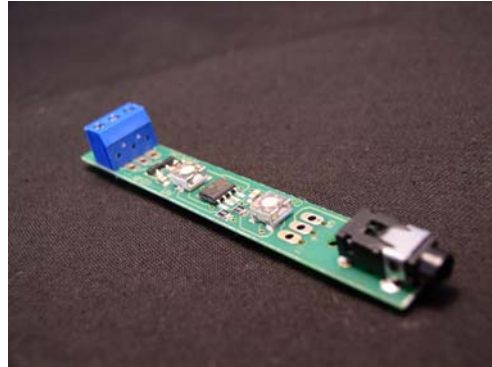


# Transmitter of photodiode current to 4- 20 mA current loop

## AMPCON 4–20



### **Description:**

The AMPCON-board converts an input current  $I_E$  ranging from 0 nA to 800 nA to an output current  $I_A$  ranging from 4 mA to 20 mA such that the board can be integrated into a standard industrial 4 – 20 mA loop data bus.

The conversion is

$$I_A = C \times I_E + I_{OFF}$$

An input current  $I_E = 0$  nA corresponds to the offset current  $I_{OFF} = 4$  mA as output current. There are two trimmer on the board. The offset current  $I_{OFF}$  can be adjusted with the trimmer OS. The amplification  $C$  can be adjusted with the trimmer AM.

**Input:** 3.5 mm audio jack for the sensor, or solder point (-) to anode and (+) to cathode

**Output:** screw joint terminal with :

- V+ : positive polarity of data-bus loop
- 0 : negative polarity of data-bus loop
- G : optional mass, gets connected with the shielding of a 3.5 mm audio plug.

**Power supply:** A bias of 11- 28 V has to be applied between 0 und V+. The resulting current  $I_A$  ist the signal for the data bus. As standard, a 4 – 20 mA data bus is driven with 24 V. Therefore, the bias of the data bus is usually sufficient to run the board.

**Dimensions:** width × length × height = 11.3 × 77.7 × 12 mm<sup>3</sup>

**Mounting:** 2 holes with 2.2 mm separated by 57.3 mm.

**Options:** The board is also available without in- & output terminals and solder points only.