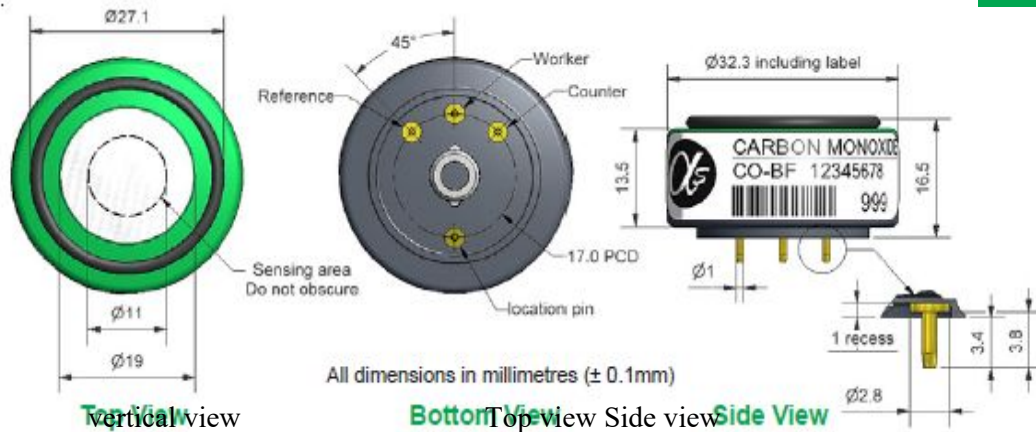


CO-BF Carbon Monoxide Sensor



Figure 1 schematic diagram of CO-BF



function	sensitivity	Sensitivity in 400ppmCO (nA/ppm)	80~130
	reaction time	Time from zero to 400ppmCO t90 (s)	< 25
	zero current	Equivalent ppm value in zero air	< ± 4
	resolution ratio	RMS noise (equivalent ppm value)	< 0.5
	range	Measuring limits (ppm) that guarantee product performance	5000
	degree of linearity	The ppm value of the full scale error is linear from 0 to 1000ppm	< ± 30
	overload	Maximum ppm value of gas pulse stabilized reaction	10000
life span	zero drift	Equivalent ppm values that change in the laboratory air from year to year	< 0.1
	sensitivity drift	Percentage change in laboratory air over the year, measured monthly	< 3
	working life	Number of months to which the output has been reduced to 80% of the original signal (24-month guarantee)	> 24
environment	-20°C sensitivity	400ppm CO when, (output at -20°C / output at 20°C)%	70~88
	Sensitivity at 50°C	400ppm CO when, (50°C output / 20°C output)%	102~115
	-20°C when zero point	Change in equivalent ppm values with reference to 20°C zero	< -1~+4
	50°C at zero point	Change in equivalent ppm values with reference to 20°C zero	< ± 6
cross sensitivity	filter capacity	ppm · hour	H ₂ S 250,000
	filter capacity	ppm · hour	NO ₂ 120,000
	filter capacity	ppm · hour	NO 120,000
	filter capacity	ppm · hour	SO ₂ 160,000
	H ₂ S	Gas sensitivity percentage at 20ppmH ₂ S	< 0.1
	NO ₂	Gas sensitivity percentage ₂ measured at 10ppmNO	< 0.1
	Cl ₂	Sensitivity percentage of gas measured ₂ at 10ppmCl	< 0.1
	NO	Gas sensitivity percentage measured at 50ppmNO	< 25
	SO ₂	Gas sensitivity percentage ₂ at 20ppmSO	< 0.1
	H ₂	Gas sensitivity percentage ₂ measured at 400ppmH(20°C)	< 65
	C ₂ H ₄	Gas sensitivity percentage measured at 400ppmC ₂ H ₄	< 65
NH ₃	Percentage sensitivity of gas ₃ at 20ppmNH	< 0.1	
key parameter	temperature range	°C	-30~50
	pressure limit	kPa	80~120
	Humidity range	Percentage of continuous relative humidity	15~90
	Storage period	Number of months for preservation from 3 to 20°C (to be kept in a sealed tank)	6
	load resistance	Ω (recommend)	10~47
	weight	g	< 13

