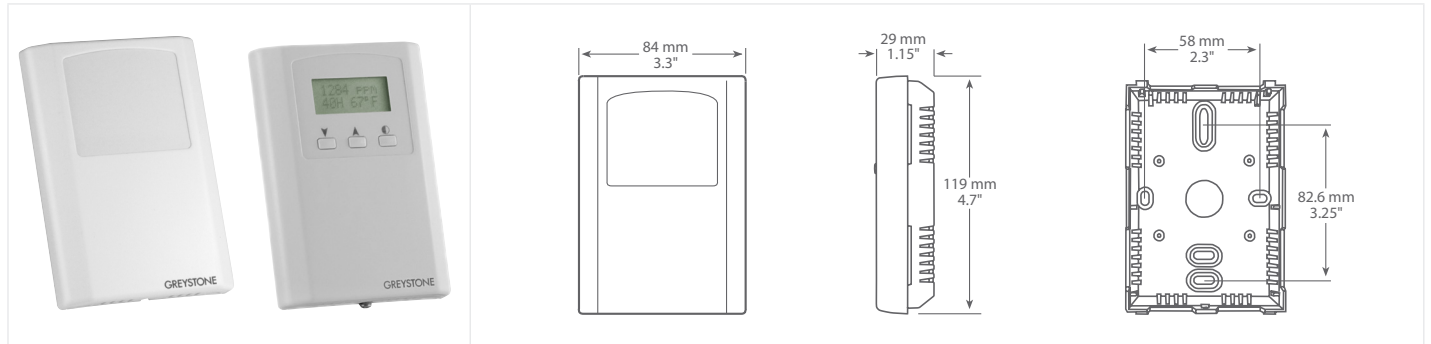




## ROOM CARBON DIOXIDE DETECTOR WITH BACnet® OR MODBUS COMMUNICATIONS



### CDD3 SERIES

#### PRODUCT DESCRIPTION

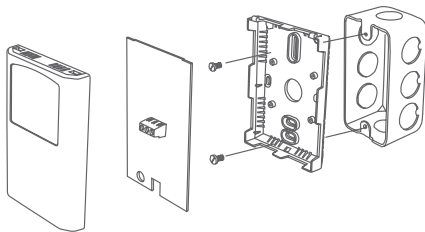
The CDD3 series uses a highly accurate and reliable Non-Dispersive Infrared (NDIR) sensor combined with state-of-the-art digital linearization and temperature compensated circuitry in an attractive, low profile enclosure for room applications to monitor room CO<sub>2</sub> levels. A BACnet® or Modbus Communications signal is provided for connection to a building automation system. Optional features such as temperature, humidity, setpoint adjustment, manual override, and adjustable relay output are available.

#### TYPICAL INSTALLATION

**For complete installation and wiring details, please refer to the product installation instructions.**

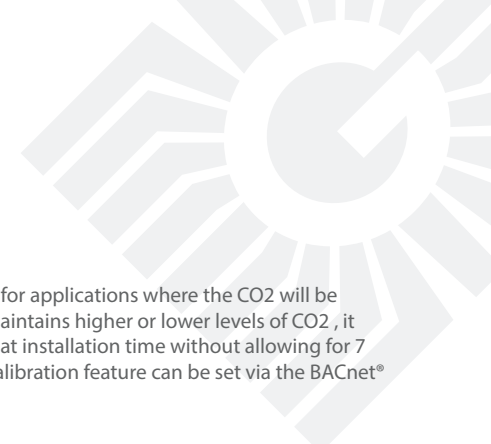
The CDD3 series can be mounted directly to a single gang electrical box or directly to a wall. The backplate includes many mounting hole configurations to allow for mounting on a variety of electrical boxes.

The basic CDD3 has a screw block terminal provided for connection to the Building Automation System.



