°C)	<1%
Tilt response (0-90° 1000W/m ²)	< 0.2 %
Wavelength range (nm)	285 to 3000
Irradiance range (W/m ²)	0 to 4000
Nominal sensitivity (µV/W/m ²) / Signal output (mV)	10 / 0 - 15
Nominal impedance	45 kΩ
Operating temperature	- 40 to 80°C
Ingress Protection	IP 67
Calibration traceability / uncertainty	ISO 17025 / WRR / < 0.7% (k = 1.96)
Case temperature sensor	10kΩ NTC
<i>Standard cable length 10m (Optional lengths 20m, 30m, 50m)</i>	

immune to offsets and easily integrates all value added features such as a ventilator, heater and different industrial interfaces.

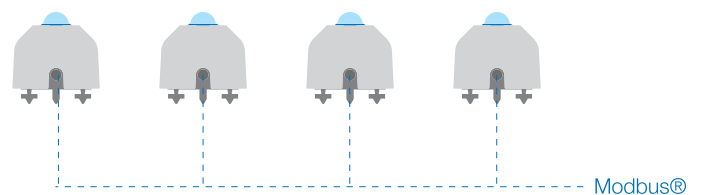
EKO's new generation pyranometer broke with the traditional pyranometer architecture. The innovative design was inspired by the latest technologies enabling a breakthrough in unprecedented low offset behaviour and fast thermopile sensor response. Providing the lowest measurement uncertainties under all atmospheric conditions when deployed in harsh environments. The MS-80 secondary standard Solar sensor is made for long-term unattended operation, comes with 5 years warranty, 5 years recommended re-calibration interval and no longer need to inspect or change the desiccant.



Maximum flexibility on the field with the MS-80 integrated options.

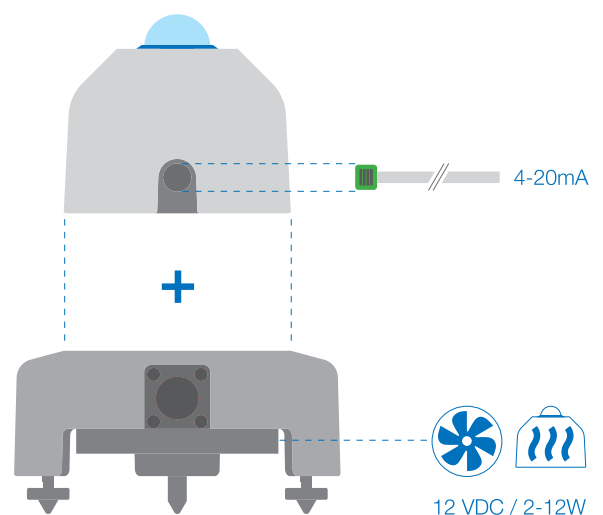
MS-80M (RS-485 Modbus® RTU)

The MS-80M can be used whenever RS-485 Modbus® RTU signal is required. With Modbus®, up to 100 sensors or other converter units can be addressed and connected in parallel.



MS-80A (4-20mA)

