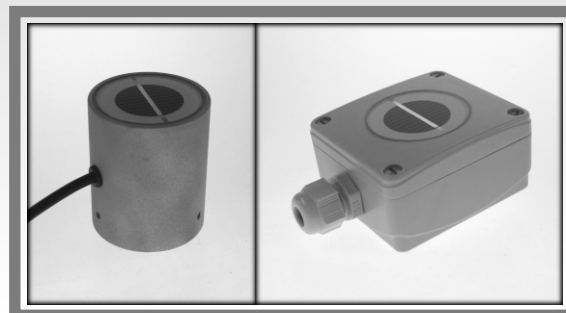


## ▣ IRRADIATION SENSORS

The irradiation sensors are based on our mono crystalline silicon solar cell. The standard measuring range is 0 – 1500 W/m<sup>2</sup>. The standard output signal is either current loop (4–20mA) or analog voltage (0 – 15mV). The onboard temperature sensor can be used for temperature compensation of output signal, e.g. in mcontroller or other computer post-processing system. The sensor is protected by cylindric anodized aluminum case or ABS plastic and solar cell is encapsulated in standard long-live PV industry materials.



| <b>Irradiation sensor F-sun</b>     | <b>Value</b>        | <b>Unit</b>         |
|-------------------------------------|---------------------|---------------------|
| Measuring range                     | 0 – 1500            | Wm <sup>-2</sup>    |
| Spectral sensitivity (silicon cell) | 380 – 1100          | nm                  |
| Sensor average accuracy *           | ±4                  | %                   |
| Field of view                       | 179                 | °                   |
| Operating temperature range         | -30 – 70            | °C                  |
| <b>Output signal</b>                |                     |                     |
| • <i>Current loop</i>               | 4 – 20              | mA                  |
| Power supply                        | 8 – 30              | V DC                |
| Programable digital filter delay    | 0 – 30              | s                   |
| Response time                       | <100                | ms                  |
| • <i>Analog voltage signal</i>      | 0 - 15              | mV                  |
| Sensitivity                         | 7 - 9               | µV/W/m <sup>2</sup> |
| Response time                       | <10                 | ms                  |
| <b>Physical dimension</b>           |                     |                     |
| Dimension (diameter x height)       | 50 x 60             | mm                  |
| Mouting (inner hole screw)          | M8                  |                     |
| Electrical connection               | soldered bare wires |                     |
| IP protection rating                | IP 56               |                     |
| Cylindric Anodised Aluminium case   |                     |                     |
| <b>Thermometers</b>                 |                     |                     |
| • <i>Digital thermometer</i>        |                     |                     |
| Type of communication               | 1 wire              |                     |
| Temperature range                   | -55 – 120           | °C                  |
| • <i>Analog thermometer</i>         |                     |                     |
| PT-100, PT-1000                     |                     |                     |
| Type of communication               | 3 wire              | pc                  |

\*calibrated on sun simulator; outdoor comparison with Kipp&Zonen CMP11 (ISO secondary standard)