



## Features & Options

- Automatic Barometric Pressure and Temperature Compensation
- Optional Temperature, Temperature Setpoint, Override and Humidity
- Optimized for Periodically Unoccupied or Continuously Occupied Areas

The BAPI CO<sub>2</sub> Sensor is an accurate and reliable way of incorporating demand controlled ventilation into a building's HVAC strategy. It measures the CO<sub>2</sub> in a range of 0 to 2,000 ppm with a field selectable output of 0 to 5 or 0 to 10 VDC.

The Single Beam (ACD) unit has been optimized for periodically unoccupied areas and features automatic background calibration over a long time period to reduce drift. The Dual Channel (DCD) "24/7" unit has been optimized for continuously occupied areas and features a three-point calibration process for enhanced stability, accuracy and reliability.

Barometric pressure changes from altitude or weather patterns can affect CO<sub>2</sub> sensors, even putting them outside of their specified accuracy. The BAPI unit has a built-in Barometric pressure sensor that continuously compensates the output for accurate readings despite the weather or altitude of the installation.

The unit can be ordered as CO<sub>2</sub> alone, or with optional temp, temp setpoint, override and humidity. The large format display is easy to read and alternates between the measured values (CO<sub>2</sub>, Temperature or Humidity). The display is also field adjustable between °F or °C and all the displayed values may be turned on or off by an HVAC technician.

Optional indication of CO<sub>2</sub> level as "Good, Fair or Poor" is available as a three-color LED or as an arrow on the display for 0 to 2,000 ppp units.



CO<sub>2</sub> Sensors with Temp. Setpoint and Override.

The top unit has the CO<sub>2</sub> Level of "Good, Fair or Poor" shown by an arrow on the display. The bottom unit has the CO<sub>2</sub> level shown by a 3-color LED.

## Specifications

### Power for 0 to 5 VDC Outputs:

9 to 35 VDC @ 50mA avg, 200 mA max (9 to 24 VDC recomm.)

### Power for 0 to 10 VDC Outputs:

15 to 35 VDC @ 50mA avg, 200 mA max (15 to 24 VDC recomm.)

### Sensing Elements:

ACD Unit CO<sub>2</sub>: Single Beam Non-Dispersive Infrared (NDIR)

DCD Unit CO<sub>2</sub>: Dual Channel Non-Dispersive Infrared (NDIR)

Humidity: Capacitive Polymer ±2% RH Accuracy

### Temperature Sensor:

Thermistor, RTD or Semiconductor

### Operating Environment:

32 to 122°F (0 to 50°C)

0 to 95%RH non-condensing

Material ABS Plastic, Material Rated UL94V-O

### CO<sub>2</sub> Detection Range:

0 to 2,000 ppm, 0 to 5,000, 0 to 10,000 and 0 to 50,000 ppm

Start-Up Time: 10 Minutes

Response Time: Less Than 2 Minutes (after Start-Up Time)

Mounting: 2"x4" J-Box or drywall – screws provided

### CO<sub>2</sub> Accuracy (Single Beam ACD Units):

400 to 1,250 ppm: ±30ppm or 3% of reading, whichever is greater  
1,250 to 2,000 ppm: ±5% of reading + 30ppm

### CO<sub>2</sub> Accuracy (Dual Channel DCD "24/7" Units):

±75ppm

### LCD Display:

Main Display: 0.76" 4-digit Numeric (Numeric Values)

Minor Display: 0.34" 3-digit Alpha-Numeric (PPM, %RH, °F, °C)

Occupied/Unoccupied Human Icon: (Blk=Occupied)

### Measurement Offsets: (Field Adjustable)

±5° (F or C) in 0.1° increments

±5% RH in 0.1% RH increments

### Override Output:

Contact .... SPST, 24V AC/DC, 0.5A max

Sensor ..... Shorts Out direct temperature sensor

Setpoint .... Contact in parallel, resistive setpoint only

### LED CO<sub>2</sub> Level Indicator:

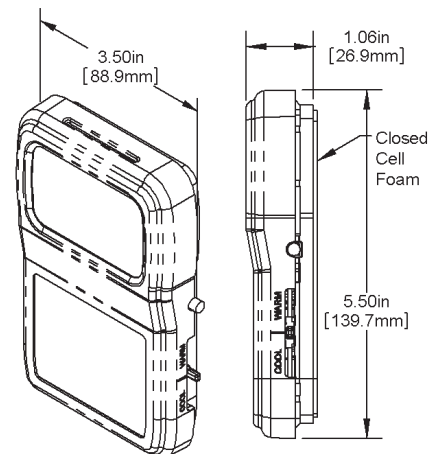
Good, Green < 1,000 PPM

Fair, Orange = 1,000 to 1,500 PPM

Poor, Red > 1,500 PPM

### Certifications: RoHS

Warranty Period: 2 Years from manufacture date





# CO<sub>2</sub> Room Sensor, BAPI-Stat 3 Enclosure

# D9

Rev. 03/09/16

**Air Quality Sensors**Ordering Grids without List Prices are available on our website at [www.bapihvac.com](http://www.bapihvac.com)

Ordering Information		List Price	Your Order																																																												
<b>BA/</b> BAPI-Stat 3 Style Room CO <sub>2</sub> Sensor with Optional Temperature and Humidity Sensing																																																															
<b>Temperature Display Mode</b>																																																															
BS3F	Temperatures Displayed in °F (Temperature is displayed by default but can be turned off by the user. See instruction sheet.)	\$35.00	\$																																																												
BS3C	Temperatures Displayed in °C (Temperature is displayed by default but can be turned off by the user. See instruction sheet.)	\$35.00	\$																																																												
BS3X	No LCD Display	\$0.00	\$																																																												
<b>CO<sub>2</sub> Output</b>																																																															
-ACD05	CO <sub>2</sub> as 0 to 2,000 PPM, 0 to 5 VDC output, Single Beam Automatic Background Calibration unit for periodically unoccupied areas	\$475.00	\$																																																												
-ACD10	CO <sub>2</sub> as 0 to 2,000 PPM, 0 to 10 VDC output, Single Beam Automatic Background Calibration unit for periodically unoccupied areas	\$475.00	\$																																																												
-DCD05	CO <sub>2</sub> as 0 to 2,000 PPM, 0 to 5 VDC output, Dual Channel Calibration "24/7" unit for continuously occupied areas	\$505.00	\$																																																												
-DCD10	CO <sub>2</sub> as 0 to 2,000 PPM, 0 to 10 VDC output, Dual Channel Calibration "24/7" unit for continuously occupied areas	\$505.00	\$																																																												
<b>Humidity Transmitter (Omit if not required)</b>																																																															
-H205	±2% Humidity Transmitter, 0 to 5 VDC output	\$80.00	\$																																																												
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-H212	±2% Humidity Transmitter, 2 to 10 VDC output	\$80.00	\$																																																												
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Call BAPI if you have questions about the above ordering/pricing grid or the configuration of the product you are ordering.

\*Not available with Differential Ground (-DF) option



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Tel: +1-608-735-4800 • Fax: +1-608-735-4804 • Email: [sales@bapihvac.com](mailto:sales@bapihvac.com) • Web: [www.bapihvac.com](http://www.bapihvac.com)