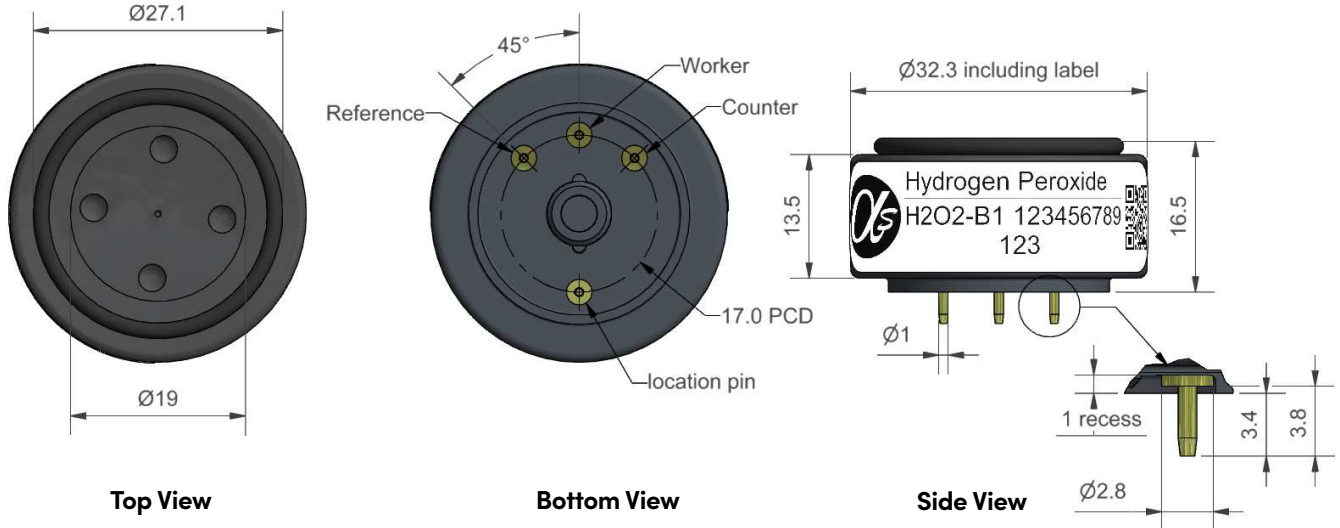


# DRAFT

Technical specifications Version 1.0

## H2O2-B1 Hydrogen Peroxide Sensor



Dimensions are in millimetres ( $\pm 0.1$  mm).

Performance (tested with surrogate gas CO)	Parameter	Value	Value
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	< $\pm 4$
	Resolution	RMS noise (ppm equivalent)	< 0.5
	Range	ppm limit of performance warranty	2,000
	Linearity	ppm CO error at full scale, linear at zero, 1000ppm CO	< $\pm 30$
	Overgas limit	maximum ppm for stable response to gas pulse	5,000

Lifetime	Parameter	Value	Value
Lifetime	Zero drift	ppm equivalent change/year in lab air	< 0.1
	Sensitivity drift	% change/year in lab air, monthly test	< 3
	Operating life	months until 80% original signal (24-month warranted)	> 24

Environmental	Parameter	Value	Value
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	< $\pm 1$
	Zero @ 50°C	ppm equivalent change from 20°C	< $\pm 6$

Cross Sensitivity	Gas	Sensitivity	Value
Cross Sensitivity	H <sub>2</sub> S	% measured gas @ 20ppm	< 200
	NO <sub>2</sub>	% measured gas @ 10ppm	< 50
	Cl <sub>2</sub>	% measured gas @ 10ppm	< -1
	NO	% measured gas @ 50ppm	< 80
	SO <sub>2</sub>	% measured gas @ 20ppm	< 50
	H <sub>2</sub>	% measured gas @ 400ppm	< 65
	C <sub>2</sub> H <sub>4</sub>	% measured gas @ 400ppm	< 65
	NH <sub>3</sub>	% measured gas @ 20ppm	< 0.1

Key Specifications	Parameter	Value	Value
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	$\Omega$ (recommended)	10 to 47
	Weight	g	< 13

# DRAFT

**Figure 1 Zero Temperature Dependence**

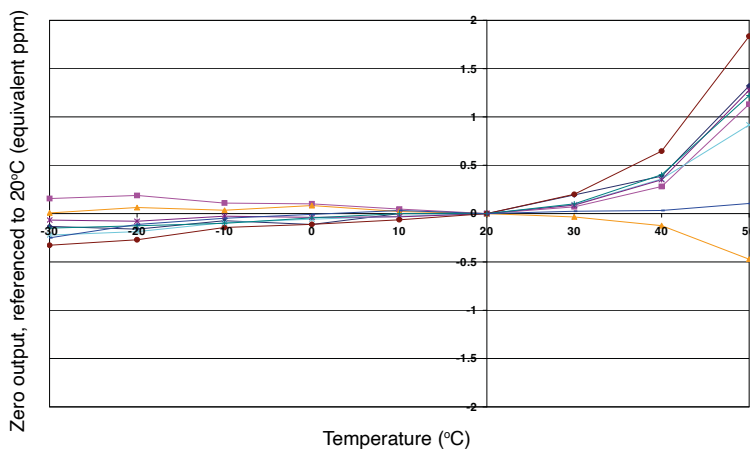


Figure 1 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

NOTE: All sensors are tested at ambient environmental conditions, with 10 ohm load resistor, unless otherwise stated. As applications of use are outside our control, the information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the sensors are suitable for their own requirements.

At the end of the product's life, do not dispose of any electronic sensor, component or instrument in the domestic waste, but contact the instrument manufacturer, Alphasense or its distributor for disposal instructions. NOTE: all sensors are tested at ambient environmental conditions unless otherwise stated. As applications of use are outside our control, the information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the sensors are suitable for their own requirements.

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