DWYEROMEGA™








Gas and Liquid Level Sensing for Precision, Safety, and Control

Sensors • Transmitters • Analyzers • Gas Detectors • Liquid Level Switches

Sensors Business Unit Overview

The DwyerOmega Sensors Business Unit delivers a comprehensive portfolio of high-performance gas sensing technologies and liquid level switches designed to ensure safety, process efficiency, and product quality across the world's most demanding applications.

Through our brands; Analytical Industries Inc. (Aii), SST Sensing Ltd, Sensore Electronic GmbH, and Dynament Ltd, we provide reliable measurement solutions trusted by OEMs, integrators, and end-users globally.

Our manufacturing facilities operate under internationally recognised quality management systems, including ISO 9001 and a range of ATEX, IECEx, UKEx, cMETus, MDSAP, and FDA approvals across individual product lines.

Our Expertise Includes:

- Oxygen sensors, handhelds, transmitters and analyzers
- NDIR refrigerant, hydrocarbon, and CO_2 sensors
- Gas detectors for hazardous environments
- Liquid level switches
- Custom OEM gas and liquid level sensing solutions

Sensors Business Unit Brands:

Analytical Industries Inc. (Aii) designs and manufactures electrochemical oxygen sensors and high-performance oxygen analyzers, measuring from ppb through to 100% O2 concentrations. Our portfolio includes industrial, medical, and diving oxygen sensors, as well as portable and fixed analyzers used in industrial gas generation, hydrogen and natural / biogas production, gloveboxes, laboratories, and medical life-support systems.

Dynament designs and manufactures NDIR infrared gas sensors for refrigerants, hydrocarbons, and CO_2, as well as flameproof fixed gas detectors for hazardous areas. Our sensors are ATEX and IECEx certified, with SIL1-capable performance, delivering fast, stable, and accurate gas detection for HVAC+R refrigerant monitoring, industrial safety systems, biogas applications, oil & gas environments, and OEM gas detection equipment.

Sensore specialises in zirconia oxygen sensors and transmitters designed for high-accuracy, drift-stable measurement in industrial gas systems, gloveboxes, and controlled atmospheres. Our OXY-ProXT and Microx ProSafe SIL2 transmitters offer precise O_2 measurement with built-in temperature compensation, ideal for gas generation, additive manufacturing, and laboratory applications.

SST Sensing produces a wide range of oxygen sensing technologies including zirconia O_2 sensors and transmitters, and LuminOx optical fluorescence oxygen sensors. SST also manufactures liquid level switches and optical detection modules for OEM applications. Our products are widely used in industrial processes, combustion control, and environmental monitoring.

Core Industries Served:

- Hydrogen Production & Energy Transition
- Industrial Gas Generation & Gas Distribution
- Medical & Life Support Systems
- Diving & Underwater Breathing Systems
- HVAC+R & Refrigerant Safety
- Additive Manufacturing
- Combustion Control & Process Industries
- Oil & Gas / Petrochemical / Hazardous Areas
- Biogas & Renewable Natural Gas (RNG)
- Semiconductor & Electronics Manufacturing
- Laboratory & Research Environments
- Environmental Monitoring & Safety Systems

Oxygen Sensors

Across the DwyerOmega Sensors Business Unit, Analytical Industries Inc., Sensore, and SST Sensing offer a comprehensive portfolio of oxygen sensing technologies, including **electrochemical**, **zirconia**, and **optical** solutions.

Designed and manufactured for durability, stability, and easy integration, these sensors provide accurate and reliable real-time measurement.

- Industrial Gases
- Hydrogen Applications
- Medical and Diving Equipment
- Combustion Control
- Environmental Monitoring
- Ultra High Purity Gas Distribution

		Oxygen Range						
Product Range	**Page**	**1ppm**	**1000ppm**	**1%**	**25%**	**96%**	**100%**	**100%, High Pressure**
Electrochemical Galvanic Range from Aii	*3*	■	■	■	■	■	■	
Zirconia Oxygen Range from SST	*5*			■	■	■	■	■
Zirconia Oxygen Range from Sensore	*5*	■	■	■	■	■		
Optical Oxygen Range from SST	*6*			■	■	■	■	■

Electrochemical Oxygen Sensors

Galvanic electrochemical oxygen sensors designed for reliable **trace, percent,** and **purity O_2** measurement. Manufactured by Analytical Industries Inc. to meet the exacting needs of OEM customers in industrial, process-control, and safety applications.

