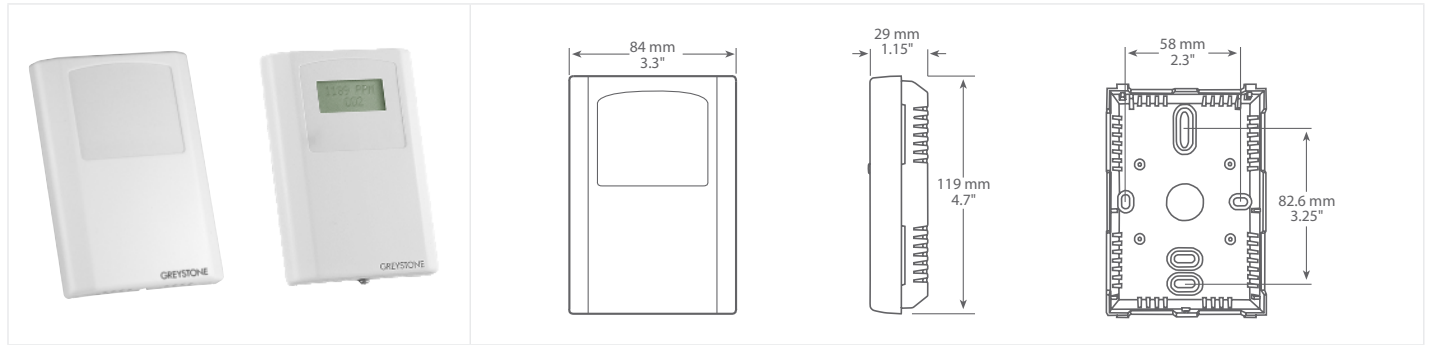




ROOM CARBON DIOXIDE DETECTOR



CDD4A1 SERIES

PRODUCT DESCRIPTION

The room CO₂ transmitter device uses a highly accurate and reliable nondispersive infrared (NDIR) sensor in an attractive, low profile enclosure for room applications to monitor CO₂ levels. The sensor uses dual wavelength optics and LTA (long term adjustment) signal processing technology to deliver industry leading long-term accuracy and reliability. These technology features ensure optimum measurement stability for both periodic and constant occupancy applications, so the device is equally suitable for a classroom or a hospital room.

Standard features include a field selectable output signal of either 4-20 mA, 0-5 Vdc or 0-10 Vdc for the highest versatility, programmable CO₂ measurement span, a backlit alpha-numeric LCD and easy menu operation for configuration.

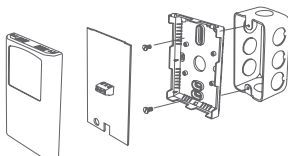
Optional features include a resistive temperature sensor output (with LCD display of temperature in either °C or °F), a control relay with adjustable setpoint, hysteresis and time delay and a dry-contact override switch.

TYPICAL INSTALLATION

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

The CDD4 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 CDD4 has a 3 wire configuration with a screw block terminal provided for connection to the Building Automation System.

