



## 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.

It can be used in combination with any pyranometer to measure the DNI and Global Horizontal Irradiance (GHI). Hence the Diffuse Horizontal Irradiance (DHI) can be calculated.

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-090 is highly suitable to be applied in solar energy monitoring

systems and meteorological networks.

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

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

Specifications are subject to change without further notice.