Series CDT

CARBON DIOXIDE
Transmitters

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**Series CDT**

**Right Choice. Right Price. Right Now.**

Series CDT Carbon Dioxide and Temperature Transmitters accurately monitor the CO₂ concentration and temperature in schools, office buildings, and other indoor environments to help achieve LEED® certification for increased energy savings. A single beam, dual-wavelength non-dispersive infrared (NDIR) sensor is used to automatically convert the measurement in both occupied and unoccupied buildings. Each transmitter is designed for simple installation and field adjustable and can be configured for Modbus® temperature, and temperature set point with parameters including carbon dioxide, humidity, and pressure.

**ADVANTAGES**
- **REDUCE INSTALLATION COST:** In order to reduce the set up cost, the RS-485 MAC address is set up using on board dip switches. A second set of dip switches is also used to select the transmitter wires.
- **REDUCE FIELD CALIBRATION:** The communicating detector can be dialed up to further reduce installation cost. In order to reduce the set up time, the RS-485 MAC address is set up on board dip switches. A second set of dip switches is used to select the transmitter wires or BACnet MS/TP communication protocols and to limit access to the set-up menu.
- **REDUCE INSTALLATION TIME:** The Series CDTA Communicating Carbon Dioxide Detector combines the function of three room sensors into a single, compact housing. Parameters include Carbon Dioxide, Humidity, and Temperature per r-t curves and can be easily configured for Modbus® temperature, and temperature set point with parameters including carbon dioxide, humidity, and pressure. The communicating detector can be dialed up to further reduce installation cost. In order to reduce the set up time, the RS-485 MAC address is set up on board dip switches. A second set of dip switches is used to select the transmitter wires or BACnet MS/TP communication protocols and to limit access to the set-up menu.

**SENSOR ADVANTAGES**
- **SINGLE BEAM DUAL-WAVELENGTH SENSOR ADVANTAGES**
  - **Automatically corrects for aging effects in indoor and unoccupied buildings:** Perfect for hospitals and manufacturing plants that are occupied 24 hours per day.
  - **Measures actual unfiltered light intensity directly:** Reduces the number of models that must be expected in stock.
  - **Eliminates error from incorrect assumptions:** Gas concentration in theoretical logic assumption methods.

**REMOTE DISPLAY CONNECTOR**
- **Allows viewing LCD display to be used as a remote transmitter:** Eliminates building occupant questions about proper CO₂ level accuracy.
- **Increasing the accuracy, a single-beam dual-wavelength NDIR:** The Series CDT includes digital temperature, and temperature set point with parameters including carbon dioxide, humidity, and pressure. The communicating detector can be dialed up to further reduce installation cost. In order to reduce the set up time, the RS-485 MAC address is set up on board dip switches. A second set of dip switches is used to select the transmitter wires or BACnet MS/TP communication protocols and to limit access to the set-up menu.

**FIELD SELECTABLE CURRENT/VOLTAGE OUTPUT**
- **Prevents human error of installing wrong transmitter on a job:** Reduces the number of models that must be expected in stock.
- **Reduces the number of models that must be expected in stock:** Gas concentration in theoretical logic assumption methods.

**OPTIONAL RELAY OUTPUT**
- **Prevents false CO₂ and temperature readings by blocking air flow from unscheduled condensation events:** Reduces the number of models that must be expected in stock.
- **Reduces the number of models that must be expected in stock:** Gas concentration in theoretical logic assumption methods.

**OUTPUT SELECTOR SWITCH**
- **Prevents false CO₂ and temperature readings by blocking air flow from unscheduled condensation events:** Reduces the number of models that must be expected in stock.
- **Reduces the number of models that must be expected in stock:** Gas concentration in theoretical logic assumption methods.

**REMOTE DISPLAY CONNECTOR**
- **Allows the building engineer to locally check the CO₂ and temperature readings in the duct without having to access the building management system or connect to the transmitter wires:** Reduces the number of models that must be expected in stock.

**SPECS**
- **Range:** CO₂: 0 to 3000 or 0 to 5000 ppm (depending on model).
- **Temperature:** 32 to 122°F (0 to 50°C).
- **Humidity:** 0 to 100% RH (CDT and CDTA only).
- **Accuracy:** ±40 ppm + 3% of reading, ±2% RH.
- **Non-Linear:** ±16 ppm.
- **Power Requirements:** 16 to 35 VDC / 19 to 28 VAC.
- **Power Consumption:** Average: 2 watts; Peak: 3.75 watts.
- **Sensor:** Single beam, dual-wavelength NDIR.
- **Output (CDT and CDTA):** Current: 4 to 20 mA (max 500 Ω); Voltage: 0 to 5 VDC or 0 to 10 VDC (min 500 Ω)
- **Relay:** SPST NO 2A @ 30 VDC; RTD or thermistor per r-t curves (depending on model).
- **CDT BACnet MS/TP or Modbus® RTU:** Weight: 5.6 oz (158.8 g).
- **Accessory:** A-490 REMOTE DISPLAY Remote LCD display allows remote indication of the transmitter and provides the highest level of accuracy compared to field-calibrate the sensor.

**SPECIFICATIONS**

Series CDTA

### Range
- **Temperature:** 32 to 122°F (0 to 50°C).
- **Humidity:** 0 to 100% RH.
- **Pressure Dependence:** 16 ppm.
- **Response Time:** 2 minutes for 90% step change.
- **Ambient Operating Temperature:** 32 to 122°F (0 to 50°C).
- **Ambient Operating Humidity:** 10 to 95% RH (non-condensing).
- **Power Requirements:** 16 to 35 VDC / 19 to 28 VAC.
- **Power Consumption:** Average: 2 watts; Peak: 3.75 watts.
- **Sensor:** Single beam, dual-wavelength NDIR.
- **Output (CDT and CDTA):** Current: 4 to 20 mA (max 500 Ω); Voltage: 0 to 5 VDC or 0 to 10 VDC (min 500 Ω)
- **Relay:** SPST NO 2A @ 30 VDC; RTD or thermistor per r-t curves (depending on model).

**Series CDT**

**Range**
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- **Humidity:** 0 to 100% RH.
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