

Rev. 05/01/18

## Features & Options

- Automatic Barometric Pressure and Temperature Compensation
- Optional Temperature, Temperature Setpoint, Override and Humidity
- Optimized for Areas that Are Periodically Unoccupied

The BAPI 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 a range of 0 to 2,000 ppm with a field selectable output of 0 to 5 or 0 to 10 VDC.

The non-dispersive infrared (NDIR) technology has been optimized for periodically unoccupied areas and features automatic background calibration over a long time period to reduce drift. The sensor is also altitude compensated for long-term accuracy. 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.

The unit can be ordered as CO<sub>2</sub> alone, or with optional temp sensing, temp setpoint, override and humidity sensing. The large format display is easy to read and alternates between the measured values (CO<sub>2</sub>, Temp or Humidity). The display is also field adjustable between °F or °C and all the displayed values may be turned on or off by an HVAC technician.

Optional indication of the CO<sub>2</sub> level as "Good, Fair or Poor" is available as a three-color LED on the unit or as an arrow on the display.



### CO<sub>2</sub> Sensors with Temperature Setpoint and Override.

The top unit has an optional CO<sub>2</sub> Level indication of "Good, Fair or Poor" shown by an arrow on the display. The bottom unit has an optional CO<sub>2</sub> level indication via a 3-color LED.

## Specifications

### Power for 0 to 5 VDC Outputs:

9 to 35 VDC @ 240mA (9 to 24 VDC recommended)

### Power for 0 to 10 VDC Outputs:

15 to 35 VDC @ 240mA (15 to 24 VDC recommended)

### Sensing Elements:

CO<sub>2</sub> – Single Beam Non-Dispersive Infrared (NDIR)  
Humidity – Capacitive Polymer ±2% RH Accuracy

**Temperature Sensor:** 10K-2 Thermistor

### Operating Environment:

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

**Material** ABS Plastic, Material Rated UL94V-0

**CO<sub>2</sub> Detection Range:** 0 to 2000 ppm

**Start-Up Time:** <2 Minutes

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

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

### Override Output:

Contact .... SPST, 24V AC/DC, 0.5A max  
Sensor ..... Shorts Out direct temperature sensor  
Setpoint ... Contact in parallel, resistive setpoint only

### LCD Display:

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

### Measurement Offsets: (Field Adjustable)

±5° (F or C) in 0.1° increments  
±5% RH in 0.1% RH increments

### CO<sub>2</sub> Accuracy: (Automatic Background Calibration)

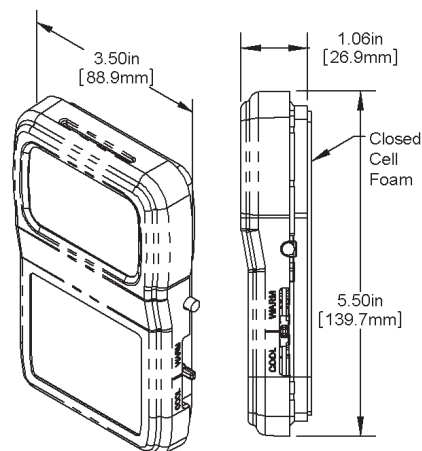
500ppm ±35ppm • 800ppm ±60ppm  
1000ppm ±75ppm • 1200ppm ±90ppm

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

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

**Certifications:** RoHS

**Warranty Period:** 5 Years



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## **Ordering Information/Part Numbers**

### **CO2 UNITS WITH DISPLAY AND °F INDICATION**

#### **ALC/BS3F-ACD05-H205-G81L6-102-P-BNK**

BAPI-Stat 3 with Display, °F Indication, CO2 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-ACD05-G81L6-102-P-BNK**

BAPI-Stat 3 with Display, °F Indication, CO2 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-ACD05-G81L6-102-Z-BNK**

BAPI-Stat 3 with Display, °F Indication, CO2 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-ACD05-102-Z-BNK**

BAPI-Stat 3 with Display, °F Indication, CO2 Output of 0 to 5 VDC, 10K-2 Thermistor Temp Sensor

#### **ALC/BS3F-ACD05-Z-BNK**

BAPI-Stat 3 with Display, °F Indication, CO2 Output of 0 to 5 VDC

### **CO2 UNITS WITH DISPLAY AND °C INDICATION**

#### **ALC/BS3C-ACD05-H205-G81L6-102-P-BNK**

BAPI-Stat 3 with Display, °C Indication, CO2 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-ACD05-G81L6-102-P-BNK**

BAPI-Stat 3 with Display, °C Indication, CO2 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-ACD05-G81L6-102-Z-BNK**

BAPI-Stat 3 with Display, °C Indication, CO2 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-ACD05-102-Z-BNK**

BAPI-Stat 3 with Display, °C Indication, CO2 Output of 0 to 5 VDC, 10K-2 Thermistor Temp Sensor

#### **ALC/BS3C-ACD05-Z-BNK**

BAPI-Stat 3 with Display, °C Indication, CO2 Output of 0 to 5 VDC

### **CO2 UNITS WITHOUT DISPLAY**

#### **ALC/BS3X-ACD05-102-Z-BNK**

BAPI-Stat 3 without Display, CO2 Output of 0 to 5 VDC, 10K-2 Thermistor Temp Sensor

#### **ALC/BS3X-ACD05-Z-BNK**

BAPI-Stat 3 without Display, CO2 Output of 0 to 5 VDC

*These units are available with a CO2 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).*

*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”.*

