DISPLAYS

TEMPERATURE

RELATIVE HUMIDITY

PRESSURE

CURRENT

AIR QUALITY

ACCESSORIES

ACI
"First in Sensor Quality"

Product Data

A/CO$_2$ Series
Carbon Dioxide Sensor
4 to 20 mA
0 to 10 VDC

Carbon Dioxide

Product Description

The A/CO$_2$ transmitters monitor carbon dioxide (CO$_2$) levels in industrial and living environments from 0 to 10,000 ppm. The concentration of CO$_2$ is a good indication of the indoor air quality (IAQ). 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 and deadband (Hysersis). 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 CO$_2$ is measured using a Single Beam Absorption Infrared sensing method. The CO$_2$ transmitter is also equipped with a patented ABC Logic^{TM} (Automatic Background Calibration) software. The ABC Logic^{TM} software virtually eliminates the need for manual calibration in applications where the indoor CO$_2$ level drops to outside levels during unoccupied periods. The ABC Logic^{TM} 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 CO$_2$.

The room transmitter is encased in a white enclosure while the duct sensor is enclosed in a black case that is UL94-5V rated and includes a pitot tube.

All units come with a two year factory warranty.

Attributes:
- LCD Display
- Analog and Relay outputs
- Self calibration system
- CE, FCC part 15 class B California Energy Commission Compliant
- Long life span (15 years typical)

Applications:
- Schools
- Large Office Buildings
- Auditoriums/Gymnasiums
- Shopping Malls
- Residential
- Theatres

Product Specifications

Supply Voltage	18 to 30 VAC, 50/60 Hz Half-Wave Rectified +18 to 42 VDC, Polarity Protected
Power Consumption	1.75 VA average power, 2.75 VA peak power
CO$_2$ Analog Output Signals	4 to 20 mA (RL max = 500 Ohms) 0 to 10 VDC (100 Ohms output impedance)
Accuracy @ 72°F (22°C)	+/- 40 ppm + 3% of reading
Response Time	0 to 90% < 2 minutes
Operating Temperature	32 to 122°F (0 to 50°C)
Operating RH Range	0 to 95% RH, non-condensing
CO$_2$ Measurement Range	0 to 2000 ppm (Factory Set), Adjustable to 10,000 ppm
Digital I/O	RS232 Interface for use with optional PC UIP Kit #2072
Relay Output	N/O or N/C 2A max @ 24VAC contact Rating, Factory Set at 1000 ppm with 50 ppm Hysteresis
Calibration Time	5 Years / Zero ppm with a 50 ppm Hysteresis
Sampling Method	Room: Single Beam Infrared Diffusion
Digital Display	0 to 10,000 ppm (Optional)

Automation Components, Inc.
2305 Pleasant View Rd.
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Wiring Diagrams available at www.workaci.com/instructions.htm
C0000113 rev 2.pdf

Dimensions

Room Mount
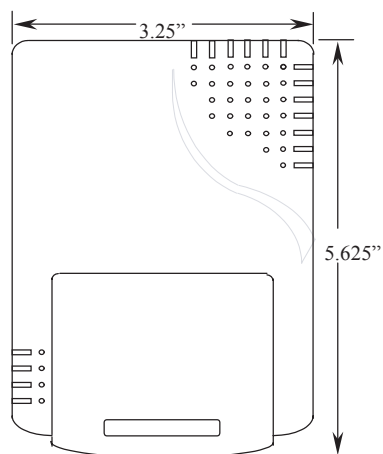
3.25"

5.625"

Duct Mount

Fittings for Pitot
Tube Mounting

6.125"

LCD Display

Back Mounting Plate

2 7/8"
2 3/8"
2 3/8"
3 1/4"
4 1/4"
5 1/16"

8 7 6 5 4 3 2 1

AC/DC+
AC/GND

Side View

0.75"

Louvres for Air Intake

1.100"

Pitot Tube for Duct

0.8125

0.250" Foam Pad

36" Clear Tubing

Side View

Air Intake   Air Intake

5.50"

End View

2.75"

H   L

FLOW →

1.25"
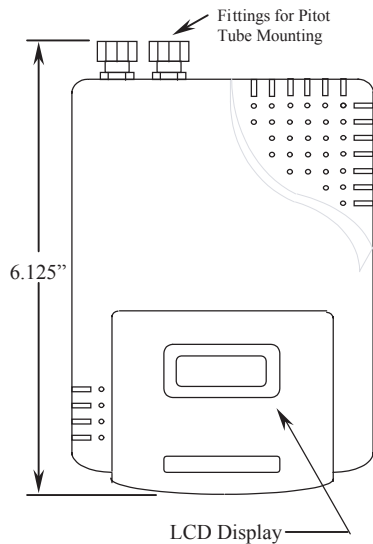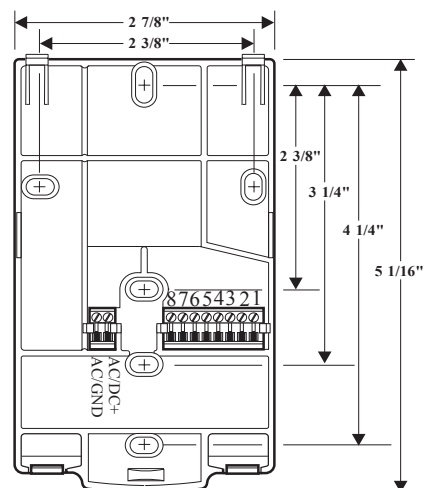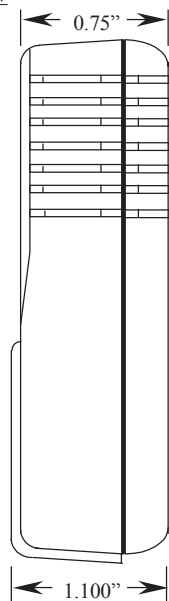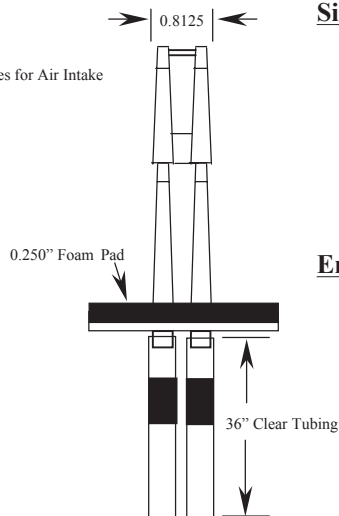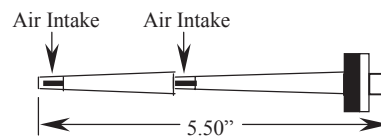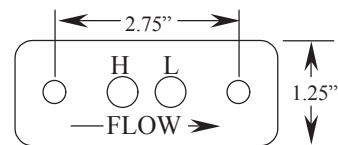
Ordering Information

Configuration   Display Option (Room Only)

A/CO2-R (Room Mount)   **- [   ]**

(   )- No Display (Standard)
(D)- LCD Display (Optional)

A/CO2-D (Duct Mount with Display)

A/CO2-Software (Calibration Software)
(UIP Kit #2072)

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