

4 to 20 mA SIGNAL AMPLIFIER

- Galvanic isolated in/output
- Extended temperature range
- Negative inputs allowed
- Large screw terminals
- Fixed or calibrated gain



AMPBOX is a current loop amplifier for the complete range of solar radiometers. Most radiometers have no power supply, the measured radiation is used to create an output signal in the mV range and amplification is often required, especially when signal cables of more than 50 m are used between the radiometer and data collection equipment.

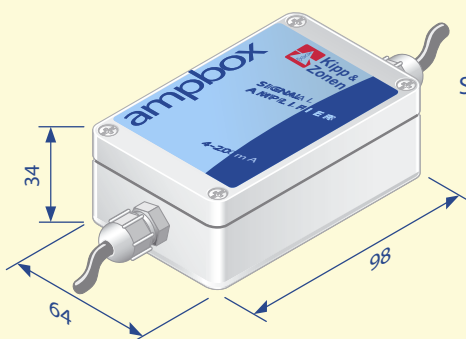
The input and output of the AMPBOX are galvanically isolated to minimize feedback and to protect the data collection equipment. When installation is in EMC-unfriendly environments, amplification can prevent interference problems.

The 4 to 20 mA interface makes it easy to connect to most data collection equipment. An output of 2 to 10 Volt can be created with the use of a 500 Ω resistor and a suitable power supply.

As standard amplification is set to 1 mV input equals 1 mA output. On request the amplification can be adjusted to suit the sensitivity of a specific radiometer, for example with a pyranometer this results in 4 to 20 mA equals 0 to 1600 W/m².

SPECIFICATIONS

Current output range	4 to 20 mA
Input voltage range	-12 to +150 mV
Gain standard	1 mA/mV
Gain range	0.1 mA/mV to 4 mA/mV
Input impedance	10 M Ω
Zero adjust	50 % of 4 to 20 mA range
Temperature range	-40 °C to +85 °C
Supply Voltage range	7.2 VDC to 35 VDC
Voltage drop	7.2 VDC
Ingress protection	IP 66
Dimensions	64 x 98 x 34 mm
Weight	0.25 kg
Cable diameters	3 to 7 mm



Suitable for use with:

- Pyranometers
- Pyrheliometers
- Pyrgeometers
- Net Radiometers
- CUV Radiometers
- PAR Radiometers

AMPBOX is IP66 approved and suitable, like all Kipp & Zonen radiometers, for outdoor installation under all weather conditions. Two cable glands and large internal screw terminals allow for easy connection of radiometer and output wires. Radiometer temperature sensors can be connected and passed through AMPBOX (without amplification).