E12

CO_2 Duct and Rough Service Sensor

Air Quality Sensors

CE Rev. 03/11/24

Features & Options

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

The BAPI CO_2 Duct Sensor is an accurate and reliable way of incorporating demand controlled ventilation. It measures CO_2 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.

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_2 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_2 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_2 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_2 Detection PPM Range:
0 to 2,000, 0 to 5,000, 0 to 10,000 and 0 to 50,000

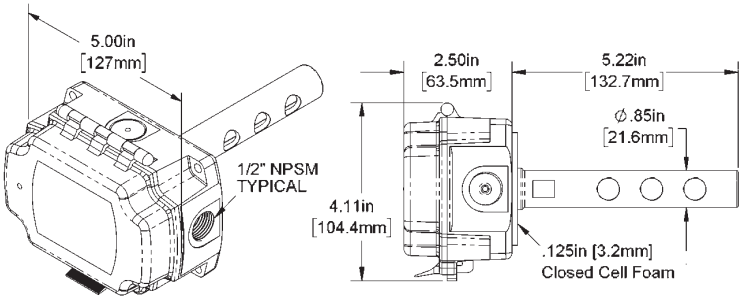
Start-Up Time: <2 Minutes

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

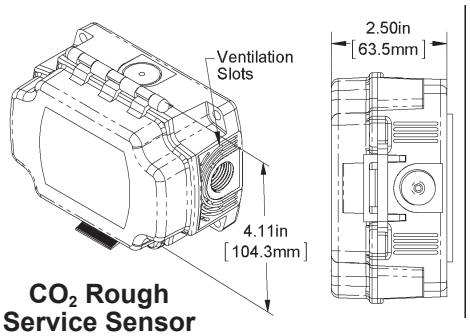
CO_2 Accuracy:
0 to 2,000 ppm: <±(50 ppm +2% of measured value)
0 to 5,000 ppm: <±(50 ppm +3% of measured value)
0 to 10,000 ppm: <±(100 ppm +5% of measured value)
0 to 50,000 ppm: 75 ppm or 10% of reading (whichever is greater)

CO_2 Drift Stability:
0 to 2,000 ppm: ±20 ppm per year
0 to 5,000 ppm: ±20 ppm per year
0 to 10,000 ppm: ±20 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_2 Duct Sensor



CO_2 Rough Service Sensor

Enclosure Material: Polycarb., UL94 V-O

CO_2 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

Certifications: RoHS

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Ordering Information

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

BA/DCD05-D-BB
Dual Channel "24/7" CO_2 Duct Sensor, 0 to 5V Output, 0 to 2,000 ppm Range

BA/DCD05-V-BB
Dual Channel "24/7" CO_2 Rough Service Sensor, 0 to 5V Output, 0 to 2,000 ppm Range

BA/DCD10-D-BB
Dual Channel "24/7" CO_2 Duct Sensor, 0 to 10V Output, 0 to 2,000 ppm Range

BA/DCD10-V-BB
Dual Channel "24/7" CO_2 Rough Service Sensor, 0 to 10V Output, 0 to 2,000 ppm Range

BA/DCD05-5K-D-BB
Dual Channel "24/7" CO_2 Duct Sensor, 0 to 5V Output, 0 to 5,000 ppm Range

BA/DCD05-5K-V-BB
Dual Channel "24/7" CO_2 Rough Service Sensor, 0 to 5V Output, 0 to 5,000 ppm Range

BA/DCD10-5K-D-BB
Dual Channel "24/7" CO_2 Duct Sensor, 0 to 10V Output, 0 to 5,000 ppm Range

BA/DCD10-5K-V-BB
Dual Channel "24/7" CO_2 Rough Service Sensor, 0 to 10V Output, 0 to 5,000 ppm Range

BA/DCD10-50K-D-BB
Dual Channel "24/7" CO_2 Duct Sensor, 0 to 10V Output, 0 to 50,000 ppm Range

BA/DCD10-50K-V-BB
Dual Channel "24/7" CO_2 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_2 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