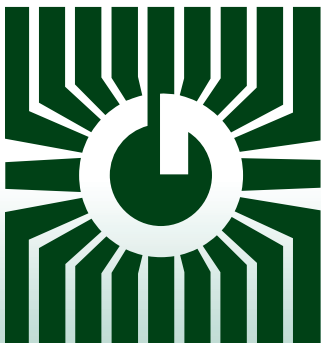


# GREYSTONE

ACCURACY BY DESIGN



## CARBON MONOXIDE (CO) DETECTORS CMD Series



*ABS Space Enclosure*



*ABS Duct Enclosure*

### Precision gas control/sensing

#### FEATURES:

- Surface or Duct mount models
- Long-life, replaceable electrochemical sensor
- Optional LCD display
- Optional relay outputs & audible alarm

*Peace of mind  
through reliable  
gas monitoring*

GREYSTONE HAS AN ISO 9001 REGISTERED QUALITY SYSTEM

# CO DETECTOR

## DESCRIPTION:

The CMD series of Carbon Monoxide monitors are designed for use in environmental monitoring and control systems where high performance and stability are demanded. It's state-of-the-art design combines digital linearization with a superior electrochemical sensor for reliability and accuracy in even the most critical applications. Various models cover many aspects of CO measurement and several optional features are available to meet virtually all HVAC applications.

## SPECIFICATION:

Sensor Type:.....	Electrochemical (Field replaceable)
Sensor Agency Approvals:.....	Sensor is UL Recognized Component for ANSI/UL-2034, UL-2075, E240671
Measurement Range:.....	0-300 PPM
Accuracy:.....	±5 PPM or 5% of reading for 0-300 PPM (whichever is greater)
Accuracy rated:.....	0° to 50°C (32° to 122°F), 10-90%
Typical Coverage Area:.....	700 m <sup>2</sup> (7500 ft <sup>2</sup> ) or 15m (50ft) radius
Operating Temperature:.....	-20° to 50°C (-4° to 122°F)
Operating Humidity:.....	15 to 95% RH non-condensing
Sample Method:.....	Diffusion or flow through sample tube for duct mounted models
Stability:.....	<5% signal loss/year
Response Time:.....	<35 seconds for 90% step change
Warmup Time:.....	200 seconds
Power Supply:.....	15 to 30 Vac/dc (non-isolated, half-waved rectified)
Consumption:.....	80 mA max @ 24 Vdc with all options on 150 mA max @ 24 Vac with all options on
Input Voltage Effect:.....	Negligible over specified operating range
Protection Circuitry:.....	Reverse voltage protected and output limited
Output Signal:.....	4-20 mA active (sourcing), 0-5 or 0-10 Vdc, jumper selectable
Output Drive at Capability:.....	550 ohms max for current output 10K ohms min for voltage output
Output Resolution:.....	10 bit PWM (±0.4 ppm)
Optional Relay Output:.....	One or two Form C contact (N.O. and N.C.) 5 amps @ 250 Vac, 5 amps @ 30 Vdc, p.f. = 1 Relay 1 Trip Point - Programmable 25, 40-350 PPM in 10 PPM increments Relay 2 Trip Point - Programmable 100-400 PPM in 10 PPM increments Relay Hysteresis - Programmable 10, 15, 25, 50 or 75 PPM Relay Delay - Programmable 0, 1, 2, 3, 4, or 5 minutes
Optional LCD Display:.....	Displays PPM and menu parameters 1 PPM resolution, 28 mmW x 13 mm H (1.1" x 0.5") Alpha-numeric 2 line X 8 character
Programming and Selection:.....	Via internal push-buttons and jumpers or optional Modbus communicatians (LCD required)
Wiring Connections:.....	Screw terminal block (14 to 22 AWG)
External Dimensions:.....	Space, 124.5 x 183.5 x 43mm (7.2"w x 4.9"h x 1.7"d) Duct, 124.5 x 183.5 x 250.5mm, (7.2"w x 4.9"h x 9.9"d) includes probe
Enclosure Ratings:.....	Space (2) - IP21, NEMA 1 Duct (6) - IP21, NEMA 1 Space weatherproof (9) - IP54, NEMA 3R
Field Calibration:.....	By applying calibration gas standards (Contact Greystone for calibration kit)
Accessories:.....	Calibration kit, model# CMD-CALKIT-CO

## FEATURES:

- Superior Electrochemical sensing element
- Set up/calibration fully menu driven (requires LCD option)
- 0-300 PPM standard, other ranges available
- Optional on board relays with field adjustable trip point.
- Optional LCD for displaying PPM level and menu options.
- Modbus communications option.

- Powered by either AC or DC source with no change to circuit required.
- Choice of three field adjustable analog output signals, linearized over full range.
- Field replaceable calibrated sensor module.

## APPLICATION:

To sense carbon monoxide levels and transmit to any compatible electronic analog control, DDC/PLC controller or automation system for the control of ventilation equipment.

