

Features & Options

- Corresponds to ASHRAE's CO₂-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 CO₂. The BAPI sensor measures these VOCs and indicates when a space is occupied just as well as a CO₂ 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 CO₂ 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 CO₂ equivalent level. This lets you use ASHRAE's CO₂-based VRP schedule to ventilate. (More information on the CO₂ equivalent output is available on our website at 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 CO₂ 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

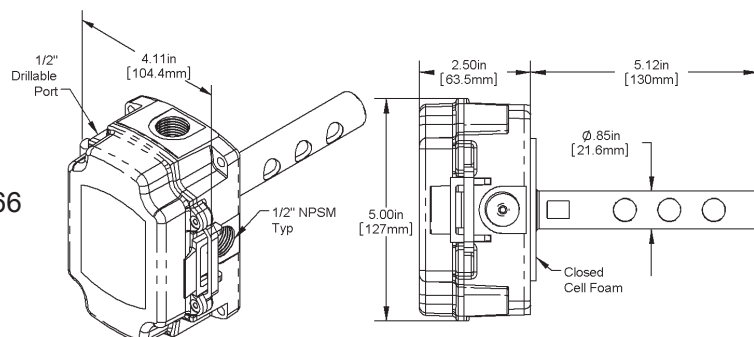
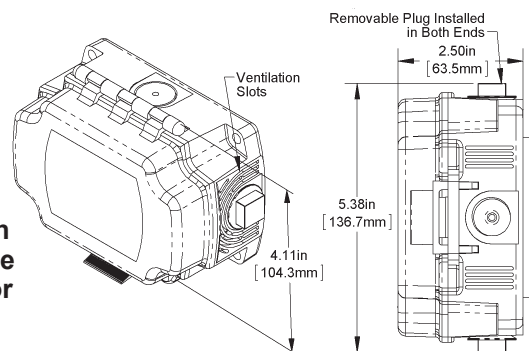
Enclosure Material:

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

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

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

