



GREYSTONE

ENERGY SYSTEMS INC

CARBON DIOXIDE TRANSMITTER CHTDT Series

The CO₂/RH/T transmitter incorporates three sensors in one duct mount enclosure for the most efficient environmental monitoring and control system. It uses Infrared Technology to monitor CO₂ levels within a range of 0 – 2000 ppm, a field-proven RH sensor to monitor relative humidity from 0-100 %RH and a curve-matched thermistor to measure temperature over common field-selectable ranges. A weatherproof Polycarbonate enclosure is included for ease of installation.

SPECIFICATIONS:

Power Supply20 - 28 Vac/dc (non-isolated half-wave rectified)
Consumptions**Current:** 120 mA max @ 24 Vdc,
212 mA max @ 24 Vac
Voltage: 79 mA max @ 24 Vdc,
129 mA max @ 24 Vac
Output Signals.....4-20 mA active (sourcing)
0-5 Vdc / 0-10 Vdc (field selectable)
Output Drive Capability550 ohms maximum for current output,
5 Kohm min for voltage output
Output Resolution10 bit PWM
Input Voltage Effect.....Negligible over specified operating range
Protection Circuitry.....Reverse voltage protected, overvoltage protected
Operating Conditions0-50°C (32-122°F), 0-95 %RH non-condensing
LCD Resolution.....1 ppm CO₂
LCD Size35 mm W x 15 mm H (1.4" x 0.6")
alpha-numeric 2 line x 8 characters
Wiring Connections.....Screw terminal blocks, 14 to 22 AWG
EnclosurePolycarbonate, UL94-V0, IP65 (NEMA 4X)
Probe.....152 mm L x 22.5 mm D (6" x 0.85")

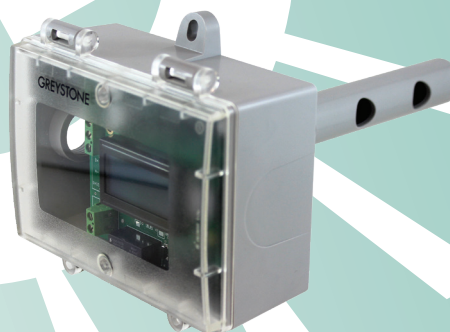
CO₂ SIGNAL
Measurement Type.....Non-Dispersive Infrared (NDIR), diffusion sampling
Measurement Range.....0-2000 ppm (Sensor 1) or 0-20,000 ppm (Sensor 2),
programmable span
Standard Accuracy+30 ppm +3% or reading
(Sensor 1 0-2000 ppm range with Auto Cal),
+75 ppm or 10% of reading (whichever is greater)
(Sensor 2 0-20,000 ppm range with dual channel sensor)
Temperature Dependence.....0.2 %FS per °C
Stability2 %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

TEMPERATURE SIGNAL
Sensing Element.....10K thermistor, +0.2°C (+0.4°F)
Range0 to 35°C (32 to 95°F) or
0 to 50°C (32 to 122°F) selectable via keypad
Resolution.....0.1°C

RH SIGNAL
Sensor.....Thermoset polymer based capacitive
Accuracy.....+2 %RH
Range0-100 %RH, non-condensing
Resolution.....2 %RH
Hysteresis.....+3 %RH
Response Time.....15 seconds typical
Stability.....+1.2 %RH typical @ 50 %RH in 5 years

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

Country of OriginCanada



PART NUMBER SELECTED

PRODUCT SELECTION INFORMATION:

MODEL	Product Description
CHTDT	Duct Carbon Dioxide (CO ₂), Humidity & Temperature Transmitter

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

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

CODE	Output
I	Current 4-20 mA
V	Voltage 0-5 Vdc, 0-10 Vdc, field selectable
B	BACnet® Communications
M	Modbus Communications

CODE	Relay Output
X	No relay
R	Relay

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



GREYSTONE ENERGY SYSTEMS, INC.

RoHS
COMPLIANT

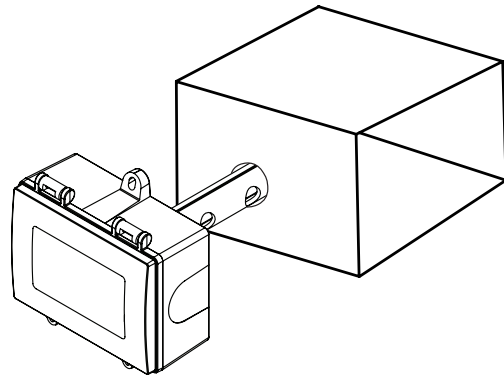


TYPICAL INSTALLATION:

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

The duct type sensor installs on the outside of a return air duct with the sampling tube inserted into the duct. Mount the sensor in an easily accessible location in a straight section of duct at least five feet from corners and other items that may cause disturbances in the air flow. Avoid areas with vibrations or rapid temperature changes.

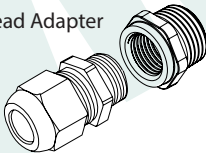
The enclosure provides mounting tabs for ease of installation.



Included with F style enclosure

Thread Adapter

Cable Gland Fitting

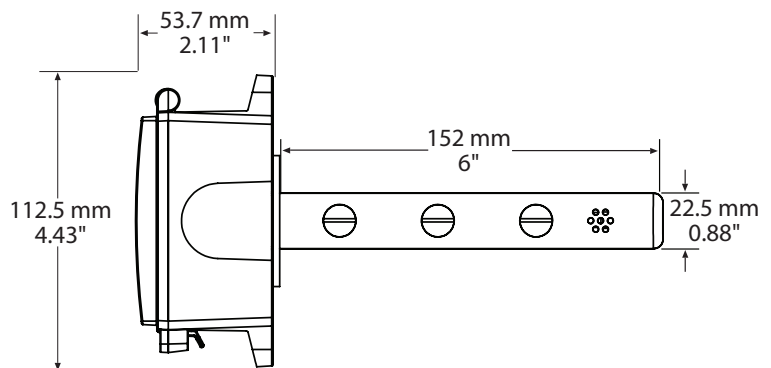
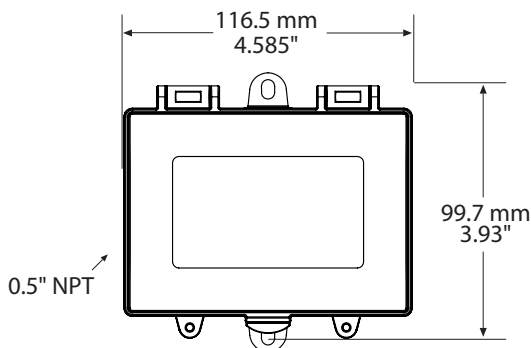


5-YEAR CALIBRATION GUARANTEE

Based on the results of years of testing of ACLP software, Greystone now offers a 5-year calibration guarantee on all its CDD series wall and duct mount sensors used for CO₂ based ventilation control when operated in an environment that can utilize ACLP software. 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.

This guarantee only applies if the sensor is operated in an environment where inside levels periodically drop to outside concentrations (i.e. during evenings or weekends when there is no occupancy) as is required by ACLP software. If a space does not experience a periodic drop to outside levels (i.e. where occupancy is 24 hours, 7 days/week).

DIMENSIONS:



GREYSTONE
ENERGY SYSTEMS INC.

Greystone Energy Systems, Inc.

150 English Drive, Moncton,
New Brunswick, Canada E1E 4G7

(506) 853-3057 Fax: (506) 853-6014

North America: 1-800-561-5611

e-mail: mail@greystoneenergy.com

www.greystoneenergy.com

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