



A-Box-I Signal converter

Technical Specifications

Analogue interface (V)

4-20mA | 0-1600 W/m² Irradiance

Correction for sensor temperature dependency and non-linearity

IP65 All weather enclosure

Optional USB controller and EKO sense control software

PV system performance rating and testing methods require solar irradiance as an input parameter. For PV monitoring applications, Solar Irradiance and PV module temperature are commonly measured. EKO universal 4-20mA and Modbus RS-485 RTU converters give full flexibility to combine different type of sensors within a multi sensor network. Solar radiation sensors and temperature sensors can be easily integrated. Preserve or improve the sensor accuracy while complying to the output standards used in the industry.

The A-Box-I converts the output voltage of a solar radiation sensor into a 4-20mA current output.

It can be used with all passive EKO sensors or any other irradiance sensor with mV output whenever a 4-20mA signal is required.

For practical installation, the converter models are accommodated inside an IP65 aluminium box with

universal cable glands. It has robust input/output screw terminals, which can be easily connected to any cable and measurements system at the installation site. With the signal converter the sensor cable can be extended over a long distance without any signal loss or potential electromagnetic interference.

With the optional USB controller and EKO Sense software the converter settings and advanced sensor parameters (Temperature dependency correction / non-linearity correction) can be applied and verified.

	A-Box-I
Output	Digital (4-20mA)
Dimensions mm	64 (L) x 98 (W) x 36 (H)
Weight	0.25 kg
Ingress protection IP	65

Options	A-Box-I
USB programming kit (MC-11)	USB-A

	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.