



## Features & Options

- Corresponds to ASHRAE's CO<sub>2</sub>-Based DCV Algorithm
- Quick Response Sensor with Aspiration Tube or 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 at [www.bapihvac.com](http://www.bapihvac.com), or in the Application Notes at the end of this section of the catalog.)

BAPI's VOC Duct Sensor samples duct air using an aspiration tube. Moving air from the duct enters the tube, is forced into the BAPI-Box enclosure and exits through the other half of the tube. As long as there is air movement in the duct, air is continuously exchanged.

The Rough Service unit features a ventilated BAPI-Box and is ideal for rough service areas such as outdoor air plenums, equipment rooms, attics, green houses and warehouses.



VOC Duct (top) and Rough Service Sensors

## 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

**Sensing Element:**

- VOCs: Micro-machined Metal Oxide

**VOC Detection Range:** 0 to 100%

**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

**Dimension:** 4.91"H x 3.21"W x 1.20"D (124.6 x 81.5 x 30.5 mm)

**Enclosure Rating:**

- Unventilated BAPI-Box: NEMA 4, IP66

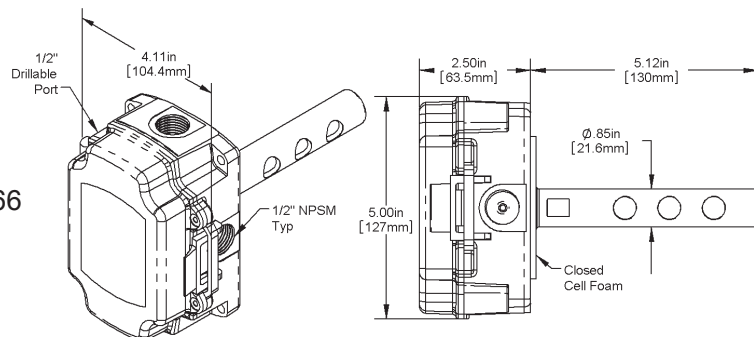
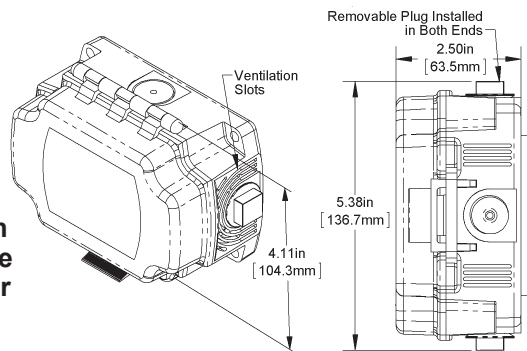
**Enclosure Material:**

- Polycarbonate, UL94 V-0

**Certifications:** RoHS

**Warranty:** Two years from manufacture date

VOC Rough Service Sensor



VOC Duct Sensor





# VOC Duct and Rough Service Sensor

D7

Rev. 01/19/16

Air Quality Sensors

<b>Ordering Information VOC Duct Sensor in the BAPI-Box Enclosure</b>			
<b>BA/</b>			
	<b>VOC Output</b>	<b>Must Select One</b>	
	<b>VOC05</b>	VOCs Transmitted as 0 to 2,000 ppm CO2 Equivalent, 0 to 5 VDC output	
	<b>VOC10</b>	VOCs Transmitted as 0 to 2,000 ppm CO2 Equivalent, 0 to 10 VDC output	
		<b>Enclosure</b>	<b>Required Selection</b>
		<b>-D-BB</b>	BAPI-Box - IP66 rated, UV-resistant polycarbonate, aspiration probe
		<b>-V-BB</b>	BAPI-Box - UV-resistant polycarbonate, ventilated
EXAMPLE			
BA/	<b>VOC05</b>	-D-BB	
Example Part Number: BA/VOC05-D-BB			
Your Part Number:			

Call BAPI if you have questions about the above ordering grid.

