

## 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

CT1

**D**

-

**3**

-

### Enclosure

D= Duct  
H = Hose Barb

### 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

### Output

3= 4-20mA,  
0-5V, 0-10V  
3-Wire  
Connection

### Display

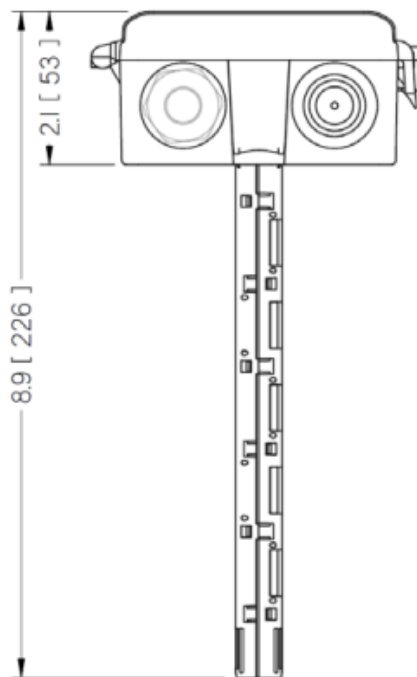
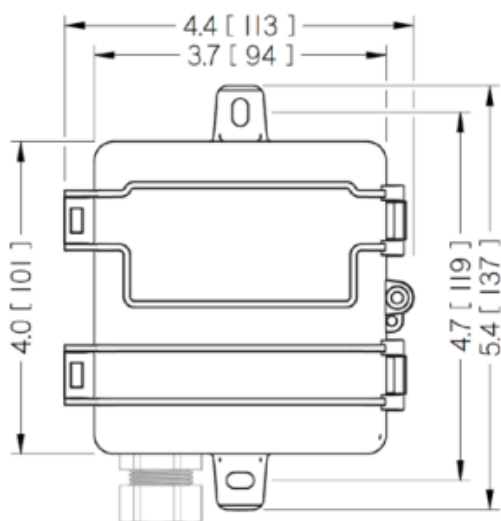
X= None  
D=Display

### Dual Channel

Blank = NDIR  
D = Dual Channel

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)
Digital Setpoint Output	Programmable	Solid-state, 1A @ 30VAC/DC, N.O.
Sensor Performance	Type	Non-dispersive Infrared (NDIR)
	Accuracy	±30ppm, ±3% of reading (400-2000ppm)
		±50ppm, ±5% of reading (2000-5000ppm)
		Consult Factory for accuracy above 5000ppm
	Response time	60 seconds to 90% reading
	Output update rate	1 second
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.

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