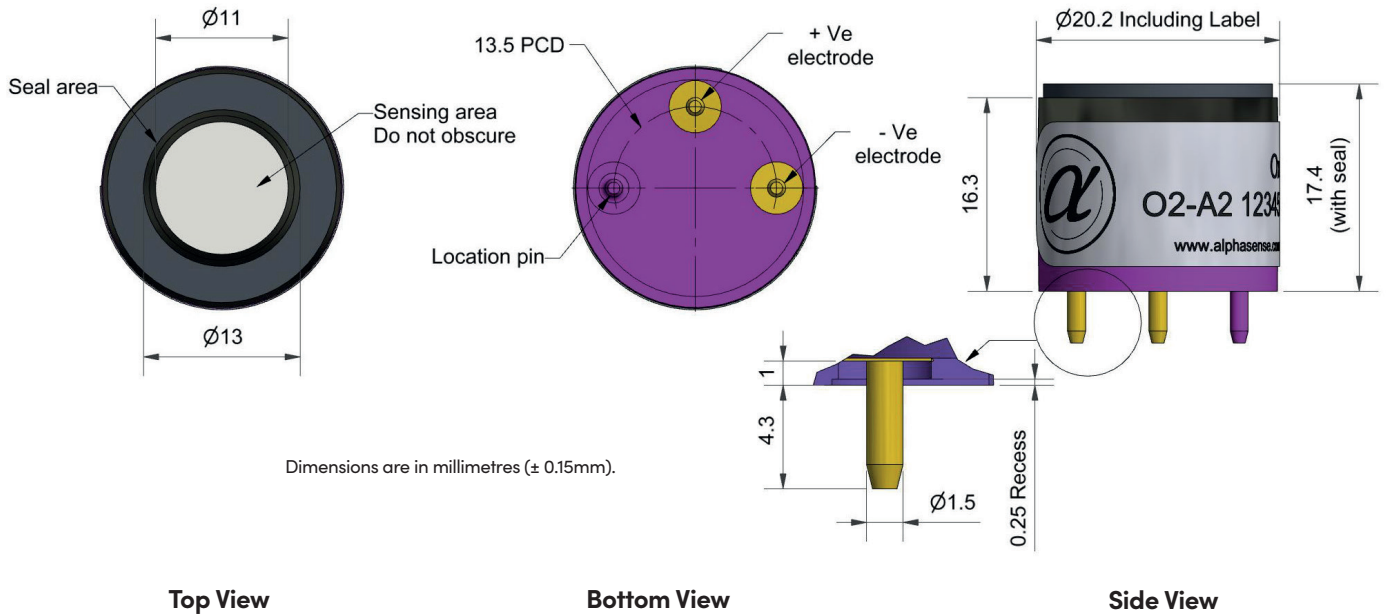


## O2-A2 Oxygen Sensor

The O2-A2 Oxygen sensor is a vital component in safety monitoring, both in portable and fixed monitors. With its patented no-leak design, the O2-A2 offers uncompromised reliability and accuracy for your instruments. The O2-A2 Oxygen sensor boasts a lifespan of 2 years. Alphasense O2 sensors have been the sensor of choice for over 20 years, providing the most accurate and unmatched sensor performance in the market.

### O2-A2 Oxygen Sensor (2-year life span)



Performance	Output	$\mu\text{A}$ @ 20.9% $\text{O}_2$	80 to 120
	Response time	$t_{90}$ (s) from 20.9% to 0% $\text{O}_2$	
	<b>Typical mean response time</b>		<b>8</b>
	Zero current	$\mu\text{A}$ in $\text{N}_2$	< 2.5
	Linearity	% $\text{O}_2$ deviation @ 10% $\text{O}_2$	0.6

Lifetime	Output drift	% change in output @ 3 months	< 1
	Operating life	Months until 85% original output of 20.9% $\text{O}_2$	> 24

Environmental	Humidity sensitivity	% $\text{O}_2$ change: 0% to 95% rh @ 40°C	< 0.7
	$\text{CO}_2$ sensitivity	% change in output / % $\text{CO}_2$ @ 5% $\text{CO}_2$	0.1
	Pressure sensitivity	(% change of output)/(% change of pressure) @ 20kPa	< 0.1

