

O2 30 Uni

Electrochemical Gas Sensor for Oxygen

3-electrode sensor for all safety applications

Class leading stability | Highly selective | Fast response | Very stable baseline

Performance Characteristics	
Measurement Range	0 - 30 %
Signal in air	130 ± 30 µA in Air
Response Time (T ₉₀)	≤ 10 s at 3 min gas exposure
Signal without air	< 1 %
Linearity	Linear between 5-30 % Oxygen

* at midpoint sensitivity

Operating Conditions	
Temperature Range	-40°C to +60°C
Humidity Range	10% to 90% r.h. non-condensing
Pressure Range	800 – 1200 hPa
Recommended Load Resistor	0 Ohm
Bias Voltage	-600 mV
Recommended Orientation	sensor front pointing downwards or sideways

Lifetime	
Long Term Output Drift	< 2 % per 12 months
Expected Operating Life	> 60 months in air
Recommended Storage conditions	5 – 20°C in sealed container
Warranty	24 months from date of dispatch

Performance and lifetime data are based on conditions at 20°C, 50% r.h. and ambient pressure

IMPORTANT NOTE:

The rear side of the sensor must be adequately ventilated inside the device.

Available Formats	
Name	Drawing
Part Number	
Weight	
4S AN312400 ~4.6 g	
7S AN312700 ~6.9 g	
Mini AN312000 ~2.4 g	
Classic 4 pin AN312C00 ~3.1 g	
Classic 8 pin compatible AN312B00 ~3.1 g	
Smart 8p with EPROM AN312800 ~3.1 g	
Other customer specific formats upon request	

Connection should be made via PCB sockets only.
Soldering to pins will render your warranty void.

Intrinsic Safety Data / PSDS	
Maximum o/c Voltage	< 1.1 V
Maximum s/c Current	< 1.0 A
Product Safety Datasheet (PSDS)	Acid electrolyte

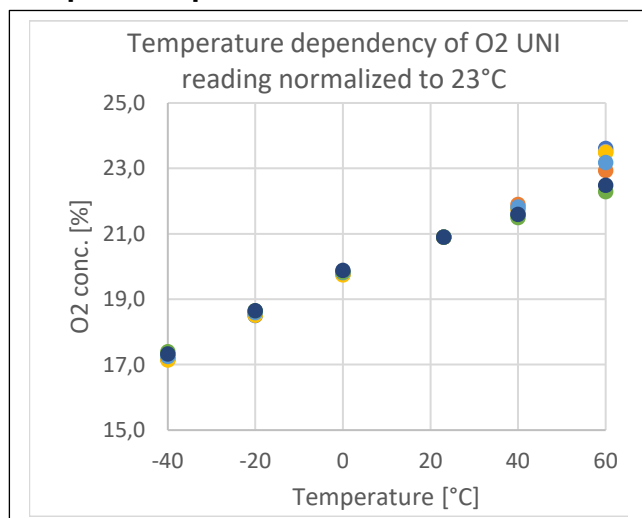
SAFETY NOTE

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. In stationary installations this needs to be repeated regularly according to national and local regulations. Failure to carry out such tests may jeopardize the safety of people and property.

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Temperature performance



Temperature Coefficients	
Temperature	Reading relative to 20 °C
-40 °C	83 %
-20 °C	89 %
0 °C	95 %
23 °C	100 %
40 °C	104 %
60 °C	110 %

Temperature data are taken from a typical batch.
(95% confidence interval?)

Cross Sensitivity & Filter	
Gas concentration	Reading after 5 min
Hydrogen 5000 ppm in air	-2 % O2 Signal
Hydrogen 4 % in N2	7.5 %
Hydrogen 50 % in N2	120 %
Helium *	0
Chemical Filter	Yes

