

CT1D Series CT1D CO2 Temp Duct Sensor

- Optional LCD display with field calibration menu
- Adjustable for ranges of 2000, 5000, or 10,000 ppm CO2
- Integrated set-point relay
- Field replaceable NDIR element

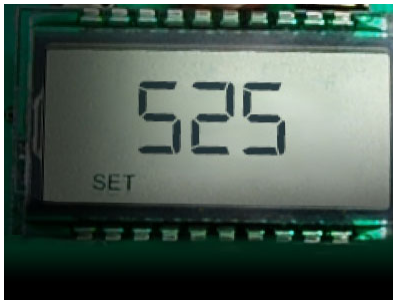


DESCRIPTION

Self-calibrating NDIR sensor for high accuracy. An optional built-in LCD display makes set up a snap, and a standard solid-state setpoint relay makes demand ventilation easy. Probe is non-directional for accurate readings and ease of installation. Dual 4-20mA and 0-10/5 vdc outputs.

APPLICATIONS

- Controlling ventilation in response to occupancy
- Facilitates compliance with ASHRAE 62.1 standard for air quality
- Offices, conference rooms, and public assembly areas



Field replaceable CO2 element for lower total lifetime cost

LCD with menu to confirm readings

Made in the USA - 7-year Warranty

FEATURES

- Integrated display and push-button menus for field selectable scale, calibration, and operational modes
- Dual 4-20mA and 0-5V/0-10V output (jumper selectable)
- Integrated high-reliability solid-state set-point relay is ideal for direct control applications; easy to set up thanks to LCD
- Non-dispersive infrared sensing element (NDIR)
- Field replaceable CO2 sensor
- 15+ year life expectancy on CO2 sensing element
- Industry leading 7-year limited warranty on electronics; NDIR module 3 years
- Selectable auto-calibration mode returns sensor to baseline values
- $\pm 30\text{ppm}$, $\pm 3\%$ of reading

