2FO Flue Gas CiTiceL®

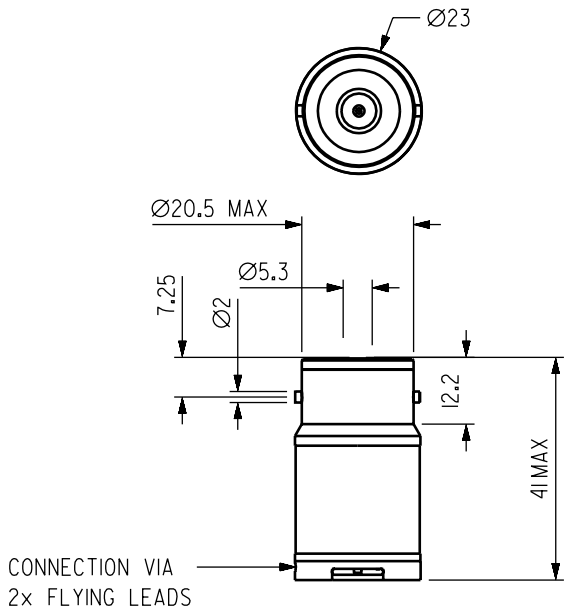
Performance Characteristics

Nominal Range	0-25% Oxygen
Max Overload	30% Oxygen
Expected Operating Life	Two years in Air
Output Signal	0.41 ± 0.07mA in Air
T_{95} Response Time	<10 seconds (see note)
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
Warranty Period	12 months from date of despatch

Note: Signal <0.1% O_2 after 3mins in zero oxygen

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

Outline Dimensions



All tolerances ±0.15mm unless otherwise stated.

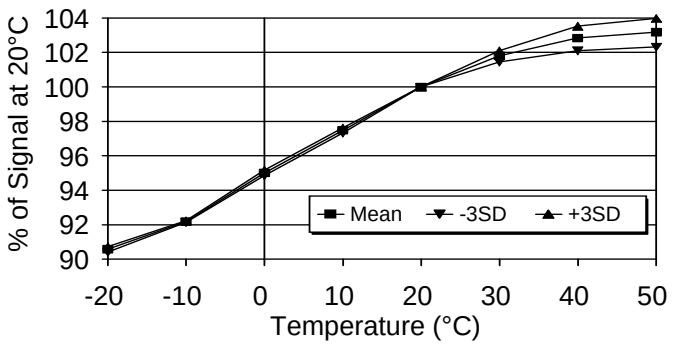
Temperature Behaviour

The output of a 2FO CiTiceL varies slightly with gradual changes in temperature. The graph shows the behaviour of a batch of 20 sensors. Output was measured at a range of temperatures and expressed as a percentage of the signal at 20°C.

Statistically, for a sample of this size, the range in values observed will normally fall within a range three times the standard deviation above or below the mean. Assuming this sample is typical, then the temperature behaviour of all 2FO CiTiceLs will fall in the band +3SD to -3SD.

2FO CiTiceL

Temperature Coefficient Data



Linearity

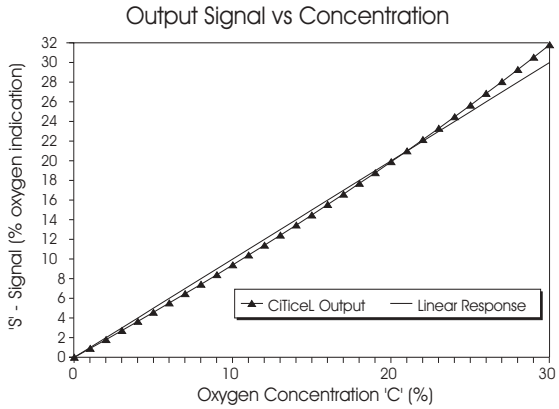
The output signal of an Oxygen CiTiceL follows the relationship:

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

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% O_2). In this case the maximum error in the 0-25% range is ≈0.5% at around 10% O_2.



Ordering Information

The 2FO Oxygen CiTiceL is available with either long or short flying leads. The ensure the appropriate option is supplied care must be taken to provide the correct code when ordering.

2FO Oxygen CiTiceL with standard 110mm flying leads	AA625-180
2FO Oxygen CiTiceL with 300mm flying leads	AA625-230