

Rev. 03/20/13

Features & Options

- VOC Alone or Temperature and Humidity Combination
- Output is Correlated to a CO₂ Value Allowing You to Ventilate Using ASHRAE's CO₂-based Algorithm

Humans respire Volatile Organic Compounds (VOCs) as well as CO₂. The BAPI sensor is able to measure these VOCs and indicate when a space is occupied just as well as a CO₂ sensor.

The BAPI Sensor is different from other VOC sensors because it has been optimized for Demand Controlled Ventilation (DCV). Using a calibration algorithm, the output is converted to a CO₂ level which lets you use ASHRAE's occupancy-based VPR schedule to ventilate. (More info on this converted output is available on our website bapivac.com)

Besides VOCs from respiration, the sensor picks up air contaminants from other sources such as building materials, perfumes, colognes and furniture off gassing. Using this sensor to ventilate is a way of achieving true indoor air quality and not just CO₂ dilution.

The unit is available as VOC alone or as a combination temperature and humidity sensor. The optional display alternates between the measured values and is field adjustable between °F or °C. An optional three color LED indicates "VOC Level" of Good, Fair or Poor.

Demand Controlled Ventilation with Confidence!

Specifications

Power: (No AC Power)

- 0 to 5 VDC Output Units:
- 9 to 35 VDC @ 50 mA Max (9 to 15 VDC recommended)
- 0 to 10 VDC Output Units:
- 15 to 35 VDC @ 50mA Max (15 VDC recommended)

Sensing Elements:

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

Temp Sensor: Thermistor, RTD or Semiconductor

VOC Detection Range: 0 to 2,000 CO₂ PPM equivalent

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

Start-Up Time: 15 minutes

Operating Environment:

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

LCD Display:

- Main Display: 0.76" 4-digit Numeric (Numeric Values)
- Minor Display: 0.34" 3-digit Alpha-Numeric (PPM, %RH, °F, °C)
- Occupied/Unoccupied BAPI Man Icon: (Blk=Occupied)

Measurement Offsets (field adjustable)

- ±5° (F or C) in 0.1° increments
- ±5% RH in 0.1% RH increments
- ±5% Contaminants in 0.1% increments
- ±100 ppp CO₂ Equivalent Contaminants in 2 ppm increments

Analog Outputs

- (0 to 5, 0 to 10 or 2 to 10VDC [%RH only], >10KΩ impedance)
- VOC Contaminants: 0 to 2,000 CO₂ PPM equivalent
- %RH: 0 to 100% or 35 to 70% RH

Override Output:

- Contact: SPST
- Sensor: Shorts out direct Temp sensor (Temp)
- Setpoint: Contact in parallel, resistive setpoint only

LED CO₂ Equivalent Level Indicator:

- Good, Green < 1,000 PPM
- Fair, Yellow = 1,000 to 1,500 PPM
- Poor, Red > 1,500 PPM

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

Material: ABS Plastic, Material Rated UL94V-0

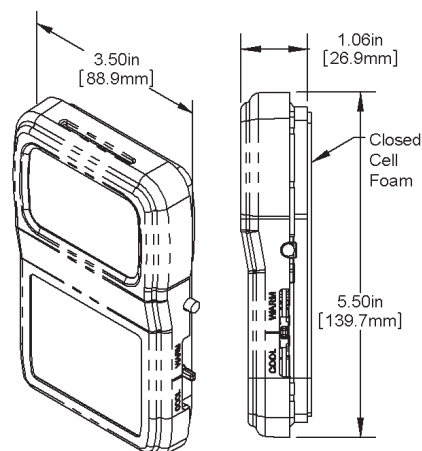
Certifications: RoHS

Warranty Period: 5 years



VOC Sensors with Temperature Setpoint and Override.

The top unit has an optional VOC Level indication of "Good, Fair or Poor" shown by an arrow on the display. The bottom unit has an optional VOC level indication via a 3-color LED.