For our full range visit **aii1.com** or scan the QR code.







PPM Sensors

- Precise trace oxygen measurement in the 0–10,000 ppm (0-1%) range
- Ultra-low detection limits (~0.05 ppm) for high-purity and demanding applications
- Fast response times (T90 ≈ 3 s) ensuring real-time monitoring

Percent Sensors

- Designed for industrial and process applications (0-25% and 0-100% O_2)
- High accuracy (±2% of full scale) for robust process control
- Customizable housings and electrical connectors on request

Purity Sensors

- Full-range measurement up to 100% O_2 purity
- Suitable for demanding applications: high-purity gas generation, industrial, medical, and process control
- Easy single point calibration

Medical Oxygen Sensors and Handheld Analyzers

Designed and manufactured in the USA, Analytical Industries Inc. medical oxygen sensors provide reliable, long-term performance in respiratory equipment such as ventilators, anesthesia systems, incubators, oxygen monitors, and gas-mixing devices.

Built to meet strict global medical quality and safety standards, including FDA, MDSAP, ISO 13485, and ISO 9001, these replacement sensors offer exceptional stability and service lifetimes of up to 60 months, making them a trusted choice for critical-care applications.

Key Features

- High stability, fast response, and long service lifetimes designed for critical-care systems.
- Galvanic electrochemical sensor technology: leak-free cell design; excellent signal stability and minimal drift.
- Ready for OEM integration into medical equipment and replacement modules for end-user devices.



Diving Sensors and Gas Analyzers

Analytical Industries Inc. supplies trusted oxygen-measurement solutions for recreational, technical and commercial diving, ensuring divers have accurate insight into the breathing gases that keep them safe below the surface.

Our diving portfolio includes long-life electrochemical oxygen sensors and handheld analyzers engineered for reliability in challenging underwater environments.



Key Features

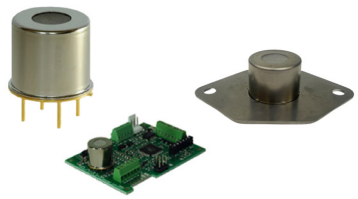
- Designed for critical-safety breathing-apparatus applications, where reliability is non-negotiable.
- Compatible with all major brands and models of diving equipment.
- Excellent long-term stability and low drift for safe, repeatable performance underwater.
- Built in the USA with high-quality manufacturing and process control.
- Rapid response time for accurate breathing-gas monitoring in real time.

For our full range visit **aii1.com** or scan the QR code.

Zirconia Oxygen Sensors and Transmitters

Sensore's zirconia oxygen sensors deliver accurate, stable measurement from trace ppm levels to full-scale 100% O_2. Designed for use in inert gas systems, gloveboxes, gas generators, additive manufacturing, and other controlled or demanding industrial environments.

For our full range visit **sensore-electronic.com** or scan the QR code.



Compact OEM & Board-Mount Zirconia Sensors

- Compact/miniature form factor for embedding into equipment
- Trace-level zirconia measurement capability designed for low-oxygen/high-purity atmospheres
- High stability and long life in controlled-atmospheres



Threaded & Industrial Mount Zirconia Sensors

- Rugged threading and industrial mounting options (M10/M16)
- Designed for inline monitoring, robust environments, OEM or direct-system use
- Suitable for applications where fit-and-replace durability is key



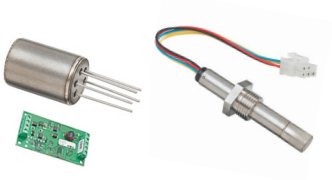
SIL2-certified

Oxygen Transmitters for Industrial and Safety-Critical Applications

- Pre-calibrated sensor modules
- Compact, low-maintenance transmitters designed for continuous monitoring
- Analog & digital communication options for easy integration (4–20 mA, RS485 Modbus)

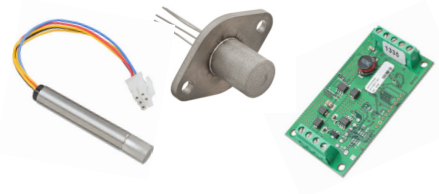
SST Sensing's zirconia oxygen sensors provide fast, precise measurement across a wide 0.1% to 100% O_2 range, delivering reliable performance across numerous industries, including aerospace, medical, food and beverage, industrial processes and combustion control.

