

SERIES CDT | DWYER CARBON DIOXIDE/TEMPERATURE TRANSMITTER

FEATURES/BENEFITS

- Single beam dual wavelength NDIR sensor eliminates drift due to light source aging offering long time stability, especially when used in areas that can be occupied 24 hours a day
- Integral passive temperature outputs reduce number of devices mounted in the space
- Integral display and relay output options to meet building requirements
- Service display tool available for models without an integral LCD - helps save time during set-up and commissioning

APPLICATIONS

- Demand control ventilation in schools, office buildings, hospitals, and other indoor environments
- LEED® certification

DESCRIPTION

The **SERIES CDT** Carbon Dioxide and Temperature Transmitters accurately monitor the CO₂ concentration and temperature in indoor environments to help achieve energy savings. For increased sensor accuracy, a single beam dual wavelength non-dispersive infrared (NDIR) sensor is used to automatically correct the measurement in both occupied and unoccupied buildings against light source aging effects. The single beam dual wavelength sensor technology provides the highest level of accuracy compared to Automatic Baseline Correction methods which can unintentionally shift the calibration based on CO₂ levels and barometric pressure conditions. In order to achieve a higher level of accuracy, the Series CDT includes digital barometric pressure adjustment and the ability to field-calibrate the sensor.

For applications that require visual indication, the wall mount configurations of the Series CDT can be ordered with an integral LCD display. Push buttons are standard on all configurations of the transmitters for access to the menu structure, but wall mount configurations can be ordered without the buttons. To prevent tampering, the action of the buttons can be locked out using an internal dip switch selection.



