

SERIES CDT | CARBON DIOXIDE/TEMPERATURE TRANSMITTERS

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

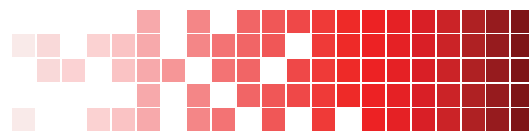


Duct mount

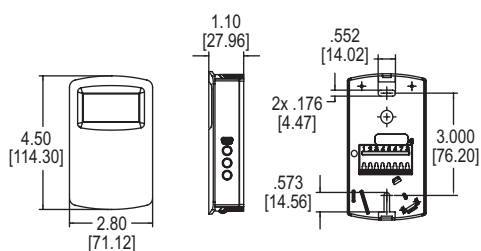
SPECIFICATIONS

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; 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).
Enclosure Rating	Duct mount: NEMA 4X (IP66) for housing only; Wall mount: IP20.
Agency Approvals	CE.

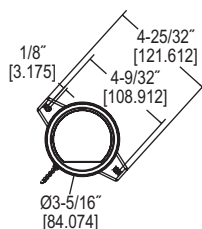




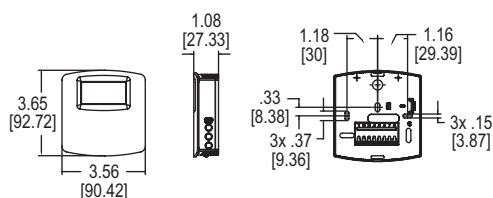
DIMENSIONS



North American style wall mount



Duct mount



European style wall mount

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							0: 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

Important Notice: Dwyer Instruments, Inc. reserves the right to make changes to or discontinue any product or service identified in this publication without notice. Dwyer advises its customers to obtain the latest version of the relevant information to verify, before placing any orders, that the information being relied upon is current.

