

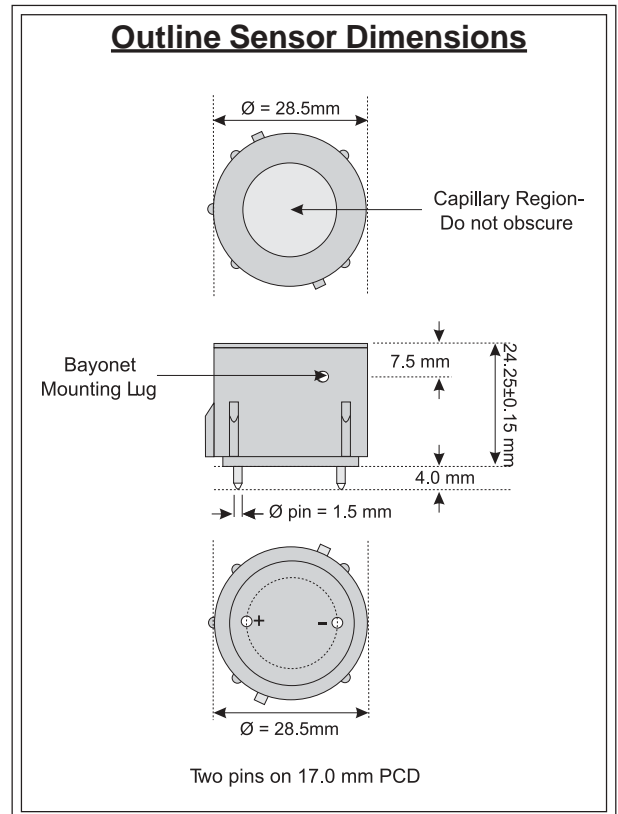
Oxygen CiTiceL[®] Specification



5FO CiTiceL[®]

Performance Characteristics

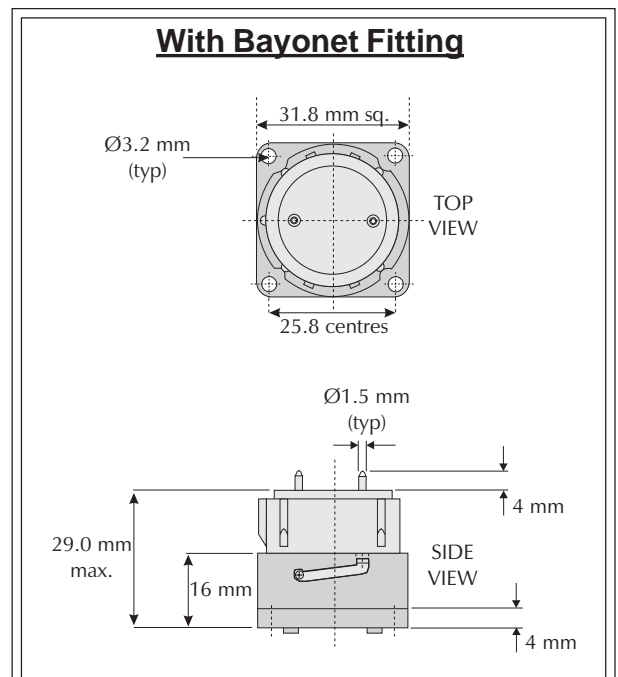
Nominal Range	0-25% Oxygen
Max Overload	30% Oxygen
Expected Operating Life	Two years in Air
Output Signal	0.41 ± 0.05mA in Air
T₉₅ Response Time	<20 seconds
Temperature Range	-20°C to +45°C
Temperature Coefficient	0.2% signal/°C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	<0.02% signal/mBar
Operating Humidity	0 to 99% RH non-condensing
Long Term Output Drift	<5% signal loss/year
Maximum Load Resistor	100Ω
Storage Life	Six months in CTL container
Recommended Storage Temperature	0-20°C



