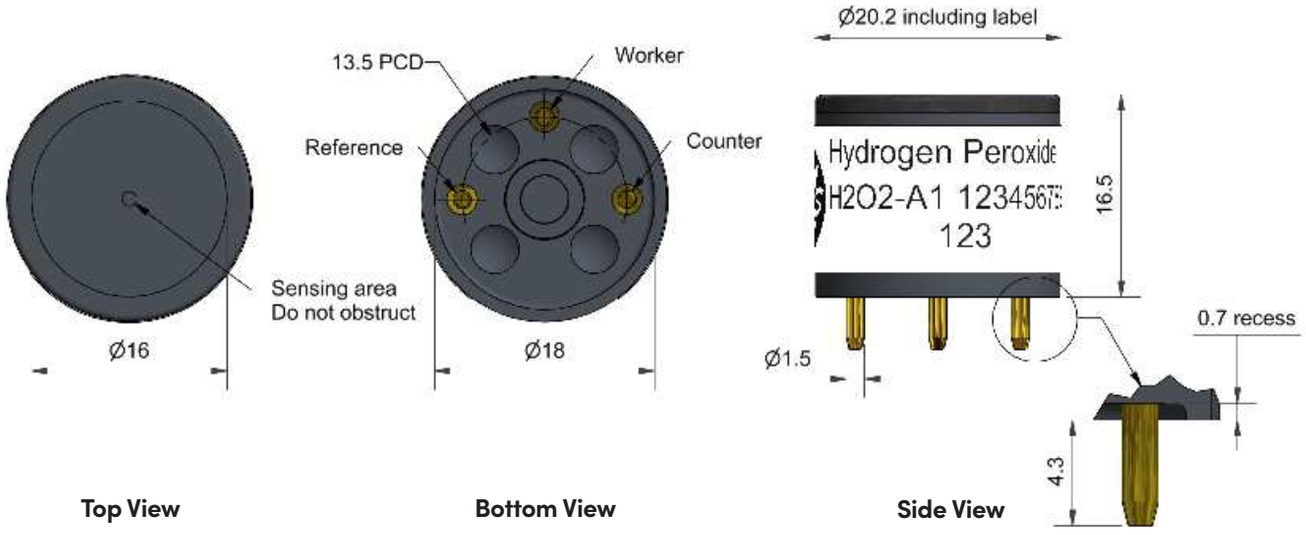
alphasense
AMETEK®

Technical specifications Version 1.0

H2O2-A1 Hydrogen Peroxide Sensor



Top View **Bottom View** **Side View**

Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity	nA/ppm in 400ppm CO	50 to 90
	Response time	t90 (s) from zero to 400ppm CO	< 25
	Zero current	ppm equivalent in zero air	-4 to +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, 400ppm CO	+15 to + 25
	Overgas limit	maximum ppm for stable response to gas pulse	5,000
Lifetime	Zero drift	ppm equivalent change/year in lab air	< 0.2
	Sensitivity drift	% change/year in lab air, monthly test	< 8
	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	< ± 3
	Zero @ 50°C	ppm equivalent change from 20°C	< ± 8

Cross Sensitivity	H_2S sensitivity	% measured gas @ 20ppm	H_2S	< 350
	NO_2 sensitivity	% measured gas @ 10ppm	NO_2	< -20
	Cl_2 sensitivity	% measured gas @ 10ppm	Cl_2	< 60
	NO sensitivity	% measured gas @ 50ppm	NO	< 30
	SO_2 sensitivity	% measured gas @ 20ppm	SO_2	< 35
	H_2 sensitivity	% measured gas @ 400ppm	H_2 at 20°C	< 85
	C_2H_4 sensitivity	% measured gas @ 400ppm	C_2H_4	< 150
	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	< 6

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For further information on the performance of this sensor, on other sensors in the range or any other subject, please contact Alphasense Ltd. or visit our website at "www.alphasense.com".

Figure 1 Sensitivity Temperature Dependence

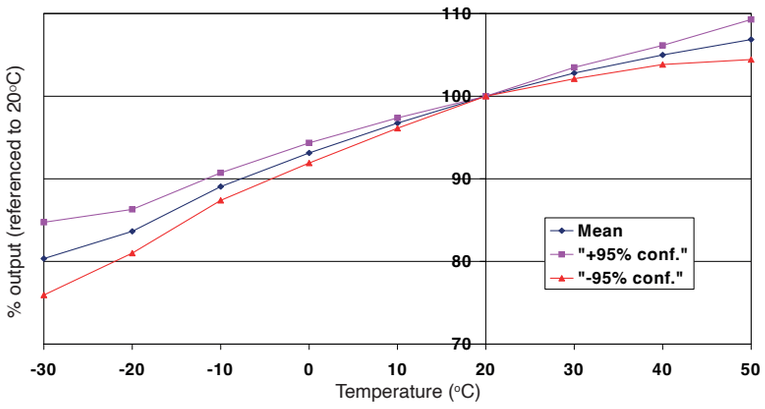

Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors. The mean and ±95% confidence intervals are shown.

Figure 2 Zero Temperature Dependence

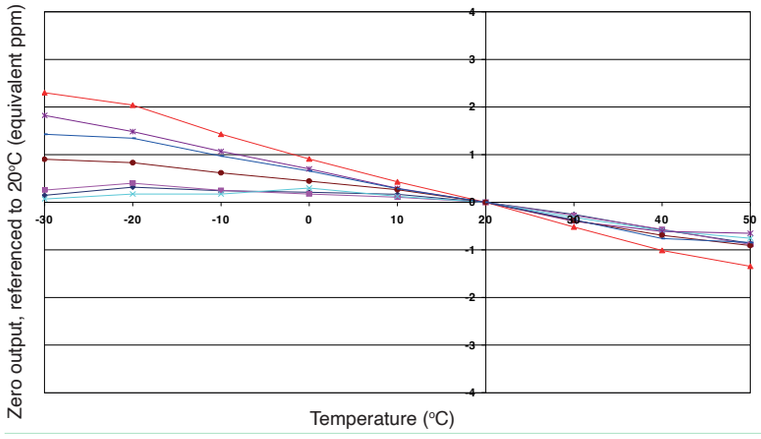

Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 3 Response to Exposure to 2% CO

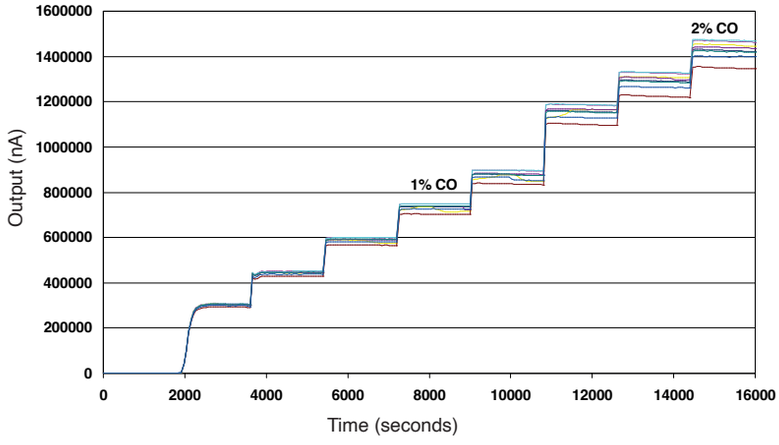

Figure 3 shows the excellent response to step changes in CO concentrations from zero to 2% CO by volume.

This data is taken from a typical batch of sensors.