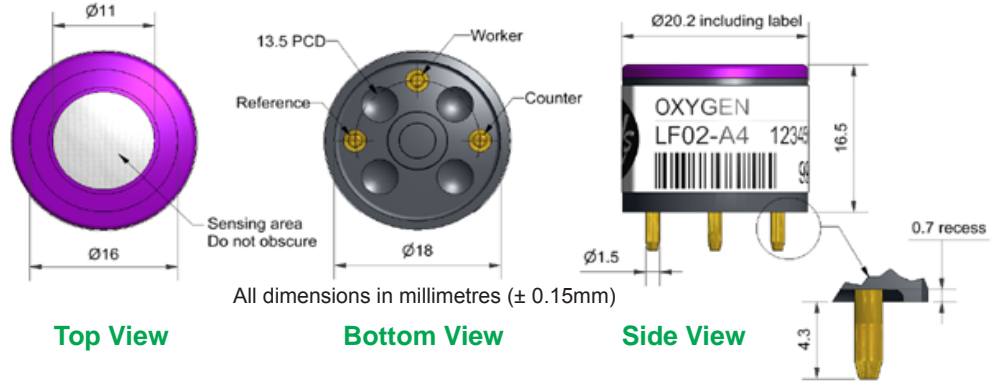




LFO2-A4 Oxygen Sensor Lead-free 3-Electrode



Figure 1 LFO2-A4 Schematic Diagram



PERFORMANCE

Output	$\mu\text{A} @ 20.9\% \text{O}_2$	95 to 115
Response time	t_{90} (s) from 20.9% to 0% O_2	< 20
Zero current	μA in N_2	< 13
Linearity	% O_2 deviation @ 10% O_2	< 0.10

LIFETIME

Output drift	% change in output @ 3 months	< 1
Operating life	months until 85% original output of 20.9% O_2	> 48

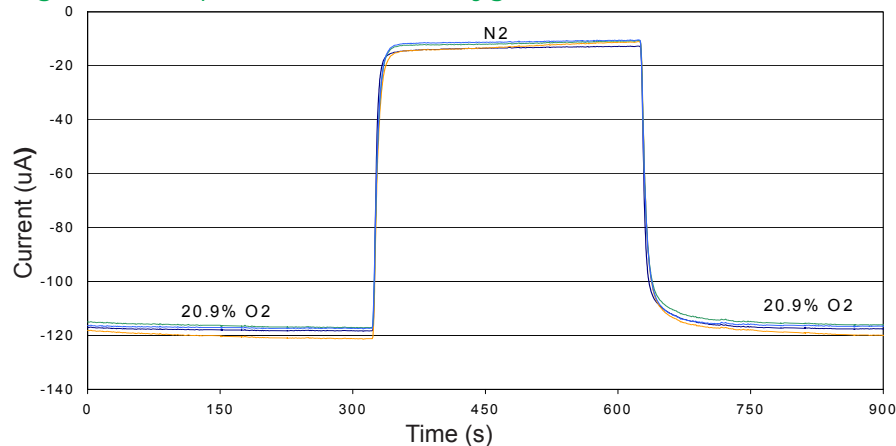
ENVIRONMENTAL

Humidity Sensitivity	% O_2 change: 0% to 95% rh @ 40°C	nd
CO_2 sensitivity	% (change O_2 reading) / % $\text{CO}_2 @ 5\% \text{CO}_2$	nd
Pressure sensitivity	(% change of output)/(% change of pressure) @ 20kPa	nd

KEY SPECIFICATIONS

Temperature range	$^{\circ}\text{C}$	-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

