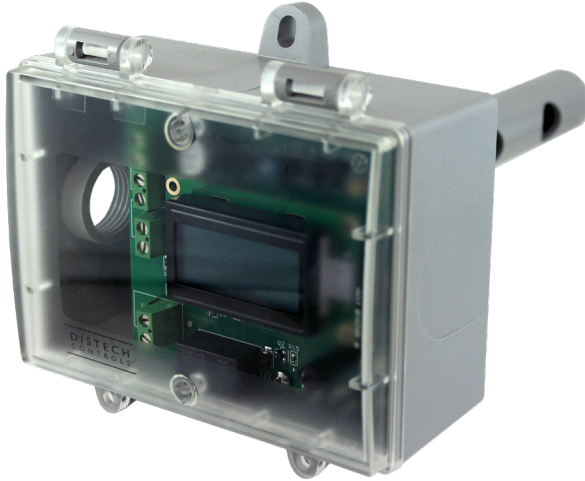




GS-2CDD Series

Duct CO₂ Sensors, Nema 4X



Overview

The GS-2CDD Series are duct carbon dioxide gas detectors. These devices provide precision measurement of CO₂ gas. These sensors use a highly accurate and reliable Non-dispersive Infrared (NDIR) sensor combined with state-of-the-art digital linearization and temperature-compensated circuitry to monitor duct CO₂ levels. The duct CO₂ transmitter principal of operation is based on the Venturi effect of the probe that extends into the HVAC duct. Air flowing through the duct is forced into the vent holes on one side of the probe, into the enclosure, over the CO₂ sensor, and then the air is drawn back out of the enclosure via the vent holes on the opposite side of the probe. Optional temperature sensor and adjustable relay output is also available.

Applications

- ☐ Used for demand controlled ventilation (DCV)
- ☐ Used for monitoring air quality
- ☐ Used in greenhouses

Features & Benefits

- ☐ Economical
- ☐ Models with adjustable range
- ☐ Menu driven set-up
- ☐ Guaranteed 5 year calibration interval
- ☐ Accurate carbon dioxide monitoring for increased comfort

Accessories

GS-CDCAL	CO ₂ calibration kit - no gas
GS-CDNIST	NIST calibration certificate

Model Selection

		GS-	2CD	D	02K	D	X	X
Sensor	2CD = Carbon dioxide, Nema 4X enclosure							
Mounting Style	D = Duct							
Sensing Range	02K = 0-2000ppm 20K = 0-20000ppm							
Display	D = Integrated display							
Temperature Sensor Option	T = Temperature sensor (10kΩ, Type II thermistor)							
Relay Option	R = Relay output							

Product Specifications

Environmental

Operating Temperature	0°C to 50°C; 32°F to 122°F
Storage Temperature	0°C to 70°C; 32°F to 158°F
Relative Humidity	0 to 95% Non-condensing

Sensor

Pressure Dependence	0.13% of reading per mm Hg
Altitude Correction	Programmable from 0-5000ft via keypad
Response Time	<2 minutes for 90% step change typical
Warm-Up Time	< 2 minutes
Range	GS-2CDD02K: 0-2000 ppm, GS-2CDD20K: 0-20000 ppm, programmable span
Accuracy	GS-2CDD02K \pm 30 ppm +3% (Auto Cal On), GS-2CDD20K \pm 75 ppm or 10% reading (whichever is greater)
Sensor Type	GS-2CDD02K Non-Dispersive Infrared (NDIR), GS-2CDD20K Dual Channel NDIR

Enclosure

Material	Grey polycarbonate
Dimensions	See figure
Shipping weight	0.3 lbs (136 g)
Enclosure Ratings	IP65 (NEMA 4X)
Electrical Conduit Connection	$\frac{1}{2}$ " NPT knockout for conduit connections and M16 adapter and cable gland in Europe

LCD Display

Resolution	1ppm CO ₂
Size	1.4"W x 0.6"H (35 mm x 15 mm)
Backlight	Enable or disable via keypad

Electrical

Protection Circuitry	Reverse voltage & overvoltage protected
Power Supply	20-28 VAC/DC
Consumption	120 mA max @ 24 VDC 212 mA max at 24VDC (With all options)

Optional Relay Output

Contact Ratings	Form A contact (N.O), 2 Amps @ 140 VAC, 2 Amps @ 30 Vdc
Relay Trip Point	GS-2CDD02K: Programmable 500-2000 ppm GS-2CDD20K: Programmable 500- 15000 ppm
Relay Hysteresis	GS-2CDD02K: Programmable 25-200 ppm GS-2CDD20K: Programmable 25-500ppm

Temperature Sensor

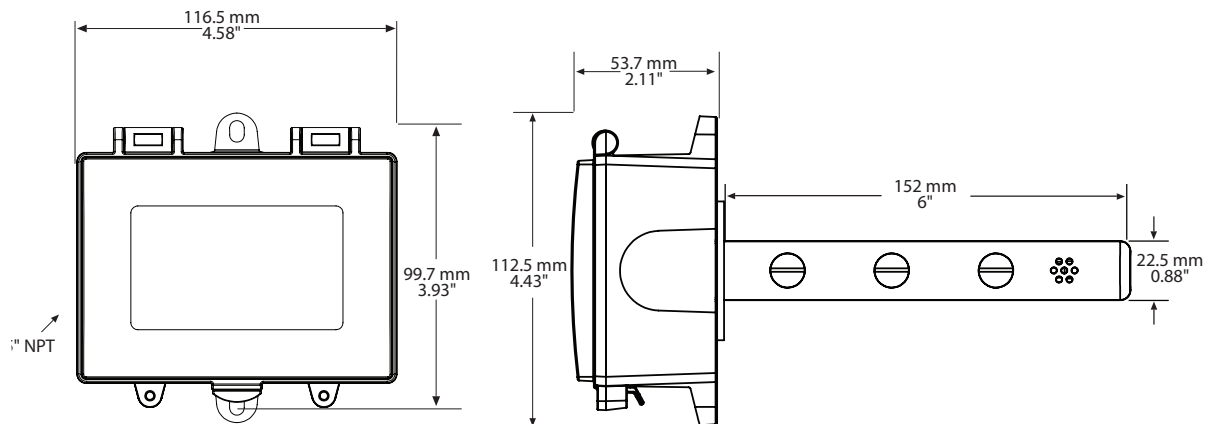
Type¹ _____ 10k Ω NTC thermistor, Type 2
Accuracy _____ $\pm 0.2^{\circ}\text{C}$; $\pm 0.36^{\circ}\text{F}$

Agency Approvals

Material² _____ UL94-V0

1. Temperature sensor type stated is standard. Other temperature sensor types are available.
2. All materials and manufacturing processes comply with the RoHS directive

Dimensions



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