



CDE & CWE Series

SPECIFICATIONS



Input Power	Class 2; 20 to 30 Vdc/24 AC 50/60 Hz; 100 mA max.
Analog Output	4 to 20 mA (clipped & capped)/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:	
CDE	0.5 to 0.6 N-m (4.4 to 5.3 in-lbf) max.
CWE	0.2 N-m (2.0 in-lbf) max.
Terminal Block Wire Size:	
CDE	24 to 12 AWG (0.25 to 2.5mm ²)
CWE	28 to 20 AWG (0.08 to 0.5mm ²)
Sensor Type	Non-dispersive infrared, diffusion sampling
Output Range	0 to 2000 ppm
Accuracy	±30 ppm ±2% of measured value*
Repeatability	±20 ppm ±1% of measured value
Response Time	<60 seconds for 90% step change
Limited Warranty	3 years

RTD/Thermistors in wall housings are not compensated for internal heating of product.
 EMC Conformance: Low voltage directive 2006/95/EC and 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 CO₂ 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 TO 20 mA/0 TO 10 VDC OUTPUT

DESCRIPTION

The **CDE** and **CWE** are non-dispersive infrared (NDIR) sensors designed for measuring environmental CO₂ concentration in ventilation systems and indoor living spaces. Their measurement range of 0 to 2000 ppm makes them compliant with ASHRAE and other standards for ventilation control. The CWE/CDE Series provides a user-selectable 4 to 20 mA or 0 to 10 Vdc output for versatility. Microprocessor-based digital electronics and a unique self-calibration algorithm improves long-term stability and accuracy.

APPLICATIONS

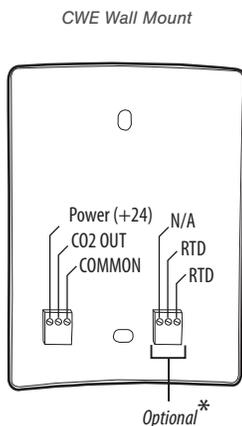
- Controlling ventilation in response to occupancy
- Facilitating compliance with ASHRAE 62.1 standard for air quality
- Office buildings, conference rooms, schools, retail stores, etc.

FEATURES

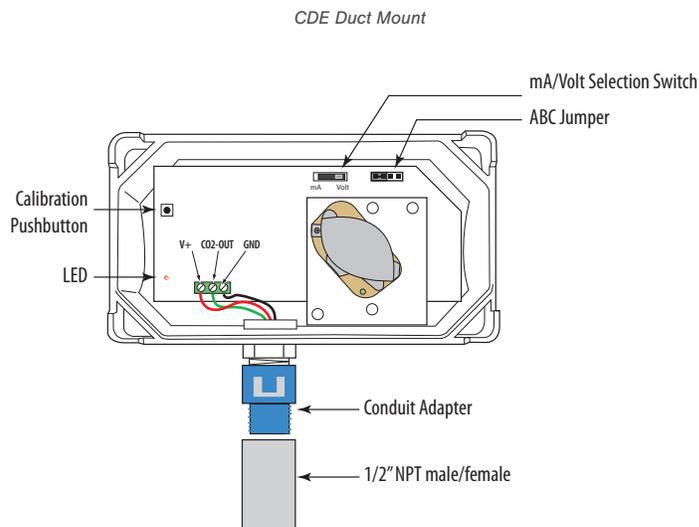
- Microprocessor-based design increases accuracy and reduces installation time
- Non-dispersive infrared technology repeatable to ±20 ppm ±1% of measured value...high accuracy measurements
- Innovative self-calibration algorithm...easy to maintain
- 5-year calibration interval (recommended)
- Low ambient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



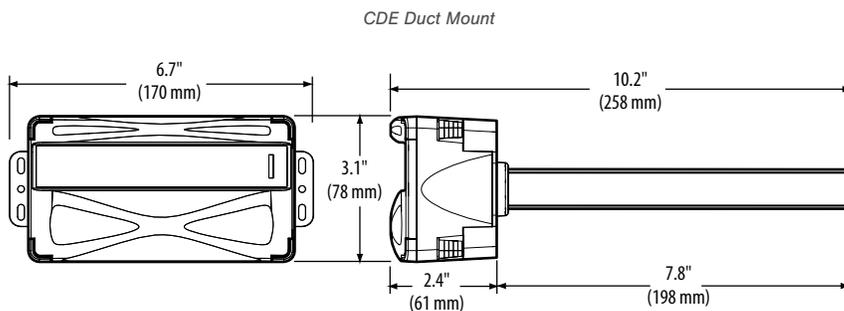
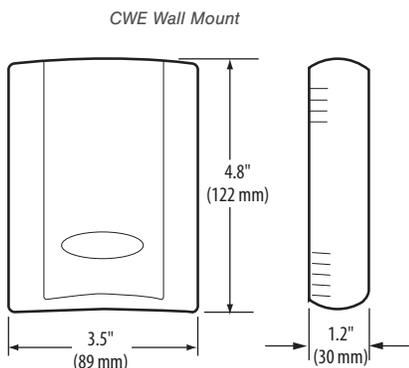
WIRING DIAGRAMS



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



DIMENSIONAL DRAWINGS



ORDERING INFORMATION



Duct Mount	Wall Mount, Temp. Option
CDE (No Options)	CWE
	Sensor Type 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 with 11k 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
CWE
Housing Blank = Cloud white B = Black
Example: CWE B

*The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.
 **Only available if temperature option is selected.

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)

