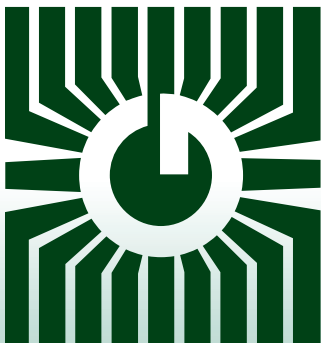


# GREYSTONE

ACCURACY BY DESIGN



## CARBON MONOXIDE (CO) DETECTORS CMD Series



### 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

Environmental, industrial and commercial indoor Carbon Monoxide (CO) gas detector. Available in both a space and duct mount version.



**ABS Duct Enclosure for CO**

## APPLICATION:

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

## FEATURES:

- Superior Electrochemical sensing elements
- Set up/calibration fully menu driven (requires LCD option)
- 0-300 PPM standard (5%), other ranges available (contact Greystone)
- 0-500 PPM for (3%)
- Electrochemical sensing elements.
- Optional on board relays with field adjustable trip point.
- Optional LCD for displaying PPM level and menu options.
- 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.

SPECIFICATIONS	CO DETECTOR - Product #CMD
<b>Gas Detected</b>	Carbon Monoxide (CO)
<b>Range</b>	0-300 PPM (5%), 0-500 PPM (3%)
<b>Standard Accuracy at 0-50°C (32-122°F), 15-90%RH</b>	±5 PPM or 5% of reading for 0-300 PPM (whichever is greater) ±5 PPM or 3% of reading for 0-500 PPM (whichever is greater)
<b>Sensing Element Life Expendancy</b>	Electrochemical 5-7 years in air
<b>Operation Conditions</b>	0-50 C (32-122 F), 15-95% RH non-condensing
<b>Sample Method</b>	Diffusion or flow through, sample tube for duct
<b>Stability</b>	< 5% signal loss/year
<b>Manufacturing Process</b>	ISO 9001 certified
<b>Output Signal</b>	4-20 mA active (sourcing), 0-5 Vdc or 0-10 Vdc jumper selectable
<b>Output Drive Capability</b>	Current output - 500 ohms max 10 Kohm min for voltage output
<b>Output Resolution</b>	10 bit PWM
<b>LCD Display (optional)</b>	LCD for displaying PPM 1 PPM resolution, 28mm W X 13mm H (1.1" X 0.5") alpha-numeric 2 line X 8 characters
<b>Field Calibration</b>	Calibration, applying calibration gas standards (Contact Greystone for calibration kit)
<b>External Dimensions</b>	ABS Space - 124.5mm W X 183.5mm H X 43mm D (7.2" X 4.9" X 1.7") Duct ABS - 124.5mm X 183.5mm X 250.5mm (7.2" X 4.9" X 9.9") includes duct insertion tube

# CO DETECTOR

SPECIFICATIONS cont'd	CO DETECTOR - Product # CMD
Agency Approvals	Sensor is UL Recognized Component for ANSI/UL-2034 and UL-2075, E240671
Typical Coverage Area	700 m <sup>2</sup> (7500 ft <sup>2</sup> ) or 15m (50ft) radius
Response Time	< 35 seconds for 90% step change
Warm-up Time	200 seconds
Power Supply	15-30 Vac/dc (non-isolated half-wave 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 Transient protection
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
Programming and Selection	Via internal push-buttons and jumper
Wiring Connections	Screw terminal block (14 to 22 AWG)

## CARBON MONOXIDE (CO): PRODUCT ORDERING INFORMATION

MODEL	Description
CMD	Carbon Monoxide Detector (CO)

CODE	Sensing Element and Accuracy	CO
3	Electrochemical	3%
5	Electrochemical	5%

CODE	Gas Type
B	CO - Carbon Monoxide Detector (CMD)

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
0	No Options
1	LCD
2	Audible Alarm
MOD	Modbus Communications
TS	Test Switch (if pressed, puts output to 100% and activates relays for 5 minutes) <b>CMD5 only</b>

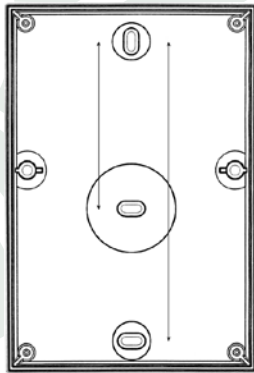
CMD	5	B	2	00	0	← Typical Model Number
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Example:	Electro chemical	CO	Space ABS	No Relay	No Options
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Greystone Energy Systems Inc. reserves the right to make design modifications without prior notice.

## DIMENSIONS nts



## Other GREYSTONE *Accuracy by Design* Products for the HVAC Professional

- Temperature Sensors and Transducers
- Humidity Transducers
- Pressure Transducers
- Current Switches and Sensors
- KW and KWH Transducers
- Electronic to Pneumatic (IP)
- Transducers
- Power Supplies



# GREYSTONE

ACCURACY BY DESIGN

Greystone Energy Systems Inc.  
150 English Drive, Moncton, NB  
Canada E1E 4G7

(506) 853-3057 Fax: (506) 853-6014  
North America: 1-800-561-5611  
e-mail: mail@greystoneenergy.com  
web site: www.greystoneenergy.com

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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