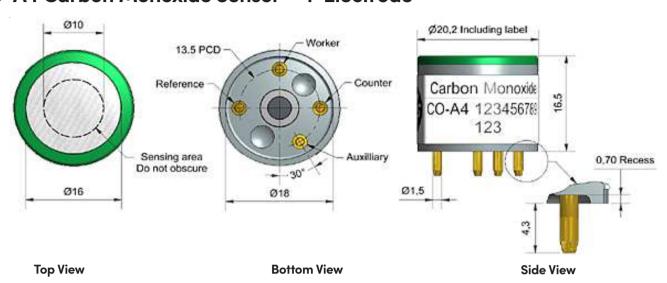


CO-A4 Carbon Monoxide Sensor – 4-Electrode



Dimensions are in millimetres (± 0.1 mm).

Technical specifications Version 1.0

Performance	Sensitivity Response time Zero current Noise* Range ppm limit of peri Linearity Overgas limit *Tested with Alphasens	ppm CO error at full scale, linear at zero, 15ppm CO maximum ppm for stable response to gas pulse		220 to 410 < 30 -100 to +10 20 500 < ± 1 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°	(% output @ -20°C/output @ 20°C) @ 5ppm CO (% output @ 50°C/output @ 20°C) @ 5ppm CO nA change from 20°C nA change from 20°C		50 to 85 110 to 125 10 to 40 -120 to -200
Cross Sensitivity	Filter capacity H ₂ S sensitivity NO ₂ sensitivity CL ₂ sensitivity NO sensitivity SO ₂ sensitivity H ₂ sensitivity C ₂ H ₄ sensitivity NH ₃ sensitivity	ppm·hrs % measured gas @ 5ppm % measured gas @ 100ppm % measured gas @ 100ppm % measured gas @ 20ppm	H ₂ S H ₂ S NO ₂ CL ₂ NO SO ₂ H ₂ at 20°C C ₂ H ₄ NH ₃	250,000 < 0.1 < -2 < 0.1 < -2 < 0.1 < -50 < 0.5 < 0.1
Key Specifications	Temperature range Pressure range Humidity range Storage period Load resistor Weight	°C kPa % rh continuous months @ 3 to 20°C (stored in sealed pot) Ω (AFE circuit is recommended) g		-30 to 50 80 to 120 15 to 90 6 33 to 100 < 6

Technical specifications Version 1.0

Figure 1 Sensitivity Temperature Dependence

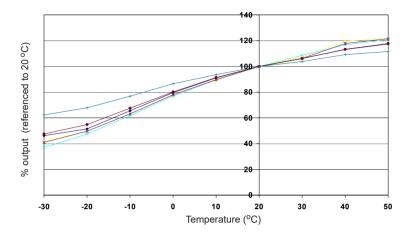


Figure 1 shows the temperature dependence of sensitivity at 2ppm CO.

This data is taken from a typical batch of sensors.

Figure 2 Zero Temperature Dependence

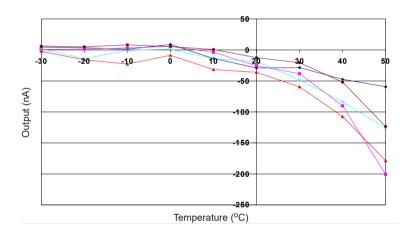


Figure 2 shows the variation in zero output of the working electrode caused by changes in temperature, expressed as nA.

This data is taken from a typical batch of sensors. Contact Alphasense for futher information on zero current correction.

Figure 3 Linearity from 0 to 1ppm

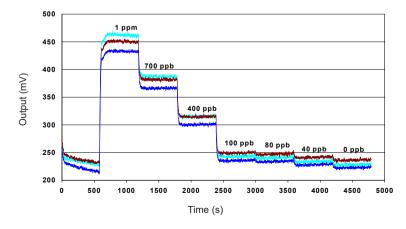


Figure 4 shows response from 0 to 1ppm CO. Use of Alphasense AFE circuit reduces noise to 20ppb, with the opportunity of digital smoothing to reduce noise even further.

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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