

# Product Data Sheet

P/N : S+DOX

**S+DOX**  
Oxygen Sensor (O<sub>2</sub>)

**Introduction** The S+DOX is a partial pressure O<sub>2</sub> sensor suitable for the checking of scuba/diving equipment. (Not intended for use during actual dive)

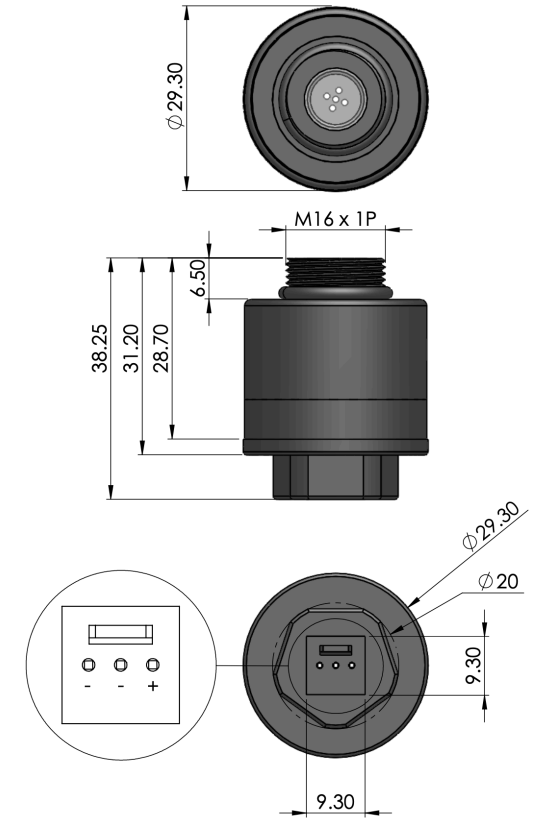
**Key Features:** Fast response, highly stable, 0-100% measurement range, on-board temperature compensation

## Performance Characteristics

Output signal	9-14mV in Air @STP
Zero Current (uV)	< 0.20uV
T90 Response Time	<10 seconds
Signal in 100%O <sub>2</sub>	100%±1%O <sub>2</sub>
Measurement Range	0 - 100% Oxygen
Temperature Compensation (20-40°C) (5-40°C)	
Linearity	Linear
Recommended Load Resistor	Min 10KOhms

## Environmental Details

Temperature Range Continuous	-20°C to +50°C
Pressure Range	500 to 2000 mbar
Operating Humidity Range	0-99% non condensing



### Product Dimensions

All dimensions in mm  
All tolerances ±0.15 mm

**Important Note:**

All performance data is based on conditions at 20°C, 50%RH and 1 atm, using DD Scientific recommended circuitry.

Lifetime Details	
Long Term Output Drift	< 5% per annum
Recommended Storage Temp	0°C to 20°C
Expected Operating Life	375,000%O <sub>2</sub> hrs in 20.9%O <sub>2</sub> @ STP
Standard Warranty	24 months from date of dispatch

Intrinsic Safety Data	
Maximum current in normal operation (pure O <sub>2</sub> )	0.01 A
Maximum o/c Voltage (10 to 100% O <sub>2</sub> )	0.9 V
Maximum s/c Current (10 to 100% O <sub>2</sub> )	0.5 A

### Cross Sensitivity Data

Toxic gases at TLV levels will have no cross-sensitivity effect on DD-Scientific oxygen sensors. At very high levels (i.e. percent levels), highly oxidising gases (e.g. ozone, chlorine) will interfere to the extent of their oxygen equivalent, but most other commonly occurring gases will have no effect.

### Acid Gases

**IMPORTANT NOTE:** Acid gases such as CO<sub>2</sub> and SO<sub>2</sub> will be absorbed by the electrolyte and tend to increase the flux of oxygen to the electrode. This gives an enhanced oxygen signal of approximately 0.3% of signal per 1% CO<sub>2</sub>. DD-Scientific oxygen sensors are not suitable for continuous operation in concentrations of CO<sub>2</sub> above 25%.

**WARNING:** By the nature of the technology used, any electrochemical gas sensor offered by DD Scientific can potentially fail to meet specification without warning. Although DD Scientific Ltd makes every effort to ensure the reliability of our products of this type, where life safety is a performance requirement of the product, we recommend that all sensors and instruments using these sensors are checked for response to gas before use.

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