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Ordering Information/Part Numbers

VOC UNITS WITH DISPLAY AND °F INDICATION

ALC/BS3F-VOC05-H205-G81L6-102-P-BNK

BAPI-Stat 3 with Display, °F Indication, VOC Output of 0 to 5 VDC, 10K-2 Thermistor Temp Sensor, Temp Setpoint with Display Range of 45 to 96°F and Output Range of 4.75 to 24.75 KΩ, Cool/Warm Setpoint Legend, %RH Output of 0 to 5VDC, Override in Parallel with the Setpoint Output

ALC/BS3F-VOC05-G81L6-102-P-BNK

BAPI-Stat 3 with Display, °F Indication, VOC Output of 0 to 5 VDC, 10K-2 Thermistor Temp Sensor, Temp Setpoint with Display Range of 45 to 96°F and Output Range of 4.75 to 24.75 KΩ, Cool/Warm Setpoint Legend, Override in Parallel with the Setpoint Output

ALC/BS3F-VOC05-G81L6-102-Z-BNK

BAPI-Stat 3 with Display, °F Indication, VOC Output of 0 to 5 VDC, 10K-2 Thermistor Temp Sensor, Temp Setpoint with Display Range of 45 to 96°F and Output Range of 4.75 to 24.75 KΩ, Cool/Warm Setpoint Legend

ALC/BS3F-VOC05-102-Z-BNK

BAPI-Stat 3 with Display, °F Indication, VOC Output of 0 to 5 VDC, 10K-2 Thermistor Temp Sensor

ALC/BS3F-VOC05-Z-BNK

BAPI-Stat 3 with Display, °F Indication, VOC Output of 0 to 5 VDC

VOC UNITS WITH DISPLAY AND °C INDICATION

ALC/BS3C-VOC05-H205-G81L6-102-P-BNK

BAPI-Stat 3 with Display, °C Indication, VOC Output of 0 to 5 VDC, 10K-2 Thermistor Temp Sensor, Temp Setpoint with Display Range of 7 to 35°C and Output Range of 4.75 to 24.75 KΩ, Cool/Warm Setpoint Legend, %RH Output of 0 to 5VDC, Override in Parallel with the Setpoint Output

ALC/BS3C-VOC05-G81L6-102-P-BNK

BAPI-Stat 3 with Display, °C Indication, VOC Output of 0 to 5 VDC, 10K-2 Thermistor Temp Sensor, Temp Setpoint with Display Range of 7 to 35°C and Output Range of 4.75 to 24.75 KΩ, Cool/Warm Setpoint Legend, Override in Parallel with the Setpoint Output

ALC/BS3C-VOC05-G81L6-102-Z-BNK

BAPI-Stat 3 with Display, °C Indication, VOC Output of 0 to 5 VDC, 10K-2 Thermistor Temp Sensor, Temp Setpoint with Display Range of 7 to 35°C and Output Range of 4.75 to 24.75 KΩ, Cool/Warm Setpoint Legend

ALC/BS3C-VOC05-102-Z-BNK

BAPI-Stat 3 with Display, °C Indication, VOC Output of 0 to 5 VDC, 10K-2 Thermistor Temp Sensor

ALC/BS3C-VOC05-Z-BNK

BAPI-Stat 3 with Display, °C Indication, VOC Output of 0 to 5 VDC

VOC UNITS WITHOUT DISPLAY

ALC/BS3X-VOC05-102-Z-BNK

BAPI-Stat 3 without Display, VOC Output of 0 to 5 VDC, 10K-2 Thermistor Temp Sensor

ALC/BS3X-VOC05-Z-BNK

BAPI-Stat 3 without Display, VOC Output of 0 to 5 VDC

These units are available with a VOC level indication of Good, Fair and Poor via a Black Arrow on the Display or a 3-color LED (Green/Orange/Red) on the Logo Plate (see images at top of other page). There is no extra charge for these indicators.

To order units with the Black Arrow, change the “-BNK” at the end of the part number to “-ARW”.

To order units with the 3-color LED, change the “-BNK” at the end of the part number to “-LED”.

