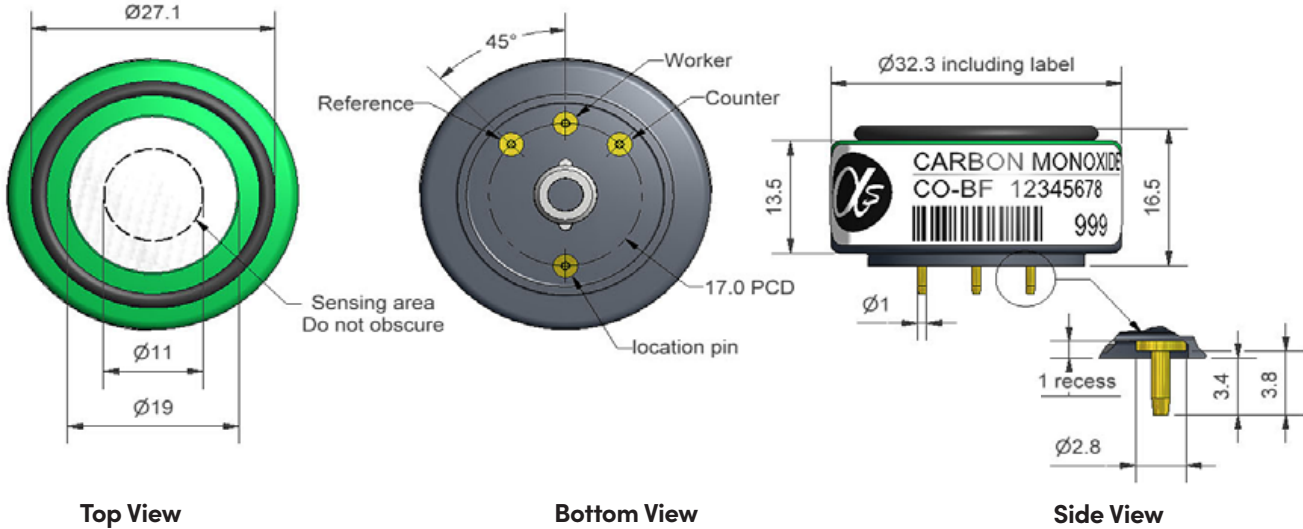




CO-BF Carbon Monoxide Sensor



Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity	nA/ppm in 400ppm CO	80 to 130	
	Response time	t90 (s) from zero to 400ppm CO	< 25	
	Zero current	ppm equivalent in zero air	< ± 4	
	Resolution	RMS noise (ppm equivalent)	< 0.5	
	Range	ppm limit of performance warranty	5,000	
	Linearity	ppm CO error at full scale, linear at zero, 1000ppm CO	< ± 30	
	Overgas limit	maximum ppm for stable response to gas pulse	10,000	
Lifetime	Zero drift	ppm equivalent change/year in lab air	< 0.1	
	Sensitivity drift	% change/year in lab air, monthly test	< 3	
	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	ppm equivalent change from 20°C	< – 1 to + 4	
	Zero @ 50°C	ppm equivalent change from 20°C	< ± 6	
Cross Sensitivity	Filter capacity	ppm-hrs	H ₂ S	250,000
	Filter capacity	ppm-hrs	NO ₂	120,000
	Filter capacity	ppm-hrs	NO	120,000
	Filter capacity	ppm-hrs	SO ₂	160,000
	H ₂ S sensitivity	% measured gas @ 20ppm	H ₂ S	< 0.1
	NO ₂ sensitivity	% measured gas @ 10ppm	NO ₂	< 0.1
	Cl ₂ sensitivity	% measured gas @ 10ppm	Cl ₂	< 0.1
	NO sensitivity	% measured gas @ 50ppm	NO	< 25
	SO ₂ sensitivity	% measured gas @ 20ppm	SO ₂	< 0.1
	H ₂ sensitivity	% measured gas @ 400ppm	H ₂ at 20°C	< 65
	C ₂ H ₄ sensitivity	% measured gas @ 400ppm	C ₂ H ₄	< 65
	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	< 13	

