AirSense
Professional Series

Model 308 Series Duct Mount Wiring and Calibration Instructions

Made in USA

- Locking Set Screws (2x)
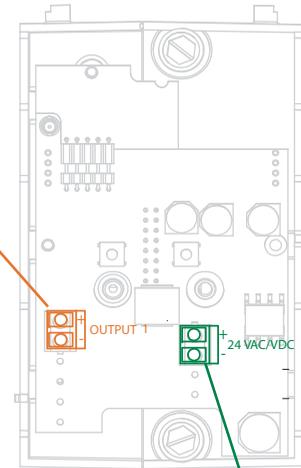- CO2 Calibration Gas Port
- CO2 Calibration Activation

Outputs available in either Voltage (0-10V) or Current (4-20mA)

Not all outputs are used on every unit. See table below for output assignments.
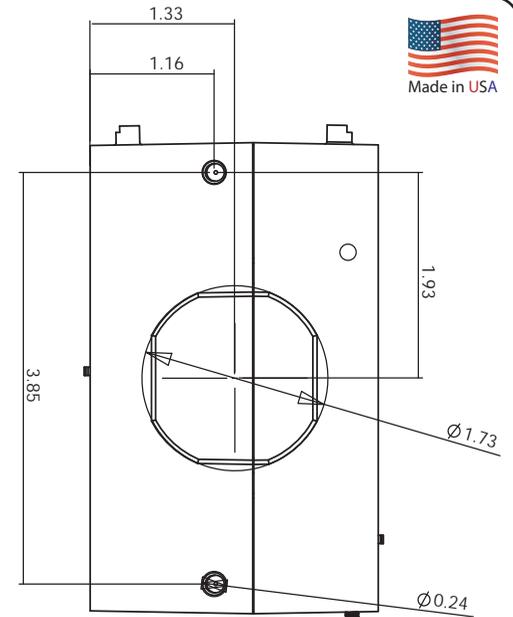
All '-' terminals are electrically connected.

Analog Output Scaling

Sensors		CO2 ppm
Current Output	4 mA	0
	12 mA	1000
	20 mA	2000
Voltage Output	0 Volts	0
	5 Volts	1000
	10 Volts	2000

Warning And Alarm Indication

Sensors	Warning level LED is YELLOW	Alarm level LED is RED
CO2	1000 ppm	2000 ppm

Output	Sensors
Output 1	CO2

OUTPUT 1

+ 24 VAC/VDC

Power input
18-30 VDC
18-28 VAC
(polarity matters for VDC only)

Duct Mounting Drill pattern
(Dimensions in inches)

1.33
1.16
3.85
1.93
Ø 1.73
Ø 0.24

Calibration Kit

Your sensor comes factory-calibrated and does not need to be calibrated upon initial installation. Calibration kits are available.

CO2 Calibration Procedure
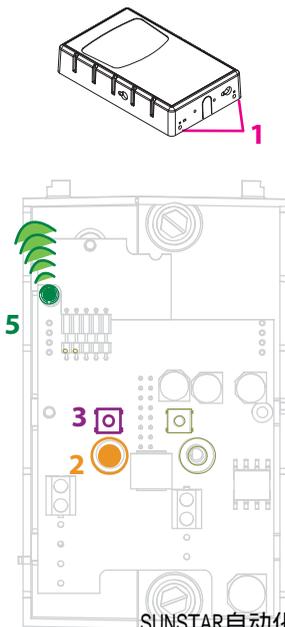
1. Back out set screws along bottom edge of enclosure cover and remove cover.

2. Remove dust cover from left-most post. Connect 2000 PPM CO2 calibration gas . Turn on gas and allow to flow one minute before proceeding to step 3.

3. Press 'CO2 CAL' switch for 5 seconds. LED will blink **yellow**.

4. After **5 minutes** the LED will **blink green**, indicating that the calibration process is completed.

5. Press and hold the 'CO2 CAL' switch (3 at left) to accept calibration. The LED will turn **solid green** after only a few seconds.

6. At this point it is safe to turn off gas and remove the gas tubing from the calibration port.

7. When calibration is complete, replace dust cover on gas calibration port.

Align top and bottom latch and snap lid closed
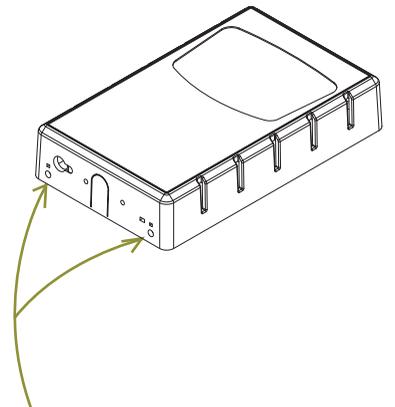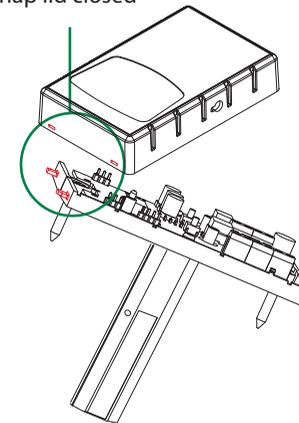
Once lid closed, insert set-screws to lock enclosure. Requires 1/16"Allen Wrench

Introduction

The 308 Series is a non-dispersive infrared analyzer for measuring environmental CO2 concentration in ventilation systems and indoor living spaces. Its measurement range of 0 - 2000 ppm (parts per million; 1000 ppm = 0.1%) covers the range required to monitor compliance with ASHRAE or other ventilation efficiency standards. The 308 comes configured for:

- Wall or duct-mounting;
- Voltage or 4-20mA outputs

A simple one-point calibration procedure and a built-in calibration port that requires no special fittings or adapters make the 308 simple to operate and maintain.

CARBON DIOXIDE SENSOR (CO2)	
Parameter	**Value**
Operating Principle	Non-dispersive infrared (NDIR)
Gas Sampling Method	Diffusion
Measurement Range	0-2000 ppm (Other ranges available by request)
Repeatability	± 20 ppm CO2
Measurement Accuracy	± 30 ppm ± 2% of reading, whichever is greater
Recommended Calibration Interval	5 years
Warm Up Time	Less than 1 minute
Power Requirements	18 - 30 VDC or 18 - 28 Vrms AC
Operating Temperature Range	0 - 50 ^{0}C
Operating Humidity Range	0 - 99% RH, non-condensing
Voltage Output (linear)	0 - 10 VDC full-scale standard
Optional Current Output (linear)	4-20 mA $R_{LOOP} < 600\ \Omega$
Calibration	ONE Point : Single-button calibration (Patented)
Dimensions	4.5 x 2.8 x 0.9 inches

Displays and Indicators

The 308 Series includes a single tri-color LED on the front panel which illuminates whenever the unit is operating. This LED indicates:

- Green -> CO2 sensor at normal levels

- Yellow -> CO2 sensor at Warning levels

- Red -> CO2 sensor at Alarm level

- Blinking Red -> Sensor error

The display option adds a 4 digit liquid crystal display (LCD) to the front panel (availble in duct unit). The display shows the measured:

- CO2 concentration in parts per million (ppm)

AirSense
Professional Series

DUCT MOUNT

WALL MOUNT

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