CO_2 Room Sensor, BAPI-Stat "Quantum Prime"

Air Quality Sensors

Rev. 01/29/25

Features & Options

- Automatic Barometric Pressure Compensation for Accurate Readings Regardless of Weather or Altitude
- Optional Temperature, Setpoint, Override and Humidity
- Optimized for Continuously Occupied Areas
- Models that Meet California Title 24 and AB 841
- 0 to 2,500 ppm Range Models Meet Addendum ab to ASHRAE Standard 62.1-2022

The BAPI CO_2 Sensor is an accurate and reliable way of incorporating demand controlled ventilation into a building's HVAC strategy. It measures the CO_2 in ranges of 0 to 2,000 or 0 to 2,500 ppm with a field selectable output of 0 to 5 or 0 to 10 VDC.

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

Barometric pressure changes 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 CO_2 level is indicated by three LEDs on the front of the unit. A 60mm mounting base is available to fit European style junction boxes.



BAPI-Stat "Quantum Prime" CO_2 Sensors
(bottom unit shown with optional 60mm mounting base)

Specifications

Power:
15 to 24 VAC, 15 to 40 VDC
4.8 VA @ 24 VAC
40 mA @ 24 VDC

CO_2 Sensor: Dual Channel Non-Dispersive Infrared (NDIR)

Humidity Sensor: Capacitive Polymer ±2% RH Accuracy

Temperature Sensor: Thermistor or RTD

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

Material: ABS Plastic, Material Rated UL94 V-0

CO_2 Detection Range: 0 to 2,000 or 0 to 2,500 ppm

Start-Up Time: <2 Minutes

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

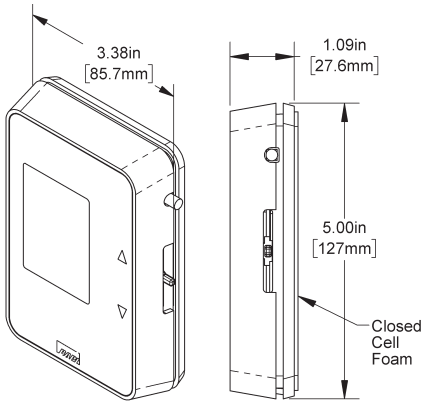
CO_2 Accuracy @ 77°F (25°C) and Sea Level:
<±50 ppm + 3% of measured value
<±75 ppm at 600, 1,000 and 2,500 ppm

CO_2 Drift Stability: ±20 ppm/year

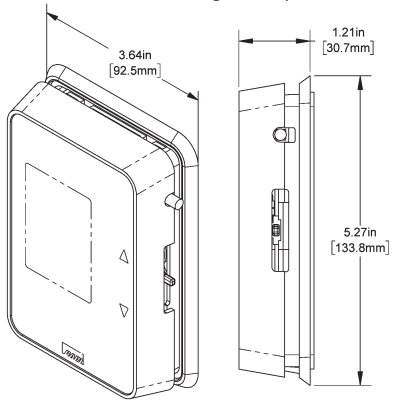
Mounting: Standard 2"x4" junction box, European junction box or drywall mount (screws provided)

LED CO_2 Level Indicator:
Good, Green < 1,000 ppm (1,100 ppm when option "N" chosen)
Fair, Yellow = 1,000 to 1,500 ppm (1,100 to 1,500 ppm when "N" chosen)
Poor, Red > 1,500 ppm

Agency: RoHS, California Title 24 and AB 841,
Addendum ab to ASHRAE Standard 62.1-2022



Unit Dimensions
(bottom unit shown with 60mm mounting base)



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Air Quality Sensors

Use the guide below to create your custom part number. Replace the number and parenthesis with the designator for each selection. Skip the designator and dashes for optional selections that are not required.

BAPI-Stat "Quantum Prime" CO_2 Sensor Option Selection Guide:

Unit with Standard Mounting Base
BA/AQP(**#1**) - (**#2**) - (**#3**) - (**#4**) - (**#5**) - (**#6**)(**#7**) - (**#8**) - (**#9**)

Unit with 60mm Mounting Base
BA/AQP60(**#1**) - (**#2**) - (**#3**) - (**#4**) - (**#5**) - (**#6**)(**#7**) - (**#8**) - (**#9**)

#1: Display Style (required)
F .....Unit with Display and °F indication
C.....Unit with Display and °C indication
X.....Unit without Display

#2: CO2 Range & Output (required)
C.....0 to 2,000 ppm, 0 to 5V Output
D.....0 to 2,000 ppm, 0 to 10V Output
E .....0 to 2,500 ppm, 0 to 5V Output
F .....0 to 2,500 ppm, 0 to 10V Output

#3: Temperature Sensor (required)
A .....1K Platinum RTD (385 curve)
B .....10K-2 Thermistor
C.....10K-3 Thermistor
D.....10K-3[11K] Thermistor
E .....20K Thermistor
F .....1.8K Thermistor
G.....1K Ω Nickel RTD
H.....3K Thermistor
X.....No Temperature Sensor

#4: Humidity Output (required)
A .....±2% Accuracy, Output of 0 to 5V
B .....±2% Accuracy, Output of 0 to 10V
X.....No Humidity Output

#5: Setpoint Adjustment (required)
1.....Slider Setpoint Adjustment
X.....No Setpoint Adjustment

Additional options are available for these units but not shown in this Selection Guide. Contact your BAPI representative for the complete list of options.

#6: Setpoint Display Range (required)
A .....-3 to +3
B .....-5 to +5
C.....50 to 90 °F or 10 to 32 °C
D .....55 to 85 °F or 13 to 30 °C
E .....60 to 80 °F or 15 to 27 °C
F .....65 to 80 °F or 18 to 27 °C
X.....No Setpoint Adjustment

#7: Setpoint Output Range (required)
00.....0 to 5 V
10.....0 to 10 V
40.....0 to 1 K
60.....0 to 10 KΩ
80.....0 to 20 KΩ
81.....4.75 K to 24.75 KΩ
82.....6.19 K to 26.19 KΩ
84.....10 K to 30 KΩ
X.....No Setpoint Adjustment

#8: Occupant Override (required)
J.....Override as a Separate Output
N.....Override in Parallel (//) with Sensor
P .....Override in Parallel (//) with Setpoint
X.....No Override

#9: Optional Selections* (optional)
A .....Differential Ground
B .....Comm Jack C35
F .....Test and Balance Switch
N.....LED Alert Level for California AB 841
(must have a display to meet AB 841)

*When more than one is selected, put in alphabetical order. Additional options can be found on pg. I4

Example Number: BA/AQP **(F) - (A) - (C) - (A)- (1) - (F)(80) - (N)**

Actual Number (with brackets removed): BA/AQPF-C-B-A-1-F80-N

Description: BAPI-Stat "Quantum Prime" CO_2 Sensor, °F Display, 0 to 5V Dual Channel CO_2 Output, 10K-2 Thermistor Temperature Sensor, 0 to 5V Humidity Output, Sider Setpoint Adjustment, 65 to 80 Temp Setpoint Display Range, 0 to 20K Temp Setpoint Output Range, Override in Parallel with the temp sensor, No Additional Options

Your Number: BA/

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