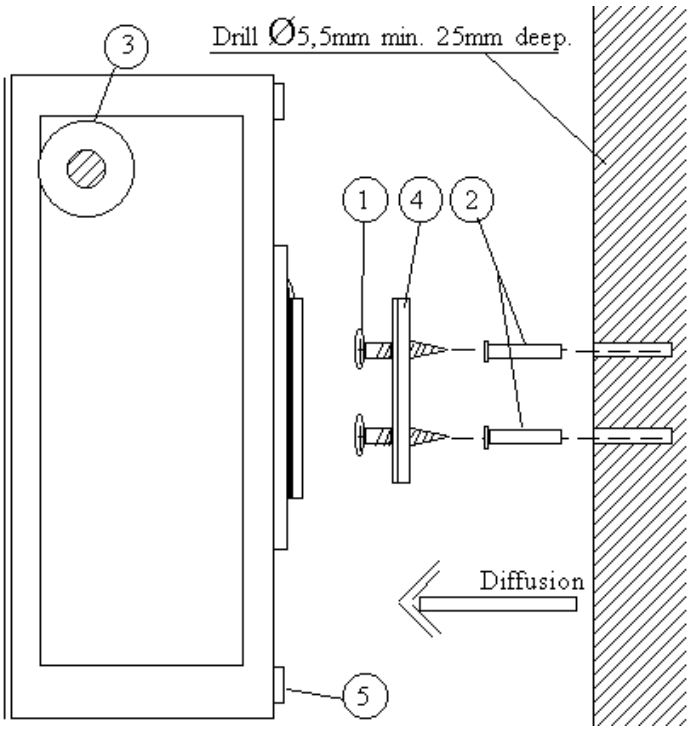
Installation Manual

aSENSE

CO_2 / temperature transmitter with heater mounted in industrial housing

aSENSE with heater



Mounting of the sensor onto the wall

1 Screw 5x25
2 Dowel
3 Cable entry bushing PG9
4 DIN rail
5 Draining holes

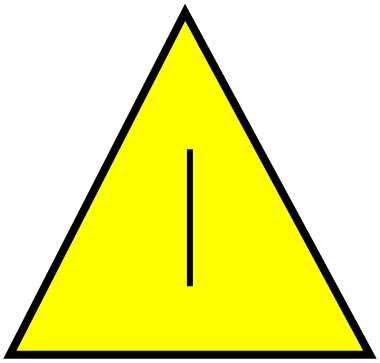
The DIN rail places the sensor 7 mm from the wall. This distance is very important for the response time because the air inlets are situated at the back of the housing facing the wall. The sensor should be mounted with the cable entry bushing upwards and the draining holes downwards.

The sensor PCB is in an extra housing inside the outer housing.

If for some reason the PCB must be removed it must be handed carefully and protected from electrostatic discharge! Normally, removing the PCB is not required.

Electrical connections

The power supply has to be connected to ~ + and ⊥. ⊥ is considered as system ground. If the analogue output is connected to a controller *the same ground reference has to be used for the aSENSE unit and for the control system!* Unless different transformers are used, special precautions need to be taken.



PLEASE NOTE! The *aSENSE* signal ground *is not* galvanically separated from the *aSENSE* power supply!

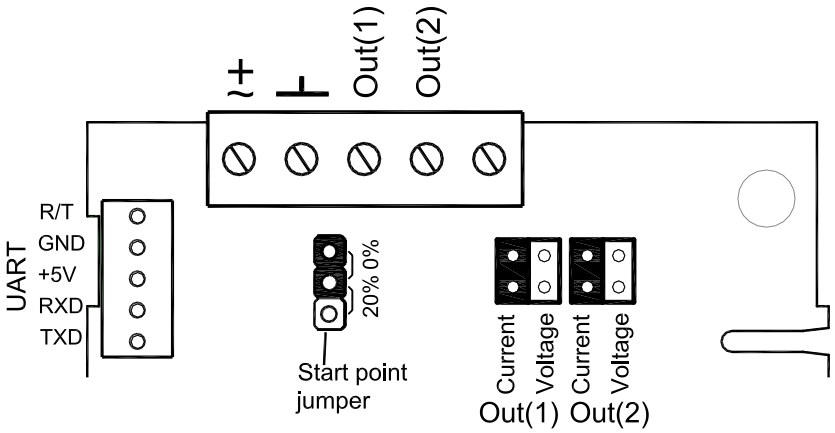
NOTE!
The same ground reference has to be used for the *aSENSE* unit and for the control system!

Connect the power after mounting. The analogue output should be connected before measuring.

