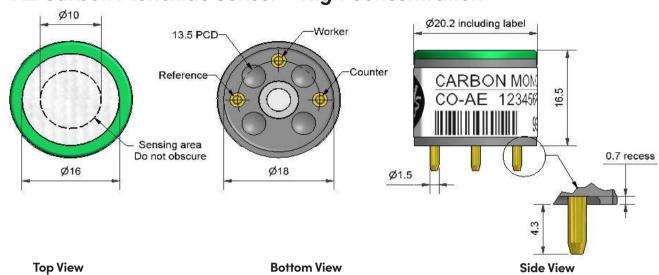


Technical specifications Version 1.0

## **CO-AE Carbon Monoxide Sensor – High Concentration**



Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity Response time Zero current Resolution Range Linearity Overgas limit	nA/ppm in 2,000ppm CO t90 (s) from zero to 2,000ppm CO ppm equivalent in zero air RMS noise (ppm equivalent) ppm CO limit of performance warranty ppm error at full scale, linear at zero and 2,000ppm CO maximum ppm for stable response to gas pulse		10 to 25 < 50 < ± 20 < 5 10,000 < 0 to 500 100,000
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)		< 2 < 1 > 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		65 to 93 98 to 115 < ± 2 < ± 5
Cross Sensitivity	Filter capacity Filter capacity Filter capacity Filter capacity Filter capacity H <sub>2</sub> S sensitivity NO <sub>2</sub> sensitivity Cl <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 ppm·hrs ppm·hrs ppm·hrs  % measured gas @ 20ppm % measured gas @ 10ppm % measured gas @ 10ppm % measured gas @ 50ppm % measured gas @ 20ppm % measured gas @ 400ppm % measured gas @ 400ppm % measured gas @ 400ppm % measured gas @ 20ppm	$H_2S$ $NO_2$ $NO$ $SO_2$ $H_2S$ $NO_2$ $CI_2$ $NO$ $SO_2$ $H_2$ at $20^{\circ}C$ $C_2H_4$ $NH_3$	3,000,000 8,000,000 200,000 4,000,000 < 0.1 < 0.1 < 0.2 < 5 < 0.1 < 75 < 20 < 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 se Ω (recommended) g	aled pot)	-30 to 50 80 to 120 15 to 90 6 10 to 47 < 6

## Figure 1 Sensitivity Temperature Dependence

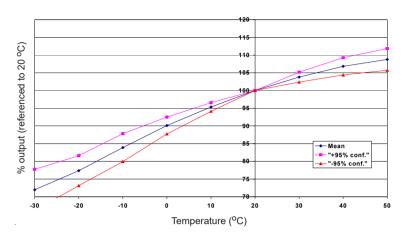


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

The mean and ± 95% confidence intervals are shown.

Figure 2 Zero Temperature Dependence

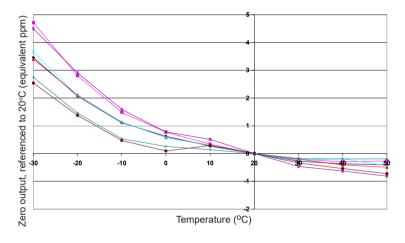
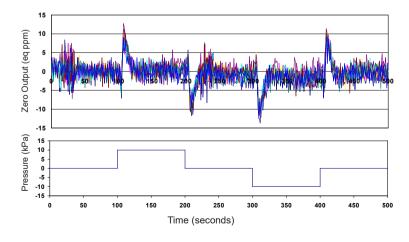


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 3 Zero Response to Pressure Steps



From ambient pressure, sensors were subjected to both positive and negative 10kPa pressure steps. The small transient rapidly decays as the sensor returns to its zero baseline.

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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