# CO<sub>2</sub> Room Sensor, BAPI-Stat "Quantum"

Air Quality Sensors

Rev. 03/13/18



### Features & Options

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

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

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

For 0 to 2000 PPM units, the CO<sub>2</sub> level is indicated as "Good, Fair or Poor" by three discrete green, yellow and red LED's on the front of the unit. If it reaches the top of the PPM range, the red LED will begin to flash.



CO<sub>2</sub> Sensor in the **BAPI-Stat** "Quantum" **Enclosure** 



Closed

Cell

Foam

## Specifications

#### Power:

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

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

Single Channel or Dual Channel Non-Dispersive Infrared (NDIR)

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

Enclosure Material: ABS Plastic, Material Rated UL94V-O

#### CO<sub>2</sub> Detection 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 Time)

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

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

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

whichever is greater

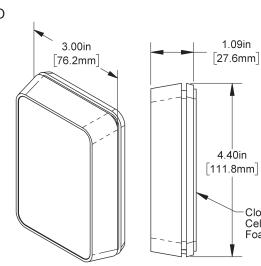
1,250 to 2,000 ppm: ±5% of reading + 30ppm

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

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

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

<5% of full scale over life of product.



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

Good, Green < 1,000 PPM Fair, Yellow = 1,000 to 1,500 PPM

Poor, Red > 1,500 PPM

Warranty Period: 5 Years

Certifications: RoHS

(for 0 to 2.000 PPM units only):





## Ordering Information: BAPI-Stat "Quantum" CO2 Sensor

Part #	<u>Description</u>
BA/AQX-A	Single Channel for Periodically Unoccupied Areas, 0 to 5 V Output, 0 to 2,000 PPM Range
BA/AQX-B	Single Channel for Periodically Unoccupied Areas, 0 to 10 V Output, 0 to 2,000 PPM Range
BA/AQX-C	Dual Channel for Continuously Occupied Areas, 0 to 5 V Output, 0 to 2,000 PPM Range
BA/AQX-D	Dual Channel for Continuously Occupied Areas, 0 to 10 V Output, 0 to 2,000 PPM Range
BA/AQX-E	Dual Channel for Continuously Occupied Areas, 0 to 5 V Output, 0 to 5,000 PPM Range
BA/AQX-F	Dual Channel for Continuously Occupied Areas, 0 to 10 V Output, 0 to 5,000 PPM Range
BA/AQX-G	Dual Channel for Continuously Occupied Areas, 0 to 5 V Output, 0 to 10,000 PPM Range
BA/AQX-H	Dual Channel for Continuously Occupied Areas, 0 to 10 V Output, 0 to 10,000 PPM Range
BA/AQX-I	Dual Channel for Continuously Occupied Areas, 0 to 5 V Output, 0 to 50,000 PPM Range
BA/AQX-J	Dual Channel for Continuously Occupied Areas, 0 to 10 V 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