CD SERIES

Individual or 3-in-1 CO_2, RH and Temperature

CDL

CDL carbon dioxide (CO_2) sensors maximize energy savings, while helping optimize ventilation. These sensors allow ventilation systems to be controlled by the amount of CO_2 present in a space. The CDL Series detect fluctuations in CO_2 levels and signal ventilation systems to provide an inlet of fresh air optimal for the space at a given time saving energy and increasing tenant comfort.

SPECIFICATIONS

Input Power	Class 2; 20 to 30 Vdc/24 Vac 50/60 Hz; 100 mA max.
Analog Output	4 to 20 mA (clipped and capped)/0 to 5 Vdc/ 0 to 10 Vdc (selectable)
Operating Temp Range	0 to 50 °C (32 to 122 °F)
Operating Humidity Range	0 to 95% RH non-condensing
Housing Material	High impact ABS plastic
Terminal Block Torque	0.2 N-m (2.0 in-lbf) max.
Terminal Block Wire Size	28 to 14 AWG (0.5 to 1.5mm²)
CO_2 TRANSMITTER	
Sensor Type	Non-dispersive infrared (NDIR), diffusion sampling
Output Range	0 to 2000/5000 ppm (programmable)
Accuracy	±30 ppm ±2% of measured value*
Repeatability	±20 ppm ±1% of measured value
Response Time	<60 seconds for 90% step change
RH TRANSMITTER OPTION	
HS Sensor	Fully replaceable, digitally profiled thin-film capacitive (32-bit mathematics) U.S. Patent 5,844,138
Accuracy	±2% from 10 to 80% RH @ 25 °C; NIST traceable multi-point calibration
Hysteresis	1.5% typical
Stability	±1% @ 20 °C (68 °F) annually for two years
Output Range	0 to 100% RH
Temperature Coefficient	±0.1% RH/°C above or below 25 °C (typical)
TEMPERATURE TRANSMITTER OPTION	
Sensor Type	Solid-state, integrated circuit
Accuracy	±0.5 °C (±1 °F) typical
Resolution	0.1 °C (0.2 °F)
Output Range	10 to 35°C (50 to 95°F)

Microprocessor based

Microprocessor-based design increases accuracy and reduces installation time

Snap-on faceplate

Snap-on faceplate…no screws required, making installation and service easy

Self-calibrating

Innovative self-calibration algorithm…easy to maintain

Field-selectable

Field-selectable outputs for operation flexibility

NDIR

Non-dispersive infrared technology (NDIR) repeatable to ±20 ppm ±1% of measured value…high accuracy measurement

Integrated probe

Integrated transducer and probe…eliminates the need to install a separate pick-up tube

APPLICATIONS

- Controlling ventilation in response to occupancy
- ASHRAE 62.1 air quality standard compliance

RELAY CONTACTS	
1 Form C (SPDT)	1 A@30 Vdc, resistive; 30 W max.
WARRANTY	
Limited Warranty	5 years

AGENCY APPROVALS

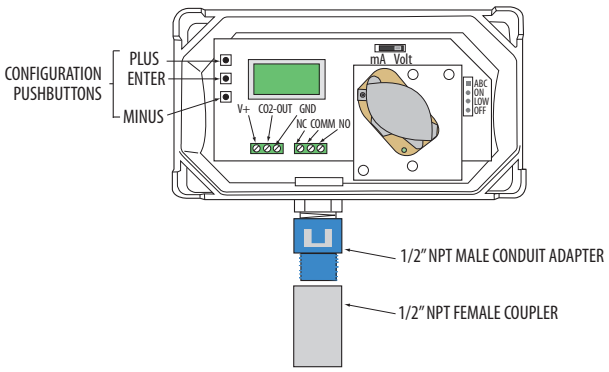
CE

RTD/Thermistors in wall packages are not compensated for internal heating of product.
EMC Conformance: Low voltage directive 2014/35/EU and EMC directive 2014/30/EU.
EMC Special Note: Connect this product to a DC distribution network or an AC DC power adaptor with proper surge protection (EN 61000-6-1 specification requirements).
* Measured at NTP.

Note: Rough handling and transportation may cause a temporary reduction of CO_2 sensor accuracy. With time, the ABC function will tune the readings back to the correct accuracy range. The default tuning speed is limited to 30 ppm per week.

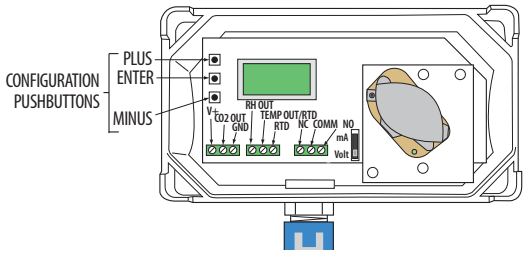
CDL (CO_2 ONLY)

Wiring Diagram



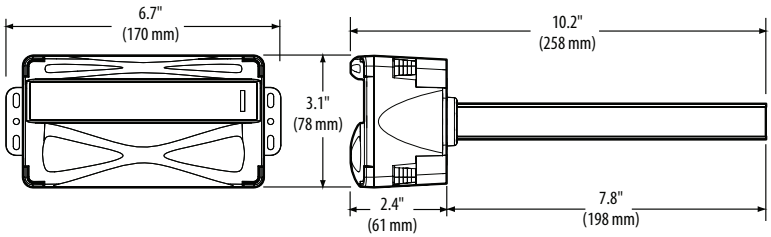
CDL (TEMP AND/OR RH OPTIONS)

Wiring Diagram



CDL

Dimensional Drawing



ORDERING INFORMATION

	RH Option	Temp	Sensor Type	Optional Cal Cert
CDLS	☐	☐	☐	☐
	H = RH2% X = No RH	T = Temp X = No Temp (Stop here)	A = Transmitter B = 100R Platinum, RTD C = 1k Platinum, RTD D = 10k T2, Thermistor E = 2.2k, Thermistor F = 3k, Thermistor G = 10k CPC, Thermistor H = 10k T3, Thermistor J = 10k Dale, Thermistor K = 10k w/11k shunt, Thermistor M = 20k NTC, Thermistor N = 1800 ohm, Thermistor R = 10k US, Thermistor S = 10k 3A221, Thermistor T = 100k, Thermistor U = 20k "D", Thermistor W = 10k T2 high accuracy, Thermistor Y = 10k T3 high accuracy, Thermistor	Blank = None 1 = 1 pt Temp Cert* 2 = 2 pt Temp Cert*

Example:

CDLS	H	T	B	2

*Not available with W and Y high accuracy thermistors.

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