European Style Wall Mount

North American Style Wall Mount

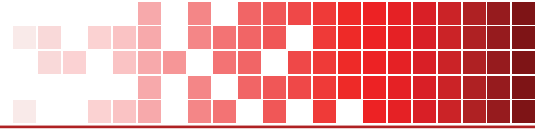


Duct Mount

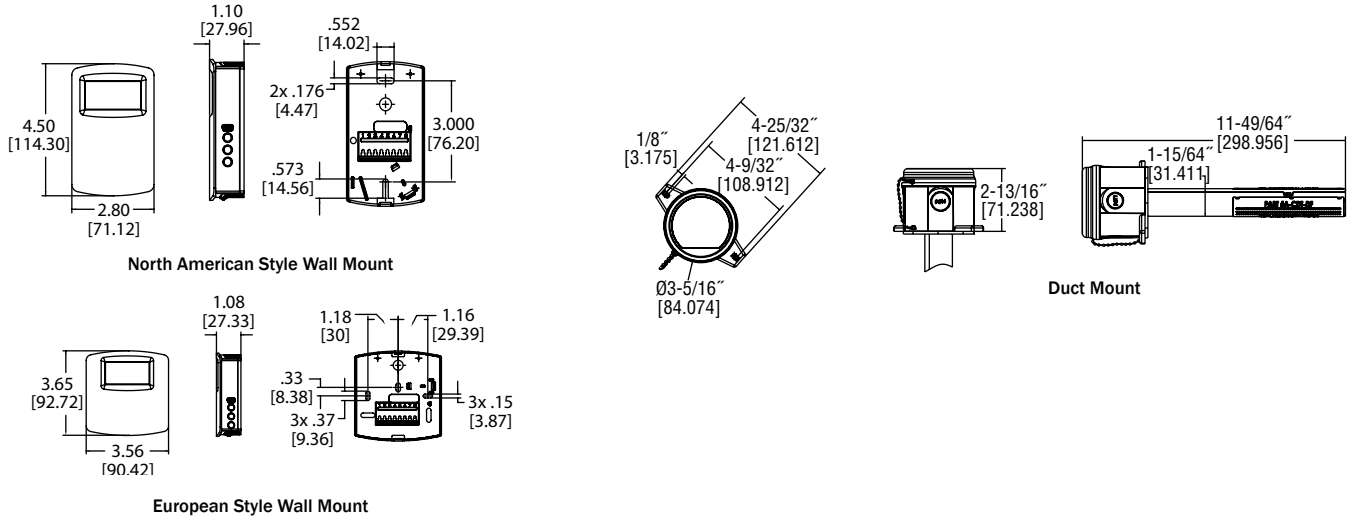
SPECIFICATIONS

| | |
|--------------------------------|---|
| Sensor | Single beam, dual wavelength NDIR. |
| Range | CO ₂ : 0 to 2000 or 0 to 5000 ppm (depending on model); Temperature: 32 to 122 °F (0 to 50 °C). |
| Accuracy | CO ₂ : ±40 ppm ±3% of reading; RH: ±2% (10 to 90% RH); Temperature: ±1 °C @ 25 °C. |
| Temperature Dependence | ±8 ppm/°C at 1100 ppm. |
| Non-Linearity | 16 ppm. |
| Pressure Dependence | 0.13% of reading per mm of Hg. |
| Response Time | 2 min for 99% step change. |
| Duct Air Velocity Range | 0-4000 FPM (20.32 m/s). |
| Temperature Limits | 32 to 122 °F (0 to 50 °C). |
| Humidity Limits | 10 to 95% RH (non-condensing). |
| Power Requirements | 16 to 35 VDC or 19 to 28 VAC. |
| Power Consumption | Average: 2 w; Peak: 3.75 w. |
| Output | Current: 4 to 20 mA (max. 500 Ω); Voltage: 0 to 5 VDC or 0 to 10 VDC (min. 500 Ω); Relay: SPST NO rated 2 A @ 30 VDC. |
| Weight | 4.4 oz (125 g). |
| Agency Approvals | CE. |





DIMENSIONS



HOW TO ORDER

Use the **bold** characters from the chart below to construct a product code.

| | | | | | | | |
|--|------------|-----------|----------|----------|----------|---------------------------------------|--|
| | CDT | -2 | N | 4 | 4 | -LCD | |
| SERIES | | | | | | OPTIONS | |
| CDT - Carbon dioxide/temperature transmitter | | | | | | -FC - Factory calibration certificate | |
| RANGE | | | | | | -LCD - LCD display (wall only) | |
| -2 - 0 to 2000 ppm CO ₂ range | | | | | | -RLY - Relay | |
| -5 - 0 to 5000 ppm CO ₂ range | | | | | | -NBC - No buttons (wall only) | |
| CONFIGURATION | | | | | | TEMPERATURE OUTPUT | |
| N - North American style wall mount | | | | | | O - None | |
| E - European style wall mount | | | | | | 4 - 4 to 20 mA / 0 to (5 or 10) VDC | |
| D - Duct mount | | | | | | A - 10 KΩ NTC thermistor type III | |
| CO₂ | | | | | | B - 10 KΩ NTC thermistor type II | |
| 4 - 4 to 20 mA / 0 to (5 or 10) VDC | | | | | | C - 3 KΩ NTC thermistor | |
| | | | | | | D - Pt100 Ω RTD | |
| | | | | | | E - Pt1000 Ω RTD | |
| | | | | | | F - 20 KΩ NTC thermistor | |

ACCESSORIES

| Model | Description |
|-------------------|--|
| GCK-200CO-2000CO2 | Calibration gas kit includes a 99.99% nitrogen gas cylinder for calibrating the zero point and a 200 PPM CO / 2000 PPM CO ₂ gas cylinder for calibrating the span point on Dwyer's gas sensing transmitters |
| A-449 | Remote LCD display allows remote indication of select Dwyer® wall mount transmitters for validation or certification purposes |
| A-449A | Remote LCD display with buttons allows remote indication and calibration of select Dwyer® wall mount and duct mount transmitters for validation and certification purposes |
| A-CDT-KIT | Accessory kit including terminal block and power supply |

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