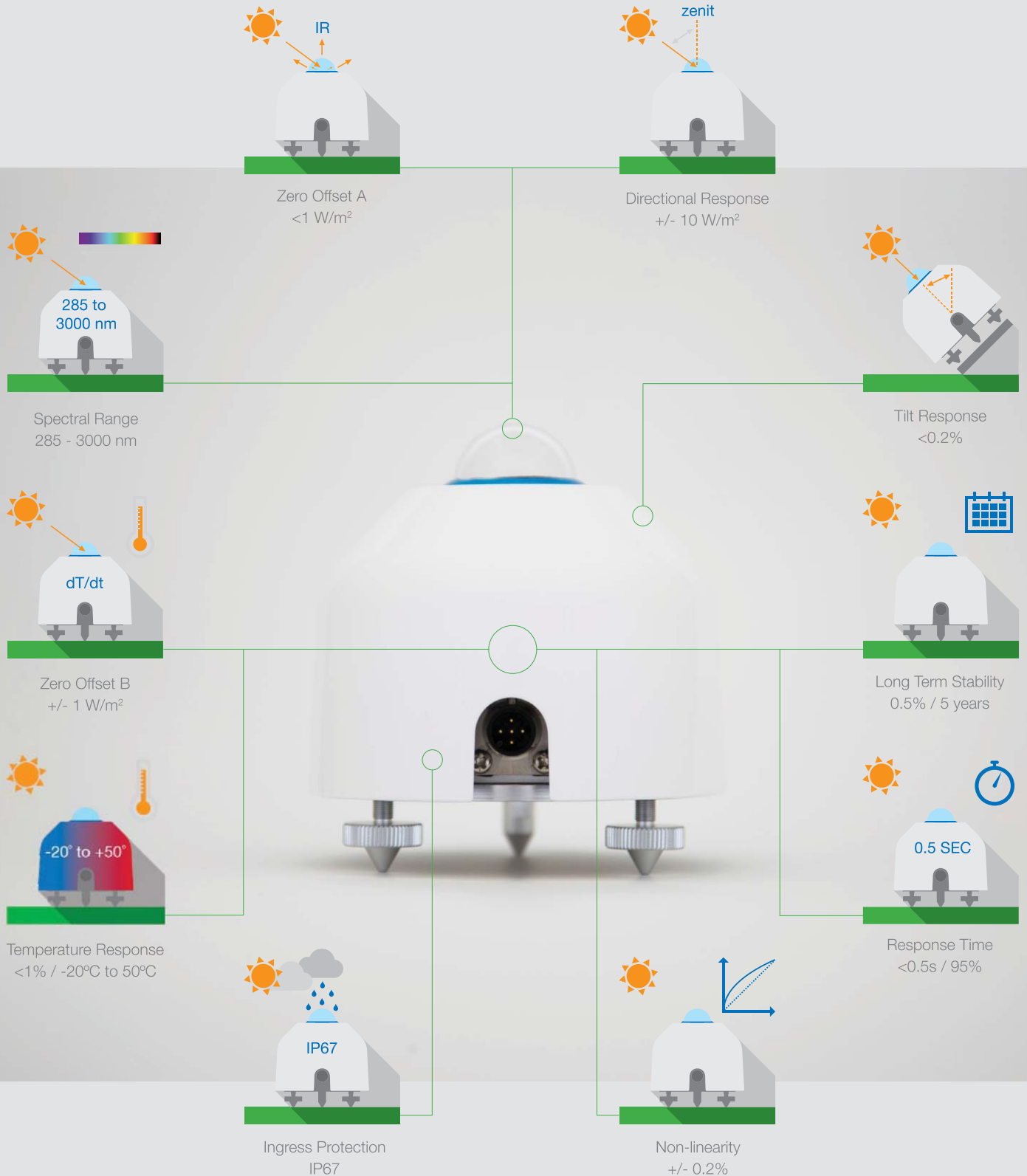
Preserve the high accuracy of the sensor while complying with the output standards used in the industry. The MS-80A converts the voltage output of solar radiation sensors into 4-20mA current.



MV-01 VENTILATOR & HEATER

The MS-80 in combination with the MV-01 can extend the sensor maintenance interval period and assures the availability of solar irradiance data when deployed in cold climate regions or desert environments.

