



## 2FO Flue Gas CiTiceL®

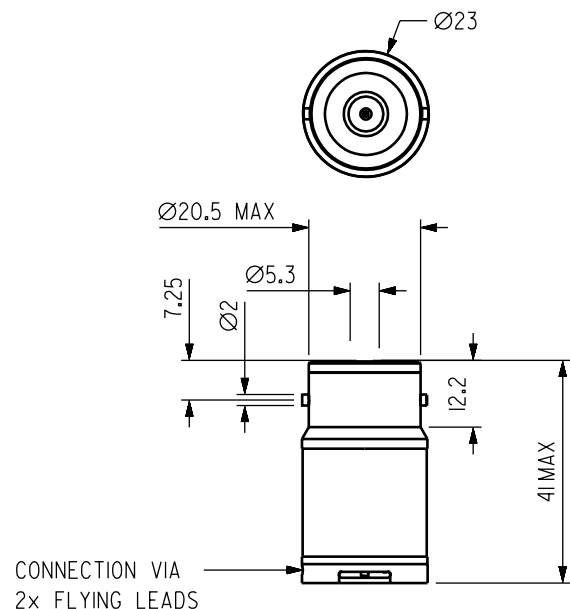
### Performance Characteristics

<b>Nominal Range</b>	0-25% Oxygen
<b>Max Overload</b>	30% Oxygen
<b>Expected Operating Life</b>	Two years in Air
<b>Output Signal</b>	0.41 ± 0.07mA in Air
<b>T<sub>95</sub> Response Time</b>	<10 seconds (see note)
<b>Temperature Range</b>	-20°C to +45°C
<b>Temperature Coefficient</b>	0.2% signal/°C
<b>Pressure Range</b>	Atmospheric ± 10%
<b>Pressure Coefficient</b>	<0.02% signal/mBar
<b>Operating Humidity</b>	0 to 99% RH non-condensing
<b>Long Term Output Drift</b>	<5% signal loss/year
<b>Maximum Load Resistor</b>	100Ω
<b>Storage Life</b>	Six months in CTL container
<b>Recommended Storage Temperature</b>	0-20°C
<b>Warranty Period</b>	12 months from date of despatch

**Note:** Signal <0.1% O<sub>2</sub> 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.

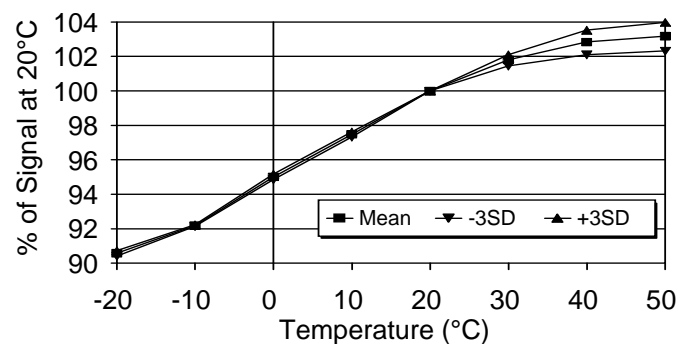
### Temperature Behaviour

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:

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

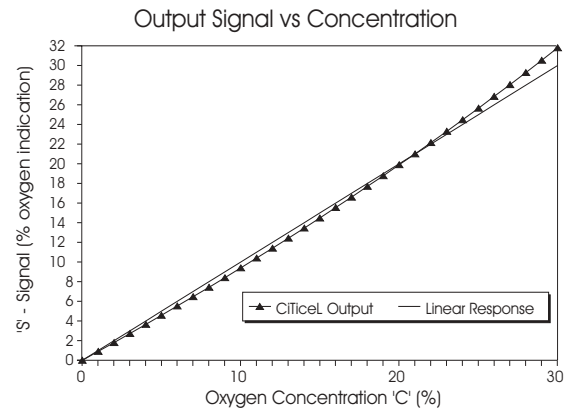
where:

**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<sub>2</sub>). In this case the maximum error in the 0-25% range is ≈0.5% at around 10% O<sub>2</sub>.



## 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

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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.