

# MIDAS<sup>®</sup>-M CARBON MONOXIDE (CO)

## Smart Sensor Specifications

Bringing new visibility, reliability, and ease-of-use to gas detection in semiconductor processing and industrial manufacturing.



GAS MEASURED	CARBON MONOXIDE (CO)
Cartridge Part Number	MMS-C2
Sensor Technology	3 electrode electrochemical cell
Measuring Range	CO 0 ppm to 100 ppm
Default Alarm 1	12.5 ppm (rising)
Default Alarm 2	25 ppm (rising)
Accuracy	<±5% of measured value Exposure to CO 50 ppm for 5 minutes
Response Time (t <sub>62.5</sub> )	Typical 8 seconds
Sensor Cartridge Life Expectancy	24 months under typical application conditions
Operating Temperature	0°C to 40°C (32°F to 104°F)
Effect of Temperature	
Zero	<±0.1 ppm/°C
Sensitivity	<±0.5% of measured value/°C
Operating Humidity (continuous)	15% RH to 90% RH
Effect of Humidity	
Zero	<±0.02 ppm/% RH
Sensitivity	<±0.1% of measured value/% RH
Operating Pressure	70 kPa to 110 kPa
Effect of Position	No effect in typical application
Long Term Drift	
Zero	<2 ppm/year
Sensitivity	<5% of measured value/year
Calibration Gas	Carbon Monoxide (25 ppm to 75 ppm, default 50 ppm)
Challenge Gas (Bump Test)	Carbon Monoxide (CO 50 ppm)
Warm Up Time	<10 minutes
Storage Temperature	5°C to 25°C (41°F to 77°F)

The sensor data listed is based on the test data under normal lab test conditions (20°C to 25°C, 0% RH to 60% RH, normal atmosphere pressure); observed performance may vary based on the actual monitoring system and the sampling conditions employed.

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## OTHER DETECTABLE GASES

The following additional gases can be detected with this sensor cartridge. Sensor performance and characteristics will be representative of the data as tabulated above. Consult the Technical Manual to set up the Midas<sup>®</sup>-M transmitter with the designated identification code for each of the following gas types:

DETECTABLE GAS	CHEMICAL FORMULA	MEASURING RANGE

## CROSS SENSITIVITIES

Each Midas-M sensor is potentially cross sensitive to other gases and this may cause a gas reading when exposed to other gases than those originally designated. The table below presents typical readings that will be observed when a new sensor cartridge is exposed to the cross sensitive gas (or a mixture of gases containing the cross sensitive species).

**NOTE: The cross sensitivity data shown below does not form part of the product specification and is supplied for guidance only. Values quoted are based on tests conducted on a small number of sensors and any batch may show significant variation.**

GAS/VAPOR	CHEMICAL FORMULA	CONCENTRATION APPLIED (ppm)	READING (ppm CO)
Acetone	(CH <sub>3</sub> ) <sub>2</sub> CO	1000	0
Acetylene	C <sub>2</sub> H <sub>2</sub>	40	80
Ammonia	NH <sub>3</sub>	100	0
Chlorine	Cl <sub>2</sub>	2	0
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	2000	3
Ethylene	C <sub>2</sub> H <sub>4</sub>	100	110
Hydrogen	H <sub>2</sub>	100	35
Hydrogen Sulphide	H <sub>2</sub> S	25	0
Iso Propanol	C <sub>3</sub> H <sub>7</sub> OH	200	0
Nitric Oxide	NO	50	8
Nitrogen Dioxide	NO <sub>2</sub>	800	20
Sulphur Dioxide	SO <sub>2</sub>	50	0.5

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Manuals and other information about this product are available at:  
[www.honeywellanalytics.com/en/products/Midas-M](http://www.honeywellanalytics.com/en/products/Midas-M)



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