



MS-60S Smart Pyranometer

Technical Specifications

ISO 9060:2018 Class B (First class)

Sub-category "Spectrally flat"

ISO 17025 certified calibration

5-year warranty and recommended 2-year recalibration interval

Smart interface: (MODBUS 485 RTU, SDI-12, 4-20mA, configurable 0-10mA / 0-1V with external optional 100Ω precision shunt resistor)

The MS-60S is an ISO 9060:2018 Class B pyranometer with smart sensor technology and on-board diagnostic functions now standard for all EKO smart sensors. It preserves the high accuracy of the sensor while complying with the various output standards used in the industry. The new Smart signal transducer allows selecting from 4 types of output in one unit (**MODBUS 485 RTU** , **SDI-12** , **4-20mA** , configurable 0-10mA / 0-1V with external optional 100Ω precision shunt resistor). The new electronics ensure a great benefit for system integrators who work with various industrial interface standards.

The new double dome construction provides lower offsets and cosine errors. The MS-60S can be used with the optional MV-01 ventilator / heater.

The MS-60S pyranometers are manufactured in a consistent way followed by strict quality inspection and performance evaluation. EKO provides a unique

calibration compliant to the international standards defined by ISO/IEC17025/9847. The sensor has a 5 year warranty with a 2 year re-calibration interval recommended and it is no longer necessary to change the desiccant.

| | MS-60S |
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| ISO 9060:2018 | Class B |
| ISO 9060:2018 | (First Class) |
| Sub-category "Spectrally flat" | Compliant |
| Sub-category "Fast response" | Not compliant |
| Output | (MODBUS 485 RTU, SDI-12, 4-20mA, configurable 0-10mA / 0-1V with external optional 100Ω precision shunt resistor) |
| Response time 95% | < 18 Sec. |
| Zero off-set a) 200W/m ² | +/- 5 W/m ² |
| Zero off-set b) 5K/hr | +/- 2 W/m ² |
| Complete zero off-set c) | +/- 7 W/m ² |
| Non-stability change/1 year | +/- 1.5 % |
| Non-linearity at 1000W/m ² | +/- 1 % |
| Directional response at 1000W/m ² | +/- 18 W/m ² |
| Spectral error | +/- 0.2 % |
| Temperature response -10°C to 40°C | +/- 2 % |
| Temperature response -20°C to 50°C | +/- 4 % |
| Tilt response at 1000W/m ² | +/- 1 % |
| Sensitivity | - |
| Operating temperature range | -40 - 80 °C |
| Irradiance range | 0 - 2000 W/m ² |
| Wavelength range | 285 - 3000 nm (50% points) |
| Power supply | 5 - 30 VDC |
| Power consumption | < 0.2 W |
| Ingress protection IP | 67 |

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|--|----------------------|
| Cable length | 10 m |
| Additional signal processing errors | < 1 W/m ² |

| Options | MS-60S |
|----------------------------|----------------|
| Cable length | 20 / 30 / 50 m |
| Ventilation unit | MV-01 |
| Albedo mounting kit | MS-albedo Kit |

Specifications are subject to change without further notice.