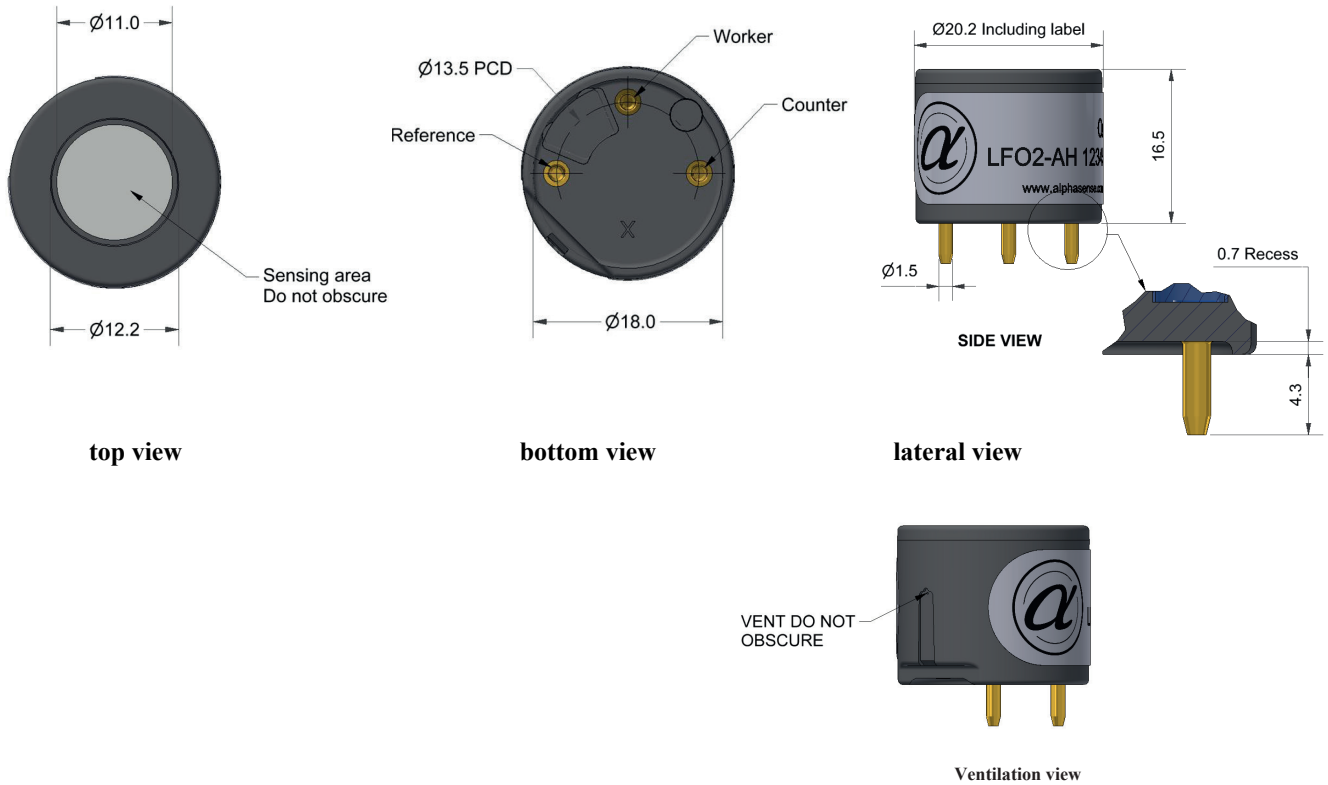


## LFO2 - AH Long Life Without Oxygen Sensor

The LFO2-AH Long-Life Lead-Free Oxygen Sensor is a RoHS-compliant oxygen sensor designed for industrial safety and process control applications (oxygen concentration range of 0-2%), with the best baseline and output stability in its class. This high-output sensor will allow measurements as low as hundreds of ppm.

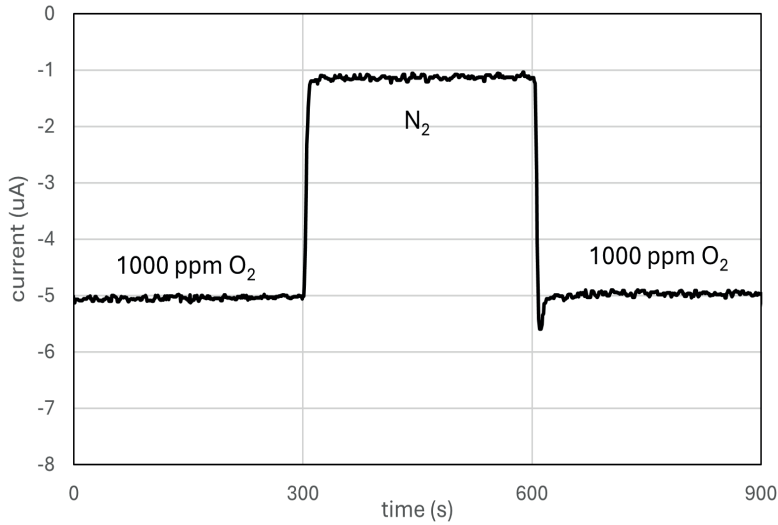
### LFO2-AH Long life lead free oxygen sensor



The unit of size is millimeters ( $\pm 0.15$  mm).