For our full range visit **sstsensing.com** or scan the QR code.



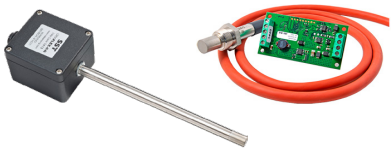
OEM and Compact Zirconia Sensors

- No reference gas required
- Suitable for ambient to moderate temperature ranges
- Fast response (<4s T10-T90) for rapid measurement.
- Linear output across a wide range (0.1% up to 100% O_2) with minimal drift



High-Temperature / Harsh Environment Zirconia Sensors

- Designed for elevated gas temperatures and aggressive process conditions (up to +400°C in some versions)
- Screw thread or probe mounting formats for robust installation in industrial process lines, ovens or flue gas lines.



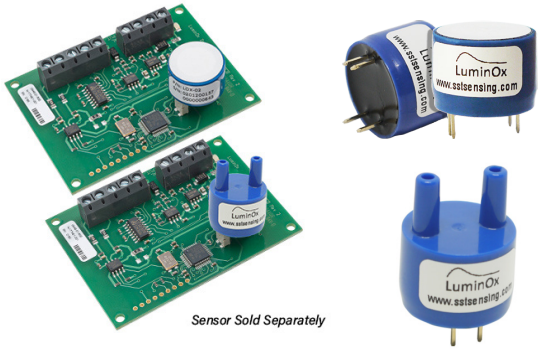
Oxygen Transmitters and Sensor Systems

- Complete solutions combining sensor cell + electronics/ interface board, ready for installation
- Measurement range options from 0.1% up to 100% O_2, with strong signal linearity and analog / digital outputs
- Rugged transmitter for industrial / harsh environments

Optical Oxygen Sensors

SST Sensing's LuminOx range provides a solid-state, RoHS-compliant approach to oxygen measurement, offering stable, low-maintenance performance without the lead or liquid electrolytes found in traditional electrochemical sensors.

Our optical sensing principle delivers reliable readings even in complex or mixed-gas environments, with low drift and minimal cross-sensitivity, making them ideal for compact, portable, or OEM-integrated systems.



For our full range visit **sstsensing.com** or scan the QR code.

Key Features

- Low power consumption, ideal for portable and battery-powered devices
- Digital output options for easy integration
- Fast response time suitable for dynamic measurement conditions
- Built-in temperature and barometric pressure compensation in supported models
- Compact module format designed for simple OEM integration
- No consumable components, reducing maintenance and lifetime cost

Gas Detectors

Dynament offers a comprehensive range of fixed gas detectors designed for the continuous monitoring of toxic gases, oxygen, and flammable gases in industrial and commercial environments.

Our solutions are available with a variety of sensing technologies, including infrared, electrochemical, and pellistor-based detection, making them suitable for a wide range of applications.

Flameproof and Intrinsically Safe Fixed Gas Detectors

- Certified for hazardous areas: ATEX/IECEx approved flame-proof "Ex d" enclosures for use in explosive atmospheres
- Rugged construction: options include cast aluminium or 316 stainless-steel housings to suit demanding industrial or corrosive conditions
- Industry-standard analogue output (4-20 mA) and flexible sensor modules support hydrocarbons, CO_2, oxygen or toxic gases in one platform
- IP65 (or higher) rated ingress protection for dust and water resistance in harsh field conditions
- Integrated diagnostics and optional handheld configuration tools enable quick commissioning and maintenance in tough environments



For our full range visit **dynament.com** or scan the QR code.

