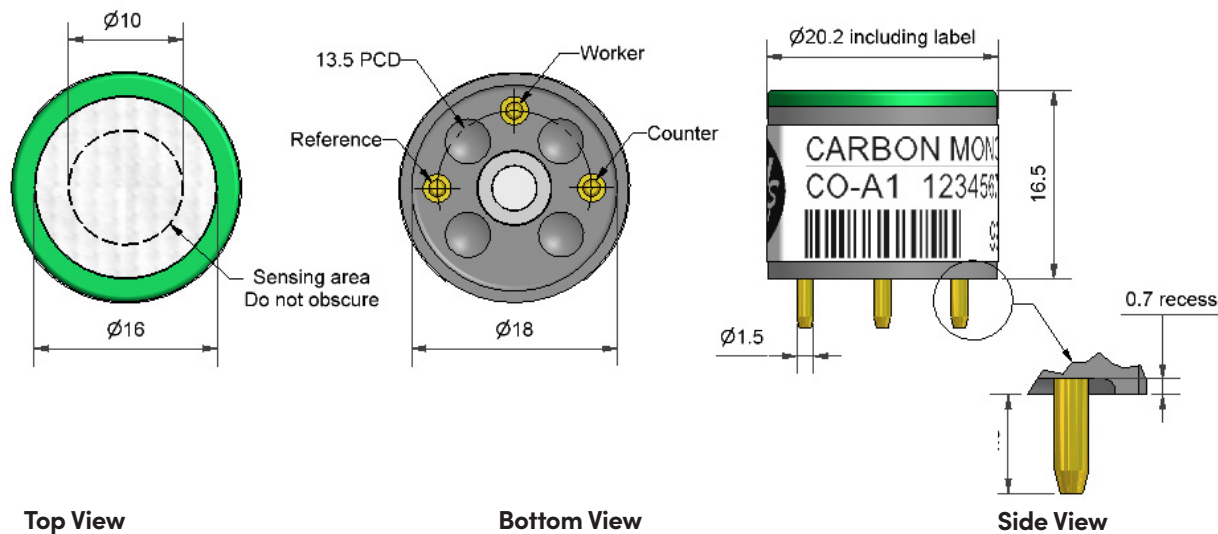


CO-A1 Carbon Monoxide Sensor – 3-Electrode



Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity	nA/ppm in 400ppm CO	50 to 90	
	Response time	t90 (s) from zero to 400ppm CO	< 25	
	Zero current	ppm equivalent in zero air	-4 to +3	
	Resolution	RMS noise (ppm equivalent)	< 0.5	
	Range	ppm CO limit of performance warranty	5,000	
	Linearity	ppm error at full scale, linear at zero, 400ppm CO	+15 to +25	
	Overgas limit	maximum ppm for stable response to gas pulse	10,000	
Lifetime	Zero drift	ppb equivalent change/year in lab air	< 0.2	
	Sensitivity drift	% change/year in lab air, monthly test	< 8	
	Operating life	months until 80% original signal (24-month warranted)	> 24	
Environmental	Sensitivity @ -20°C	(% output @ -20°C/output @ 20°C) @ 400ppm CO	70 to 88	
	Sensitivity @ 50°C	(% output @ 50°C/output @ 20°C) @ 400ppm CO	102 to 115	
	Zero @ -20°C	nA equivalent change from 20°C	< ± 3	
	Zero @ 50°C	nA equivalent change from 20°C	< ± 8	
Cross Sensitivity	H ₂ S sensitivity	% measured gas @ 20ppm	H ₂ S	< 350
	NO ₂ sensitivity	% measured gas @ 10ppm	NO ₂	< -20
	CL ₂ sensitivity	% measured gas @ 10ppm	CL ₂	< 60
	NO sensitivity	% measured gas @ 50ppm	NO	< 30
	SO ₂ sensitivity	% measured gas @ 20ppm	SO ₂	< 35
	H ₂ sensitivity	% measured gas @ 400ppm	H ₂ at 20°C	< 85
	C ₂ H ₄ sensitivity	% measured gas @ 400ppm	C ₂ H ₄	< 150
	NH ₃ sensitivity	% measured gas @ 20ppm	NH ₃	< 0.1
Key Specifications	Temperature range	°C	-30 to 50	
	Pressure range	kPa	80 to 120	
	Humidity range	% rh continuous	15 to 90	
	Storage period	months @ 3 to 20°C (stored in sealed pot)	6	
	Load resistor	Ω (recommended)	10 to 47	
	Weight	g	< 6	



