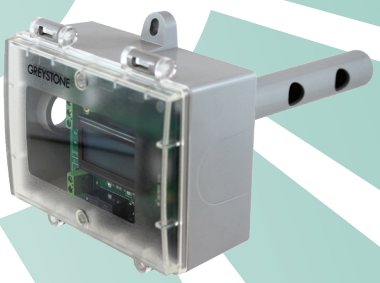
GREYSTONE
ENERGY SYSTEMS INC

CARBON DIOXIDE TRANSMITTER
CD Series

The CO2 transmitter uses Infrared Technology to monitor CO2 levels and outputs a linear 4-20 mA or 0-5/0-10 Vdc signal. Options include an LCD, a control relay and a resistive temperature sensor. Features include a back-lit LCD and user menu for easy installation.



SPECIFICATIONS:

Power Supply ..... 20 - 28 Vac/dc (non-isolated half-wave rectified)
Consumptions ..... 120 mA max @ 24 Vdc,
212 mA max @ 24 Vac (mA models)
79 mA max @ 24 Vdc,
129 mA max @ 24 Vac (voltage models)
Output Signals ..... 4-20 mA active (sourcing) or 0-5 Vdc / 0-10 Vdc (field selectable)
Output Drive Capability .. **Current:** 550 ohms maximum
Voltage: 5 Kohm minimum
Output Resolution ..... 10 bit PWM
Input Voltage Effect. ..... Negligible over specified operating range
Protection Circuitry ..... Reverse voltage protected, overvoltage protected
Operating Conditions ..... 0-50°C (32-122°F), 0-95 %RH non-condensing
LCD Resolution ..... 1 ppm CO2
LCD Size ..... 35 mm W x 15 mm H (1.4" x 0.6")
alpha-numeric 2 line x 8 characters
LCD Backlight ..... Enable or disable via keypad
Wiring Connections ..... Screw terminal blocks, 14 to 22 AWG
Enclosure ..... Polycarbonate, UL94-V0 IP65 (NEMA 4X)
F style includes thread adapter (1/2" NPT to M16) and cable gland fitting
Probe ..... 152 mm L x 22.5 mm D (6" x 0.85")
Country of Origin ..... Canada

CO2 SIGNAL

Measurement Type ..... Non-Dispersive Infrared (NDIR), diffusion sampling
Measurement Range ..... 0-2000 ppm (Sensor 1) or
0-20,000 ppm (Sensor 2), programmable span
Standard Accuracy ..... +30 ppm +3% or reading
(Sensor 1 0-2000 ppm range with Auto Cal),
+75 ppm or 10% of reading (whichever is greater)
(Sensor 2 0-20,000 ppm range with dual channel sensor)
Temperature Dependence ..... 0.2 %FS per °C
Stability ..... <2 %FS over life of sensor (15 years typical)
Sensor 1 (0-2000 ppm),
<5 %FS over life of sensor (15 year typical)
Sensor 2 (0-20,000 ppm)
Pressure Dependence ..... 0.13% of reading per mm Hg
Altitude Correction ..... Programmable from 0-5000 ft via keypad
Response Time ..... <2 minutes for 90% step change typical
Warm-up Time ..... <2 minutes

OPTIONAL TEMPERATURE SIGNAL

Sensing Element ..... 10K thermistor, +0.2°C (+0.4°F)

OPTIONAL RELAY OUTPUT

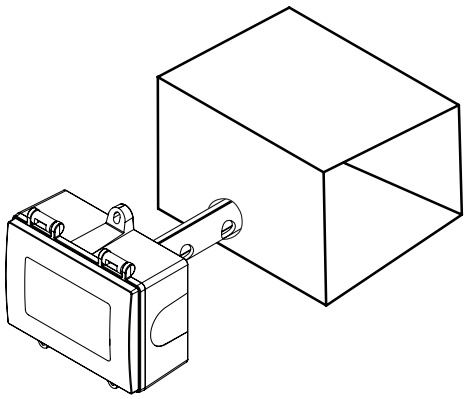
Contact Ratings ..... Form A contact (N.O.), 2 Amps @ 140 Vac,
Amps @ 30 Vdc
Relay Trip Point ..... Programmable via keypad
Relay Hysteresis ..... Programmable via keypad

TYPICAL INSTALLATION:

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

The duct type probes are installed through a hole in the side of the duct to monitor a single point temperature within the duct. Since the probes are tip sensitive, select a probe length that places the sensor well into the duct. Install the probe in a straight section of duct at a suitable distance downstream from any heating, cooling or humidification devices.