Signals below baseline are stated as 0

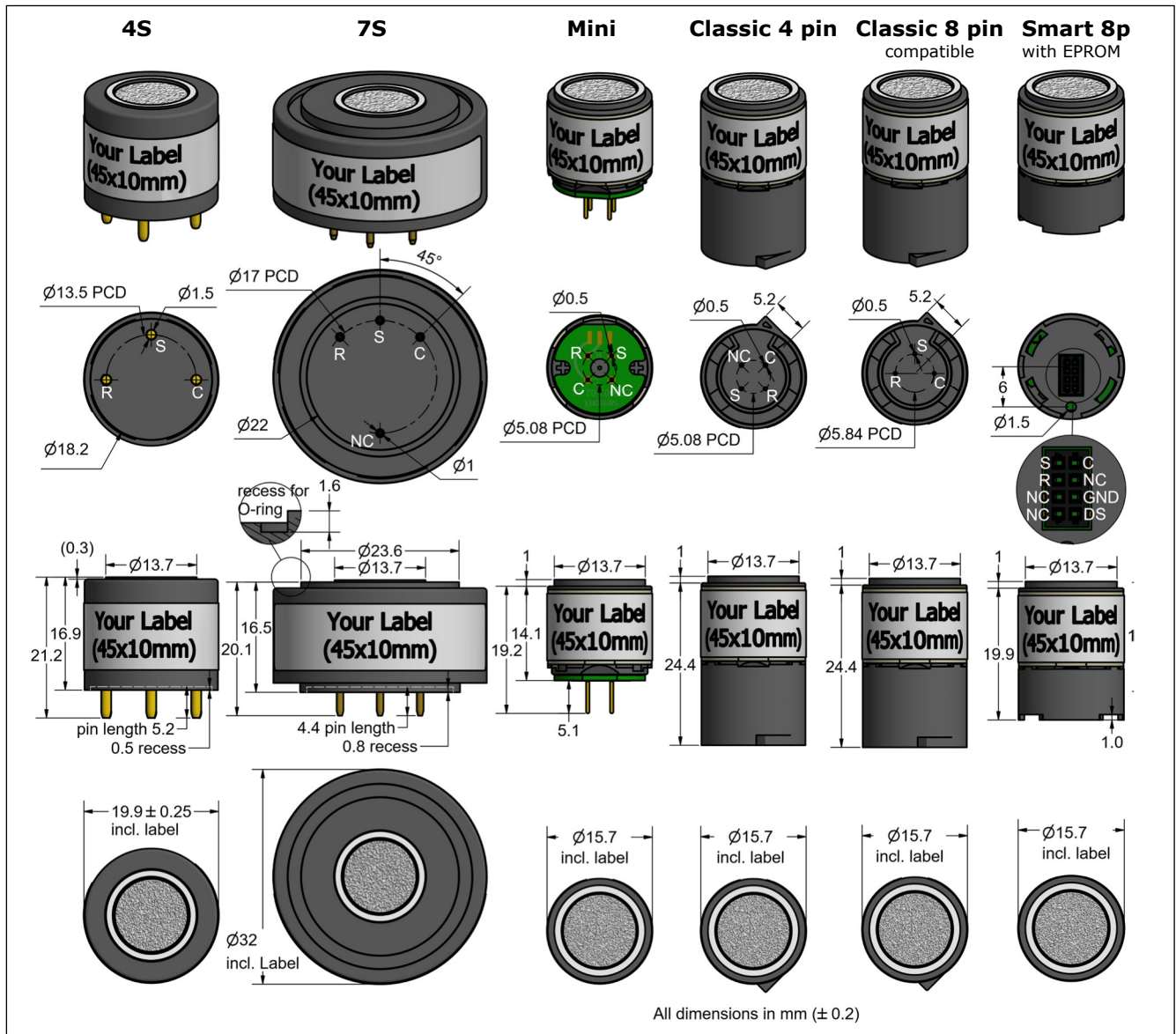
* Light gases distort the measurement result and require separate calibration.

Whilst Sensorix cells are designed to be highly specific to the gas they are intended to measure, they will still respond to some degree to various other gases. The table above is not exclusive and other gases not included in the table may still cause a sensor to react. The cross-sensitivity values quoted are based on tests conducted on a small number of sensors. They are intended to indicate sensor response to gases other than the target gas. Sensors may behave differently with changes in ambient conditions and any batch may show significant variation from the values quoted. Therefore, interfering gases should not be used for calibration.

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Product dimensions (Höhe Grafik 14.3 cm)



Poisoning

Sensorix cells are designed for operation in a wide range of environments and harsh conditions. However, it is important that exposure to high concentrations of solvent vapors 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.

Recycling

At the end of the product's life, do not dispose of any electronic sensor, component, or instrument in the domestic waste, but contact the instrument manufacturer or Sensorix for disposal instructions. Sensorix will take back sensors for professional recycling.

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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.

