



## Features & Options

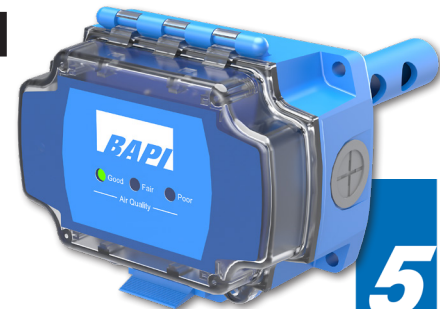
- Automatic Air Pressure and Temperature Compensation
- Optimized for Continuously Occupied Areas

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.

BAPI's Dual Channel "24/7" unit is optimized for continuously occupied areas and features a 3-point calibration process for enhanced accuracy and reliability.

Altitude and 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.

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, green houses and warehouses. For 0 to 2,000 ppm units, the CO<sub>2</sub> level is indicated as "Good, Fair or Poor" by three LED's on the front of the unit. If it reaches the top of the ppm range, the red LED will begin to flash.



Duct Sensor

**5**  
YEAR  
WARRANTY



Rough Service Sensor

## Specifications

### Power:

12 to 24 VDC, 240 mA,  
18 to 24 VAC, 12 VA Peak

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

Dual Channel Non-Dispersive Infrared

### Field Selectable Voltage Output:

0 to 5 or 0 to 10 VDC

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

### Operating Environment:

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

### 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:** <2 Minutes

### Response Time:

<2 Minutes for 90% step change typical (after start-up)

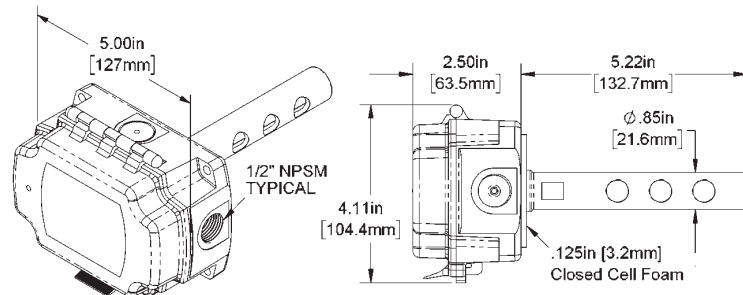
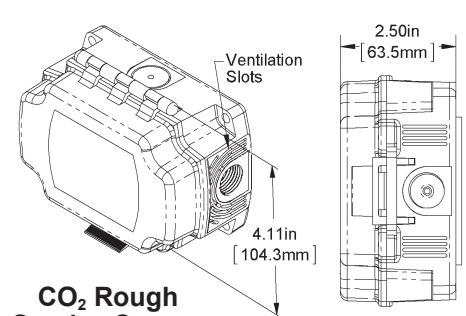
### CO<sub>2</sub> Accuracy:

0 to 2,000 ppm:  $\pm(50 \text{ ppm} + 2\% \text{ of measured value})$   
 0 to 5,000 ppm:  $\pm(50 \text{ ppm} + 3\% \text{ of measured value})$   
 0 to 10,000 ppm:  $\pm(100 \text{ ppm} + 5\% \text{ of measured value})$   
 0 to 50,000 ppm: 75 ppm or 10% of reading (whichever is greater)

### CO<sub>2</sub> Drift Stability:

0 to 2,000 ppm:  $\pm 20 \text{ ppm per year}$   
 0 to 5,000 ppm:  $\pm 20 \text{ ppm per year}$   
 0 to 10,000 ppm:  $\pm 20 \text{ ppm per year}$   
 0 to 50,000 ppm: <5% of FS (over 10 years)  
 or <10% of reading annual

**Unventilated BAPI-Box Rating:** NEMA 4, IP66

CO<sub>2</sub> Duct SensorCO<sub>2</sub> Rough Service Sensor

**Enclosure Material:** Polycarb., UL94 V-0

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

(0 to 2,000 PPM units only):  
 Good, Green < 1,000 PPM  
 Fair, Yellow = 1,000 to 1,500 PPM  
 Poor, Red > 1,500 PPM

**Agency:** CE EN 61326-1:2013 EMC, RoHS





### Ordering Information

**BA/DCD05-D-BB**

Dual Channel "24/7" CO<sub>2</sub> Duct Sensor, 0 to 5V Output, 0 to 2,000 ppm Range

**BA/DCD05-V-BB**

Dual Channel "24/7" CO<sub>2</sub> Rough Service Sensor, 0 to 5V Output, 0 to 2,000 ppm Range

**BA/DCD10-D-BB**

Dual Channel "24/7" CO<sub>2</sub> Duct Sensor, 0 to 10V Output, 0 to 2,000 ppm Range

**BA/DCD10-V-BB**

Dual Channel "24/7" CO<sub>2</sub> Rough Service Sensor, 0 to 10V Output, 0 to 2,000 ppm Range

**BA/DCD05-5K-D-BB**

Dual Channel "24/7" CO<sub>2</sub> Duct Sensor, 0 to 5V Output, 0 to 5,000 ppm Range

**BA/DCD05-5K-V-BB**

Dual Channel "24/7" CO<sub>2</sub> Rough Service Sensor, 0 to 5V Output, 0 to 5,000 ppm Range

**BA/DCD10-5K-D-BB**

Dual Channel "24/7" CO<sub>2</sub> Duct Sensor, 0 to 10V Output, 0 to 5,000 ppm Range

**BA/DCD10-5K-V-BB**

Dual Channel "24/7" CO<sub>2</sub> Rough Service Sensor, 0 to 10V Output, 0 to 5,000 ppm Range

**BA/DCD05-10K-D-BB**

Dual Channel "24/7" CO<sub>2</sub> Duct Sensor, 0 to 5V Output, 0 to 10,000 ppm Range

**BA/DCD05-10K-V-BB**

Dual Channel "24/7" CO<sub>2</sub> Rough Service Sensor, 0 to 5V Output, 0 to 10,000 ppm Range

**BA/DCD10-10K-D-BB**

Dual Channel "24/7" CO<sub>2</sub> Duct Sensor, 0 to 10V Output, 0 to 10,000 ppm Range

**BA/DCD10-10K-V-BB**

Dual Channel "24/7" CO<sub>2</sub> Rough Service Sensor, 0 to 10V Output, 0 to 10,000 ppm Range

**BA/DC05-50K-D-BB**

Dual Channel "24/7" CO<sub>2</sub> Duct Sensor, 0 to 5V Output, 0 to 50,000 ppm Range

**BA/DCD05-50K-V-BB**

Dual Channel "24/7" CO<sub>2</sub> Rough Service Sensor, 0 to 5V Output, 0 to 50,000 ppm Range

**BA/DCD10-50K-D-BB**

Dual Channel "24/7" CO<sub>2</sub> Duct Sensor, 0 to 10V Output, 0 to 50,000 ppm Range

**BA/DCD10-50K-V-BB**

Dual Channel "24/7" CO<sub>2</sub> Rough Service Sensor, 0 to 10V Output, 0 to 50,000 ppm Range



Your Number: BA/

### Associated Products

#### BAPI VC350A or VC350A-EZ VOLTAGE CONVERTERS

The CO<sub>2</sub> unit requires 240mA of current to operate correctly. If this is more current than can be provided by the controller power output, then the unit can be powered by a BAPI VC350A or VC350A-EZ Voltage Converter. See the Accessories section for more info.



**VC350A-EZ**  
Voltage Converter

