AMPBOX

Specifications	
Input impedance	10 MΩ
Output range	4 to 20 mA
Supply voltage	35 VDC maximum
Voltage drop to power amplifier	7.2 VDC
Input range	-12 to +150 mV
Standard gain	2 mV / mA
Gain range	0.1 to 4 mA / mV
Zero adjustment	Up to 12 mA
Operational temperature range	-40 °C to +85 °C
Storage temperature range	-40 °C to +85 °C
Humidity range	0 to 100 % non-condensing
Ingress Protection (IP) rating	66

AMPBOX is a digital amplifier perfectly suited to combine with our instruments. Most Kipp & Zonen solar radiation radiometers are passive instruments that do not require any power to operate. The output signal is generated by the thermopile or photo-diode detector. However, the output is a very low voltage, typically in the region of 10 mV on a bright sunny day.

AMPBOX can be used to provide a 4 to 20 mA current loop signal for applications where longer cables are required, or the low signal outputs cannot be handled. AMBOX is fully waterproof and can be installed outdoors close to the radiometer and connected by several hundred metres of cable to the data acquisition system. The amplifier is 'current-sink' (powered by the current loop). The power for the loop must be supplied from the data acquisition system.

AMPBOX is a programmable digital amplifier and the input and output are isolated to minimize feedback and to protect the data collection equipment. As standard the amplifier is delivered with an input signal of 2 mV producing an output of 1 mA, so that 4 to 20 mA represents 0 to 32 mV.

AMPBOX can be adjusted to suit the sensitivity of a particular radiometer to provide a defined radiation output range, for instance 4 to 20 mA represents 0 to 1600 W/m² of radiation. For radiometers that can produce a negative output the zero point is offset.

Part number	Article
0365900	AMPBOX signal amplifier standard gain setting
0365901	AMPBOX signal amplifier gain adjusted
0365903	AMPBOX signal amplifier gain adjusted for pyrgeometers
Note: For an existing radiometer please specify the model, serial number and sensitivity when ordering	