

CO₂ Transmitters



ACI/CO₂



Product Description

The ACI/CO₂ transmitters monitor carbon dioxide (CO₂) levels in industrial and living environments from 0 to 10,000 ppm. The concentration of CO₂ is a good indication of the indoor air quality (IAQ).

Guidelines provided by ASHRAE (62-1989), relate CO₂ levels to the amount of ventilation required in occupied spaces. Carbon dioxide levels in outside air range from 320 to 350 ppm. Indoor concentrations above 1000 ppm indicate the need for additional ventilation.

All units come with both a 4-20 mA and 0-10 VDC analog output as well as a relay output with an adjustable setpoint. An optional LCD display may be added to the room unit while all the duct configurations come standard with the LCD display.

The concentration of CO₂ is measured using a Single Beam Absorption Infrared Diffusion sampling method. The CO₂ transmitter is also equipped with a patented ABC Logic (Automatic Background Calibration) software. The

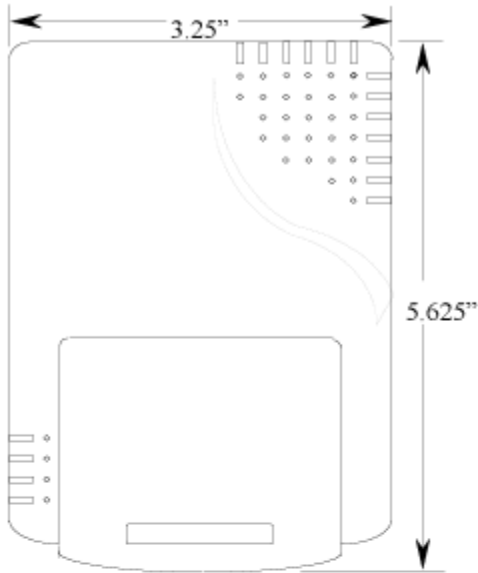
software virtually eliminates the need for manual calibration in applications where the indoor CO₂ level drops to outside levels during unoccupied periods. The ABC Logic will not work properly in applications where the space is left unoccupied for less than 4 hours a day or where there are industrial sources of CO₂. An Elevation (Pressure) Correction of 0.13% of reading per mm Hg decrease from 760 mm Hg may be set during configuration. All adjustments to the sensor including output scaling and single point adjustments shall be made via computer connection to an on-board RJ45 jack. Upon initial installation, a warmup time of more than 2 minutes is required to get an accurate reading.

ACI's carbon dioxide transmitters are offered in both room or duct mounted configurations. The room transmitter mounts directly to a standard 2" x 4" junction box, whereas the duct sensor comes with a Pitot Tube for sampling. The room transmitter is encased in a white enclosure while the duct sensor is enclosed in a black case that is UL94-5V Rated.

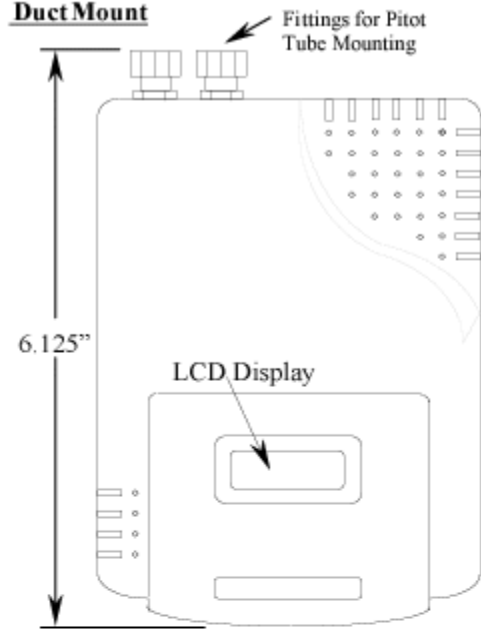
Product Specifications			
Supply Voltage	18 to 30 VAC, 50/60 Hz Half-Wave Rectified 18 to 42 VDC, Polarity Protected	Measurement Range	0 to 2000 ppm (Factory S Adjustable to 10,000 ppm
Power Consumption	1.75 VA average power, 2.75 VA peak power	Digital I/O	RS232 Interface for use v Calibration Software
Output	4 to 20mA (RL max =500 Ohms) 0 to 10 VDC (100 Ohms output impedance)	Relay Output	N/O or N/C 2A Contact F a 50 ppm Hysteresis
Accuracy	+/- 75 ppm or +/- 7% whichever is greater	Calibration Time	5 Years / Zero ppm gas o
Resolution	+/- 1 ppm	Sampling Method	Single Beam Infrared Dif
Sensitivity	+/- 10 ppm	Operating Temp.	60 to 90°F (15 to 32°C)
Response Time	0 to 90% <1 minutes	Digital Display	0 to 10,000 ppm (Optiona

Dimensions

Room Mount



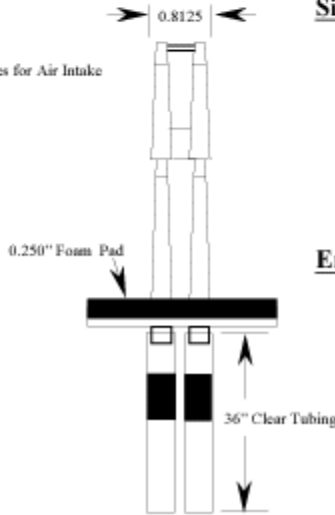
Duct Mount



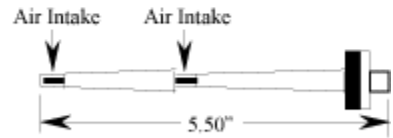
Side View



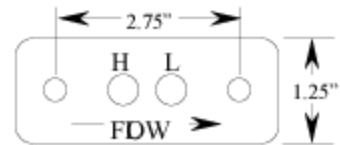
Pitot Tube for Duct



Side View



End View



Ordering Information

	Model		Display	
A/CO ₂	[]		[]	
	↑		↑	
	(R)	Room	()	No Display (standard)
	(D)	Duct	(LCD)	LCD Display
Cal Kit		Calibration Kit		
Software		Calibration Software		

16L NO₂ 16 Litre Cylinder of Nitrogen (used for Zero Calibration)

2000 ppm 16 Litre Cylinder of Carbon Dioxide (used for Span Check)

Example: A/CO2-R-LCD **or** A/CO2-D

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