CT1O Outdoor
CO2 Sensor

LCD display with field calibration menu
2000/5000/10000 ppm CO_2
Integrated set-point relay
Field replaceable element
Internal heater for increased operating range



DESCRIPTION

Senva CO_2 sensors maximize energy savings by ensuring optimal ventilation. Measuring exterior CO_2 levels ensures optimized economizer control. The CT1O series is an outside air sensor with NDIR sensing element and features that include a built-in heater, standard LCD, setpoint relay, menu selectable auto-calibration and provision to offset the reading +/-250ppm.

APPLICATIONS

- Controlling ventilation in response to occupancy
- Economizer control
- Facilitates compliance with ASHRAE 62.1 standard for air quality

FEATURES

Easy to install and maintain

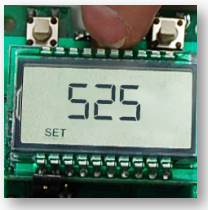
- Integrated display and push-button menus for field selectable scale, calibration, and operational modes
- Dual 4-20mA and 0-5V/0-10V output (jumper selectable)
- Integrated high-reliability solid-state set-point relay is ideal for direct control applications; easy to set up thanks to LCD

High reliability reduces call backs

- Non-dispersive infrared sensing element (NDIR)
- 15+ year life expectancy on CO_2 sensing element
- Industry leading 7-year limited warranty on electronics; NDIR module 3 years

High accuracy for improved system performance

- Internal heater for reliable outdoor operation
- Selectable auto-calibration mode returns sensor to baseline values
- ±30ppm, ±3% of reading



Display and menu

- Easy set point and calibration adjustments. Set offsets for CO2

PROUDLY MADE IN USA

7 year limited warranty

ORDERING

CT1 O - [ ] 3 [ ]

Enclosure

D = Duct
O = Outdoor

Temperature

A = None
B = Transmitter
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

Display (LCD)

D = Display
X= None

To order replacement sensor elements, please consult factory

SPECIFICATIONS

Power Supply		12-30VDC, 50mA max / 24VAC(1), 100mA max.
Analog Outputs	Dual Analog	3-wire 4-20mA and 0-5V/0-10V (2) (dip switch selectable)
	Output scaling CO_2	0 - 2000 (default) or 0 - 5000/10000 ppm (selectable)
	Output Scaling Temp	32 to 122ºF (0-50ºC) or -40 to 140ºF (-40-60ºC) (Switch Selectable)
Digital Setpoint Output	Programmable	Solid-state, 1A @ 30VAC/DC, N.O.
CO_2 Sensor Performance	Type	Non-dispersive Infrared (NDIR)
	Accuracy	±(30ppm + 3% of reading) (400-2000ppm), -10-50ºC, 0-85%RH ±(50ppm+ 5% of reading) (2000-5000ppm), -10-50ºC, 0-85%RH <5000ppm consult factory
	Response time	60s to 90% reading
	Output update rate	1s
	Operating Environment	14 to 122ºF (-10 to 50ºC), 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 (default), 0-5000ppm, 0-10000ppm
	AdJ_ Adjustment	Offset adjustment +/-250ppm (0 default)
	CAL_ Calibration mode	Automatic mode ON or OFF (default=ON)
	rUn_ Run mode	Displays CO_2 in ppm
Operating Environment	Temperature	-4 to 122ºF (-20 to 50ºC)
	Humidity	0-95% non-condensing
Enclosure	Material	ABS/Polycarbonate
	Enclosure Rating	Nema 1; Add drain holes to enclosure bottom to achieve Nema 3R rating
	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) When operating unit outside of each element's specified operating temperature, accuracy may be reduced.