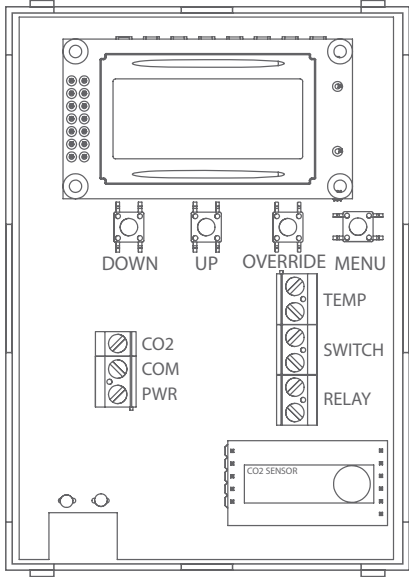


SPECIFICATIONS

GAS TYPE DETECTED	Carbon Dioxide (CO ₂)
SENSOR TYPE	Dual wavelength non-dispersive infrared (NDIR)
SENSOR ACCURACY	± 50ppm + 3% of reading
MEASUREMENT RANGE	0-2000ppm (default), adjustable 1000 - 5000ppm
PRESSURE DEPENDENCY	<1% of reading / kPa
RESPONSE TIME	90 seconds (T90)
WARM-UP TIME	1 minute
SENSOR COVERAGE AREA	100 m ² (1000ft ²) typical
SENSOR LIFE SPAN	>10 years
TRANSMITTER ACCURACY	±0.25% of span (including linearity, hysteresis and repeatability)
POWER SUPPLY	24 Vdc ±20% or 24 Vac ±10% (non-isolated half-wave rectified)
PROTECTION CIRCUITRY	Reverse voltage protected and transient protected
INPUT VOLTAGE EFFECT	Negligible over specified operating range
OUTPUT SIGNAL TYPE	4-20 mA (3-wire), 0-5 or 0-10 Vdc (field selectable)
CURRENT CONSUMPTION	Current: 75 mA @ 24 Vdc max, 150 mA @ 24 Vac max Voltage: 50 mA @ 24 Vdc max, 100 mA @ 24 Vac max
OUTPUT DRIVE @ 24 VDC	Current: 550Ω max Voltage: 10,000Ω min
AMBIENT OPERATING RANGE	-10 to 50°C (14 to 122°F), 5 to 90 %RH non-condensing
STORAGE TEMPERATURE	-30 to 70°C (-22 to 158°F)
STORAGE HUMIDITY	5 to 90 %RH non-condensing
LCD DISPLAY	Units: ppm (CO ₂), °C/°F for optional temperature sensor Range: 0 to 5000ppm, 0 to 50°C (32 to 122°F) for optional temperature sensor Resolution: 1 ppm CO ₂ , 0.1°C/°F for optional temperature sensor Size: 35mm W x 15mm H (1.4" x 0.6"), 2 line x 8 character, alpha-numeric
OPTIONAL TEMPERATURE SENSOR	Type: Thermistor and RTD (see ordering chart) Accuracy: See ordering chart Output: 2-wire resistive
OPTIONAL RELAY (2-WIRE OUTPUT)	Selectable CO, high, CO ₂ low, Temp High or Temp Low Rating: Form A (N.O.), 2 Amps @ 140 Vac / 30 Vdc
OPTIONAL OVERRIDE SWITCH (2-WIRE OUTPUT)	Front panel pushbutton Rating: 50 mA @ 12 Vdc max
ENCLOSURE	Material: ABS, White Dimensions: 84mm W x 119mm H x 29mm D (3.3" x 4.7" x 1.15") Protection: IP30 (NEMA 1)
WIRING	Screw terminal block (14 to 22 AWG)
APPROVALS	CE
COUNTRY OF ORIGIN	Canada



WIRING INFORMATION



TERMINAL	FUNCTION
CO ₂	Analog Output
COM	COMMON
PWR	Supply Voltage
TEMP	Resistance Output
SWITCH	Digital Output
RELAY	Digital Output

ORDERING

PRODUCT	CDD4A1	Room Carbon Dioxide Sensor
DISPLAY	00	Concealed LCD
	01	Viewable LCD
OPTIONAL TEMPERATURE SENSOR	-	None (leave blank)
	T2	100 Ω Platinum, IEC 751, 385 Alpha, thin film
	T5	1801 Ω NTC Thermistor, ±0.2°C
	T6	3000 Ω NTC Thermistor, ±0.2°C
	T7	10,000 Ω Type 3, NTC Thermistor, ±0.2°C
	T8	2.252K Ω NTC Thermistor, ±0.2°C
	T12	1000 Ω Platinum, IEC 751, 385 Alpha, thin film
	T13	1000 Ω Nickel, Class B, DIN 43760
	T14	10,000 Ω Type 3, NTC Thermistor, ±0.2°C c/w 11,000 shunt resistor
	T20	20,000 Ω NTC Thermistor, ±0.2°C
	T24	10,000 Ω Type 2, NTC Thermistor, ±0.2°C
T59	10,000 Ω, 25°C, ±1%, B = 3435 ±1% (25/85)	
OPTIONAL RELAY	-	None (leave blank)
	R	Adjustable Relay
OPTIONAL OVERRIDE	-	None (leave blank)
	S	Override

PART NUMBER

CDD4A1

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

5-YEAR CALIBRATION GUARANTEE

Greystone offers a 5-year calibration guarantee on all its CDD series wall and duct mount sensors used for CO₂ based ventilation control. The CDD series uses dual wavelength optics and LTA (long term adjustment) signal processing technology to deliver industry leading long-term accuracy and reliability. These technology features ensure optimum measurement stability for both periodic and constant occupancy applications. If the sensor is found to be out of calibration more than 150 PPM as compared to a calibration gas or recently calibrated reference, Greystone will provide a free factory calibration of the sensor if returned to Greystone.