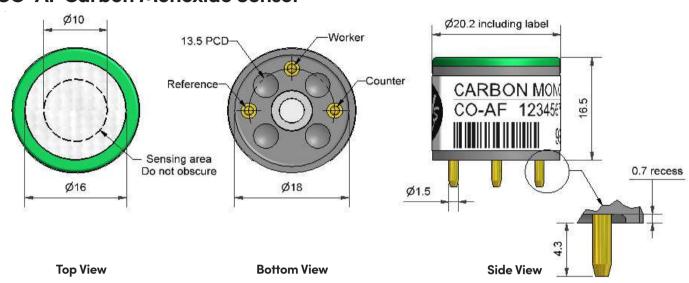
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αlphasense

Technical specifications Version 1.0

CO-AF Carbon Monoxide Sensor



Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity Response time Zero current Resolution Range Linearity Overgas limit	nA/ppm in 400ppm CO t90 (s) from zero to 400ppm CO ppm equivalent in zero air RMS noise (ppm equivalent) ppm CO limit of performance warranty ppm error at full scale, linear at zero, 1000ppm CO maximum ppm for stable response to gas pulse		55 to 90 < 25 -5 to +4 < 0.5 5,000 +15 to +25 10,000
Lifetime	Zero drift Sensitivity drift Operating life	ppm equivalent change/year in lab air % change/year in lab air, monthly test months until 80% original signal (24–month warranted)		< 0.2 < 8 > 24
Environmental	Sensitivity @ -20°C Sensitivity @ 50°C Zero @ -20°C Zero @ 50°C	(% output @ -20°C/output @ 20°C) @ 400ppm CO (% output @ 50°C/output @ 20°C) @ 400ppm CO ppm equivalent change from 20°C ppm equivalent change from 20°C		63 to 88 102 to 115 < ± 3 < ± 8
Cross Sensitivity	Filter capacity Filter capacity Filter capacity Filter capacity Filter capacity H ₂ S sensitivity NO ₂ sensitivity CI ₂ sensitivity NO sensitivity SO ₂ sensitivity H ₂ sensitivity C ₂ H ₄ sensitivity NH ₃ sensitivity	ppm·hrs ppm·hrs ppm·hrs ppm·hrs ppm·hrs % measured gas @ 20ppm % measured gas @ 10ppm % measured gas @ 50ppm % measured gas @ 20ppm % measured gas @ 400ppm % measured gas @ 400ppm % measured gas @ 400ppm % measured gas @ 20ppm	H ₂ S NO ₂ NO SO ₂ H ₂ S NO ₂ CI ₂ NO SO ₂ H ₂ at 20°C C ₂ H ₄ NH ₃	250,000 600,000 20,000 300,000 < 0.1 < 0.1 < 5 < 0.1 < 60 < 25 < 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 seale Ω (recommended) g	ed pot)	-30 to 50 80 to 120 15 to 90 6 10 to 47 < 6

Figure 1 Sensitivity Temperature Dependence

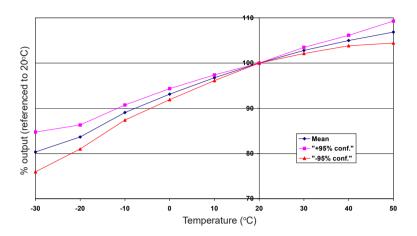


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

The mean and ±95% confidence intervals are shown.

Figure 2 Zero Temperature Dependence

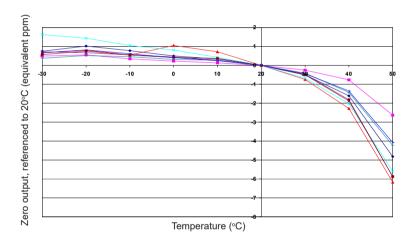


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 3 Response to Exposure to 2% CO

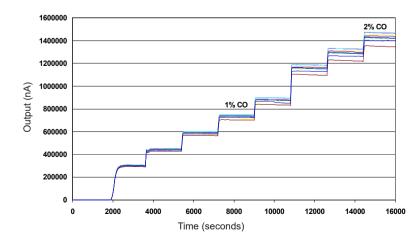


Figure 3 shows the excellent response to step changes in CO concentrations from zero to 2% CO by volume.

This data is taken from a typical batch of sensors.

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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