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MS-90 DNI Sensor

Technical Specifications

DNI measurement (<10% uncertainty)

Pulsed analog output 0-5V

Spectral range 300 - 2500nm

No sun-tracker required

Configurable to measure DNI / GHI / DHI

A new sensor which accurately measures the Direct Normal Irradiance (DNI) without the requirement of a sun-tracker. It features a rotating mirror, which only reflects the sunbeam onto a thermal detector. The pulsed analog output can work with dataloggers with a pulsed analog input or peak hold function. The analog pulse (0-5V) is proportional to the DNI.

Optional control box with GPS antenna (C-Box) can be used to connect MS-90 and any pyranometer to create a **digital solar monitoring station** measuring Direct Normal Irradiance (DNI), Global Horizontal Irradiance (GHI), and calculating Diffuse Horizontal Irradiance (DHI). This system provides Modbus 485 RTU output for all parameters from a single cable.

A revolutionary method to capture the direct sunbeam. MS-90 is a reinvention of the MS-093 sunshine duration meter, which is a reliable and accurate sunshine duration meter, which has been deployed within the AMeDaS network in Japan for over 10 years.

More than 800 stations gather precise sunshine duration information every day. MS-90 is highly suitable to be applied in solar energy monitoring systems and meteorological networks.

	MS-90
ISO 9060:1990	-
Output	0-5V (Pulse)
Temperature response -20°C to 40°C	+/- 5 %
Non-linearity	+/- 2.5 %
Operating temperature range	-20 - 45 °C
Wavelength range	300 - 2500 nm
Power supply	10.5 - 12.5 VDC
Dimensions mm	350 (W) x 250 (L) x 200 (H) (Incl. optional base plate)
Weight	2.5 kg
Ingress protection IP	67
Cable length	10 m
Geographic application	Lattitude (-58º to 58º) / Longitude (0º to 360º)
Power consumption	< 5 W

Options	MS-90
Cable length	20 / 30 / 50 m
Base plate	350 x 250 / leveling feet mm
Power supply	100 to 240 VAC / 12VDC / 200 x 140 x 80mm / 2.5 kg

Specifications are subject to change without further notice.