

# Product Data Sheet

## Product Datasheet DO2 Oxygen Sensor

### Document Purpose

The purpose of this document is to present the performance specification of the DO2 oxygen gas sensor.

This document should be used in conjunction with the Product Data Handbook (autooxops.pdf) and the Product Safety Datasheet (PSDS 4).

The data provided in this document are valid at 20°C, 50% RH and 1013 mBar for 3 months from the date of sensor manufacture.

Output signal can drift below the lower limit over time. For guidance on the safe use of the sensor, please refer to the Product Data Handbook (autooxops.pdf).

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### Key Features & Benefits

- Molex Connector
- Linear Output from 0-100% Oxygen

### Technical Specifications

#### MEASUREMENT

<b>Operating Principle</b>	Partial Pressure Electrochemical
<b>Measurement Range</b>	0-100% O <sub>2</sub>
<b>Output*</b>	25 - 35 mV in 210 mBar O <sub>2</sub>
<b>Response Time (T<sub>90</sub>)*</b>	< 30 s
<b>Baseline Offset*</b>	< 100 μV
<b>Resolution</b>	0.01% O <sub>2</sub>
<b>Linearity</b>	Linear 0-100% O <sub>2</sub>

#### ELECTRICAL

<b>Connector</b>	3 Pin Molex header (MOLEX 22-29-2031)
<b>Recommended Mating Part</b>	Molex 3-Way Housing (MOLEX 22-01-2035) Molex Crimp Terminals (MOLEX 08-45-0110)

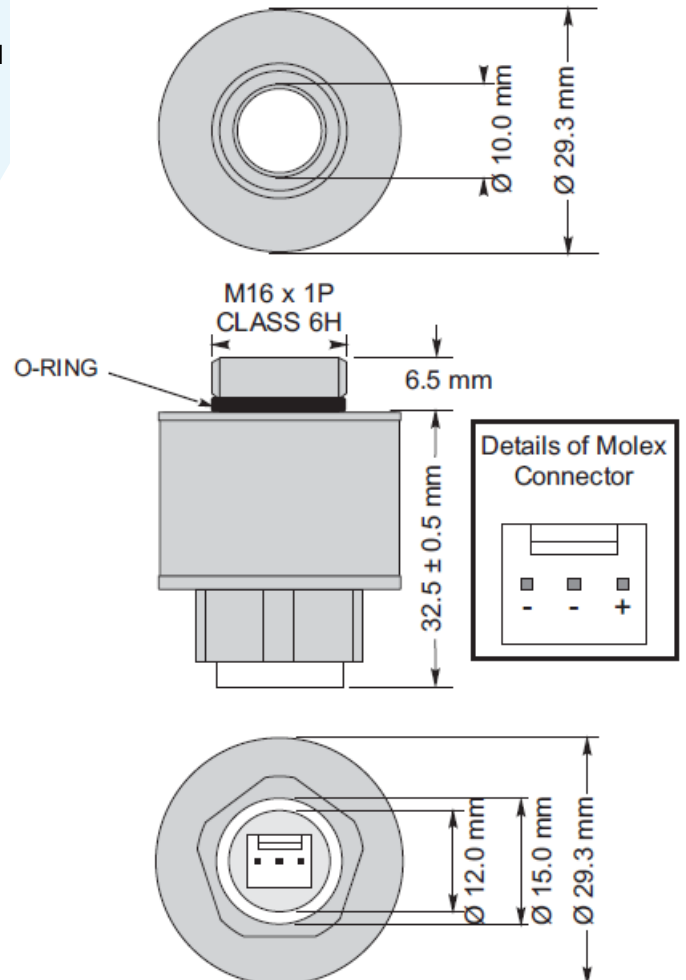
#### ENVIRONMENTAL

<b>Typical Application</b>	Checking of SCUBA equipment prior to a dive - not for used during a dive
<b>Operating Temperature Range</b>	-20°C to +50°C
<b>Operating Pressure Range</b>	Atmospheric ± 10%
<b>Operating Humidity Range</b>	0 - 99% RH non-condensing

#### LIFETIME

<b>Long Term Output Drift in 100% O<sub>2</sub></b>	<5% signal loss/year
<b>Expected Operating Life</b>	2 years in 20.9% O <sub>2</sub> at 22°C ± 2°C

### Product Dimensions



All dimensions in mm

All tolerances ±0.15 mm unless otherwise stated

\* Specifications are valid at 20°C, 50% RH and 1013 mBar, using City Technology recommended circuitry. Performance characteristics outline the performance of sensors supplied within the first 3 months. Output signal can drift below the lower limit over time.

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## **Poisoning**

CiTiceLs are designed for operation in a wide range of environments and harsh conditions. However, it is important that exposure to high concentrations of solvent vapours is avoided, both during storage, fitting into instruments and operation.

When using sensors with printed circuit boards (PCBs), degreasing agents should be used before the sensor is fitted. Do not glue directly on or near the CiTiceL as the solvent may cause crazing of the plastic.

## **Mechanical Installation**

When installing the sensor, it must only be screwed in hand-tight and a gas tight seal ensured. Spanners and similar mechanical aids may not be used, as excessive force may damage the sensor thread.

### **SAFETY NOTE**

This sensor is designed to be used in safety critical applications. To ensure that the sensor and/or instrument in which it is used, are operating properly, it is a requirement that the function of the device is confirmed by exposure to target gas (bump check) before each use of the sensor and/or instrument. Failure to carry out such tests may jeopardize the safety of people and property.

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