Key Specifications	Temperature range	°C	-30 to 55
	Pressure range	kPa	80 to 120
	Humidity range	% rh non-condensing (0 to 99% rh short term)	5 to 95
	Storage period	Months @ 3 to 20°C (store in sealed container)	6
	Load resistor	$\Omega$ (recommended)	47 to 100
	Diameter	mm (including label)	20.0
	Height	mm (including foam ring)	17.4
Weight	g	< 16	

**Figure 1 Output Temperature Dependence**

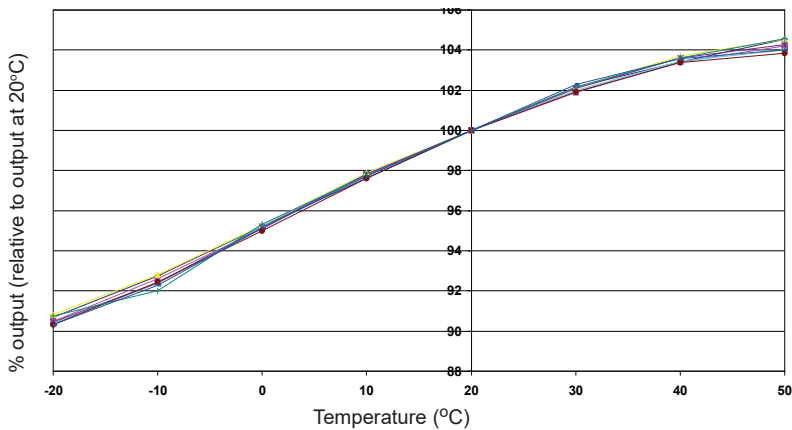
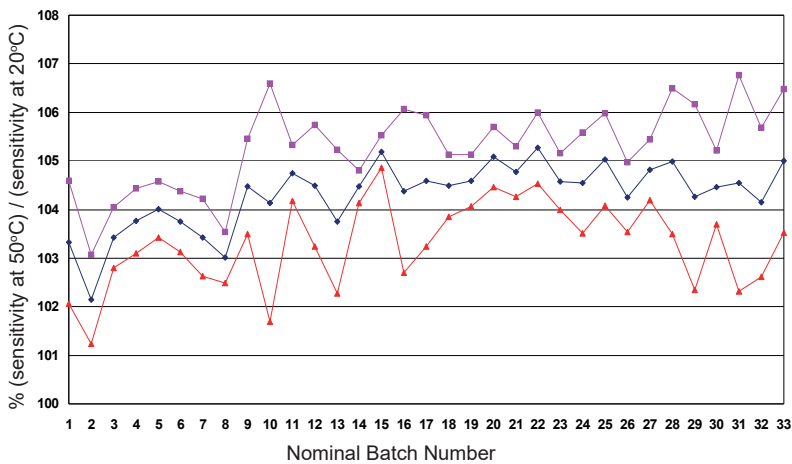


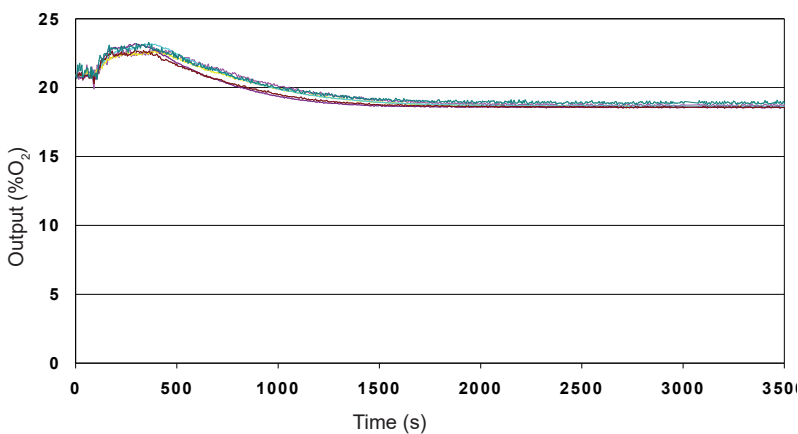
Figure 1 shows the variation in sensitivity caused by changes in temperature. Temperature dependence is very repeatable.

**Figure 2 Sensitivity at 50°C**



This plot of the mean and  $\pm 95\%$  confidence intervals for 34 batches shows superior repeatability of the sensitivity dependence from batch to batch, giving confidence when setting temperature compensation in your gas detector.

**Figure 3 Thermal Transient Performance**



Sensors were thermally shocked from 20°C to -30°C. Consistent manufacture and good design ensure that there are no thermal spikes which can cause an alarm.

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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