

# VT0D VOC Value Series Duct VOC Sensor

Senses volatile organic compounds  
0-5/10V/2 and 3-wire 4-20mA transmitter



## DESCRIPTION

The VT0D is capable of sensing thousands of VOC's coming from sources such as paints, glues, cleaners, alcohol, building products, smoke, and myriad other harmful or offensive gases. It's ability to sense these contaminants in addition to breath and other bodily functions makes it the preferred alternative or compliment to CO2 occupancy sensing.

The VT0D Value Series ensures that odor and ventilation issues are never a topic of conversation. An array of analog outputs and thermistor options accommodate any installation and keep occupants breathing easy.

## APPLICATIONS

- Controlling ventilation in response to occupancy
- Ventillation control
- Economizer control
- Cafeterias, conference rooms, restrooms and public assembly areas

## FEATURES

### Senva's high efficiency duct probe

- Designed to mount easily in any duct
- Ideal for schools, hotels, offices, bathrooms, etc.

### Superior sensing

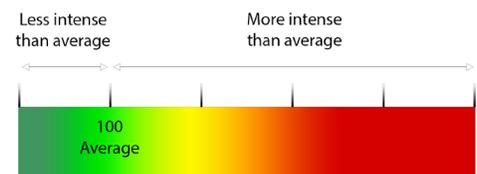
- Humidity compensation for higher accuracy
- Gasket ensures excellent measurement accuracy

### Industry-leading warranty

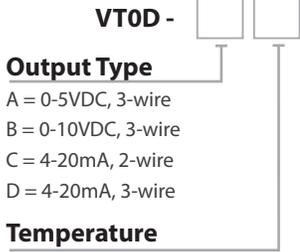
- 7-year limited warranty on electronics; sensor element 2 years

### Easy Scaling

- The 0-1000 ppm ethanol output is logarithmically scaled to give a 0-500 relative intensity value that more closely correlates to what is expected from other occupancy sensors.



ORDERING



Output Type

- A = 0-5VDC, 3-wire
- B = 0-10VDC, 3-wire
- C = 4-20mA, 2-wire
- D = 4-20mA, 3-wire

Temperature

- A = None
- C = 100Pt (385)
- D = 1000Pt (385)
- E = 10k type 2
- F = 10k type 3
- G = 10k type 3 w/11k shunt
- H = 3k
- I = 2k2
- J = 1k8
- K = 20k
- L = 100k

SPECIFICATIONS

Power Supply	12-30VDC/24VAC <sup>(1)</sup> , 24mA max	
Output	Analog outputs	0-10V, 0-5V, 2-wire or 3-wire 4-20mA
Output scaling	VOC intensity	0-500 (relative intensity)
Thermistor Options	Yes, see ordering table on left	
VOC Sensor Performance	Type	MOS
	Gas	Ethanol
	Range	0-1000ppm of ethanol equivalent
	Response Time	<10s
	Humidity Compensation	Yes
Enclosure	Dimensions	4.0' h x 4.4" w x 2.1" d (+6.8" probe)
	RH	0 to 90% RH (operating) 0- to 80% (storage)
	Temp Rating	14 to 122°F (-10 to 50°C) (operating) 5 to 30°C (storage)
Compliance	RoHS	

(1) One side of transformer, secondary is connected to signal common. Dedicated transformer is recommended. 15-30VDC/24VAC power supply voltage required for 10 volt output.

WHAT IS VOC?

VOC means volatile organic compounds which can be found in a number of harmful and other gases, odors, and smoke. Some example contaminants are listed on the right.

The output of this product has been converted from a raw Ethanol concentration into an intensity value, ranging from 0-500. An environment with normal air quality will typically read about 100 on this scale. Suggested control actions are listed to the right.

VOC Contaminant	Sources
Harmful Gases	Paints, glues, solvents, furniture, mattresses, carpet, flooring, building products
Other gases	Alcohol, cleaners, perfume, cooking smells
Odors	Rotten food, flatulence, breath, cosmetics, pet pee
Smoke	Cigarette smoke

VOC Level	Suggested Action
0-200	None, air quality is good
200-300	Ventilate, purify
300-500	Ventilate, purify intensely