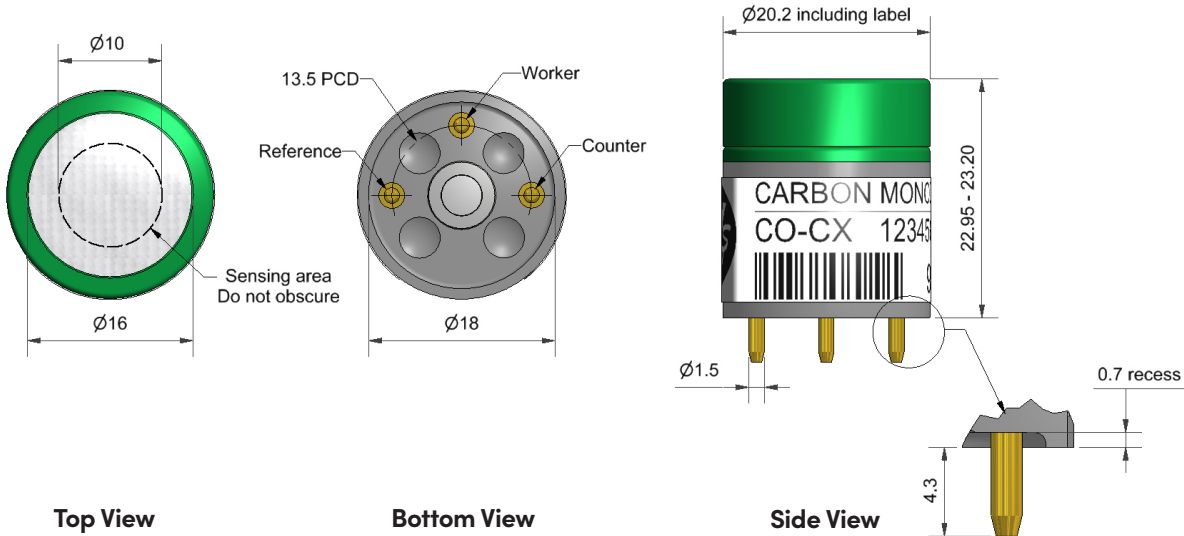




CO-CX Carbon Monoxide Sensor – EN 50379 Compliant for Stack Gases



Dimensions are in millimetres (± 0.1 mm) unless otherwise stated.

Performance	Sensitivity	nA/ppm in 400ppm CO		55 to 100
	Response time	t90 (s) from zero to 800ppm CO		< 40
	Zero current	ppm equivalent in zero air		< ± 3
	Resolution	RMS noise (ppm equivalent)		< 0.5
	Range	ppm CO limit of performance warranty		2,000
	Linearity	ppm error at full scale, linear at zero and 800ppm CO		< ± 40
	Overgas limit	maximum ppm for stable response to gas pulse		4,000
Lifetime	Zero drift	ppm equivalent change/year in lab air		< 0.2
	Sensitivity drift	% change/year in lab air, monthly test		< 6
	Operating life	months until 80% original signal (24-month warranted)		> 24
Environmental	Sensitivity @ -20°C	(% output @ -20°C/output @ 20°C) @ 400ppm CO		50 to 85
	Sensitivity @ 0°C	(% output @ 0°C/output @ 20°C) @ 400ppm CO		80 to 95
	Sensitivity @ 40°C	(% output @ 40°C/output @ 20°C) @ 400ppm CO		100 to 125
	Zero @ -20°C	ppm equivalent change from 20°C		< 0 to 4
	Zero @ 0°C	ppm equivalent change from 20°C		< 0 to 3
	Zero @ 50°C	ppm equivalent change from 20°C		< 0 to -10
Cross Sensitivity	Filter capacity	ppm-hrs	H ₂ S	250,000
	Filter capacity	ppm-hrs	NO ₂	500,000
	Filter capacity	ppm-hrs	NO	400,000
	Filter capacity	ppm-hrs	SO ₂	250,000
	H ₂ sensitivity	% measured gas @ 900ppm	H ₂ in 900ppm CO @ 10°C	< 2
	H ₂ sensitivity	% measured gas @ 900ppm	H ₂ in 900ppm CO @ 20°C	< 5
	H ₂ sensitivity	% measured gas @ 900ppm	H ₂ in 900ppm CO @ 30°C	< 6
	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	< 0.1
	SO ₂ sensitivity	% measured gas @ 20ppm	SO ₂	< 0.1
	C ₂ H ₄ sensitivity	% measured gas @ 400ppm	C ₂ H ₄	< 2
	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 @ 0 to 20°C (stored in sealed pot)		6
	Load resistor	Ω (recommended)		10 to 47
	Weight	g		< 8

