



SERIES CDTC | COMMUNICATING CARBON DIOXIDE SENSOR



European style



North American style
(with optional LCD display)

FEATURES/BENEFITS

- Application/Installation flexibility through network communication via BACnet or Modbus®
- Reliable readings from dual-channel NDIR sensor reduces drift associated with light source aging
- Tamper resistant with physical security hardware lockout
- Easy system setup with optional remote display tool

APPLICATIONS

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

DESCRIPTION

The **Series CDTC Communicating Carbon Dioxide Sensor** combines the function of two room sensors into a single, compact housing. Parameters include carbon dioxide, temperature, and temperature set point with override. A 4-wire connection and daisy chaining together reduces installation cost. The RS-485 MAC address is set up using on-board DIP switches. Additional DIP switches are used to select Modbus® RTU or BACnet MS/TP and to limit access to the set up menu.

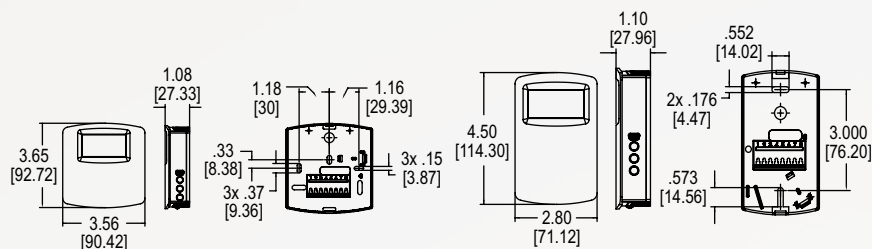
The Series CDTC uses a Single Beam Dual Wavelength Non-Dispersive Infrared (NDIR) sensor to measure the carbon dioxide level allowing for installations that will be occupied 24 hours per day. For improved accuracy, the transmitter can be field calibrated to the environmental conditions of the installation. The barometric pressure can be programmed to correct for altitude.

Optional integral and remote displays are available to display temperature, humidity, or temperature set point instead of CO₂.

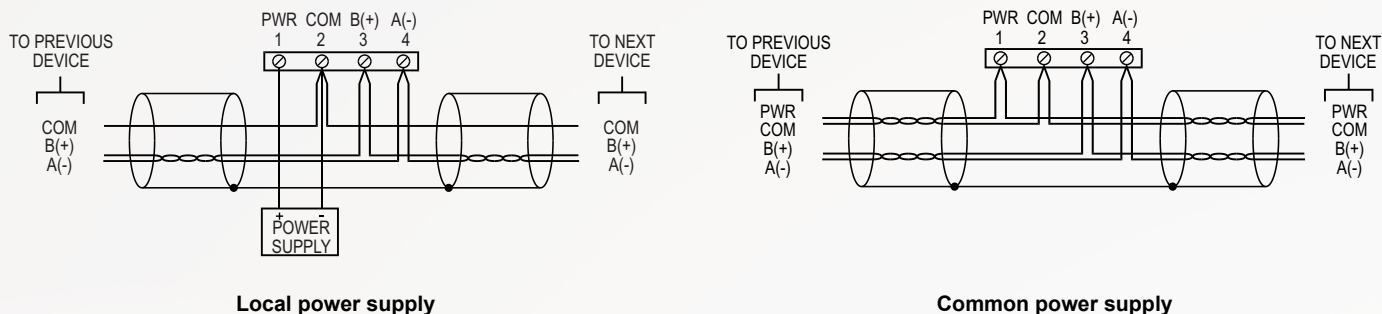
SPECIFICATIONS

Range	0 to 2000 or 5000 PPM CO ₂ (depending on model); 32 to 122°F (0 to 50°C) temperature.
Accuracy	±40 PPM +3% of reading carbon dioxide; ± 1°C @ 25°C temperature.
Response Time	<2 minutes, diffusion, carbon dioxide.
Sensor Technology	NDIR (non-dispersive infrared); 15 year light source.
Temperature Limits	32 to 122°F (0 to 50°C).
Output	2-wire RS-485, Modbus® RTU or BACnet MS/TP communication protocol.
Temperature Dependence (CO₂)	±8 PPM / °C at 1100 PPM.
Non-Linearity (CO₂)	16 PPM.
Pressure Dependence (CO₂)	0.13% of reading per mm Hg carbon dioxide.
Power Requirements	10-42 VDC / 10-30 VAC.
Weight	4.4 oz (125g).
Agency Approvals	BTL, CE.

DIMENSIONS

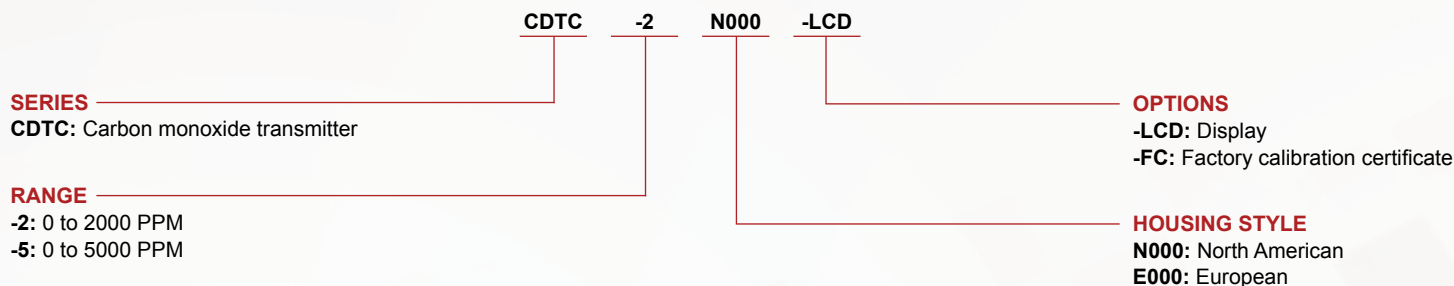


WIRING DIAGRAM



HOW TO ORDER

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



ACCESSORIES

Model	Description
A-449	Remote LCD display allows remote indication
A-CDT-KIT	Accessory kit including terminal block and power supply
GCK-200CO-2000CO2	Calibration gas kit for zero and span adjustment

Modbus® is a registered trademark of Schneider Automation, Inc.
LEED® is a registered trademark of the U.S. Green Building Council

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dwyer-inst.com/Product/SeriesCDTC



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Printed in U.S.A. 5/21

DS-CDTC Rev. 3

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