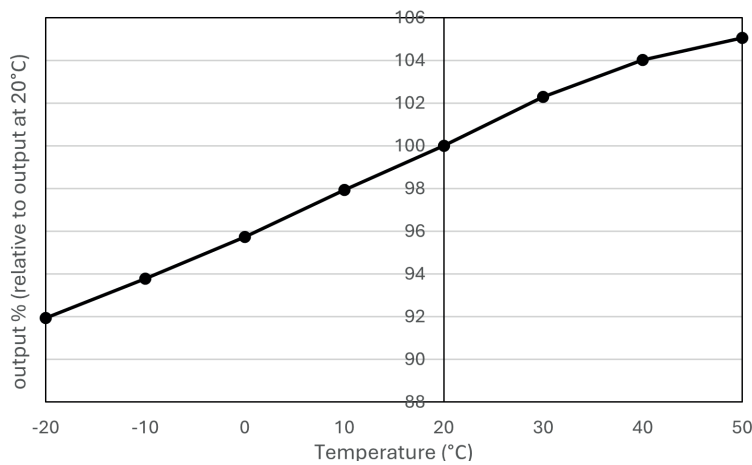
<b>function</b>	output	$\mu\text{A } 2\% \text{ O}_2$	60 ~ 110
	null point	% vol $\text{O}_2$	< 0.1
	response time	From 20.9% to 0% $\text{O}_2$ at $t_{90}$ (s)	< 10
	overload	Typical average response time	6
		Maximum percentage of stable response to gas pulse	21
range	% $\text{O}_2$	2	
<b>life span</b>	Sensitivity @ -20°C	% (Output @ -20°C/Output @ 20°C)	85 ~ 95
	Sensitivity @ 50°C	% (Output @ 50°C/Output @ 20°C)	102 ~ 108
	Output drift	Percentage change in output @ 3 months	< 1   2 >
	warranty	member of the month	
	service life	Output decreased to 20.9% of the number of months when $\text{O}_2$ was 80% of the original output	60
<b>hinge parameter</b>	temperature range	°C	-30~50
	pressure limit	kPa	80 ~ 120
	Humidity range	% RH no condensation (0 ~ 99% RH short term)	5 ~ 95
	Storage period	No. of months@ 3 to 20°C (stored in a sealed container)	6
	bias	mV	-600
	diameter	mm (including labels)	20.0
	Height	mm (including foam ring)	17.4
	weight	g	< 6

Figure 1 Response



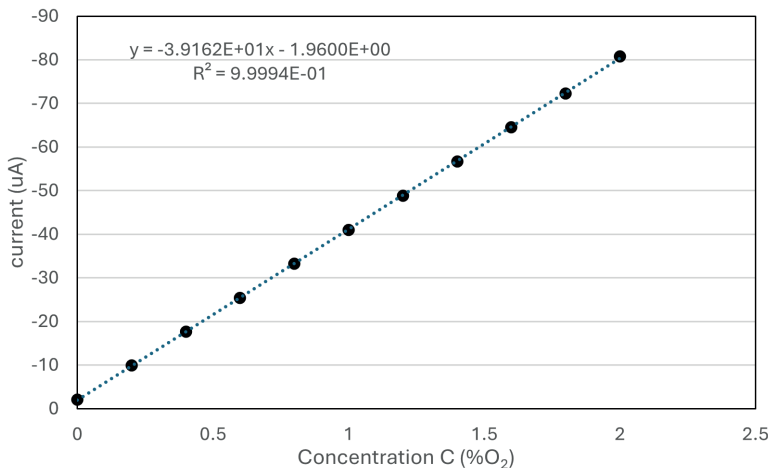
If an immediate response is required when the gas detector is turned on, the sensor must maintain a bias of -600mV.

Figure 2 Sensitivity Temperature Characteristics



The temperature characteristics of the sensor are highly repetitive, so they can be easily calibrated in the software.

Figure 3 Linearity (0-2% Oxygen)



The sensor signal is almost linear over a range of 2% oxygen concentration. The best fit is obtained by 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-AH/JUL24

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