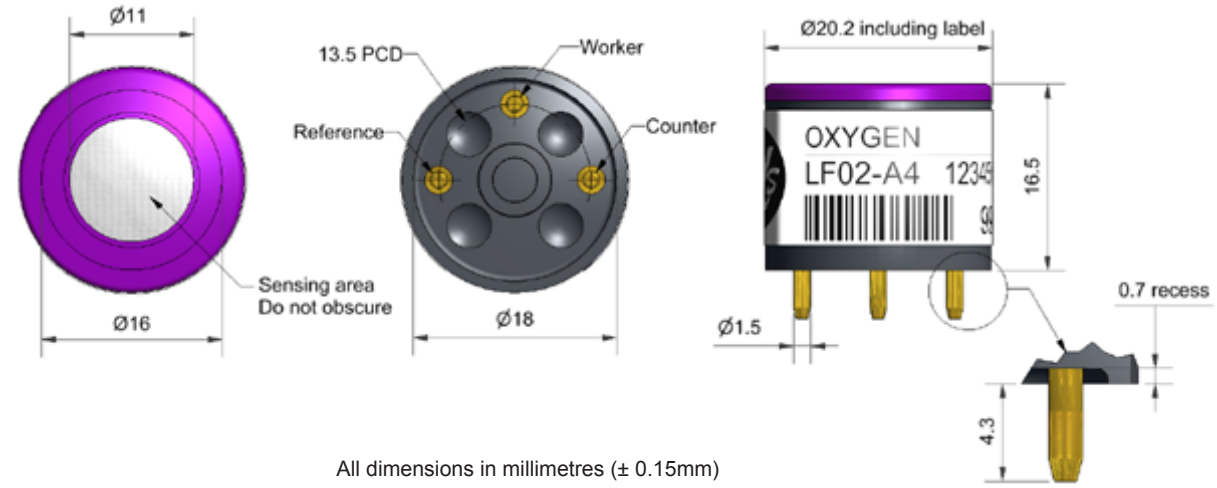
LFO2-A4 Oxygen Sensor

Lead-free 3-Electrode

Technical Specification

Figure 1 LFO2-A4 Schematic Diagram



All dimensions in millimetres (± 0.15mm)

Top View Bottom View Side View

PERFORMANCE			
	Output	µA @ 20.9% O_2	90 to 110
	Response time	t90 (s) from 20.9% to 0 % O_2	< 15
	Linearity	% O_2 deviation @ 10% O_2	< 0.10
LIFETIME	Sensitivity @ -20°C	% (output @ -20°C/output @ 20°C)	80 to 90
	Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C)	105 to 115
	Output drift	% change in output @ 3 months	< 1
	Operating life	months until 85% original output of 20.9% O_2	> 48
KEY SPECIFICATIONS			
	Temperature range	°C	-30 to 50
	Pressure range	kPa	80 to 120
	Humidity range	% rh continuous (0 to 99 %rh short term)	5 to 95
	Storage period	months @ 3 to 20°C (store in sealed pot, open circuit)	6
	Bias voltage	mV	-600
	Diameter	mm (including label)	20.0
	Height	mm (including foam ring)	17.4
	Weight	g	< 6

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, with 47 ohm load resistor, 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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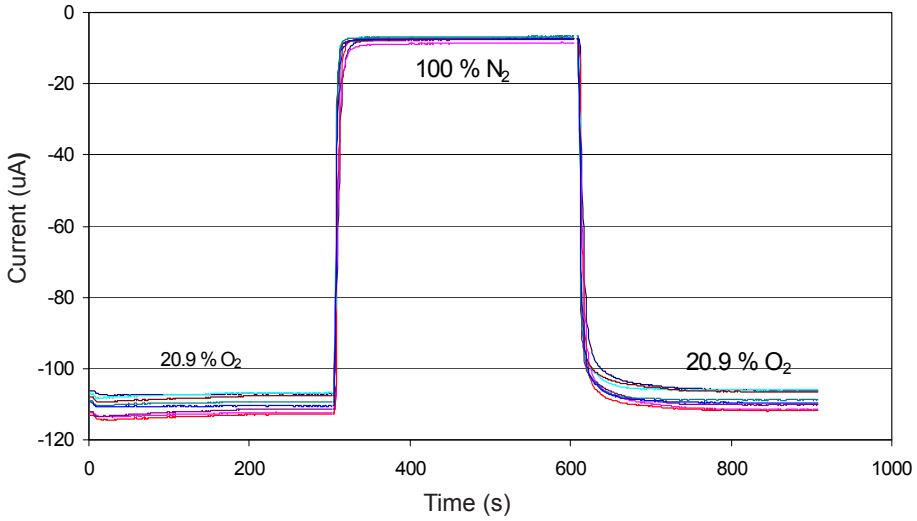
LFO2-A4 Performance Data