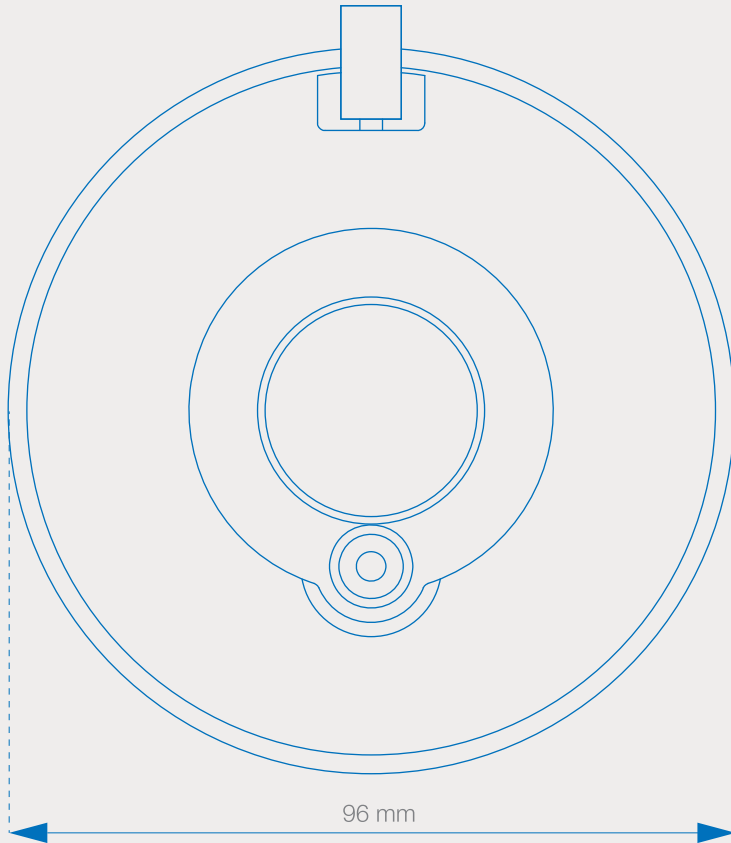
Every aspect has its own value.



What you see is the actual size of the new MS-80.

The greatest precision fits the smallest size.

Excellent durability, corrosion free and air tight for unprecedented performance.



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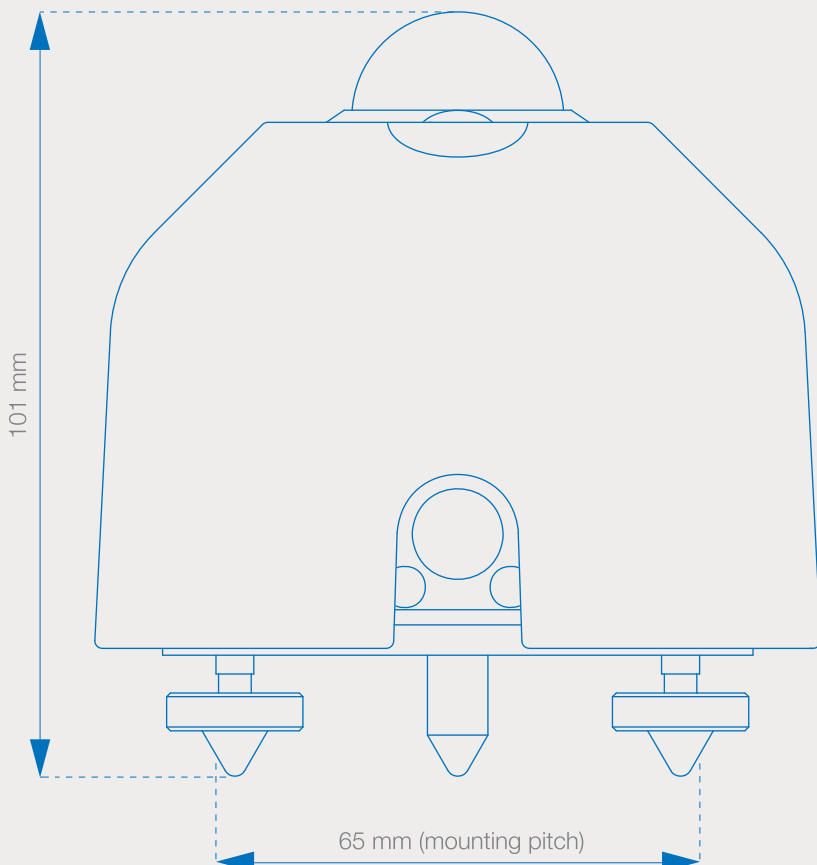
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