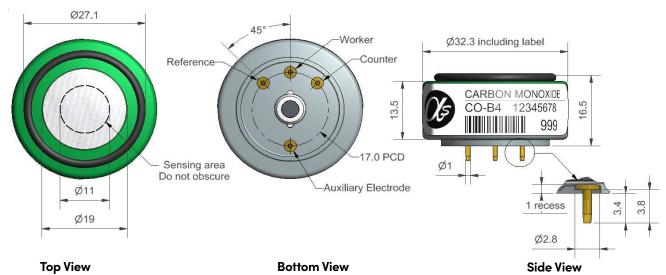


## CO-B4 Carbon Monoxide Sensor – 4-Electrode



Dimensions are in millimetres (± 0.1 mm).

	n).			
Performance	Sensitivity Response time Zero current Noise* Range Linearity Overgas limit *Tested with Alphasens	nA/ppm in 2ppm CO t90 (s) from zero to 10ppm CO nA in zero air at 20°C ±2 standard deviations (ppb equivalent) ppm limit of performance warranty ppm CO error at full scale, linear at zero, 500ppm CO maximum ppm for stable response to gas pulse se ISB low noise circuit		420 to 650 < 30 +30 to -250 4 1000 20 to 35 2000
Lifetime	Zero drift Sensitivity drift Operating life	ppb equivalent change/year in lab air % change/year in lab air, monthly test months until 50% original signal (24–month warranted)		< ±100 < 10 > 36
Environmental	Sensitivity @ -20°C Sensitivity @ 50°C Zero @ -20°C Zero @ 50°C	(% output @ -20°C/output @ 20°C) @ 5ppm CO (% output @ 50°C/output @ 20°C) @ 5ppm CO nA nA		40 to 70 110 to 125 -30 to +30 -50 to -200
Cross Sensitivity	Filter capacity  H <sub>2</sub> S sensitivity  NO <sub>2</sub> sensitivity  CI <sub>2</sub> sensitivity  NO sensitivity  SO <sub>2</sub> sensitivity  H <sub>2</sub> sensitivity  C <sub>2</sub> H <sub>4</sub> sensitivity  NH <sub>3</sub> sensitivity	ppm·hrs % measured gas @ 5ppm % measured gas @ 100ppm % measured gas @ 100ppm % measured gas @ 20ppm	H <sub>2</sub> S H <sub>2</sub> S NO <sub>2</sub> CI <sub>2</sub> NO SO <sub>2</sub> H <sub>2</sub> at 20°C C <sub>2</sub> H <sub>4</sub> NH <sub>3</sub>	250,000 < 1 < 1 < 1 < -3 < 0.1 < 50 < 1 < 0.1
Key Specifications	Temperature range Pressure range Humidity range Storage period Load resistor Weight	$^{\circ}\text{C}$ kPa $^{\circ}\text{C}$ rh continuous months @ 3 to 20 $^{\circ}\text{C}$ (stored in sealed pot) $^{\circ}$ (ISB circuit is recommended) g		-30 to 50 80 to 120 15 to 90 6 33 to 100 < 13



Figure 1 Sensitivity Temperature Dependence

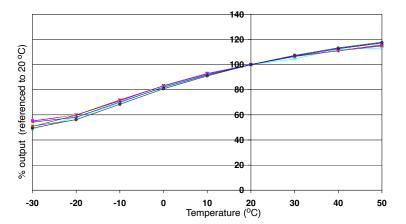


Figure 1 shows the temperature dependence of sensitivity at 2ppm CO.

This data is taken from a typical batch of sensors.

Figure 2 Zero Current Temperature Dependence (corrected)

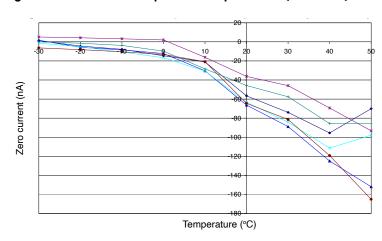


Figure 2 shows the variation in zero output of the working electrode caused by changes in temperature, expressed as nA.

This data is taken from a typical batch of sensors.

Contact Alphasense for futher information on zero current correction.

Figure 3 Response from 0 to 1ppm CO

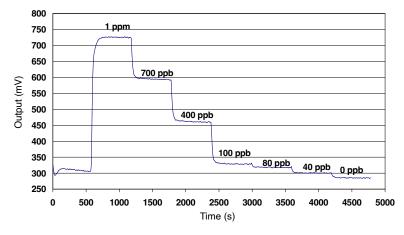


Figure 3 shows response from 0 to 1ppm CO.
Use of Alphasense ISB circuit reduces noise to 4ppb, with the opportunity of digital smoothing to reduce noise even further.

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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