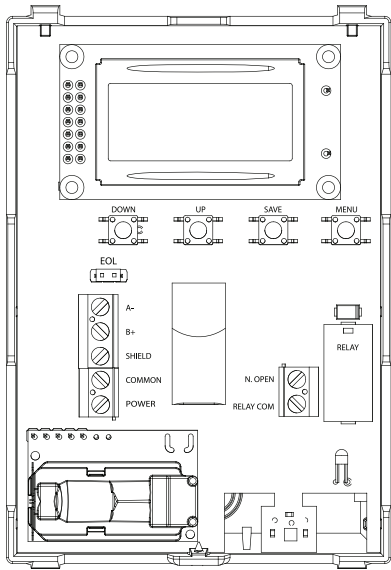
#### SPECIFICATIONS

<b>CO<sub>2</sub> SIGNAL</b>	<b>Measurement Type:</b> Dual Channel (NDIR) <b>Range:</b> 0-10,000ppm <b>Standard Accuracy:</b> ± (30ppm + 3% of measured value) <b>Coverage Area:</b> 100m <sup>2</sup> (1000ft <sup>2</sup> ) typical <b>Temperature Dependence:</b> ±2.5ppm/°C <b>Altitude Correction:</b> Programmable from 0-5000 ft via BACnet® or Modbus <b>Response Time:</b> 20 seconds <b>Life Span:</b> 15 years typical
<b>NETWORK INTERFACE</b>	<b>Hardware:</b> 2-wire RS-485 <b>Software:</b> BACnet® - MS/TP protocol Modbus - MS/P (RTU) <b>Baud Rate:</b> BACnet® - Locally set to 9600, 19200, 38400, 57600, 76800 or 115200 Modbus - Locally set to 9600, 19200, 38400, 57600, 76800 or 115200 <b>Address Range:</b> BACnet® - Locally set to 0-127 (factory default is 3), (63 devices max on one daisy chain) Modbus - Locally set to 1-255 (factory default is 1), (255 devices max on one daisy chain)
<b>OPTIONAL TEMPERATURE</b>	<b>Sensing Element:</b> NTC thermistor <b>Accuracy:</b> ±0.2°C @ 0 to 50°C (±0.36°F @ 32 to 122°F) <b>Resolution:</b> 0.1°C (0.2°F) <b>Range:</b> 0 to 50°C (32 to 122°F)
<b>OPTIONAL RH</b>	<b>Sensing Element:</b> Thermoset polymer based capacitive <b>Accuracy:</b> ±2 %RH <b>Range:</b> 0 to 100 %RH, non-condensing <b>Resolution:</b> 1 %RH <b>Hysteresis:</b> ±0.8 %RH @25°C (77°F) <b>Response Time:</b> 8 seconds <b>Stability:</b> <0.25 %RH/year
<b>OPTIONAL RELAY OUTPUT</b>	<b>Contact Ratings:</b> Form A contact (N.O.), 2 Amps @ 140 Vac/30 Vdc <b>Relay Trip Point:</b> Programmable 500 - 1500ppm via BACnet® or Modbus <b>Relay Hysteresis:</b> Programmable 25-200ppm via BACnet® or Modbus
<b>OPTIONAL LCD DISPLAY</b>	<b>Resolution:</b> 1ppm CO <sub>2</sub> , 1 %RH, 1°C (1°F) <b>Size:</b> 35mm W x 15mm H (1.4" x 0.6") alpha-numeric 2 line x 8 character <b>Backlight:</b> Enable or disable via keypad
<b>OPTIONAL OVERRIDE SWITCH</b>	Front panel push-button available as BACnet® or Modbus register
<b>OPTIONAL SETPOINT CONTROL</b>	Front panel push-buttons available as 0 to 100% as BACnet® object or Modbus register
<b>POWER SUPPLY</b>	24 Vdc ±20% or 24 Vac ±10% (non-isolated half-wave rectified)
<b>CONSUMPTIONS</b>	80 mA max @ 24 Vdc, 140 mA max @ 24 Vac with all options
<b>OPERATING CONDITIONS</b>	0 to 50°C (32 to 122°F), 0 to 90 %RH non-condensing
<b>WIRING CONNECTIONS</b>	Screw terminal block (14 to 22 AWG)
<b>ENCLOSURE</b>	White ABS, 84mm W x 119mm H x 29mm D (3.3" x 4.7" x 1.15"), IP30 (NEMA 1)
<b>APPROVALS</b>	CE
<b>COUNTRY OF ORIGIN</b>	Canada



**NOTE:** This CO2 sensor incorporates a Self Calibration feature to correct CO2 sensor drift. This feature is recommended for applications where the CO2 will be exposed to fresh air (400 ppm) at least one hour per day. If the monitored space is occupied 24 hours or consistently maintains higher or lower levels of CO<sub>2</sub>, it is recommended that this feature be turned off, but yearly calibration will be required. If the self calibration is disabled at installation time without allowing for 7 day auto calibration cycle, then a manual calibration should be performed to ensure accuracy of the device. The Self Calibration feature can be set via the BACnet® Auto Cal Object or Modbus Auto Cal Register. The default is ON.

## WIRING INFORMATION



TERMINAL	FUNCTION
A(-)	Network Output
B(+)	Network Output
Shield	Network Output
COMMON	Common
POWER	24 Vac/Vdc Supply
N.OPEN	Relay Output
RELAY COM	Relay Common

## ORDERING

PRODUCT	<b>CDD3A10</b> Room Carbon Dioxide Transmitter with BACnet® Communications <b>CDD3B10</b> Room Carbon Dioxide Transmitter with Modbus Communications
DISPLAY	<b>0</b> Concealed <b>1</b> Viewable
CONFIGURATIONS	<b>-</b> CO <sub>2</sub> Only <b>RH</b> CO <sub>2</sub> , Humidity & Temperature <b>T</b> CO <sub>2</sub> & Temperature
OPTIONS (MULTIPLE SELECTIONS CAN BE MADE) (LEAVE BLANK IF NO OPTIONS REQUIRED)	<b>P</b> Setpoint control, 2 button up/down <b>S</b> Exposed push button momentary switch - N.O. <b>R</b> Relay output

## PART NUMBER


NOTE: Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.