VOC Room Sensor, BAPI-Stat "Quantum Prime"

Air Quality Sensors

Rev. 03/24/26

Features & Options

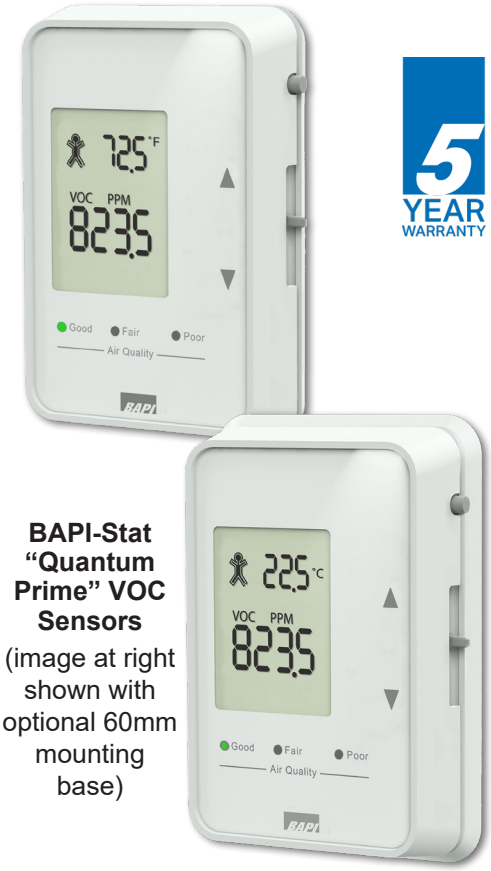
- VOC Alone or Temperature and Humidity Combination
- Achieves True Indoor Air Quality, Not Just CO_2 Dilution
- Output is Correlated to a CO_2 Value Allowing You to Ventilate Using ASHRAE's CO_2-Based VRP Algorithm

Humans respirate Volatile Organic Compounds (VOCs) as well as CO_2. The BAPI sensor is able to measure these VOCs and indicate when a space is occupied just as well as a CO_2 sensor.

The advantage of the VOC sensor is that it measures air contaminants from other sources besides respiration, such as building materials, cleaners, perfumes and furniture and carpet off-gassing. So using this sensor for Demand Controlled Ventilation is a way of achieving true indoor air quality, rather than CO_2 dilution.

A further benefit is that it requires no additional work on your part. That's because the sensor converts the VOC reading to a CO_2 equivalent level. This lets you use ASHRAE's CO_2-based VRP schedule to ventilate.

The unit is available as VOC alone or with temp and humidity sensing, temp setpoint and override. The optional display alternates between the measured values. The VOC level is indicated as "Good, Fair or Poor" by LEDs on the front of the unit. A 60mm mounting base is also available to fit European style junction boxes.



BAPI-Stat "Quantum Prime" VOC Sensors

(image at right shown with optional 60mm mounting base)

5 YEAR WARRANTY

Specifications

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

Sensing Elements:
Humidity: Capacitive Polymer, ±2% RH Accuracy
VOCs: Micro-machined Metal Oxide

Temp Sensor: Thermistor or RTD

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

VOC Detection Range: 400 to 2,000 CO_2 ppm equivalent

Response Time: Less Than 60 Sec. (after Start-Up Time)

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

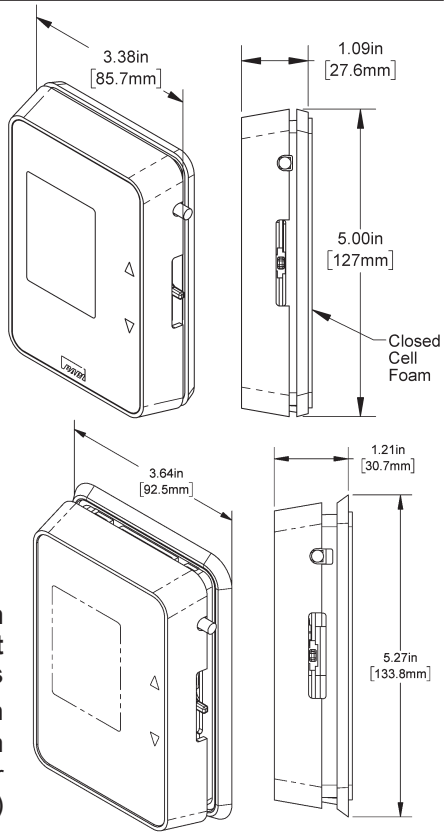
Material: ABS Plastic, Material Rated UL94 V-0

Start-Up Time: 15 minutes

Cover LED VOC/CO_2 Equivalent Level:
Good, Green < 1,000 ppm
Fair, Yellow = 1,000 to 1,500 ppm
Poor, Red > 1,500 ppm

Agency: RoHS

Warranty Period: 5 years



BAPI-Stat "Quantum Prime" VOC Unit Dimensions

(bottom unit shown with optional 60mm mounting base for European wall boxes)

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Air Quality Sensors

Use the Option Selection Guide below to create your custom part number. Replace the number and brackets with the designator for each selection. Skip the designator and dashes for optional selections that are not required in your configuration.

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

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

Unit w/ 60mm Mounting Base
BA/BQP60(**#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: VOC Output (required)
A .....VOC 0 to 5V Output
B .....VOC 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. Submittal sheets without List Prices can be downloaded from our website at www.bapihvac.com

#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

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

Example Number: BA/BQP **(F) - (A) - (B) - (A)- (1) - (F)(80) - (N)**

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

Description: BAPI-Stat "Quantum Prime" VOC Sensor, °F Display, 0 to 5V VOC Output, 10K-2 Thermistor Temperature Sensor, 0 to 5V Humidity Output, Slider 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/