

CO-AE Carbon Monoxide Sensor High Concentration



PATENTED

Figure 1 schematic diagram of CO-AE



function	sensitivity	Sensitivity in 2000ppmCO (nA/ppm)	10~25
	reaction time	Time from zero to 2000ppmCO t90 (s)	< 50
	zero current	Equivalent ppm value of zero air	< ±20
	resolution ratio	RMS noise (equivalent ppm value)	< 5
	range	CO measurement limit (ppm) that guarantees product performance	10000
	degree of linearity	The ppm value of the full scale error is linear from 0 to 2000ppm	< 0~500
	overload	Maximum ppm value of gas pulse stabilized reaction	100000
life span	zero drift	Equivalent ppm values that change in the laboratory air from year to year	< 2
	sensitivity drift	Percentage change in laboratory air over the year, measured monthly	< 1
	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)%	65~93
	Sensitivity at 50°C	400ppm CO when, (50°C output / 20°C output)%	98~115
	-20°C when zero point	Change in equivalent ppm values with reference to 0°C 20	< ±2
	50°C at the zero point	Change of equivalent ppm value with reference to 20°C zero point	< ±5
cross sensitivity	filter capacity	ppm- hour H ₂ S	3,000,000
	filter capacity	ppm- hour NO ₂	8,000,000
	filter capacity	ppm- hour NO	200,000
	filter capacity	ppm- hour SO ₂	4,000,000
	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	< 0.2
	NO	Gas sensitivity percentage measured at 50ppmNO	< 5
	SO ₂	Gas sensitivity percentage ₂ at 20ppmSO	< 0.1
	H ₂	Gas sensitivity percentage ₂ measured at 400ppmH(20°C)	< 75
	C ₂ H ₄	Gas sensitivity percentage measured at 400ppm ₂ C ₄	< 20
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	< 6

Figure 2 Sensitivity Temperature Characteristics

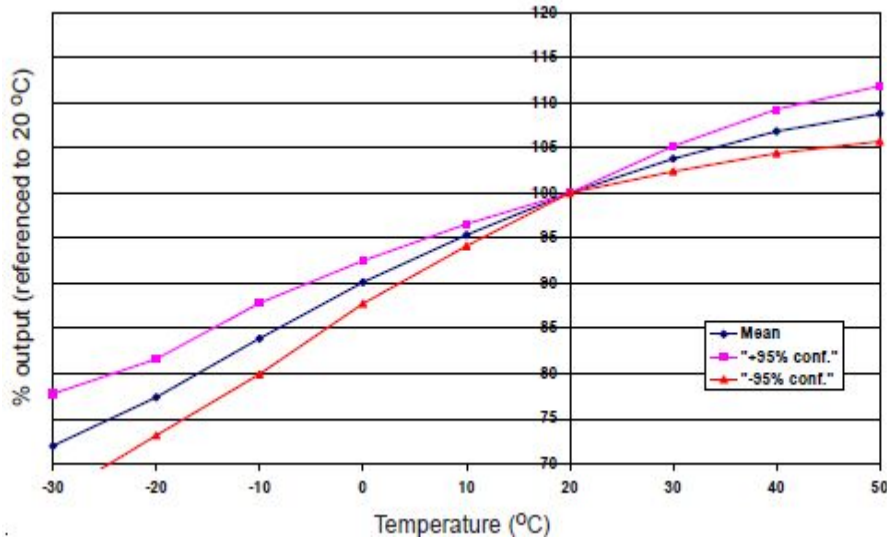


Figure 2 shows the change in sensor sensitivity caused by temperature changes.

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

Figure 3 Zero Temperature Characteristics

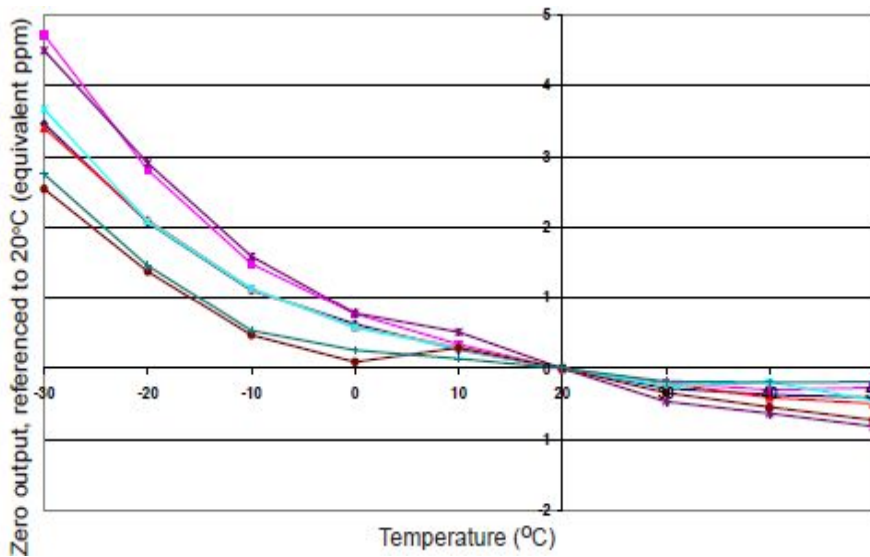
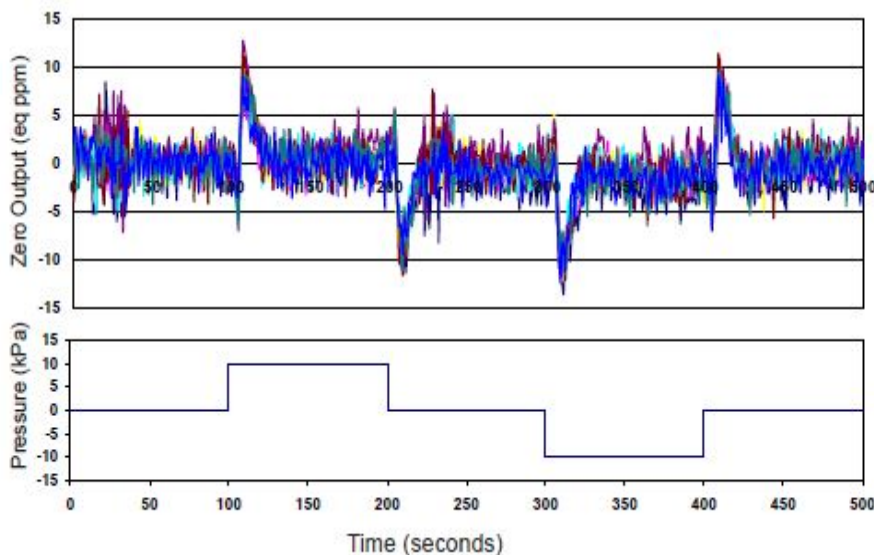


Figure 3 shows the change in zero point output caused by temperature changes, expressed as equivalent ppm values, with reference to the zero point at 20°C.

Data is taken from a typical batch of sensors.

Figure 4 Zero Point Reaction Caused by Pressure Change



When the sensor is subjected to pressure changes from the environment, up to 10KPa and down to 10 KPa, the slight transient of its zero output will fall rapidly as the sensor returns to the zero baseline.

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