Duct
CO2/Humidity/Temp

LCD display with field calibration menu
2000/5000 ppm CO2; 2% RH
Integrated set-point relay
Field replaceable NDIR CO2 element

DESCRIPTION

Senva CO2 sensors maximize energy savings by ensuring optimal ventilation. Measuring exhaled CO2 levels ensures air is conditioned only when needed. This unit combines CO2, humidity, and temperature sensing all in one compact device, reducing sensors required, installation labor and provides a cleaner IAQ solution.

APPLICATIONS

- Controlling ventilation in response to occupancy
- Facilitating compliance with ASHRAE 62.1-2004 standard for air quality
- Offices, conference rooms, and public assembly areas

FEATURES

CO2, humidity, and temperature all in one device...fewer units to buy and install

- LCD display for easy set up of all parameters
- Options for complete control including set-point
- 0-10V outputs standard. Thermistors optional

High performance NDIR CO2 with set-point relay

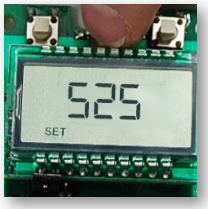
- Non-dispersive infrared sensing element (NDIR)
- Selectable auto-calibration mode returns sensor to baseline values
- Field replaceable CO2 sensor
- 2000 or 5000 ppm scale

2% RH sensor

- On-board temperature compensation for RH eliminates temp coefficient errors achieving excellent measurement accuracy, high repeatability and offset stability.
- State of the art testing facilities. 8-point calibration certificate available (NIST traceability—consult factory)

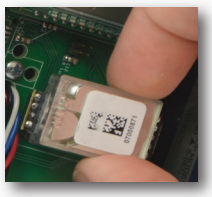
Quality

- Industry leading 7-year limited warranty/ 2-year RH element, 3-year CO2 element limited warranties



Display and menu

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



Field replaceable element

- Display and menu
- Easy set point and calibration

Proudly Made in the U.S.A.

7 year limited warranty

ORDERING

CHTDL - ☐

CO2/Temp/RH (2%)

Thermistor Addition*

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

*Addition of Thermistor requires the removal of the setpoint relay on the circuit board of the CHTDL.

To order replacement sensor elements, please consult factory

SPECIFICATIONS

Power Supply		12-30VDC/24VAC, 100mA max.
Outputs	CO2, RH, and Temperature Transmitters	3 wire 0-5/0-10V (2) (jumper selectable)
CO2	Type	Non-dispersive Infrared (NDIR)
	Accuracy	±40ppm ±3% of reading
	Response time	60 seconds to 90% reading
	Output update rate	3 seconds
	Output scaling	0-2000 ppm (default), 0-5000 ppm (option)
	Programmable set point	Solid-state output, 1A @ 30VAC/DC, N.O.
Relative Humidity	Type	Dual RH Temp integrated circuit
	Accuracy	+/-2% over 10 to 90%RH range
	Resolution	0.05%RH
	Hysteresis	+/-1%RH
	Non-Linearity	factory linearized <1%RH
	Temperature coefficient	fully compensated on-board
	Response time (3)	30s
	Output update rate	2s
	Operating range	0 to 100%RH (non-condensing)
	Long term drift	<0.5%RH per year
	Operating conditions (4)	-20° C to 60° C @ RH>90% -20° C to 80° C @ RH=50%
Temperature (transmitter specifications; thermistors optional)	Scaling	32 to 122° F (0-50° C)
	Accuracy (-20 to 70° C range)	<+/-1° C; 0.5° C typ @ 25° C 3% models, <+/-2° C; 0.5° C typ @ 25° C
	Resolution	0.01° C
	Repeatability	+/-0.1° C
	Response time (3)	30s
	Output update rate	2s
	Operating range	-40° C to 120° C (sensor only)
LCD Menu Setup Parameters	SPH, Setpoint, Hi (On) point)	500ppm to full-scale (700ppm default)
	SPL, Setpoint, Lo (Off) point)	400ppm to full-scale-50 (600ppm default)
	SCL, Scaling	0-2000ppm or 0-5000ppm (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	32 to 122F (0 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) 15-30 VDC/24VAC power supply voltage required for 10V output

(3) Time for reaching 63% of reading at 25° C and 1 m/s airflow

(4) Long term exposures to conditions outside normal range at high humidity may temporarily offset the RH reading (+3%RH after 60 hours.)