Figure 1 Sensitivity Temperature Dependence

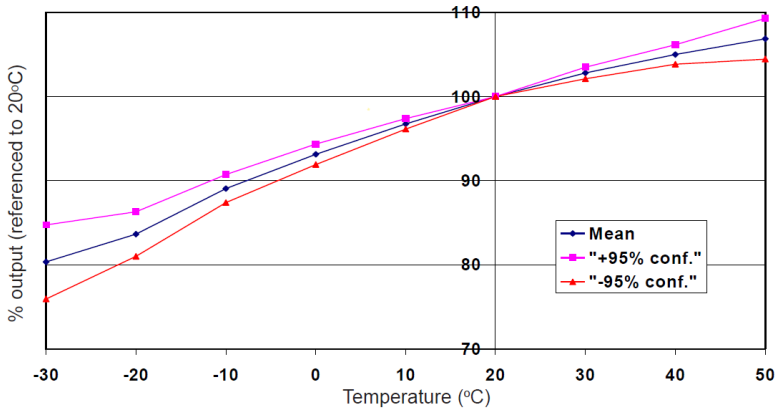


Figure 1 shows the variation in sensitivity caused by changes in temperature.
This data is taken from a typical batch of sensors.
The mean and $\pm$ 95% confidence intervals are shown.

Figure 2 Zero Temperature Dependence

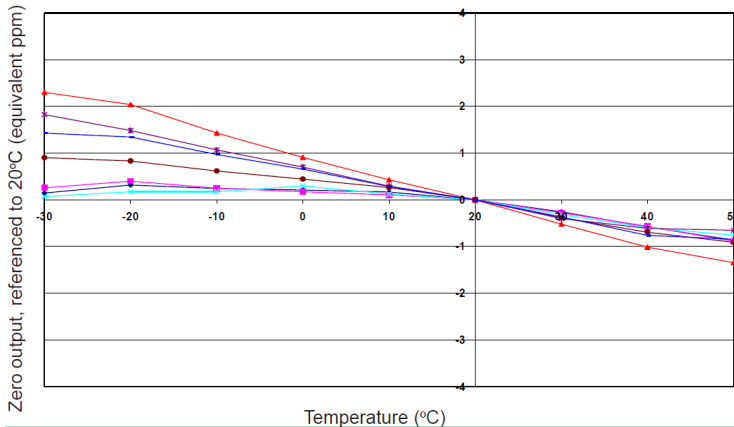


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.
This data is taken from a typical batch of sensors.

Figure 3 Response to Exposure to 2% CO

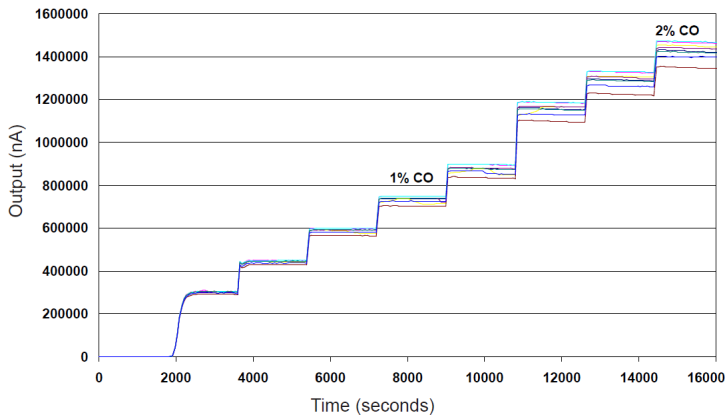


Figure 3 shows the excellent response to step changes in CO concentrations from zero to 2% CO by volume.
This data is taken from a typical batch of sensors.

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