

## VT0D Series

# VT0D VOC/Temp Duct

- Cost-effective measurement of room VOC levels
- 0-5V, 0-10V, 2-wire and 3-wire 4-20mA options
- Thermistor outputs for temperature optional
- Rugged attractive design



## 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

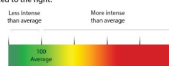
- Verify operation of ionization and UV systems
- Controlling ventilation in response to occupancy
- Ventillation control
- Economizer control
- Cafeterias, conference rooms, restrooms and public assembly areas



Rugged Enclosure

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           | Breath, food, staleness, breath, excretion, 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 |

VOC Explained



Made in the USA - 7-year Warranty

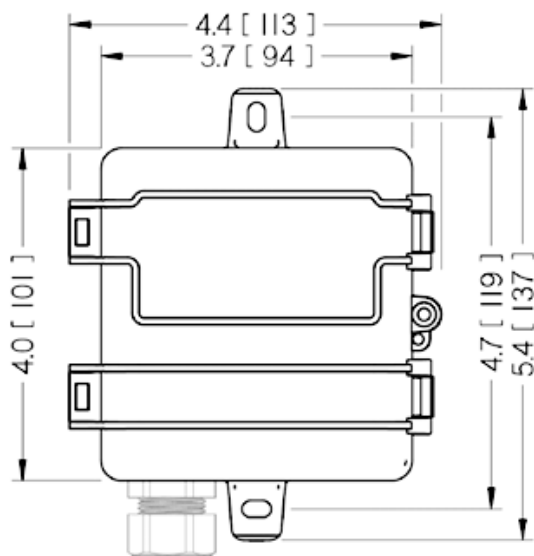
## FEATURES

- On-board temperature compensation for VOC
- Gasket seals sensor against wall drafts and false readings
- Senses thousands of contaminants
- Perfect alternative or compliment to CO2 sensing for ventillation
- New enclosure design is rugged and slim; unobtrusive tamper resistant design
- Fits easily in standard single gang boxes
- 0-5V, 0-10V, 2-wire and 3-wire 4-20mA options
- Thermistor outputs for temperature optional

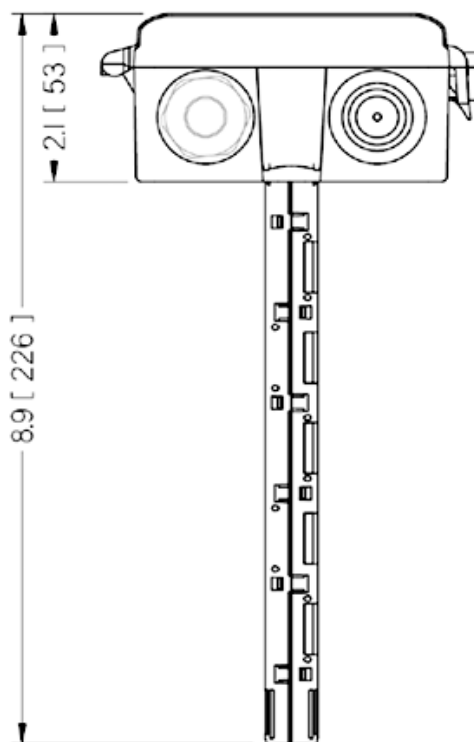
ORDERING

|       |                      |                      |
|-------|----------------------|----------------------|
| VT0D- | <input type="text"/> | <input type="text"/> |
|       | <b>Output Type</b>   | <b>Temperature</b>   |
|       | A= 0-5VDC, 3-Wire    | A= None              |
|       | B= 0-10VDC, 3-Wire   | C= 100PtRTD          |
|       | C= 4-20mA, 2-Wire    | D= 1000PtRTD         |
|       | D= 4-20mA, 3-Wire    | E= 10K Type 2        |
|       |                      | F= 10K Type 3        |
|       |                      | G= 10K W/ 11K        |
|       |                      | H= 3K                |
|       |                      | I = 2K2              |
|       |                      | J = 1K8              |
|       |                      | K = 20K              |
|       |                      | L= 100K              |

## DIMENSIONS



Units: in [mm]  
Not to scale



**Warning:** The datasheet is designed for reference only. Refer to installation instructions that accompany the product and heed all safety instructions. Product improvement is a continuing process at Senva. Changes may occur to products without prior notice.

## SPECIFICATIONS

|                    |                       |  |
|--------------------|-----------------------|--|
| Power Supply       |                       | 12-30VDC/24VAC (1), 24mA max.          |
| Outputs            | RH% (options)         | 0-10V, 0-5V, 2-wire or 3-wire 4-20mA   |
| Output scaling     | RH%                   | 0-500 (relative intensity)             |
| Thermistor Options |                       | Yes, see ordering table                |
| Sensor Performance | Type                  | MOS                                    |
|                    | Gas                   | Ethanol                                |
|                    | Range                 | 0-1000ppm of ethanol equivalent        |
|                    | Response time         | <10s                                   |
|                    | Humidity Compensation | Yes                                    |
|                    | Long term drift       | <0.25%RH per year                      |
| Enclosure          | Dimensions            | 4.0"h x 4.4"w x 2.1"d (+6.8" probe)    |
|                    | RH Rating             | 0-90% operating, 0-80% storage         |
|                    | Temp Rating           | -10 to 50C operating, 5 to 30C storage |
| Compliance         |                       | CE, 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.

*\* Product improvement is a continual process at Senva and product features and specification may change without prior notice. Refer to instructions that accompany the product for installation and wiring.*