



MC-11 Signal converter

Technical Specifications

Analogue sensor interface (mV)

4-20mA | 0-1600 W/m² Irradiance

Correction for sensor temperature dependency and non-linearity

Optional USB controller and EKO sense configuration software

The MC-11 is a 4-20mA digital signal conditioner to convert the Voltage output of a solar radiation sensor into a 4-20mA current output. The converter can be used with all passive EKO radiometers or any other mV sensor to be connected to dataloggers or inverters with a 4-20mA input channel. By using the signal conditioner, the sensor cable can be easily extended over long distances without any signal loss or potential electromagnetic interference in noisy industrial environments.

connected to the signal cable that leads to the measurements system at the installation site.

For easy conversion the converter output for the solar sensor can be set to: 4-20mA = 0 - 1600 W/m². In combination with a solar sensor the sensitivity factor of the solar sensor will be preset to the converter. With the optional USB controller and EKO Sense software (Multiple languages) the converter settings can be freely changed. This tool will be needed in case the sensor sensitivity might need to be changed after a periodical solar sensor re-calibration. It has robust input/output screw terminals, which can be easily

| | MC-11 |
|---|----------------------------------|
| Output | Digital (4-20mA) |
| Input range 1 | 0 - 100 mV |
| Input range 2 | 2W PT-100 / 10kΩ NTC |
| Output range | 4-20mA = 0-1600 W/m ² |
| Resolution (μV) | < 5 |
| Resolution | < 0.1 °C |
| Impedance | > 15 MΩ |
| Temperature response -20°C to 50°C | < 0.2 % |
| Response time 95% | < 1 Sec. |
| Non-linearity full span | < 0.1 % |
| Operating temperature range | -40 - 80 °C |
| Power supply | 12 to 24 +/-10% VDC |
| Power consumption | 0.08 - 0.5 W |
| Dimensions mm | 45 (D) x 23 (H) |
| Weight | 0.03 kg |
| Ingress protection IP | 20 |

| Options | MC-11 |
|------------------------------------|--------------|
| USB programming kit (MC-11) | USB-A |

Specifications are subject to change without further notice.