The enclosure provides mounting tabs for ease of installation.



RoHS COMPLIANT
MADE IN CANADA
ISO9001
CE

PART NUMBER SELECTED

PRODUCT SELECTION INFORMATION:

MODEL	Product Description
CDDT	Duct Carbon Dioxide (CO_2) Transmitter

CODE	Enclosure
B	Polycarbonate with hinged and gasketed cover
F	Same as B with thread adapter & cable gland fitting

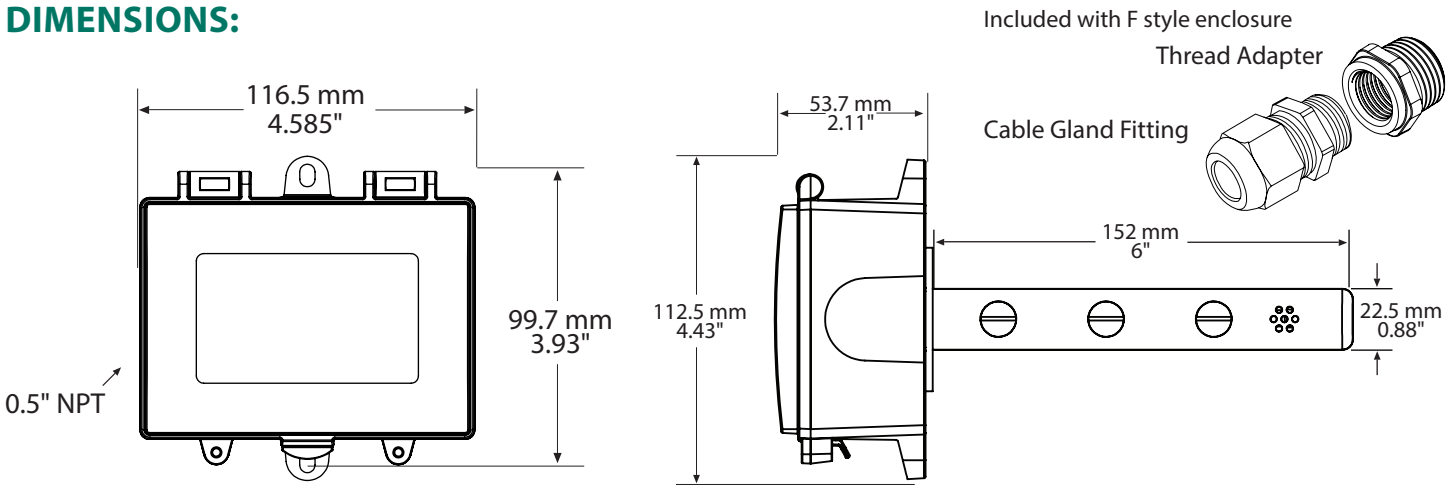
CODE	CO2 Sensing & Range
1	Non-Dispersive Infrared (NDIR), diffusion sampling, 0-2000 ppm
2	Non-Dispersive Infrared (NDIR), diffusion sampling, 0-20,000 ppm, adjustable

CODE	Relay Output
X	No relay
R	Relay

CODE	Optional Temperature Sensor
00	No Sensor Option
02	100 Ω, Platinum, IEC 751, 385 Alpha, thin film
05	1801 Ω, NTC Thermistor, ±0.2°C
06	3000 Ω, NTC Thermistor, ±0.2°C
07	10,000 Ω, Type 3, NTC Thermistor, ±0.2°C
08	2.25K Ω, NTC Thermistor, ±0.2°C
12	1000 Ω, Platinum, IEC 751, 385 Alpha, thin film
13	1000 Ω, Nickel, Class B, DIN 43760
14	10,000 Ω, Type 3, NTC Thermistor, ±0.2°C c/w 11K shunt resistor
20	20,000 Ω, NTC Thermistor, ±0.2°C
24	10,000 Ω, Type 2, NTC Thermistor, ±0.2°C

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

DIMENSIONS:



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RoHS COMPLIANT

Greystone Energy Systems Inc. is one of North America's largest ISO registered manufacturers of HVAC/R sensors and transmitters for Building Automation Management Systems. We have conscientiously established a worldwide reputation as an industry leader by maintaining leading-edge design technology, prompt technical support, and a commitment to on-time deliveries. We take pride in our Quality Management System which is ISO 9001 certified, assuring our customers of consistent product reliability.

GREYSTONE HAS AN **ISO 9001** REGISTERED QUALITY SYSTEM