



Carbon Monoxide

User's Manual

Thank You for deciding to use Sensorcon's Carbon Monoxide Inspector. We want to be your favorite company, so please contact us with any comments, questions, or concerns, and we'll do our best to make sure you're 100% satisfied.

Use:
Do you know if there is Carbon Monoxide in the air? The Carbon Monoxide Inspector is a professional grade tool that will answer that question. Carbon Monoxide is a toxic, odorless gas that is produced from most combustion processes, including furnaces, car exhaust and even burning cigarettes.

Lifetime:
The Inspector has a 1 year warranty on all parts. Treat it nice, and keep it calibrated, and it should last much longer. If you don't calibrate the Inspector, there's a good chance it won't be accurate. If no calibration is performed, EOL (end of life) will be displayed after 2 years of use. Successful calibration postpones EOL for 180 days.

Normal Operating Conditions:
Temperature: -20°C to +50°C (-4°F to +122°F)
Humidity: 20-90% R.H (0-99% intermittent)

Practical Considerations
Short term measurements (i.e. <1hr) in any humidity (0-99% R.H.) are OK if condensation doesn't block the sensor inlet. Longer term exposure to humidity extremes outside normal range can damage the sensor. Damage occurs faster at higher temperatures. The display and sensor won't work properly at lower temperatures. Higher temperatures can damage the device.

Contact Information:
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Lanyard Loop (with Clip on back):
Use this to attach to shirt or other location

Sensor Inlet:
Where the gas is measured, (keep it clean & don't puncture the membrane)

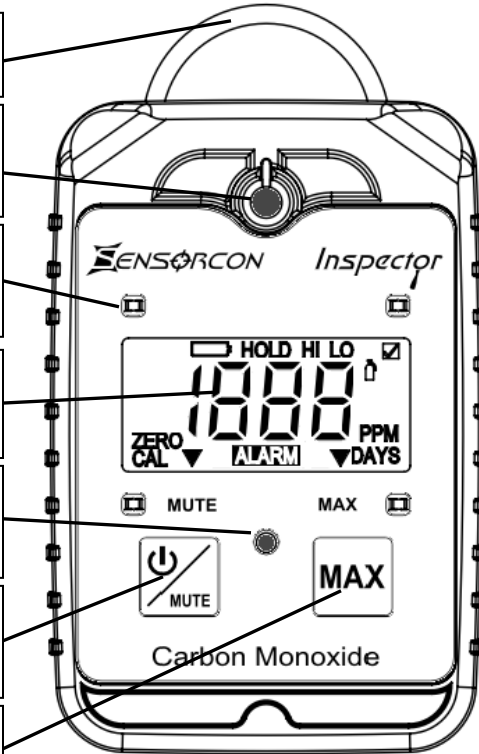
LED Indicators (4 around LCD):
These red lights will flash when CO concentration is high enough for an alarm

LCD Display:
Shows CO concentration from 0-1,999 ppm (other details in lower figure)

Buzzer/Speaker:
It makes beeping noises when an alarm is active, (don't puncture the membrane)

Power/MUTE Button:
*Press & hold to turn power ON or OFF
Press to mute the buzzer for up to 5 mins*

MAX Button:
Press to make the LCD remain at the maximum CO concentration measured



Carbon Monoxide (CO) Concentration Guidelines: (EPA & NIOSH published)
0-5ppm Average inside homes
35ppm NIOSH 8-hr exposure limit
200ppm NIOSH 15min. exposure limit

How the CO Inspector Works:
An electrochemical sensor (behind the sensor inlet drawn in the enclosed diagram), creates an electrical signal when CO is sensed. Gas concentration is displayed in parts per million (PPM).

How to Operate the CO Inspector:
2 buttons control the device.

	Hold for 1 second to turn on. If an alarm occurs and you want to mute the sound, press this button briefly. To turn off, hold for 3 seconds.
	To display only maximum concentration measured, press this button to hold the maximum value. Press again to exit "max mode" and display real-time concentrations.

How to Maintain the CO Inspector:
This is a professional tool, you don't need to do much except keep it clean (particularly the sensor inlet) and don't physically abuse it too much (the Inspector is tough, but not as tough as you!). If it gets dirty, wipe clean with a damp cloth. Gently clean sensor inlet with a damp cotton swab.

Calibration:
For reasonable accuracy, frequent calibration is recommended (at least every 6 months). Sensorcon will do this for you, or you can do it yourself if you have 50ppm calibration gas, which Sensorcon can supply. To calibrate, follow these steps:
1. Hold both buttons for 10seconds to enter calibration mode. Press at any time to exit.
2. In a clean air environment (outside) press to begin the Zero calibration. Wait for countdown.
3. When zero is complete, use 1/4" OD, 1/8" ID Tygon tubing attached to the calibration gas cylinder and sensor inlet to flow calibration gas at 0.5L/min, then press to start cal step.
4. The Inspector will then automatically calibrate itself, and notify you if calibration is successful.

HOLD:
Displays with a countdown for powering off or entering calibration mode

HI:
Displays when the High 200ppm alarm is exceeded

LO:
Displays when the Low 35ppm alarm is exceeded

Battery Indicator:
Displays when the battery is low

ZERO:
Displays as 1st step during calibration, to establish 0 ppm status

CAL:
Indicates device is in calibration mode

Alarm:
Displays when 35ppm exceeded

Checkboxes:
Indicates successful zero or cal step during calibration mode

Gas Calibration:
Displays when applying gas in CAL mode

PPM:
Displays when measuring CO

DAYS:
At startup, indicates # of days until calibration due

Arrows:
*Displays over MUTE to indicate alarm is muted
Displays over MAX to indicate max ppm mode on*