

# Standard Duct and Wall CO<sub>2</sub> Sensors

## CDE & CWE Series



### SPECIFICATIONS

<b>Input Power</b>	Class 2; 20 to 30VDC/24AC 50/60Hz; 100mA max.
<b>Analog Output</b>	4-20mA (clipped & capped)/0-10VDC (selectable)
<b>Operating Temp Range</b>	0° to 50°C (32° to 122°F)
<b>Operating Humidity Range</b>	0 to 95% RH noncondensing
<b>Housing Material</b>	High impact ABS plastic
<b>Terminal Block Torque</b>	CDE 0.5-0.6N-m (4.4-5.3 in-lbf) max. CWE 0.2N-m (2.0 in-lbf) max.
<b>Terminal Block Wire Size</b>	CDE 24-12 AWG (0.25-2.5mm <sup>2</sup> ) CWE 28-20 AWG (0.08-0.5mm <sup>2</sup> )
<b>Sensor Type</b>	Non-dispersive infrared, diffusion sampling
<b>Output Range</b>	0-2000 ppm
<b>Accuracy</b>	±30 ppm ±2% of measured value*
<b>Repeatability</b>	±20 ppm ±1% of measured value
<b>Response Time</b>	<60 seconds for 90% step change

RTD/Thermistors in wall housings are not compensated for internal heating of product. EMC Conformance: Low voltage directive 2006/95/EC & EMC directive 2004/108/EC. EMC Special Note: Connect this product to a DC distribution network or an AC/DC power adaptor with proper surge protection (EN 61000-6-1:2007 specification requirements).

\* Measured at NTP

Note: Rough handling and transportation may cause a temporary reduction of CO<sub>2</sub> 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.

## Field-Selectable 4-20mA/0-10VDC Output

### FEATURES

- Microprocessor-based design increases accuracy and reduces installation time
- Non-dispersive infrared technology repeatable to ±20 ppm ±1% of measured value...high accuracy measurements
- Innovative self-calibration algorithm...easy to maintain
- 5-year calibration interval (recommended)
- Low ambient sensitivity
- Output 4-20mA/0-10V for flexible control system interface
- 3-year factory warranty from date of purchase

### DESCRIPTION

The **CDE** and **CWE** are non-dispersive infrared (NDIR) sensors designed for measuring environmental CO<sub>2</sub> concentration in ventilation systems and indoor living spaces. Their measurement range of 0-2000 ppm makes them compliant with ASHRAE and other standards for ventilation control

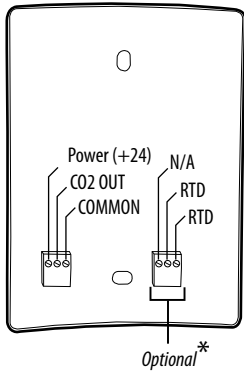
The **CWE/CDE Series** provides a user-selectable 4-20mA or 0-10VDC output for versatility. Microprocessor-based digital electronics & a unique self-calibration algorithm improves long-term stability & accuracy.

### APPLICATIONS

- Controlling ventilation in response to occupancy
- Facilitating compliance with ASHRAE 62.1 standard for air quality
- Office buildings, conference rooms, schools, retail stores, etc.

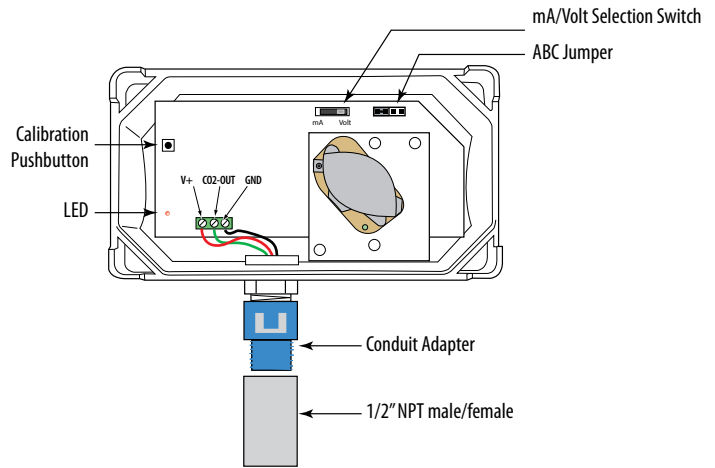
WIRING DIAGRAMS

CWE Wall Mount



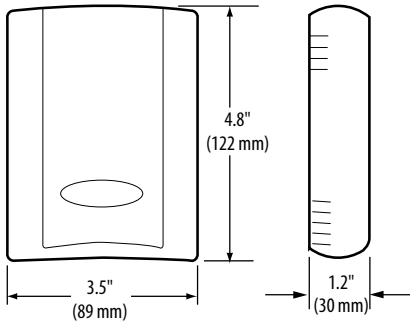
\* Note: Connector blocks and headers for optional features are not included with non-option models.

CDE Duct Mount

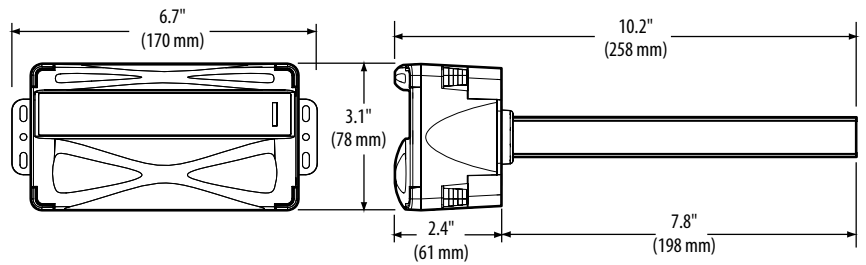


DIMENSIONAL DRAWINGS

CWE Wall Mount



CDE Duct Mount



ORDERING INFORMATION



Duct Mount

CDE (No Options)

Wall Mount, Temp. Option

Sensor Type

CWE



- SB = 100R Platinum, RTD
- SC = 1k Platinum, RTD
- SD = 10k T2, RTD, Thermistor
- SE = 2.2k, Thermistor
- SF = 3k, Thermistor
- SG = 10k CPC, Thermistor
- SH = 10k T3, Thermistor
- SJ = 10k Dale, Thermistor
- SK = 10k w/1k shunt, Thermistor
- SM = 20k NTC, Thermistor
- SN = 1800 ohm, Thermistor
- SR = 10k US, Thermistor
- SS = 10k 3A221, Thermistor
- ST = 100k, Thermistor
- SU = 20k "D" Thermistor
- SW = 10k T2 high accuracy, Thermistor
- SY = 10k T3 high accuracy, Thermistor
- SZ = 10k E1, Thermistor

Housing



- Blank = Cloud white
- B = Black

Example:

CWE SH B

Wall Mount, No Temp. Option

Housing

CWE



- Blank = Cloud white
- B = Black

Example:

CWE B

ACCESSORIES

- Calibration kits and gases (AA01, AA26, AA27, AA28, AA29)
- Handheld air quality testers (1010, 1008, 770)
- Replacement covers for wall units (AA51, AA51B)
- Replacement cloud white wall housing (AA55)



1010



AA01



AA55



AA51/AA51B