



## Features & Options

- Corresponds to ASHRAE's CO<sub>2</sub>-Based DCV Algorithm
- Duct Aspiration Tube or Rough Service Ventilated BAPI-Box
- 0 to 5 VDC or 0 to 10 VDC Output

Humans respire Volatile Organic Compounds (VOCs) as well as CO<sub>2</sub>. The BAPI sensor measures these VOCs and indicates when a space is occupied just as well as a CO<sub>2</sub> 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. Using this sensor for Demand Controlled Ventilation then is a way of achieving true indoor air quality, rather than just CO<sub>2</sub> 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<sub>2</sub> equivalent level. This lets you use ASHRAE's CO<sub>2</sub>-based VRP schedule to ventilate. (More information on the CO<sub>2</sub> equivalent output is available on our website or in the Application Notes at the end of this section.)

The Duct Sensor samples duct air using an aspiration tube, while the Rough Service unit features a ventilated BAPI-Box and is ideal for areas such as outdoor air plenums, equipment rooms, green houses and warehouses. The VOC level is indicated as "Good, Fair or Poor" by three discrete green, yellow and red LED's on the front of the unit. If the output reaches 2,000 PPM, the red LED will begin to flash because it has hit its maximum output.



VOC Duct Sensor



VOC Rough Service Sensor

## Specifications

### Power:

12 to 24 VDC, 200 mA Peak  
18 to 24 VAC, 12 VA Peak

### Analog Outputs:

0 to 5VDC or 0 to 10VDC, >10KΩ impedance  
VOC Contaminants: 0 to 2,000 PPM CO<sub>2</sub> Equivalent

**VOC Sensing Element:** Micro-machined Metal Oxide

### VOC Detection Range:

0 to 2,000 ppm CO<sub>2</sub> Equivalent

**Response Time:** Less Than 60 Seconds

**Start-Up Time:** 15 minutes

### Operating Environment:

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

### Enclosure Rating:

Unventilated BAPI-Box: NEMA 4, IP66

### Enclosure Material:

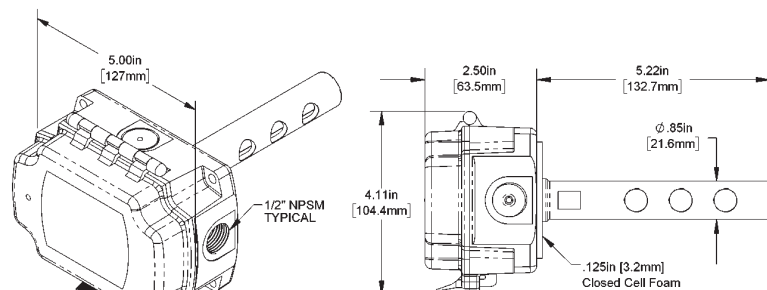
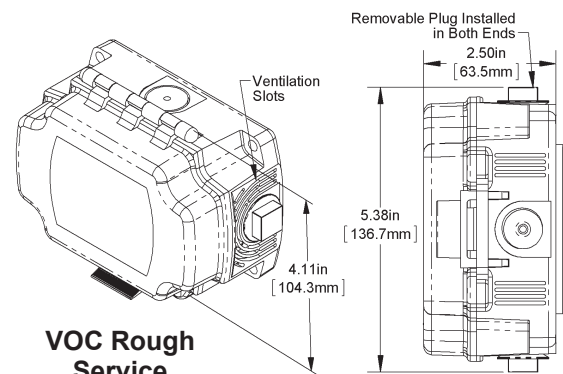
Polycarbonate, UL94 V-O

### Certifications:

RoHS

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

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





# VOC Duct and Rough Service Sensor

**D11**

Rev. 12/19/16

*Air Quality Sensors*

## **Ordering Information: Duct or Rough Service VOC Sensor**

<u>Part #</u>	<u>Description</u>
<b>BA/VOC05-D-BB</b> .....	Duct VOC Sensor with Aspiration Tube, 0 to 5V Output
<b>BA/VOC10-D-BB</b> .....	Duct VOC Sensor with Aspiration Tube, 0 to 10V Output
<b>BA/VOC05-V-BB</b> .....	Rough Service VOC with Ventilated BAPI-Box, 0 to 5V Output
<b>BA/VOC10-V-BB</b> .....	Rough Service VOC with Ventilated BAPI-Box, 0 to 10V Output

**Your Number:** BA/

