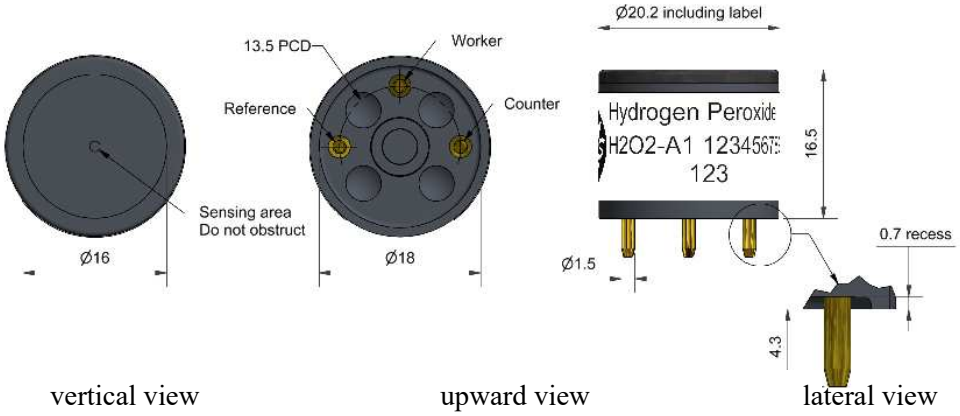
H2O2-A1 Hydrogen Peroxide Sensor

Patent obtained

Figure 1 Schematic Diagram of H2O2-A1



vertical view upward view lateral view

function	Sensitivity	Sensitivity in 400ppm CO (nA/ppm)	50 ~ 90 <
	response time	from zero to t90 time in 400ppmCO (s)	25 -4 ~ +3
	Zero point current resolution	Equivalent ppm value in zero air	< 0.5
	range	RMS noise (equivalent ppm value)	2,000 +
	Linearly	The measured limit value (ppm) of CO that can guarantee the product performance, the ppm value of the full range error, and the maximum ppm value that is linear at 0~400ppm for the stable reaction of gas pulse	15 ~ +25
	overload		5,000
life span	Zero drift sensitivity drift	Equivalent ppm values that change in the laboratory air from year to year	< 0.2
		Percentage change in laboratory air over the year, measured monthly	< 8 >
	working life	Number of months to which the output is reduced to 80% of the original signal (24 months guaranteed)	24
environment	-20°C sensitivity	400ppmCO when, (output at-20°C/ output at 20°C)%	70~88
	50°C sensitivity	400ppmCO when, (output at 50°C/ output at 20°C)% change in equivalent ppm value with reference to 20°C zero point	102~115 <
	-20°C is the zero point 50°C is the zero point	Change of equivalent ppm value with reference to 20°C zero point	±3 < ±8
cross sensitivity	H_2S	Gas sensitivity percentage at 20ppmH_2S	< 350
	NO_2	Gas sensitivity percentage at 10ppmNO_2	< -20
	Cl_2	Gas sensitivity percentage measured at 10ppmCl_2	< 60
	NO	Gas sensitivity percentage measured at 50ppmNO	< 30
	SO_2	Gas sensitivity percentage measured at 20ppmSO_2	< 35
	H_2 C	Gas sensitivity percentage measured at 400ppmH_2 (20°C) Gas sensitivity percentage measured at 400	< 85
	$_2H_4$	ppm CH_2H_4 Gas sensitivity percentage measured	< 150
	NH_3	at 20ppmNH_3	< 0.1
key parameter	temperature range	℃	-30~50
	pressure limit	kPa	80~120
	Humidity range	Number of months for continuous relative	15~90
	Storage period	humidity percentage 3~20℃ (to be stored in a	6 10~
	Load resistor weight	sealed tank)Ω (recommended)	47 <
		g	6

