



Features & Options

- Corresponds to ASHRAE's CO₂-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 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 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, 50 mA Peak
18 to 24 VAC, 1.5 VA Peak

Analog Outputs:

0 to 5VDC or 0 to 10VDC, >10KΩ impedance
VOC Contaminants: 0 to 2,000 PPM CO₂ Equivalent

VOC Sensing Element: Micro-machined Metal Oxide

VOC Detection Range:

0 to 2,000 ppm CO₂ 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

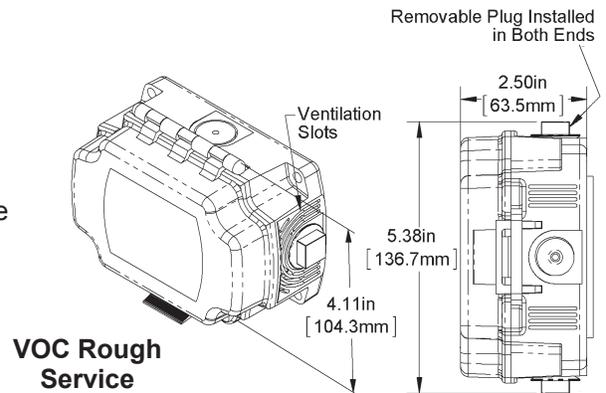
Enclosure Material:

Polycarbonate, UL94 V-O

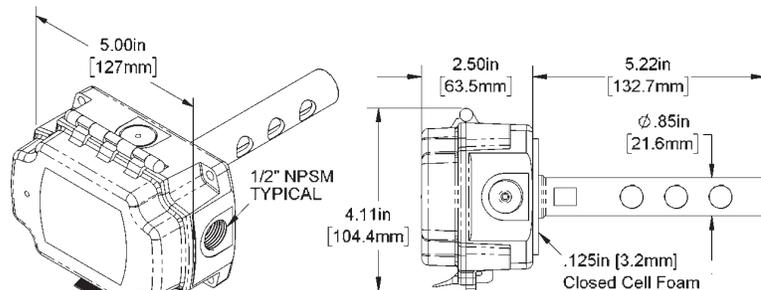
Certifications: RoHS

LED VOC/CO₂ Level Indicator:

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



VOC Rough Service



VOC Duct Sensor





VOC Duct and Rough Service Sensor

Air Quality Sensors

D11

Ordering Information: Duct or Rough Service VOC Sensor

<u>Part #</u>	<u>Description</u>
BA/VOC05-D-BB	Duct VOC Sensor, 0 to 5V Output
BA/VOC10-D-BB	Duct VOC Sensor, 0 to 10V Output
BA/VOC05-V-BB	Rough Service VOC Sensor, 0 to 5V Output
BA/VOC10-V-BB	Rough Service VOC Sensor, 0 to 10V Output