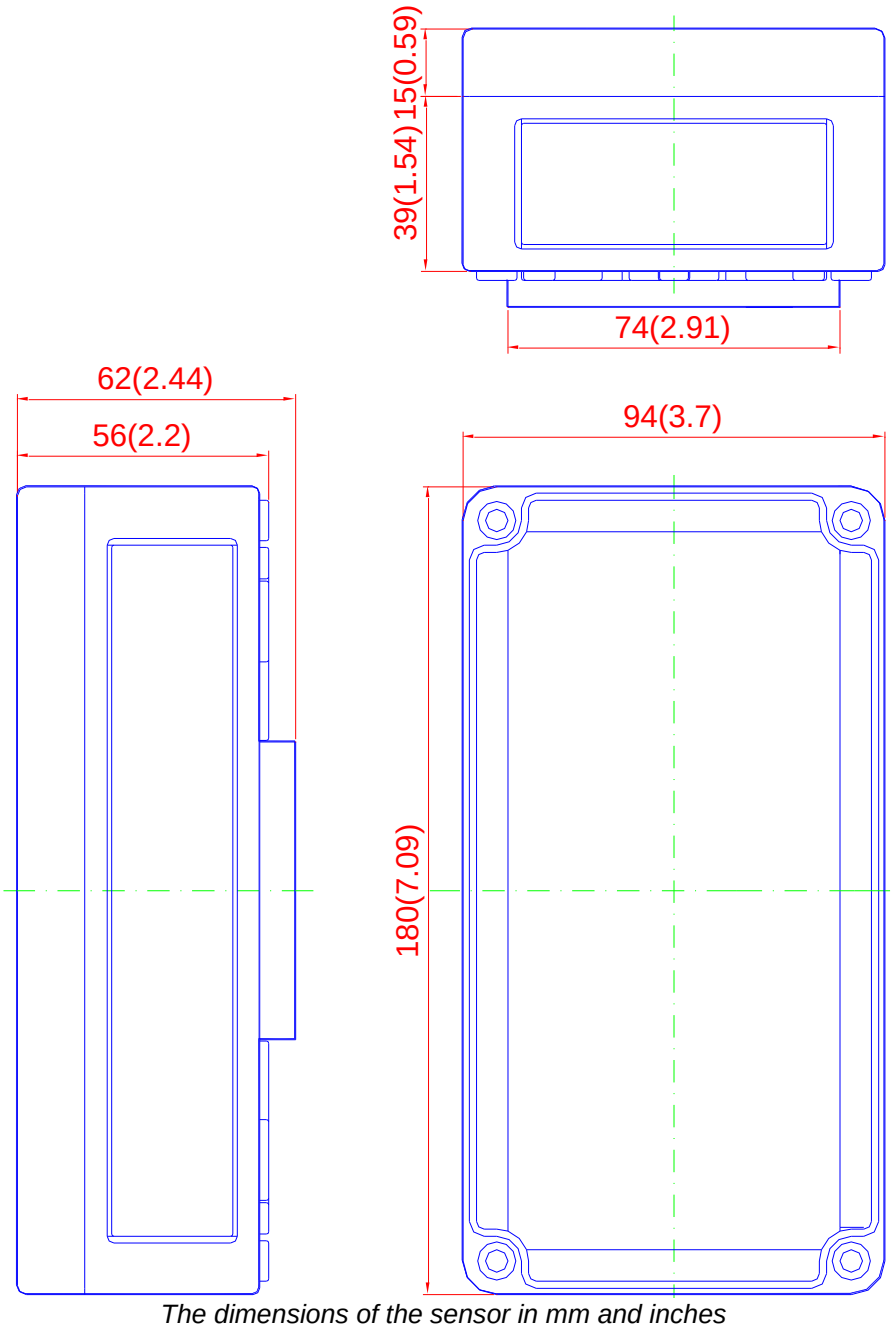
Connection Terminal	Function	Electrical Data	Remarks
~ + ⊥	Power (+) Power ground (-)	24-29 VAC/DC+ (minimum 2 A continuously) 24 VAC/DC-	The heater is connected to G+ and G0. Minimum temperature –30 °C *See note 1!*
Out(1)	Analogue Output 1 (+)	0-10 VDC or 0-20 mA, 2-10 VDC or 4-20 mA,	According to positions of OUT1 and start point jumpers. *See note 2!*
Out(2)	Analogue Output 2 (+)	Same as Output 1	According to positions of OUT2 and start point jumpers. *See note 2!*
Not marked	Signal Ground (-)	Connected to G0 via PTC fuse	*See note 1!*

Note 1: *The ground terminal is used as negative power supply DC input or AC phase ground ⊥ (halfwave rectifier). The signal ground M, protected by a PTC resistor, is the same as power ground ⊥ (permitting a "3-wire" configuration). A single transformer may be used for the entire system.*

Note 2: *aSENSE can deliver a voltage or a current loop for Out(1) / Out(2). To change between voltage and current output mode the hardware jumpers are used. There is one jumper for Out(1) and one for Out(2), so that one output can be a voltage output and the other a current output. Both, voltage output and current outputs, can have start points 0 % (0-10 VDC or 0-20mA) or 20% (2-10 VDC or 4-20mA). The same start point is used for both outputs. See the user manual.*



Terminals and jumpers on aSENSE. The darker positions are default settings.



The dimensions of the sensor in mm and inches