Configuration Jumper for Out2 Output

The output OUT2 can be used as a voltage or current output. The output is configured by the jumper on top of the PCB. The Configuration of the output can be changed by moving the jumper to the desired position. The output must be reconfigured before the unit is powered up.

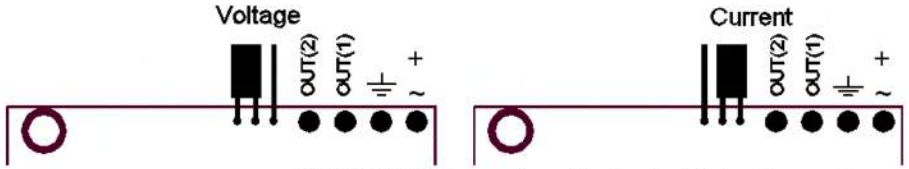

Figure 5. The upper part of the eSENSE II PCB seen from the back with the jumper in voltage (default) and current position

Self-Diagnostics

The system contain complete self-diagnostic procedures that are executed automatically when the sensor is in operation. Sensors with a display show a wrench if an error is found. The wrench is shown durning the first seconds after power up and if the measuring range (2000 ppm) is exceeded.
The output OUT2 indicates the same information by setting the output to 1V or 2 mA.

Please Note!
The Sensor accuraccy is defined at continuous operation.
(at least 3 weeks after installation)

Warranty and Limit of Liability

1. We will undertake to repair or replace free of charge any part or parts of equipment which may develop defects caused by faulty material or workmanship for 5 years from date of installation.
2. Damage due to negligence or improper use or other causes beyond our control are excluded from this guarantee.
3. We accept no liability regarding incidental expenses or consequential damages.
4. This guarantee shall be null and void should any person modify or attempt to repair our equipment.

This product is in accordance with the EMC 2004/108/EC, 92/31/EEG including amendments by the CE-marking Directive 93/68/EEC.
The product fulfils the following demands: EN 61000-4-2 level 2, EN 61000-4-3 level 2, EN 61000-4-4 level 4, EN 55022 class B

CE

Young Regulator Company

There Is No Equivalent.

Demand-Air™ CO_2

Carbon Dioxide Sensor Installation Instructions

General

The IAQ sensor product, Demand-Air is designed to measure carbon dioxide (CO2) in rooms. It displays the measured CO2 Value in parts per million (ppm) on the LCD. The units are designed for connecting to the Young Regulator Demand-Air™ Damper for fresh-air intake control.

There are two parallel signal outputs.
Out1 (0-10Vdc) connects to the Damper.
Out 2 (2-10Vdc or 4 to 20mA) provides a parallel output for a Direct Digital Control (DDC) or other Building Management system.
Out 2 indicates an error conditon if its output is 1Vdc or 2mA.

To Open the Housing
Insert a screwdriver into the hole (A) in center of the top of the housing. Push the handle towrd the front of the unit. (B)

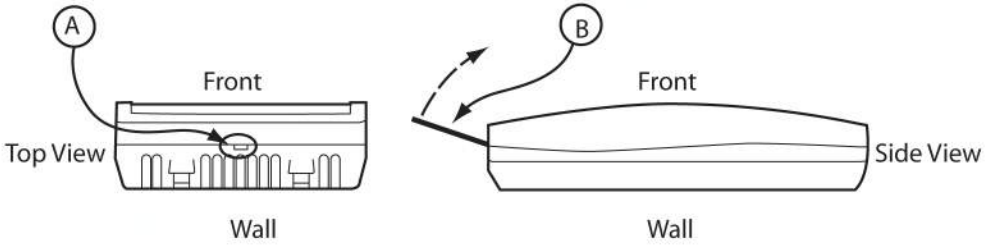

Figure 1 Closed sensor housing seen from top and side. The housing is opened by inserting a screwdriver and pushing to the front of the housing. The locking hooks will then be released.

Demand-AIR™ CO_2

Figure 2. Closed housing seen from the side. The housing is opened by inserting a screw driver and pushing left (to the front side). The locking hooks will then be released.

