Honeywell

Midas® SENSOR CARTRIDGE SPECIFICATIONS

Carbon Dioxide (CO_2)
MIDAS-S-CO2, MIDAS-E-CO2

Gas Measured	Carbon Dioxide (CO_2)
Cartridge Part Number	MIDAS-S-CO_2 1 year standard warranty MIDAS-E-CO_2 2 year extended warranty
Sensor Technology	3 electrode electrochemical cell
Measuring Range (ppm)	CO_2 0 – 2% v/v
Minimum Alarm 1 Set Point	2500ppm
Repeatability	< ± 0.06% v/v
Linearity	< ± 15% of measured value
Response Time $t_{62.5}$	< 70 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 Sensitivity	< 0.0039% vol / °C (0°C to 20°C) < ± 0.0053% vol /°C (20°C to 40°C) < 1.9% of measured value / °C (0°C to 20°C) < ± 0.9% of measured value / °C (20°C to 40°C)
Operating Humidity (continuous) **Effect of Humidity** Zero Sensitivity	 15 – 95% rH No effect < ± 1% of measured value / % rH
Operating Pressure	90 – 110kPa
Effect of Position	No effect in typical application
Long Term Drift Zero Sensitivity	 < +0.3% vol / year < 30% of measured value / 1 year
Calibration Gas	Carbon Dioxide (CO_2)
Challenge Gas (Bump Test)	Carbon Dioxide (CO_2)
Warm Up Time	< 20 minutes
Storage Temperature	+5°C to +25°C (+41°F to +77°F)

The sensor data listed is based on ideal test environment; observed performance may vary based on the actual monitoring system and the sampling conditions employed

Cross Sensitivities

Each Midas® 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).

Gas / Vapor	Chemical Formula	Concentration applied (ppm)	Reading (ppm CO_2)
Carbon Monoxide	CO	500	< 0.05
Chlorine	Cl_2	2	< 0.05
Hydrogen	H_2	1000	< 0.05
Hydrogen Sulphide	H_2S	75	< 0.05
Methane	CH_4	20000	< 0.05
Nitrogen Dioxide	NO_2	50	< 0.05
Sulphur Dioxide	SO_2	50	< 0.05
Methanol	CH_3OH	1000	< 0.05

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SS01115D_v2 8/17
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