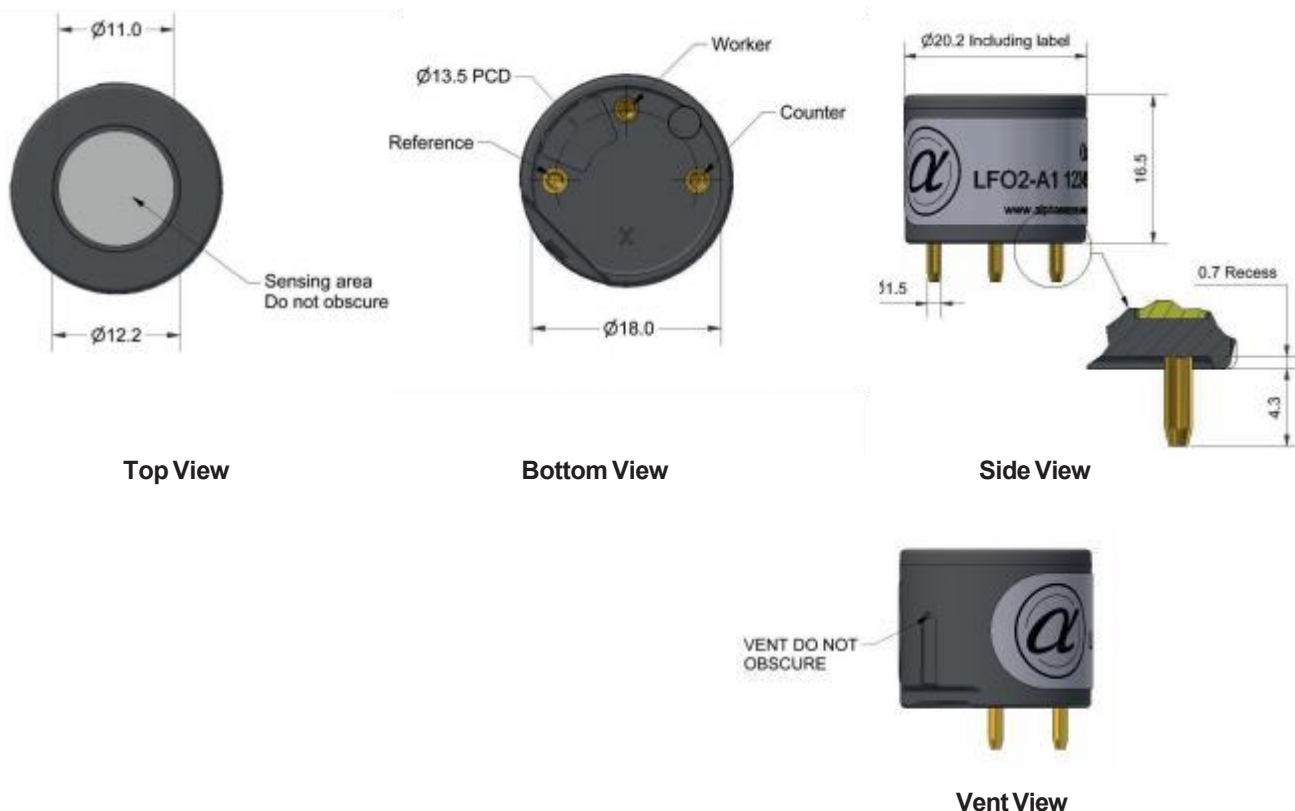


## LFO2-A1 Long-Life Lead-Free Oxygen Sensor

The LFO2-A1 long-life lead-free oxygen sensor is a RoHS compliant Oxygen sensor that is designed for industrial safety and process control applications (0-30% O<sub>2</sub>) with best-in-class baseline and output stability.

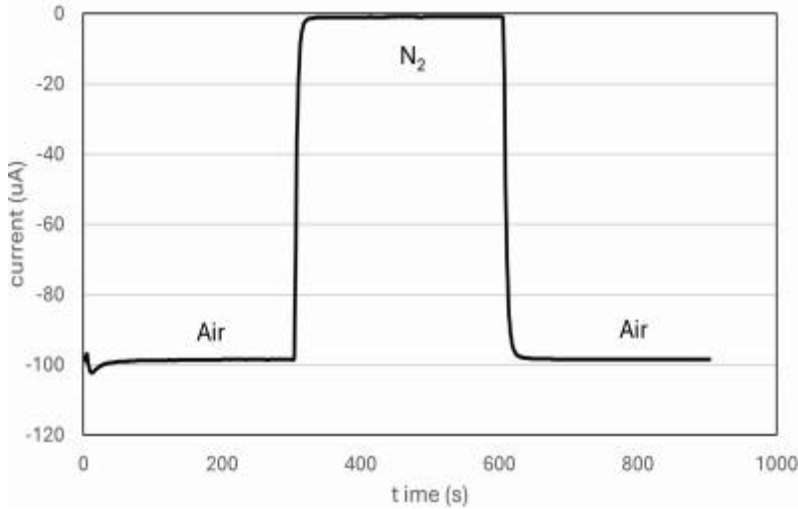
## LFO2-A1 Long-Life Lead-Free Oxygen Sensor



Dimensions are in millimetres ( $\pm 0.15$ mm).