Figure 2 Sensitivity Temperature Characteristics

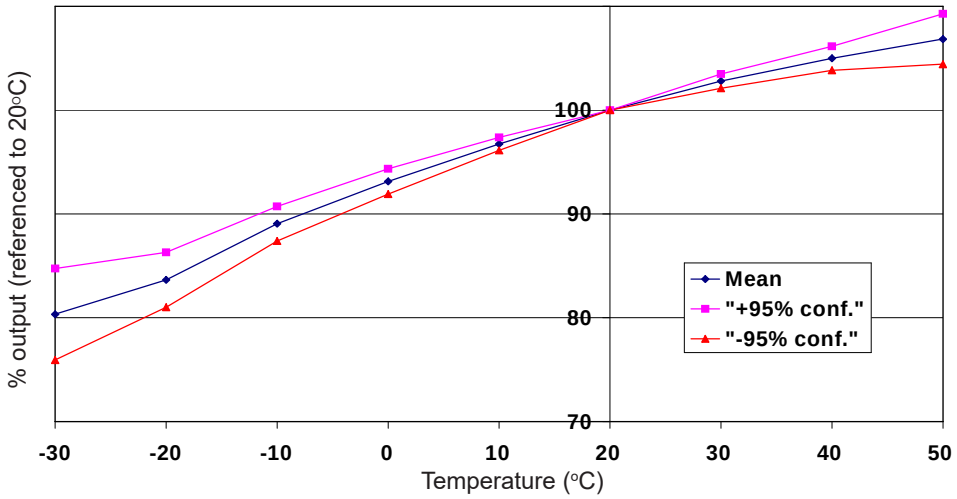


Figure 2 shows the change in sensor sensitivity caused by temperature changes.

Data are taken from a typical batch of sensors. The figure shows the mean output (reference 20℃) and ±95% confidence interval.

Figure 3 Zero Temperature Characteristics

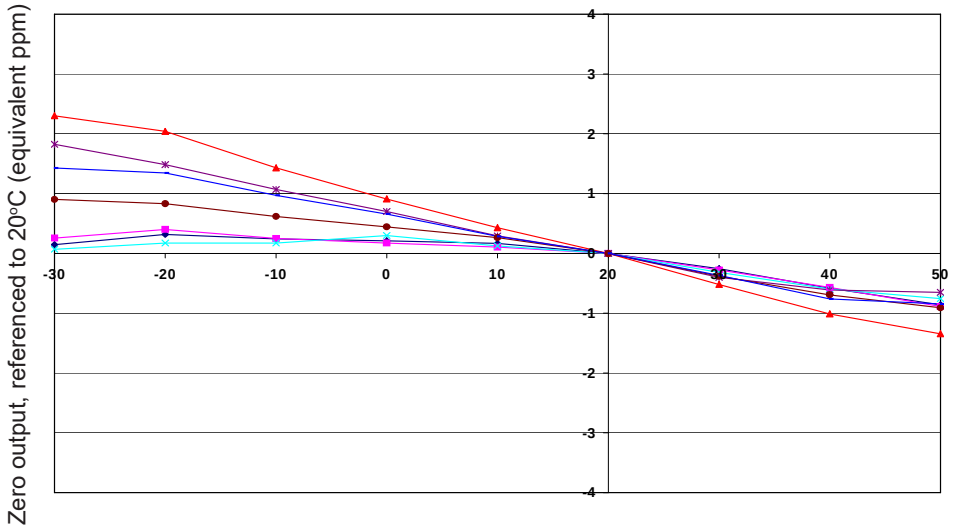


Figure 3 shows the change of the transmitter zero point output caused by temperature changes, expressed in equivalent ppm, with reference to the zero point at 20℃.

Data is taken from a typical batch sensor.

Figure 4 Response Under Exposure to 2% CO

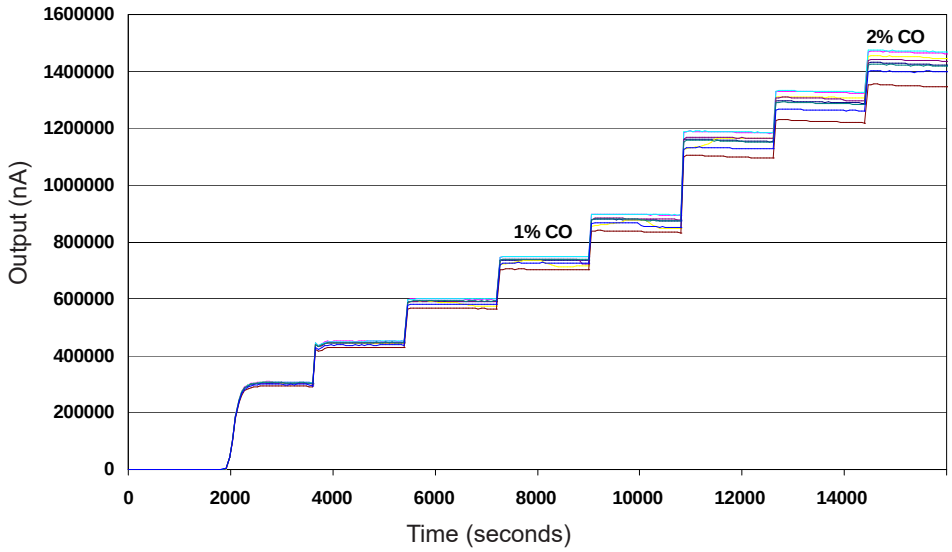


Figure 4 shows that the sensor has a good response to the step change of CO volume concentration from 0 to 2%.

Data is taken from a typical batch sensor.

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