



## Features & Options

- Automatic Air Pressure and Temperature Compensation
- Optimized for Periodically Unoccupied or Continuously Occupied Areas

The BAPI CO<sub>2</sub> Duct Sensor is an accurate and reliable way of incorporating demand controlled ventilation. It measures CO<sub>2</sub> in ranges of 0 to 2,000, 0 to 5,000, 0 to 10,000 and 0 to 50,000 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 3-point calibration process for enhanced accuracy and reliability.

Barometric pressure changes from altitude or weather 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.

The Duct unit samples duct air using an aspiration tube. The Rough Service unit features a ventilated BAPI-Box and is ideal for areas such as outdoor air plenums, equipment rooms, attics, green houses and warehouses. Optional indication of the CO<sub>2</sub> level as "Good, Fair or Poor" is available as a three-color LED on the front of the unit for the 0 to 2,000 ppm range units.



Duct (top) and Rough Service CO<sub>2</sub> Sensor

Units shown with the optional 3-color LED.

## Specifications

### Power:

12 to 24 VDC, 200 mA Peak  
18 to 24 VAC, 12 VA Peak

### Field Selectable Voltage Output:

0 to 5 or 0 to 10 VDC

**Termination:** 3 Terminals, 16 to 22 AWG

**Wiring:** 2 Pair

### Operating Environment:

32 to 122°F (0 to 50°C)  
0 to 95%RH non-condensing

### Enclosure Rating:

Unventilated BAPI-Box: NEMA 4, IP66

**Encl. Material:** Polycarbonate, UL94 V-O

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

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

**Start-Up Time:** 10 Minutes

### Response Time:

Less Than 5 Minutes (after Start-Up)

### Optional 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

(LED only available on 0 to 2,000 ppm units)

### CO<sub>2</sub> Sensing Elements:

ACD: Single Beam Non-Dispersive Infrared  
DCD: Dual Channel Non-Dispersive Infrared

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

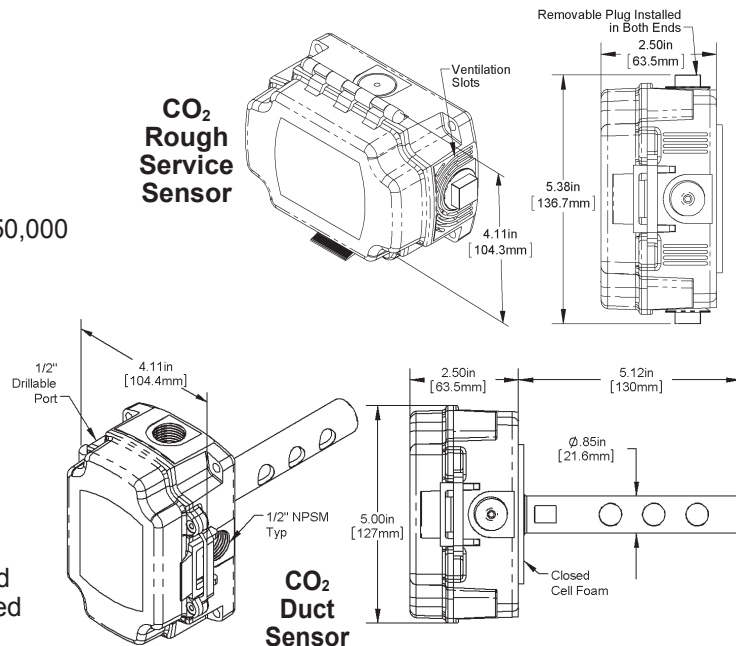
400 to 1,250 ppm: ±30ppm or 3% of reading, whichever is greater

1,250 to 2,000 ppm: ±5% of reading + 30ppm

**CO<sub>2</sub> Accuracy (DCD Units):** ±3.75% of full scale

**Certifications:** RoHS

**Warranty Period:** 2 Years from manufacture date





# CO<sub>2</sub> Duct and Rough Service Sensor

# D13

Rev. 01/29/16

Air Quality Sensors

Ordering Information		CO <sub>2</sub> Duct Sensor in the BAPI-Box Enclosure	
<b>BA/</b>			
	<b>CO<sub>2</sub> Output</b>		
	<b>ACD05</b>	CO <sub>2</sub> as 0 to 2,000 PPM, 0 to 5 VDC output, Single Beam Automatic Background Calibration for periodically unoccupied areas	
	<b>ACD10</b>	CO <sub>2</sub> as 0 to 2,000 PPM, 0 to 10 VDC output, Single Beam Automatic Background Calibration for periodically unoccupied areas	
	<b>DCD05</b>	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	
	<b>DCD10</b>	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	
	<b>DCD05-5K</b>	CO <sub>2</sub> as 0 to 5,000 PPM, 0 to 5 VDC output, Dual Channel Calibration "24/7" unit for continuously occupied areas	
	<b>DCD10-5K</b>	CO <sub>2</sub> as 0 to 5,000 PPM, 0 to 10 VDC output, Dual Channel Calibration "24/7" unit for continuously occupied areas	
	<b>DCD05-10K</b>	CO <sub>2</sub> as 0 to 10,000 PPM, 0 to 5 VDC output, Dual Channel Calibration "24/7" unit for continuously occupied areas	
	<b>DCD10-10K</b>	CO <sub>2</sub> as 0 to 10,000 PPM, 0 to 10 VDC output, Dual Channel Calibration "24/7" unit for continuously occupied areas	
	<b>DCD05-50K</b>	CO <sub>2</sub> as 0 to 50,000 PPM, 0 to 5 VDC output, Dual Channel Calibration "24/7" unit for continuously occupied areas	
	<b>DCD10-50K</b>	CO <sub>2</sub> as 0 to 50,000 PPM, 0 to 10 VDC output, Dual Channel Calibration "24/7" unit for continuously occupied areas	
	<b>Enclosure</b>		
	<b>-D-BB</b>	BAPI-Box Enclosure - IP66 rated, UV-resistant polycarbonate, aspiration probe	
	<b>-V-BB</b>	BAPI-Box Enclosure - UV-resistant polycarbonate, ventilated	
		<b>CO<sub>2</sub> Level Indication (Must select one)</b>	
	<b>-LED</b>	Green/Orange/Red LED on Logo Plate to Indicate CO <sub>2</sub> Level. Includes "Good, Fair and Poor" Legend (Only available for the 0 to 2,000 ppm range units)	
	<b>-BNK</b>	No LED, No Legend (Required for 0 to 5,000, 0 to 10,000 and 0 to 50,000 ppm range units)	
<b>EXAMPLE</b>			
<b>BA/</b>	<b>ACD05</b>	<b>-D-BB</b>	<b>-LED</b>
Example Part Number: BA/ACD05-D-BB-LED			
Your Part Number:			

Call BAPI if you have questions about the above ordering/pricing grid or the configuration of the product you are ordering.