Oxygen Analyzers

Analytical Industries Inc. offers a comprehensive range of oxygen analyzers and transmitters designed for precise measurement across trace, percent, and purity oxygen levels. Built on proven electrochemical technology, these instruments deliver fast measurement response, long-term stability, and dependable accuracy in demanding industrial and laboratory environments, with hazardous-area certified models available for safety-critical applications.

For our full range visit **aii1.com** or scan the QR code.



Transmitters

- Loop powered 4-20mA transmitters, general purpose or hazardous area, enable easy system integration
- Continuous real-time oxygen monitoring for fixed installations
- Fast response and stable long-term performance
- Sensors for inert, acidic or H2 background gases
- Models available for controlled environments, gloveboxes, and industrial gas systems



Analyzers

- Stable long-term performance with fast response
- Designed for continuous process monitoring and quality control
- Available in wall, rack or bench mount configurations
- Built-in user configured alarm set points for process control outputs
- Suitable for industrial gas production, environmental systems, and laboratory use
- Options available for CO_2-rich, high-purity, and specialty gas applications



Portables

- Lightweight, field-ready analyzers for rapid oxygen checks
- Simple user interface for quick setup and operation
- Sensors have long operational life and enable easy replacement
- Rugged designs suitable for industrial, laboratory, and environmental monitoring
- Ideal for commissioning, troubleshooting, safety verification, and gas purity checks

Hydrogen Sulphide Analyzers

Analytical Industries Inc. H_2S analyzers deliver accurate, real-time measurement of hydrogen sulphide in natural gas, biogas, biomethane and other critical process streams.



Key Features

- Measurement ranges from low-ppm (0...20 ppm) or higher ppm levels (0...2000 ppm) of H_2S
- Versions available certified for hazardous areas (ATEX / UKEx / IECEx / cMETus)
- Sample-conditioning options such as liquid-drain systems for biogas/biomethane applications
- Loop powered transmitter or analyzer configurations enable integration into control systems
- Portable models designed for spot-checking, verification and commissioning of installations

NDIR Sensors

Dynament's NDIR sensors deliver fast, accurate NDIR detection for hydrocarbons, CO_2, N_2O and mixed-gas environments in industrial and safety-critical applications. Designed for long-term stability and low-power operation make them suitable for OEM equipment and fixed installation or portable instruments.

For our full range visit **dynament.com** or scan the QR code.





Industrial Safety & Environmental Sensors

Hydrocarbons, Dual-Gas CH_4/CO_2, N_2O Sensors, Hazardous-Area Housings

- Fast response for critical leak detection and process safety
- Resistant to humidity, contamination and sensor poisoning
- ATEX/IECEx flameproof and intrinsically safe housing options
- Suitable for oil & gas, petrochemical, biogas, landfill, environmental and safety applications

Refrigerant & HVAC+R Sensors

Axiom Refrigerant Detector & Platinum Series Sensors Range

- NDIR detection optimised for A2L, A2, A3 and A1 refrigerants including R32, R454B, R454C, R290 and R744
- High resolution (e.g., down to 0.05% / 500 ppm) for early leak detection and lower LFL monitoring
- Global standards for safety and environment (ATEX/IECEx certifications, UL60335-2-40, RoHS, ISO 9001)

Liquid Level Switches

SST Sensing's liquid level switches deliver precise, reliable detection of water and oil-based liquids for critical monitoring across industrial and hazardous environments. With a wide choice of process connections, materials and output options, they offer fast response, low maintenance and straightforward integration into new or existing systems.

For our full range visit **sstsensing.com** or scan the QR code.







OEM Compact Switches: Optomax Digital/Basic Range

- Suitable for high-volume or space-constrained applications
- Wide fluid compatibility using chemically resistant Polysulfone or Trogamid® housings
- Unaffected by foam, bubbles or ambient light

Harsh-Environment Switches: Industrial, LLHT, LLHP Ranges

- Rugged, industrial-grade construction
- Wide operating temperature capability
- Immunity to foam, bubbles and ambient light, delivering stable liquid detection

Hazardous Area Approved Liquid Level Switch

- Designed for use where direct contact with hydrocarbons, fuels, and flammable or explosive liquids is likely
- ATEX, UKCA and IECEx certified
- Ambient and liquid temperature –30°C to +80°C (-22 °F...+176 °F)