Figure 2 Sensitivity Temperature Characteristics

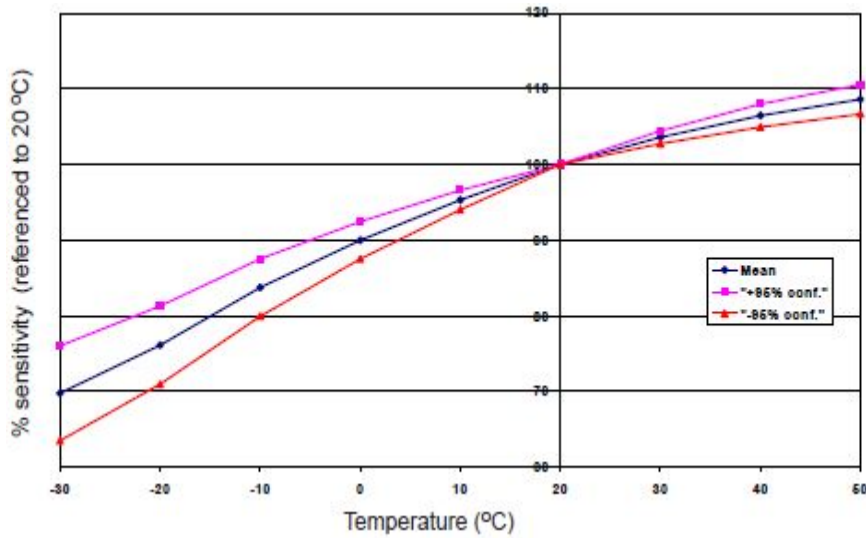
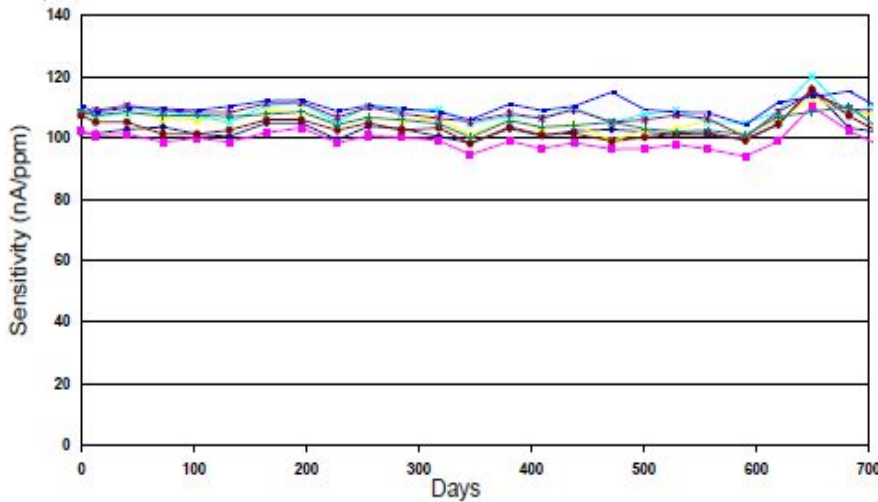


Figure 2 shows the change in sensor sensitivity caused by temperature changes.

The data was taken from a typical batch of sensors. Figure 2 shows the average and $\pm 95\%$ confidence interval of sensitivity percentage (reference 20°C).

Figure 3 Long-Term Stability of Sensitivity



After monthly measurement of the sensor, we found that its stability can be better, as shown in Figure 3, so this kind of sensor can be applied in fixed places with high maintenance and calibration costs.

Figure 4 Reaction of 1% CO

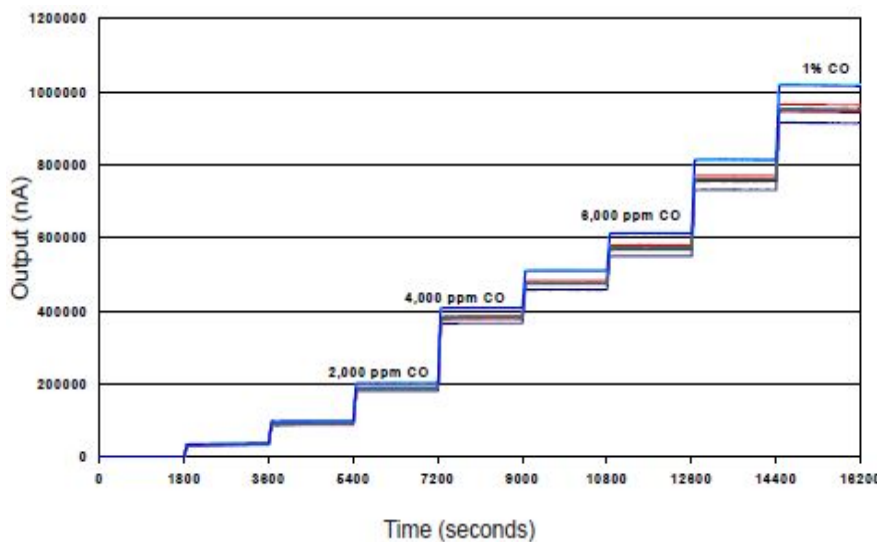


FIG. 4 shows the corresponding response of the sensor as CO concentration increases from 0 to 1%.

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