alphasense

AMETEK®

Ensure worker safety with **ALPHASENSE O_2 SENSORS**

Reliable sensors that measure oxygen levels with unparalleled accuracy and precision. For safety applications in hazardous environments, where gas monitoring is vital.

UNLOCKING EXCELLENCE IN GAS DETECTION

O2-A2-GLF Lead-Free Galvanic Sensor

The NEW O2-A2-GLF is a galvanic oxygen sensor designed for compliance and reliability.

Built on Alphasense's proven leak-free platform, it offers a drop-in replacement for traditional lead-based sensors without requiring changes to hardware or electronics.

With RoHS compliance and a two-year operational life, this sensor helps manufacturers meet regulatory requirements while maintaining performance standards.

Models	
O2-A2-GLF	RoHS compliant 2-year lifetime

Key benefits

Lead-free technology supports environmental compliance and future-proofing.

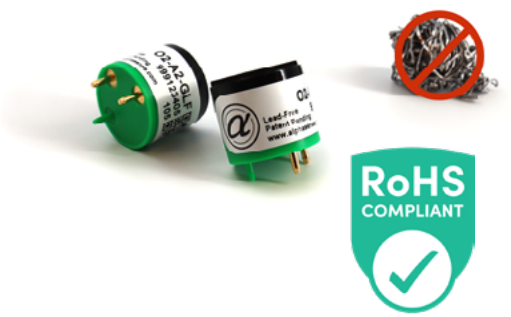
Proven leak-free construction reduces risk of instrument damage and expensive repairs.

Drop-in compatibility simplifies sensor replacement, eliminating costly redesigns.

Stable, zero-bias operation ensures accurate oxygen measurement.

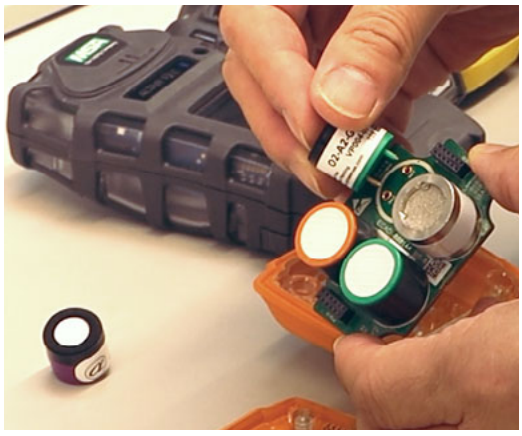
Two-year lifetime for dependable performance in safety-critical environments.

Sensor highlights



Lead-free, RoHS compliant sensor technology.

Simple drop-in replacement of lead-based O2-A2 sensors.



Trusted Lead-Based Galvanic Sensors

Our lead-based sensors are the benchmark for galvanic oxygen sensing in safety applications. Known for their leak-free design and consistent performance, they provide accurate oxygen monitoring across a wide range of conditions.

Different models provide specific functionality and variable lifetimes, for example:

- O2-A1: when O_2-sensitivity is more important than long life
- O2-C2: built-in filter for combustion analysis applications
- O2-G2: half-height size for wearable and portable devices

Models	
O2-A1	1-year lifetime Extreme sensitivity
O2-A2	2-year lifetime
O2-A3	3-year lifetime
O2-C2	Combustion analysis with built-in filter
O2-G2	Half height design for portable devices

Key benefits

Patent pending leak-free design reduces failure rates and protects instruments.

Stable, zero-bias operation ensures accurate oxygen measurement.

Multiple models for specific applications.

Proven track record in demanding industrial environments.

Accurate and consistent oxygen measurements ensure worker safety.

Sensor highlights

A variety of models offer different features and benefits.

Leak-free design protects sensitive, pricely electronic components.

LFO2 Long-Life Lead-Free Sensor

The LFO2 series of sensors uses amperometric technology to deliver extended service life and lead-free compliance.

Available in three models tailored for different oxygen ranges, these sensors are ideal for applications requiring precise measurement and minimal maintenance.

With up to five years of operational life, LFO2 sensors help reduce total cost of ownership.

Models	
LFO2-A1	0–30% O_2 for safety applications
LFO2-AL	Up to 95% O_2 for critical applications
LFO2-AH	0–2% O_2 for sensitive measurements

Key benefits

Lead-free design meets environmental and regulatory standards.

Extended lifetime (up to five years) lowers replacement frequency.

Multiple models for specific oxygen ranges (0–2%, 0–30%, up to 95%).

Reliable performance for sensitive and critical applications.

Accurate and consistent oxygen measurements ensure worker safety.

Sensor highlights

Extended five-year lifetime offers peace-of-mind in suitable applications.

Different models provide reliable readings in specific conditions.

The Right Fit for Your Application

Alphasense oxygen sensors are engineered to deliver reliable and accurate oxygen monitoring for safety-critical environments. The range includes three product lines based on different sensor technologies – **galvanic lead-free**, **galvanic lead-based**, and **amperometric lead-free**. Each model offers distinct features to address specific operational requirements, from RoHS compliance to extended service life.

Designed with innovation and practicality in mind, Alphasense oxygen sensors help you maintain safety and meet regulatory standards with confidence.

Why Choose Alphasense O_2 Sensors?

1

Precision:
Accurate oxygen measurement you can trust in safety-critical environments.

2

Flexibility:
Wide variety of models and technologies to match diverse safety application requirements.

3

Reliability:
Robust design that delivers consistent performance over years of operation.

4

Expertise:
Backed by decades of sensor innovation and proven reliability in the field.

O_2 Sensor Comparison

Model	O2-A2-GLF	O2-A1	O2-A2	O2-A3	O2-C2	O2-G2	LFO2-A1	LFO2-AL	LFO2-AH
Sensor Technology	Galvanic	Galvanic	Galvanic	Galvanic	Galvanic	Galvanic	Ampero-metric	Ampero-metric	Ampero-metric
Lead-free	Yes	No	No	No	No	No	Yes	Yes	Yes
Compliance	RoHS compliant	No	No	No	No	No	RoHS compliant	RoHS compliant	RoHS compliant
Bias Required	No	No	No	No	No	No	-600 mv	-600 mv	-600 mv
Power Required	No	No	No	No	No	No	Yes	Yes	Yes
Warm-up Time	None	None	None	None	None	None	1-2 hours	1-2 hours	1-2 hours
Operational Life	2 years	1 year	2 years	3 years	2 years	2 years	Up to 5 years	Up to 5 years	Up to 5 years
Oxygen Range	0-30%	0-30%	0-30%	0-30%	0-30%	0-30%	0-30%	Up to 95%	0-2%
Design Features	Leak-free, drop-in	Leak-free	Leak-free	Leak-free	Leak-free, filter	Leak-free	-	-	-
Height	17.4 mm	17.4 mm	17.4 mm	17.4 mm	23 mm	10.2 mm	16.5 mm	16.5 mm	16.5 mm

Confidence in Every Application

Choosing the right oxygen sensor is critical for safety and compliance. Alphasense oxygen sensors offer proven technologies and practical features to meet diverse requirements.

Whether your priority is RoHS compliance, extended lifetime, or seamless integration, these sensors provide dependable performance for manufacturers and end users alike.

Backed by Alphasense's commitment to quality and innovation, they help you build safety devices that protect people and processes with confidence.

Contact us

If you would like to enquire about our products or have a project you'd like to discuss with us, please get in touch via our website, by email or by phone. We look forward to working with you soon.

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For more information about Alphasense oxygen sensor technology and correction factors, please view the datasheets and application notes on our website: www.alphasense.com/downloads.

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