Figure 1 Sensitivity Temperature Dependence

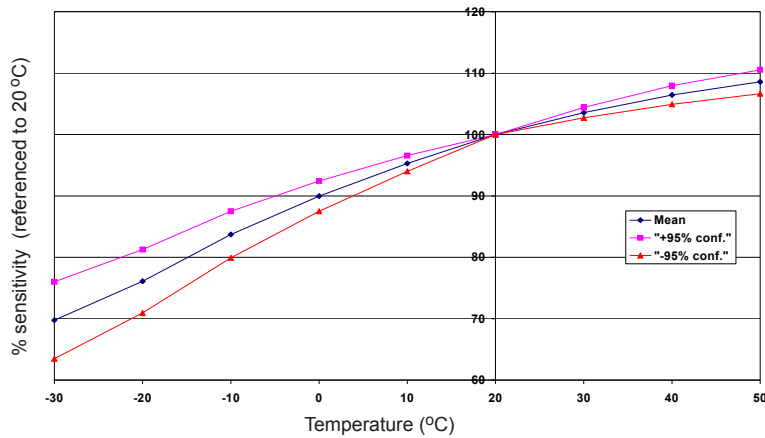
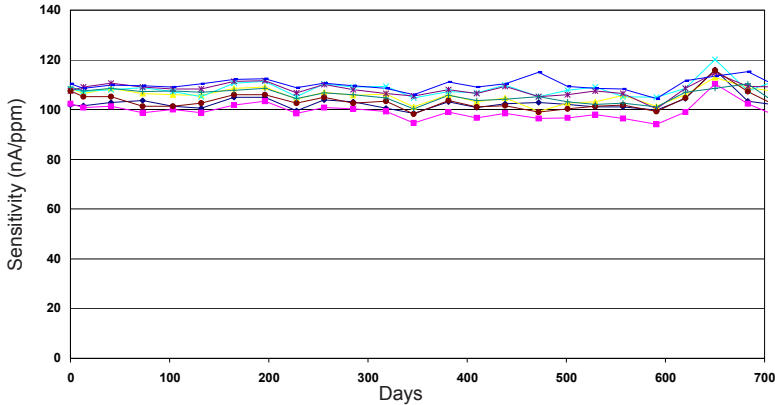


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

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

Figure 2 Sensitivity Long-term Stability



When sensors are tested monthly, their very good stability shows that they can be used in fixed sites, where maintenance and recalibration costs are important.

Figure 3 Response to 1% CO

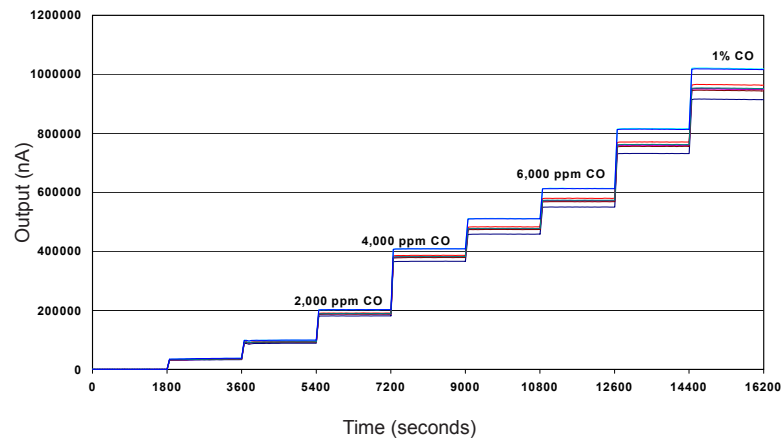


Figure 3 shows the response to step changes in CO concentrations from zero to 1% by volume.