

Carbon monoxide

Where is it found?

CO is found in fumes produced any time fuel burns in cars or trucks, small engines, stoves, lanterns, grills, fireplaces, gas ranges, or furnaces.

Improperly ventilated appliances and engines, particularly in a tightly sealed or enclosed space, may allow carbon monoxide to accumulate until dangerous levels.

CO cartridge

(A) K-CO-A-01 / (B) K-CO-B-01

The Carbon Monoxide Cartridge has a built-in electrochemical sensor with very low noise electronics allowing the measurement from very low concentrations (ppb) up to several ppm. To cover different applications, there are two measurement ranges: **Type A** measuring most common concentrations range, and **Type B**, a higher range version that can measure up to 500 ppm, decreasing the accuracy at low concentrations.

This cartridge is very stable over time with a lifespan that can go beyond the specification for several months under no extreme environments.

Why is it harmful?

Carbon monoxide or CO is an odourless and colorless pollutant gas that can cause death.

When CO is inhaled into the body, it mixes with the blood avoiding the oxygen absorption.

The CO exposure of a person over a certain period of time can cause illness and even death.



Technical specifications

Type	Electrochemical	
Unit of measurement	$\mu\text{g}/\text{m}^3$, ppb ^(A) mg/m^3 , ppm ^(B)	Limit of Detection (LOD) ⁽⁷⁾
Measurement range ⁽¹⁾	0 - 12,000 ppb ^(A) 0 - 500 ppm ^(B)	10 ppb ^(A) 0.02 ppm ^(B)
Resolution ⁽²⁾	1 ppb ^(A) 0.01 ppm ^(B)	Repeatability ⁽⁸⁾
Operating temperature range ⁽³⁾	-30 to 50 °C	20 ppb ^(A) 0.05 ppm ^(B)
Operating RH range ⁽⁴⁾	0 to 99 %RH	Response time ⁽⁹⁾
Recommended RH range ⁽⁴⁾	15 to 90 %RH	< 30 sec ^(A) < 180 sec ^(B)
Operating life ⁽⁵⁾	> 24 months	Typical accuracy (MAE) ⁽¹⁰⁾
Guarantee range ⁽⁶⁾	1,000 ppm	± 80 ppb ^(A) ± 0.1 ppm ^(B)
		Typical precision R ² ⁽¹⁰⁾
		> 0.85
		Typical slope ⁽¹⁰⁾
		0.78 - 1.29
		Typical intercept (a) ⁽¹⁰⁾
		-50 ppb $\leq a \leq$ +50 ppb ^(A) -0.1 ppm $\leq a \leq$ +0.1 ppm ^(B)
		DQO - Typical U(exp) ⁽¹¹⁾
		< 20%
		Typical Intra-model variability ⁽¹²⁾
		< 3 ppb ^(A) < 0.05 ppm ^(B)

* See notes on page 24