## CARBON MONOXIDE (CO): PRODUCT ORDERING INFORMATION

MODEL	Description
CMD5B	Carbon Monoxide Detector (CO), Electrochemical - 5%

CODE	Enclosure
2	Space ABS
6	Duct ABS
9	Space ABS, weather proof

CODE	Circuit Board Relay (s)
00	No Relay
10	One Relay, Form C contact (N.O. and N.C.), 5 amps @ 250 Vac, 5 amps @ 30 Vdc, p.f. = 1
11	Two Relays, Form C contact (N.O. and N.C.), 5 amps @ 250 Vac, 5 amps @ 30 Vdc, p.f. = 1

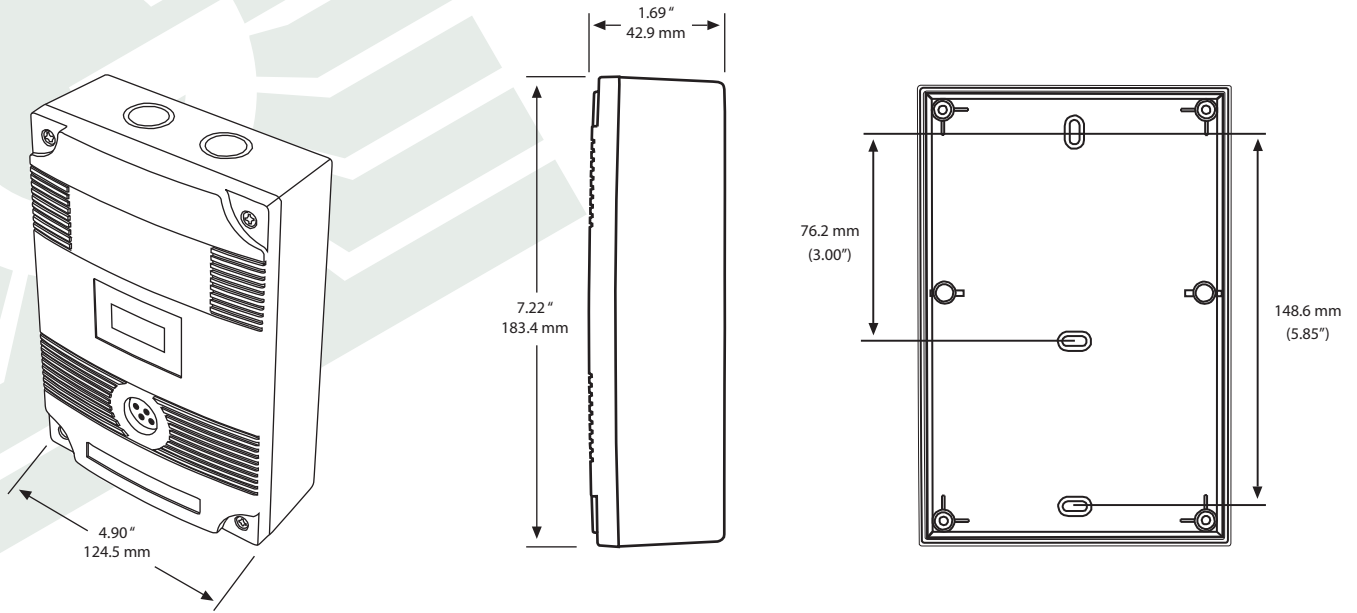
CODE	Options (Multiple options may be selected)
0	No Options
1	LCD (Not to be used in temperatures below 5°C / 32°F)
2	Audible Alarm
MOD	Modbus Communications
TS	Test Switch (if pressed, puts output to 100% and activates relays for 5 minutes)

CMD5B	2	00	0	← Typical Model Number
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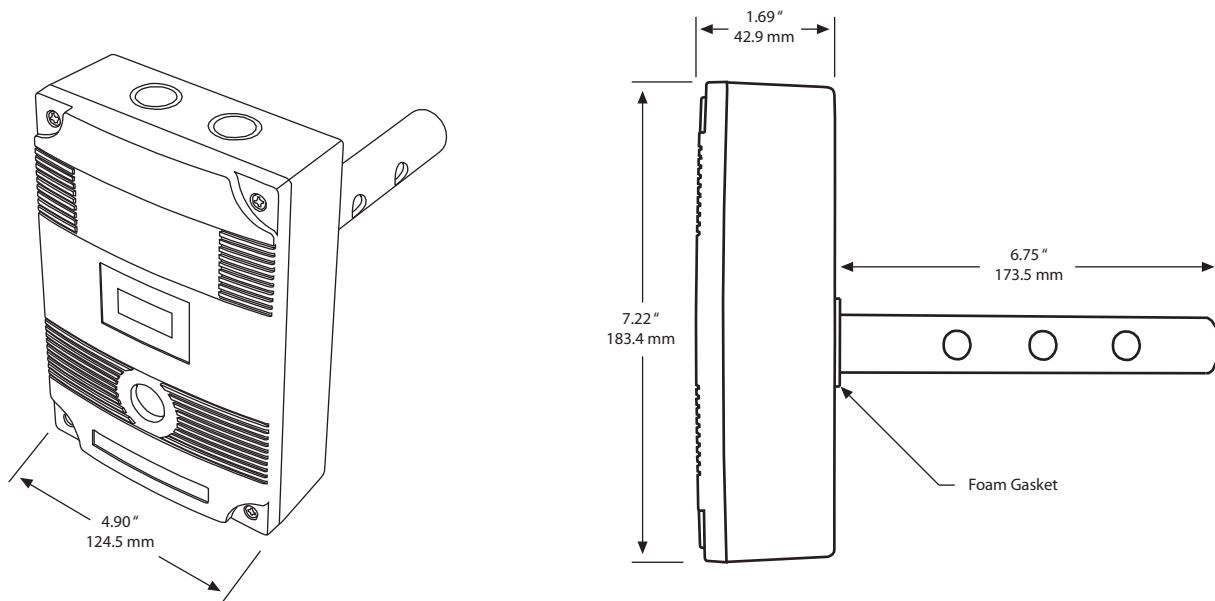
<b>Example:</b>	Space ABS	No Relay	No Options
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Greystone Energy Systems Inc. reserves the right to make design modifications without prior notice.

# DIMENSIONS nts



**Space ABS Enclosure**



**Duct ABS Enclosure**



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**RoHS**  
COMPLIANT



*Greystone Energy Systems Inc. is one of North America's largest ISO registered manufacturers of HVAC sensors and transducers 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.*

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