Figure 1 Sensitivity Temperature Dependence

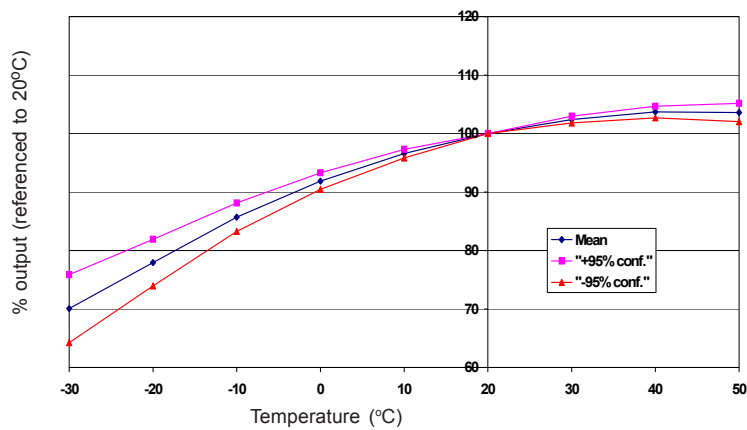


Figure 1 shows the variation in sensitivity caused by changes in temperature.
This data is taken from a typical batch of sensors.
The mean and $\pm 95\%$ confidence intervals are shown.

Figure 2 Zero Temperature Dependence

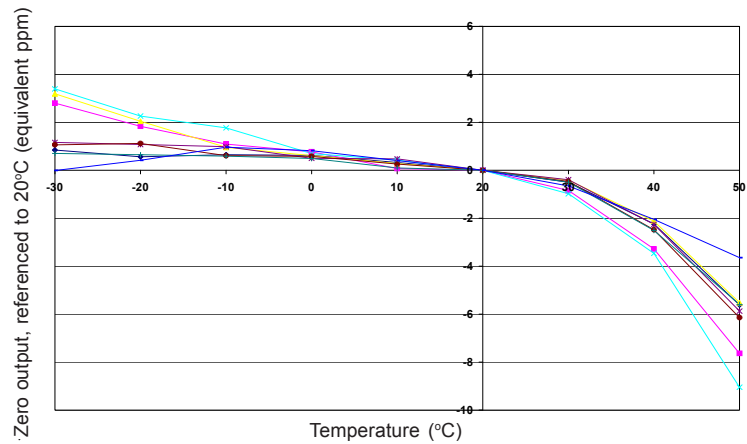
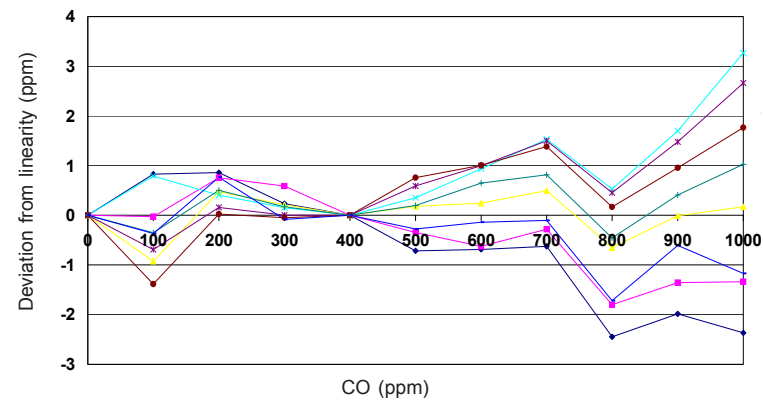


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.
This data is taken from a typical batch of sensors.

Figure 3 Linearity to 1,000ppm



CO-CX shows very good linearity from 0 to 1,000ppm CO, with less than $\pm 0.3\%$ error at 1,000ppm CO.