



Features & Options

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

The BAPI CO₂ Duct Sensor is an accurate and reliable way of incorporating demand controlled ventilation. It measures CO₂ in ranges of 0 to 2,000, 0 to 5,000 and 0 to 50,000 ppm with a field selectable output of 0 to 5 or 0 to 10 VDC.

The Single Channel unit has been optimized for periodically unoccupied areas and features Automatic Background Calibration (ABC) over a long time period to reduce drift. The Dual Channel “24/7” unit has been optimized for continuously occupied areas and features a 3-point calibration process for enhanced accuracy and reliability.

Altitude and weather patterns can affect CO₂ 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 CO₂ 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



Rough Service Sensor

Specifications

Power:

12 to 24 VDC, 240 mA
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

Operating Environment:

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

CO₂ Sensing Elements:

ACD Unit CO₂: Single Channel Non-Dispersive Infrared (NDIR)
DCD Unit CO₂: Dual Channel Non-Dispersive Infrared (NDIR)

Enclosure Rating:

Unventilated BAPI-Box: NEMA 4, IP66

Encl. Material: Polycarbonate, UL94 V-0

CO₂ Detection PPM Range:

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

Start-Up Time: <2 Minutes

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

LED CO₂ 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

CO₂ Drift Stability, “24/7” Units:

<5% of full scale over life of product.

CO₂ Accuracy, “24/7” Units:

75ppm or 10% of reading (whichever is greater)

CO₂ Accuracy, Single Channel (ABC) Units:

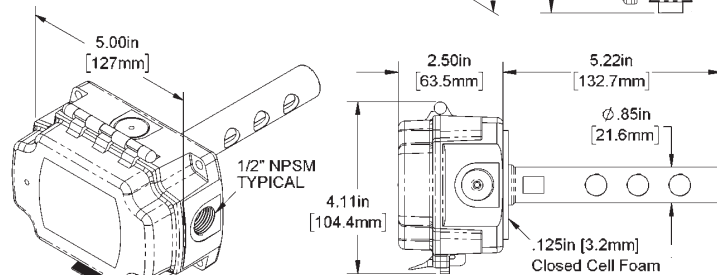
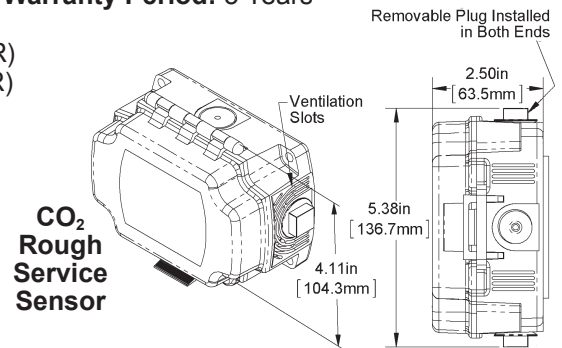
400 to 1,250 ppm: ±30ppm or 3% of reading, whichever is greater

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

Certifications: RoHS

Single Channel units meet Title 24 requirements

Warranty Period: 5 Years



CO₂ Duct Sensor





CO₂ Duct and Rough Service Sensor

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Air Quality Sensors

Submittal sheets without List Prices are available on our website at www.bapihvac.com

Ordering Information

SINGLE CHANNEL (ABC) UNITS FOR PERIODICALLY UNOCCUPIED AREAS LIST PRICE

BA/ACD05-D-BB Single Channel CO ₂ Duct Sensor, 0 to 5V Output, 0 to 2,000 PPM Range	\$470
BA/ACD05-V-BB Single Channel CO ₂ Rough Service Sensor, 0 to 5V Output, 0 to 2,000 PPM Range	\$550
BA/ACD10-D-BB Single Channel CO ₂ Duct Sensor, 0 to 10V Output, 0 to 2,000 PPM Range	\$470
BA/ACD10-V-BB Single Channel CO ₂ Rough Service Sensor, 0 to 10V Output, 0 to 2,000 PPM Range	\$550

DUAL CHANNEL "24/7" UNITS FOR CONTINUOUSLY OCCUPIED AREAS LIST PRICE

BA/DCD05-D-BB Dual Channel "24/7" CO ₂ Duct Sensor, 0 to 5V Output, 0 to 2,000 PPM Range.....	\$500
BA/DCD05-V-BB Dual Channel "24/7" CO ₂ Rough Service Sensor, 0 to 5V Output, 0 to 2,000 PPM Range	\$580
BA/DCD10-D-BB Dual Channel "24/7" CO ₂ Duct Sensor, 0 to 10V Output, 0 to 2,000 PPM Range.....	\$500
BA/DCD10-V-BB Dual Channel "24/7" CO ₂ Rough Service Sensor, 0 to 10V Output, 0 to 2,000 PPM Range	\$580
BA/DCD05-5K-D-BB Dual Channel "24/7" CO ₂ Duct Sensor, 0 to 5V Output, 0 to 5,000 PPM Range.....	\$500
BA/DCD05-5K-V-BB Dual Channel "24/7" CO ₂ Rough Service Sensor, 0 to 5V Output, 0 to 5,000 PPM Range	\$580
BA/DCD10-5K-D-BB Dual Channel "24/7" CO ₂ Duct Sensor, 0 to 10V Output, 0 to 5,000 PPM Range.....	\$500
BA/DCD10-5K-V-BB Dual Channel "24/7" CO ₂ Rough Service Sensor, 0 to 10V Output, 0 to 5,000 PPM Range	\$580
BA/DCD10-50K-D-BB Dual Channel "24/7" CO ₂ Duct Sensor, 0 to 10V Output, 0 to 50,000 PPM Range.....	\$500
BA/DCD10-50K-V-BB Dual Channel "24/7" CO ₂ Rough Service Sensor, 0 to 10V Output, 0 to 50,000 PPM Range	\$580



Associated Products

BAPI VC350A or VC350A-EZ VOLTAGE CONVERTERS

The CO₂ 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**

