

# SMART UV Radiometer MS-10S, MS-11S

EKO



Beyond Accuracy.

# MS-10S, MS-11S

## SMART UV-A and UV-B Radiometer

The UV spectral range is subdivided into two bands: UV-A and UV-B. In contrast to the traditional technology used in UV-radiometers, the MS-10S (315-400 nm) and MS-11S (280-315 nm) have an outstanding stability and measurement repeatability in harsh UV applications. The two UV-radiometer series with Smart technology provide multiple outputs and embedded sensors for remote performance diagnostics. Body-temperature, relative-humidity and tilt-angle can be permanently monitored through the digital interface (Modbus 485 or SDI-12).

Similar to all EKO pyranometers, the UV-radiometer models are based on the compact and light-weight universal EKO sensor platform which offers several benefits. All sensors can be easily combined with the MV-01 ventilation/heater for accurate UV measurements in harsh outdoor environments. Different Smart radiometer models now can be used within the same sensor network in any application for material testing, medical research or industrial monitoring field.

All UV-radiometers are spectrally characterized and calibrated against a NIST traceable standard lamp. This way the UV-radiometers can accurately measure the UV-A and UV-B integrated irradiance independently from the Solar spectral conditions outdoors.

### Features

- Traceable to NIST Standard lamp
- 5 years warranty & 2 years re-calibration period
- Signal outputs in Modbus 485 RTU, SDI-12, 4-20mA, or 0-1V
- Diagnostic functions (relative humidity, temp., tilt angle)
- Sensor can be combined with Ventilation Unit with Heater MV-01

	UV-A Radiometer MS-10S	UV-B Radiometer MS-11S
<b>Measurement range</b>	0 to 150W/m <sup>2</sup>	0 to 10W/m <sup>2</sup>
<b>Temperature response</b>	<1% (-20 to +50°C)	<1% (-20 to +50°C)
<b>Spectral range</b>	315 to 400nm	280 to 315nm
<b>Spectral selectivity</b>	<20%	<20%
<b>Traceability</b>	NIST Lamp Traceable	NIST Lamp Traceable
<b>Directional response</b>	<5W/m <sup>2</sup> ( 0° to 70°) (When irradiating 100W/m <sup>2</sup> at zero zenith angle)	<1W/m <sup>2</sup> ( 0° to 70°) (When irradiating 10W/m <sup>2</sup> at zero zenith angle)
<b>Response time</b>	0.5sec (95%)	0.5sec (95%)
<b>Non-linearity</b>	<1%	<1%
<b>Operating temperature range</b>	-40 to +80°C	-40 to +80°C
<b>Sensor diagnostic</b>	Relative humidity +/- 2% Temp. +/- 0.3°C / Tilt angle +/- 1°	Relative humidity +/- 2% Temp. +/- 0.3°C / Tilt angle +/- 1°
<b>Output</b>	Modbus 485 RTU, SDI-12, 4-20mA, or 0-1V(100Ω)	Modbus 485 RTU, SDI-12, 4-20mA, or 0-1V(100Ω)
<b>Supply voltage</b>	DC5 to 36V	DC5 to 36V
<b>Power consumption</b>	0.2W	0.2W