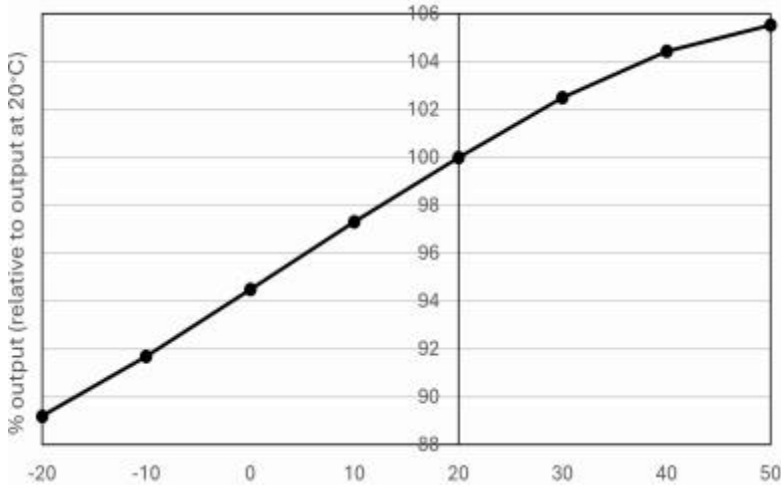
<b>Performance</b>	Output	$\mu$ A 20.9% O <sub>2</sub>	80 to 130
	Zero	% vol O <sub>2</sub>	< 0.3
	Response time	t <sub>90</sub> (s) from 20.9% to 0% O <sub>2</sub>	< 10
		Typical mean response time	6
	Overgas Limit	Maximum % for stable response to gas pulse	95
Range	% O <sub>2</sub>	0 to 30	
<b>Lifetime</b>	Sensitivity @ -20°C	% (output @ -20°C/output @ 20°C)	85 to 95
	Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C)	102 to 108
	Output drift	% change in output @ 3 months	< 1
	Warranty	Months	36
	Operating life	Months until 80% original output of 20.9% O <sub>2</sub>	> 60
<b>Key Specifications</b>	Temperature range	°C	-30 to 50
	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
	Bias voltage	mV	-600
	Diameter	mm (including label)	20.0
	Height	mm (including foam ring)	17.4
	Weight	g	< 6

Figure 1 Response



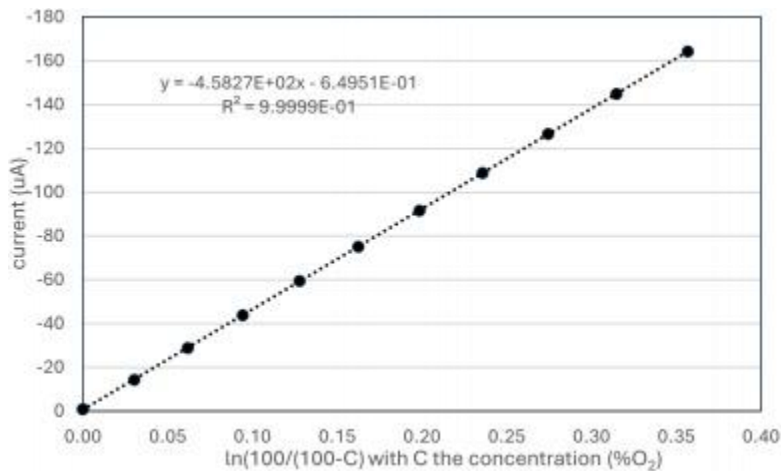
The sensor must be biased at -600mV continuously if instant response is required when switching on the gas detector.

Figure 2 Sensitivity Temperature Dependence



Temperature dependence is very repeatable and, therefore, allows for a simple correction in software.

Figure 3 Linearity (0 - 30% Oxygen)



The signal is nearly linear up to 30% O<sub>2</sub>. Best fit is obtained using the function  $K \cdot \ln(100/(100-C))$ .

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: Unless otherwise stated, all sensors are tested under ambient environmental conditions (20°C, 50% RH, and 1 atm), and performance data are based on these conditions. 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.

In the interest of continued product improvement, we reserve the right to change design features and specifications without prior notification. The data contained in this document is for guidance only. Alphasense Ltd accepts no liability for any consequential losses, injury or damage resulting from the use of this document or the information contained within. (©ALPHASENSE LTD) Doc. Ref. LFO2-A1/SEP24