Figure 2 Response to 20.9% Oxygen



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

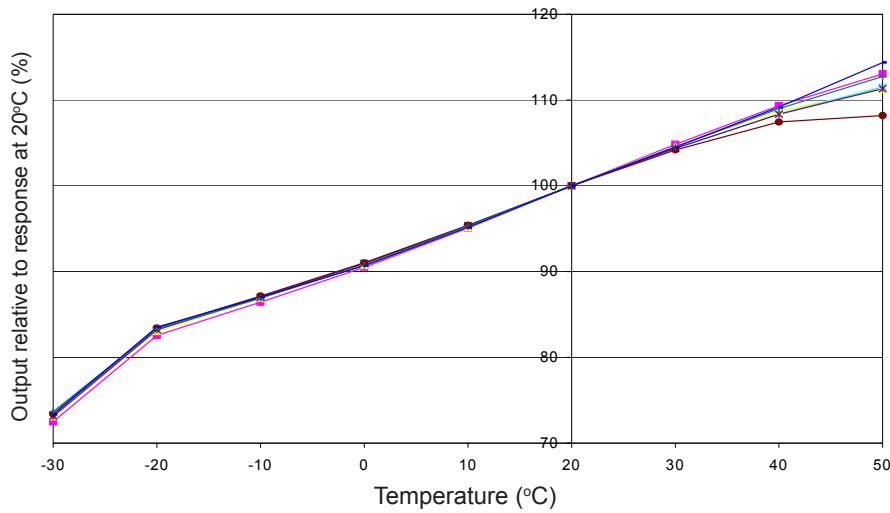
The sensor must be biased at -600mV continuously if instant response is required when switching on the gas detector.



LFO2-A4 Performance Data

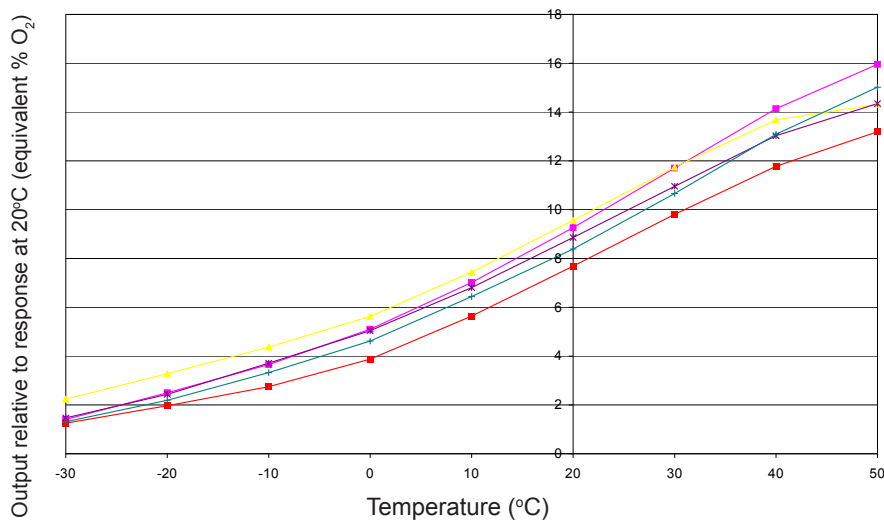
Technical Specification

Figure 3 Sensitivity Temperature Dependence



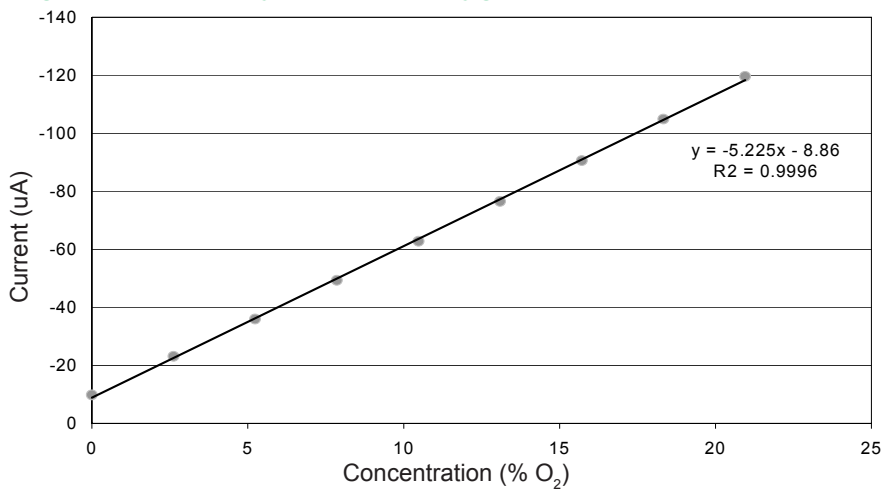
The very repeatable and nearly linear sensitivity temperature dependence allows for simple correction in software.

Figure 4 Zero Temperature Dependence



Although zero current is high for lead-free Oxygen sensors, this design is repeatable and universal software correction can be used.

Figure 5 Linearity to 20.9% Oxygen



Lead-free Oxygen sensors show linear response, removing the need to correct for non-linearity.