



AO2 CiTiceL[®]

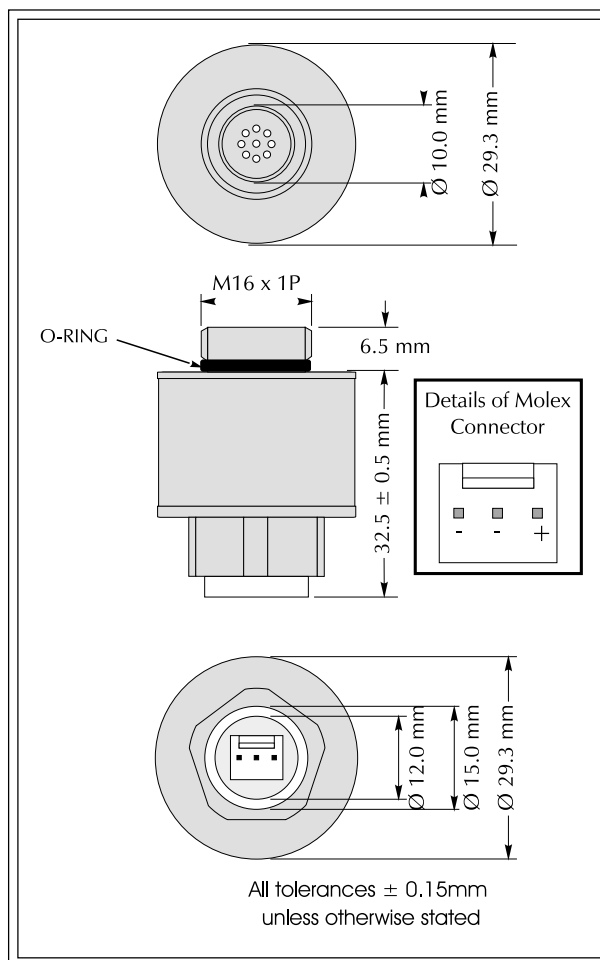
with Molex connector

Performance Characteristics

Output	9 - 13mV in Air
Range	0-100% O ₂
Resolution	0.01% O ₂
Expected Operating Life	360000%O ₂ hrs at 20°C 286000%O ₂ hrs at 40°C or 2 years in air at STP
T₉₀ Response Time	<5 seconds
T_{99.5} Response Time*	<40 seconds
Signal in 100%O₂	100±1%
Linearity	Linear 0-100% O ₂
Zero Offset	<20µV
Temperature Range	-20°C to +50°C
Temperature Compensation	<2% variation from 0°C to 40°C (see graph)
Differential Pressure Range	0-500mbar Max
Absolute Pressure Range	500-2000mbar
Relative Humidity Range	0 to 99% non-condensing
Long Term Output Drift	<10% signal loss/year
Recommended Load Resistor	Min 10KΩ
Warranty Period	12 month from date of despatch

* T_{99.5} response is equivalent to a change in concentration from 20.9% O₂ to 0.1% O₂

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



NOTE

Molex header used in sensor is MOLEX 22-29-2031
Suggested mating parts are:
Molex 22-01-2035: 3-way housing
Molex 08-56-0110: crimp terminals
AO2 CiTiceL to be assembled into application 'finger tight' only



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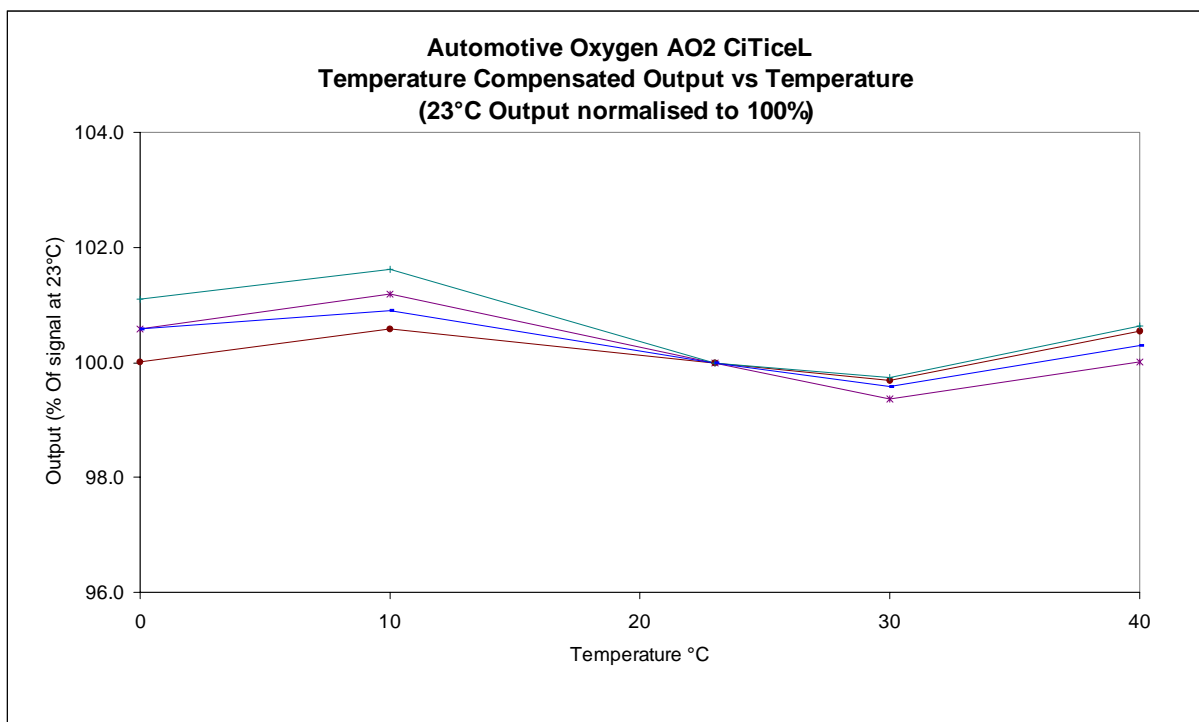
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Temperature Behaviour

The output of an AO2 CiTiceL varies with gradual changes in temperature, but incorporates a thermistor to compensate for these changes. The thermistor gives the AO2 a very stable output over a wide temperature range.

The graph below shows the typical output behaviour of AO2 sensors over the range 0°C to +40°C.



Cross-sensitivity

The AO2 has been tested for cross-sensitivity to a number of gases likely to be present in an automotive exhaust sample. The gas concentrations used and the response of the AO2 have been summarised below.

Gas	AO2 Output (%O ₂ equivalent)	Gas	AO2 Output (%O ₂ equivalent)
16%CO ₂ / Balance N ₂	<0.01	6%CO / Balance N ₂	<0.002
5% H ₂ / Balance N ₂	<0.001	3000ppm NO / Balance N ₂	<0.002
2000ppm n-hexane / Balance N ₂	<0.01		

These figures show that of the gases tested none show a sufficiently large cross-sensitivity to cause any inaccuracy in readings. In addition the baseline was unaffected by exposure to these gases.

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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.