Figure 3. Closed housing seen from the side. Never push to the right. The locking hooks may break and the housing is damaged

Dimensions

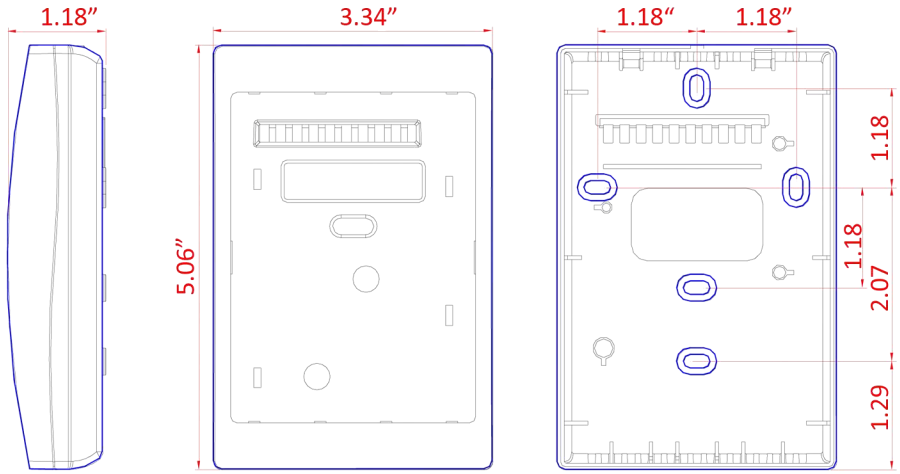

Figure 3. The dimensions of the sensor

Electrical Connections

the Power Supply has to be connected to hot ~ and ground ⏚ . Ground is considered as system ground. The same ground reference must be used for the Demand-AIR Sensor and the Demand-AIR Damper.

NOTE: If the DemandiAIR System is going to be connected into a Building Management System, the controller must share the same ground reference.

PLEASE NOTE!
The same ground reference must be used for the Demand-Air Sensor, Damper and any other connected controls.

Terminal	Function	Electrical Data	Standard Settings	Settings of This Sensor
+	Power (+) **Connects to Damper Hot (Red)**	24 VAC/DC+ +/- 20%, 2W		
~				
⏚	Power Ground (-) **Connects to Damper Common (Black)**	24VAC/DC-	System Voltage Reference	
OUT(1)	Analog Output 1 (+) **Connects to Damper Input (White)**	0-10 VDC	0-2000 ppm CO_2	
OUT(2)	Analog Output 2	2-10 VDC or 4-20mA	0-2000 ppm CO_2	
	Optional Parallel connection to BMS	0.9 to 1.6 VDC 1.5 to 2.5 mA	Status = Error	
		0VDC or 0 mA	Status = Not Ready	

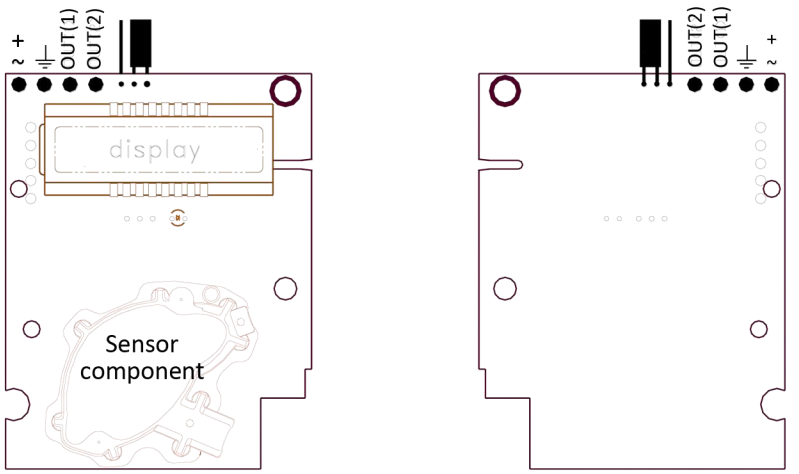

Figure 4. The PCB seen from the front and the back. The OUT2 jumper is in the default position (voltage)