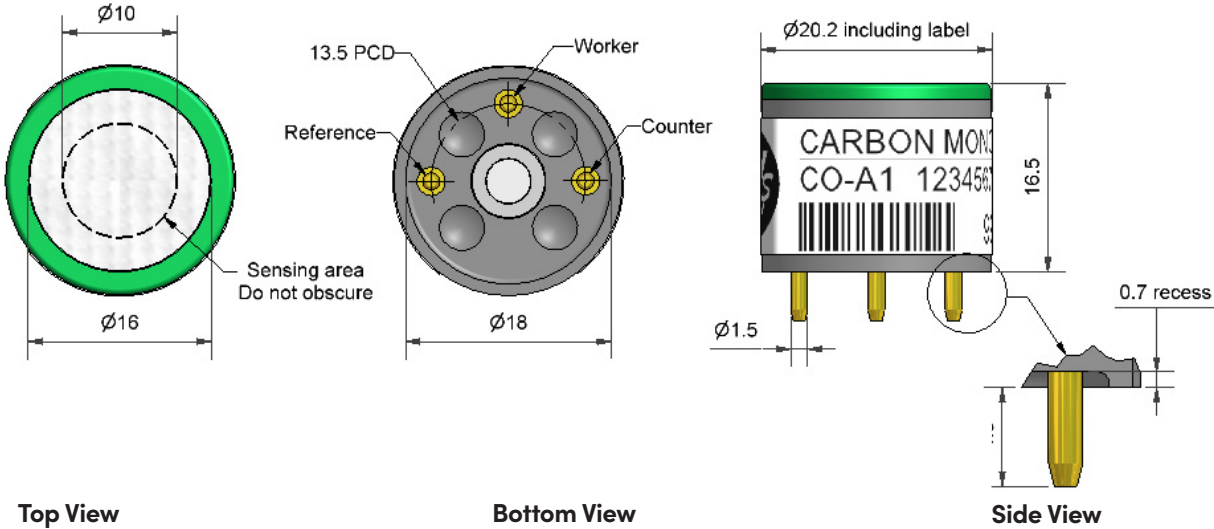


CO-A1 Carbon Monoxide Sensor – 3-Electrode



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

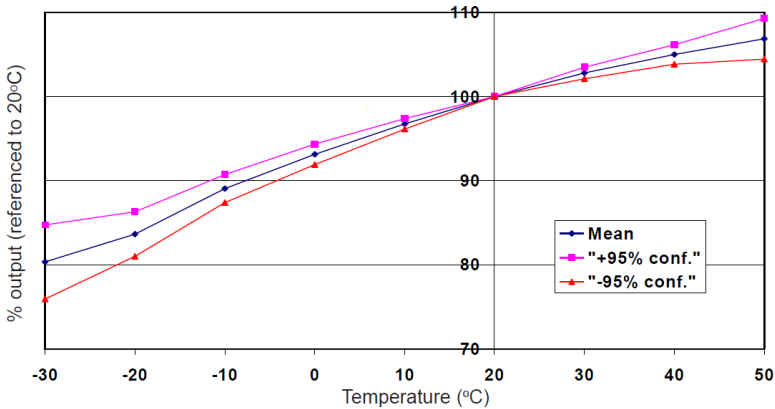


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

The mean and \pm 95% confidence intervals are shown.

Figure 2 Zero Temperature Dependence

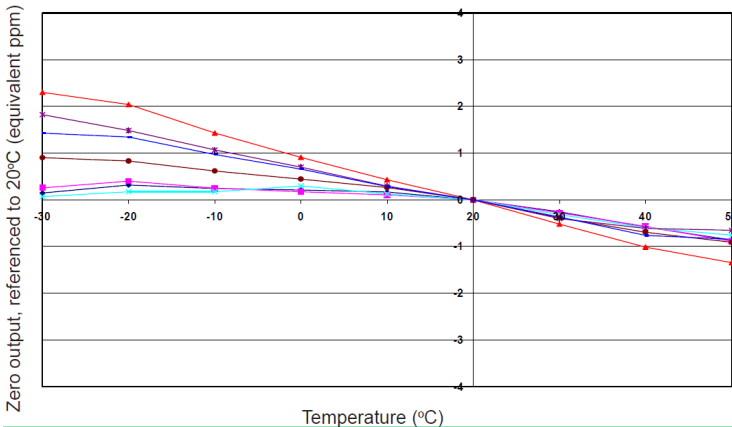


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 3 Response to Exposure to 2% CO

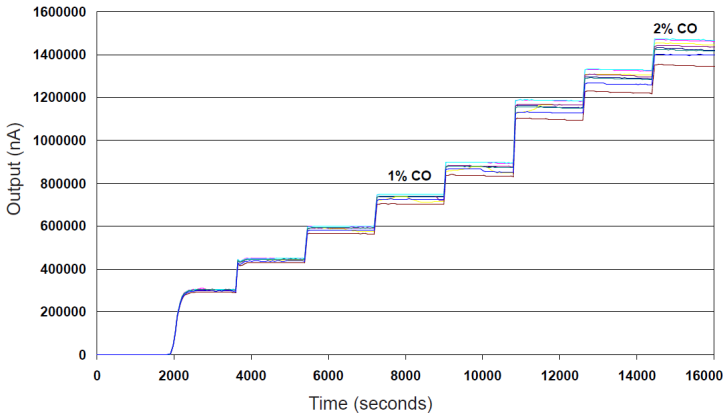


Figure 3 shows the excellent response to step changes in CO concentrations from zero to 2% CO by volume.

This data is taken from a typical batch of sensors.