N.B. All performance data is based on conditions at 20°C, 50%RH, and 1013mBar

Physical Characteristics

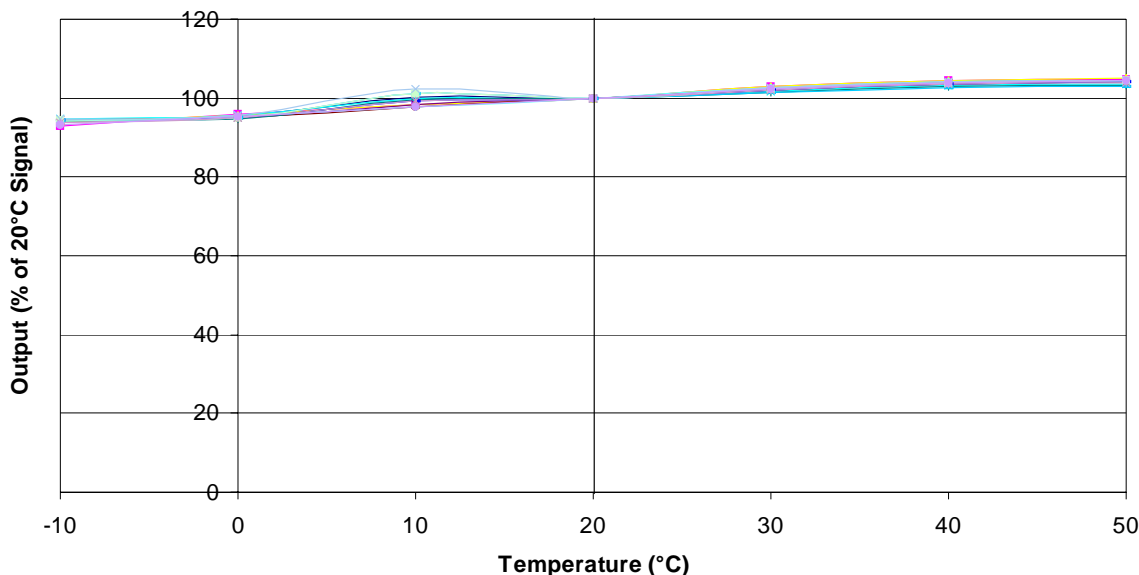
Weight	44 g
Position Sensitivity	None
Storage Life	Six months in CTL container
Recommended Storage Temperature	0-20°C
Warranty Period	12 months from date of despatch



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5FO CiTiceL Typical Temperature Coefficient Data



Linearity

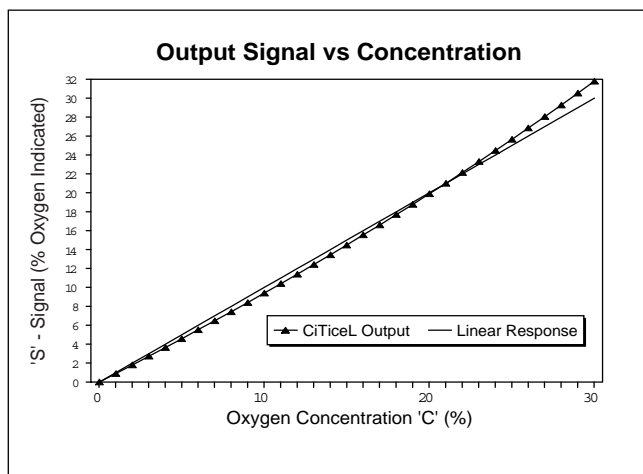
The output signal of an Oxygen CiTiceL follows the relationship:

$$S = K \log_e 1/(1-C)$$

where:

- S = Output signal;
- C = Fractional oxygen concentration;
- K = a constant for the sensor.

For most applications the deviation from a linear response will be insignificant, and no compensation needed. For example, the graph below shows the output of a sensor calibrated in air (20.9% O₂). In this case the maximum error in the 0-25% range is ≈0.5% at around 10% O₂.



Cross-sensitivity Data

Gas	Concentration	Balance	%O ₂ equivalent
Hydrocarbons	100%	n/a	0
Methane	100%	n/a	0
Hydrogen	100%	n/a	< -2%
Carbon monoxide	20%	Nitrogen	<-0.5%

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Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over time.