Technical Specification

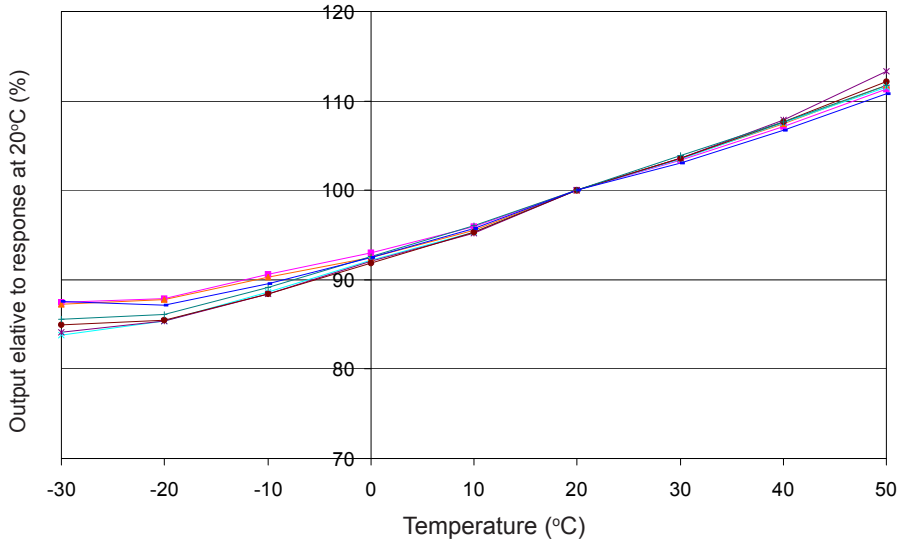
Figure 2 Response to 20.9% Oxygen



Sensor response is fast and repeatable, returning rapidly to the baseline.

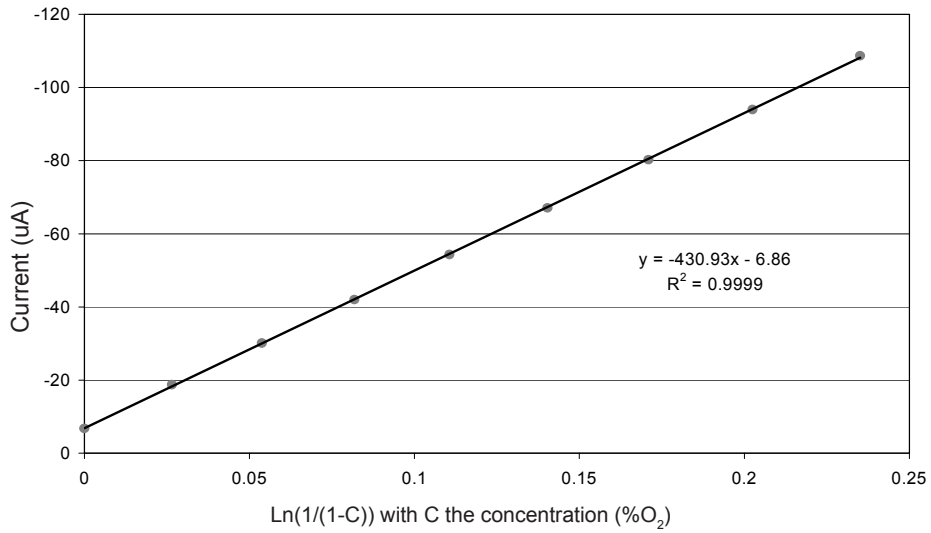
The sensor must be biased at -600mV continuously if instant response is required when swiching on the gas detector.

Figure 3 Sensitivity Temperature Dependence



The very repeatable and nearly linear sensitivity temperature dependence allows for simple correction in software.

Figure 4 Linearity to 20.9% Oxygen



Although the signal is nearly linear up to 30% O_2, theory is proven to be accurate by fitting the output with the function K*Ln(1/(1-C))

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