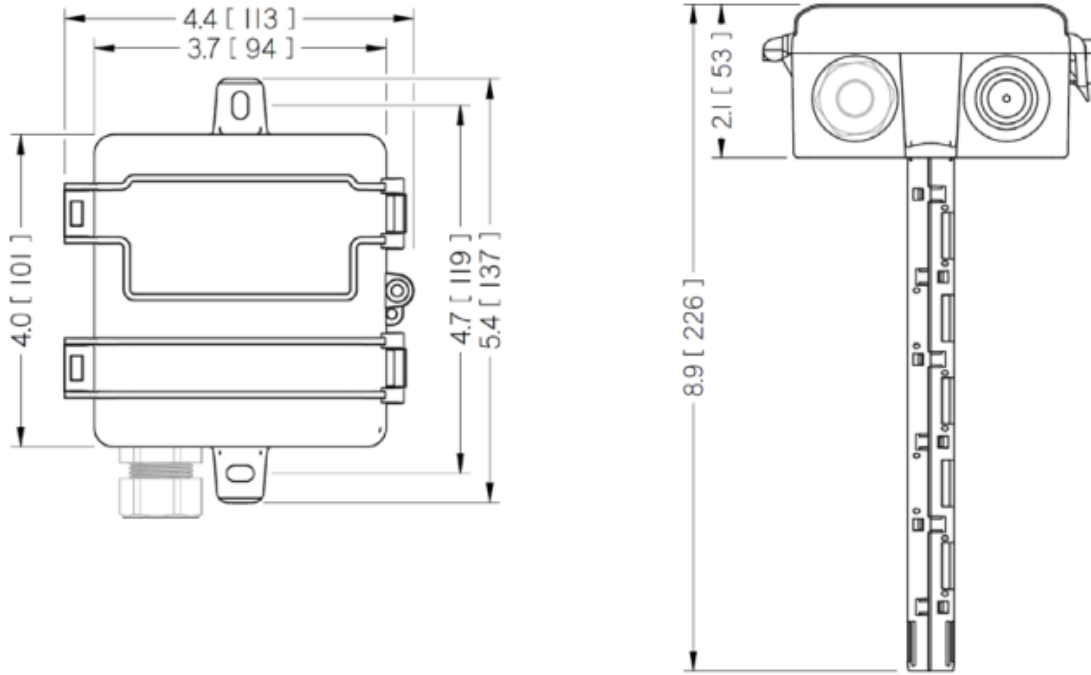
ORDERING

| | | | | | | | | | |
|-------------------|--|---|--|---|--|---|---|---|---|
| <p>CT1</p> | <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> D </div> | - | <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> </div> | - | <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> 3 </div> | - | <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> </div> | - | <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> </div> |
| | <p>Enclosure D= Duct H = Hose Barb</p> | | <p>Temperature A= None B= Transmitter* C= 100PtRTD D= 1000PtRTD E= 10K Type 2 F= 10K Type 3 G= 10K W/ 11K H= 3K I = 2K2 J = 1K8 K = 20K L= 100K</p> | | <p>Output 3= 4-20mA, 0-5V, 0-10V 3-Wire Connection</p> | | <p>Display X= None D=Display</p> | | <p>Dual Channel Blank = NDIR D = Dual Channel</p> |

* Order B=transmitter to display temperature reading; thermistor and RTD options will not display temperature on LCD

To order replacement sensor elements, please consult factory.

DIMENSIONS



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), 100mA max. |
| Analog Outputs | Dual Analog | 3-wire 4-20mA and 0-5V/0-10V (2) (jumper) |
| | Output scaling | 0 - 2000 or 0 - 5000 ppm (selectable) |
| Set-point Relay | Programmable | Solid-state, 1A @ 30VAC/DC, N.O. |
| Sensor Performance | Type | Non-dispersive Infrared (NDIR) |
| | Accuracy (Standard) | ±30ppm, ±3% of reading (400-2000ppm), @ -10-50°C, 0-85%RH ±50ppm, ±5% of reading (2000-5000ppm), @ -10-50°C, 0-85%RH ±100ppm, ±10% of reading (5000-10000ppm), @ 0-50°C, 0-85%RH |
| | Accuracy (Dual Channel) | ±30ppm, ±3% of reading (400-2000ppm), @ 0-50°C, 0-85%RH ±50ppm, ±3% of reading (2000-5000ppm), @ -10-50°C, 0-85%RH ±100ppm, ±10% of reading (5000-10000ppm), @ 0-50°C, 0-85%RH |
| | Drift with ABC disabled (standard) | 35 ppm/month |
| | Drift with ABC disabled (Dual Channel) | 5 ppm/month |
| | Pressure Dependency | +1% reading per kPa (0.143PSI) deviation from nominal (101kPa, 14.7PSI) |
| | Response time | 60 seconds to 90% reading |
| | Sample rate | 1 second |
| | Output update rate | 1 second |
| | Element Operating Environment | 4 to 122°F (-20 to 50°C), 0 to 95% RH |
| LCD Menu Setup Parameters | SPH, Setpoint, Hi (On point) | 500ppm to full-scale (800ppm default) |
| | SPL, Setpoint, Lo (Off point) | 400ppm to full-scale-50 (700ppm default) |
| | SCL, Scaling | 0-2000ppm, 0-5000ppm, 0-10000ppm (2000ppm default) |

| | | |
|-----------------------|-----------------------|---|
| | ADJ, Adjustment | Offset adjustment +/-250ppm (0 default) |
| | CAL, Calibration mode | Automatic mode ON or OFF (default=ON) |
| | RUN, Run mode | Displays CO2 in ppm |
| Operating Environment | Temperature | 14 to 122F (-10 to 50C) |
| | Humidity | 0-95% non-condensing |
| Enclosure | Material | ABS/Polycarbonate |
| | Dimensions | 4.0' h x 4.4"w x 2.1"d (+6.8" probe) |

1. One side of transformer secondary is connected to signal common. Dedicated transformer is recommended.
2. 15-30VDC/24VAC power supply voltage required for 10 volt output.
3. Operating outside of element operating environment may result in reduced accuracy.
4. Time for reaching 63% of reading at 25oC and 1 m/s airflow.
5. It is not recommended to de-activate ABC (auto-calibration) except for continuously occupied spaces or greenhouses. Drift ratings may vary based on environment

** 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.*