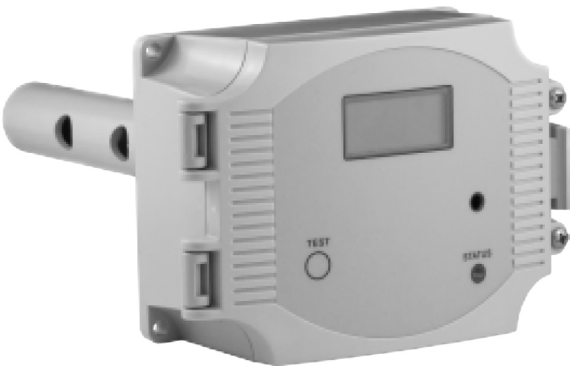
GS-CMA Series

Advanced CO Sensors



Overview

The GS-CMA Series are carbon monoxide gas detectors. They use an electrochemical sensor to monitor the carbon monoxide level and output a field-selectable 4-20 mA, 0-5 or 0-10 Vdc. The sensing range and output may be scaled to either 100, 150, 300, 400 or 500 ppm via the on-board menu. A front panel LCD is standard to ensure easy setup and operation. It is available in either wall/surface or duct mount congurations. Other standard features include a back light for the LCD, a front panel test switch, status indication and an alarmbuzzer. The test function may also be controlled remotely with a digital input signal. The on-board menu allows local conguration of all device parameters. Optional features include one or two alarm relays and/or RS-485 network communication congured for ModBus protocol.

Applications

- Monitor CO levels in parking garages
- Inspect greenhouse gases
- Combustion monitoring

Features & Benefits

- Economical
- Easily calibrated in the field
- Proven long term stability and performance
- Field replaceable calibrated sensor module
- Configurable for Modbus communication protocols

Accessories

GS-CMFCAL	Factory calibration for Carbon Monoxide Sensors
GS-CMNIST	Calibration certificate for Carbon Monoxide Sensors
GS-CMARCAL	Calibrated CO PCB - 5% for GS-CMAR Series
GS-CMADCAL	Calibrated CO PCB - 5% for GS-CMAD Series

Note: Calibration certificates must be purchased at the time of purchasing the relative sensors.

Model Selection

		GS-	CMA	R	X	XX
Sensor	CMA = Carbon monoxide advanced					
Mounting Style	R = Room					
	D = Duct					
Communication Option	M = Modbus					
Relays	1R = 1 relay output					
	2R = 2 relay outputs					

Product Specifications

Sensor Type	Electrochemical
Sensor Agency Approvals	Sensor is UL Recognized Component for ANSI/UL-2034, UL-2075, E240671
Measurement Range	0-100, 150, 300, 400, or 500 PPM (Selectable)
Accuracy	±5 PPM or 5% of reading (whichever is greater)
Accuracy rated	0˚ to 50˚C (32˚ to 122˚F), 15 to 95%
Life Expectancy	5-7 years in air
Typical Coverage Area	700 m^2 (7500 ft^2) or 15 m (50 ft) radius
Operating Conditions	-20˚ to 50˚C (-4˚ to 122˚F), 15 to 95% RH, 0.9 to 1.1 atm
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
Power Supply	24 Vdc ± 20% or 24 Vac ± 10% (non-isolated half-wave rectified)
Consumption	100 mA max. with all options on
Protection Circuitry	Reverse voltage protected and output limited
Output Signal	4-20 mA active (Active), 0-5 or 0-10 Vdc (Selectable)
Output Drive at Capability	450 ohms max for current output, 10 Kohms min for voltage output
Output Resolution	10 bit PWM (±0.4 ppm)

LCD Display:

- Displays PPM and menu parameters
- 1 PPM resolution, 35 mmW x 15 mm H (1.4” x 0.6”)
- Alpha-numeric 2 line X 8 character with backlight

Status LED	Two color (red/green) on front panel
Test Switch	Performs I/O tests, front panel and remote connection
Buzzer Alarm	85 db @ 10 feet
Buzzer trip Point	Programmable 20-500 ppm in 10 ppm increments
Buzzer Delay	Programmable 0-10 minutes in 1 minute increments

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 20-500 PPM in 10 PPM increments
- Relay 2 Trip Point - Programmable 20-500 PPM in 10 PPM increments
- Relay Hysteresis - Programmable 10-100 PPM in 5 PPM increments
- Relay Delay - Programmable 0-10 minutes in 1 minute increments

Optional Communications	Modbus (Refer to installation instructions for full details)
Wiring Connections	Screw terminal block (14 to 22 AWG)
External Dimensions	GS-CMAR Series, 145 x 101 x 64mm (5.7”w x 4”h x 2.5”d) Duct, 145 x 101 x 240mm, (5.7”w x 4”h x 9.5”d) includes probe
Enclosure Ratings	GS-CMAR Series - ABS - UL94-V - IP65, NEMA 4X Duct (5) - ABS - UL94-V - IP65, NEMA 4X

Dimensions