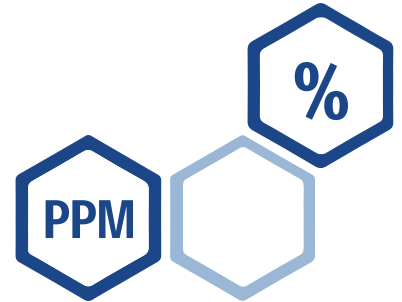


# Oxygen Analyzers With Remote Sensors

## **GPR-1900 & GPR-2900**

A panel mounted oxygen analyzer with a remote sensor allows flexibility of installation. The GPR-1900 gas analyzer is suitable for trace oxygen measurements as low as 0-10 ppm; the GPR-2900 measures O<sub>2</sub> up to 100%. The remote sensor block allows a very easy oxygen sensor replacement for simple and fast maintenance and low cost of ownership. All versions can be locked manually to a single range or auto-range. The user is always aware of the oxygen measurement range used via the range ID output.



### **Highlights**

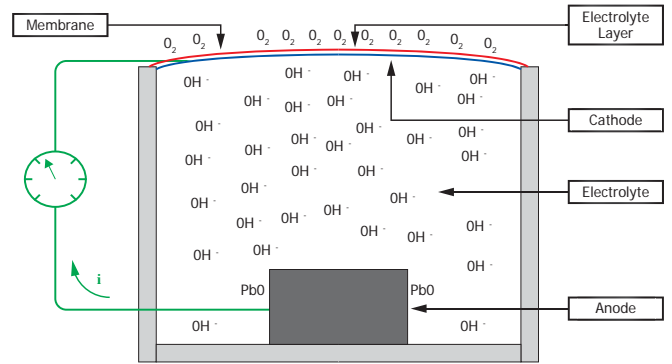
- Measurement ranges from 0-10ppm up to 0-100% O<sub>2</sub>
- Barometric pressure and temperature compensation
- Accuracy of better than 2% of range
- Two user configurable alarms
- Range ID output
- 12-28 V DC or mains powered options
- XLT sensor options for CO<sub>2</sub> backgrounds

### **Applications**

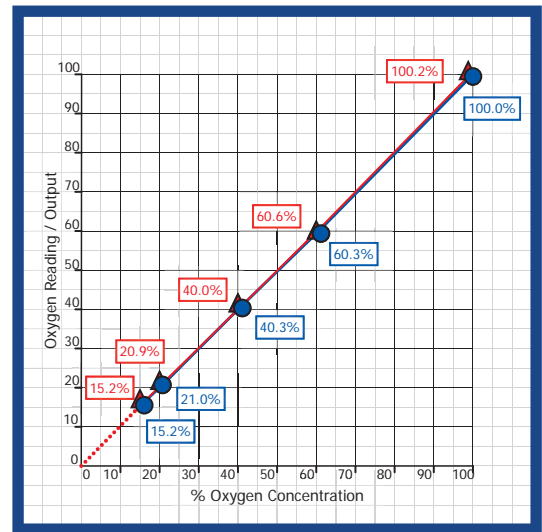
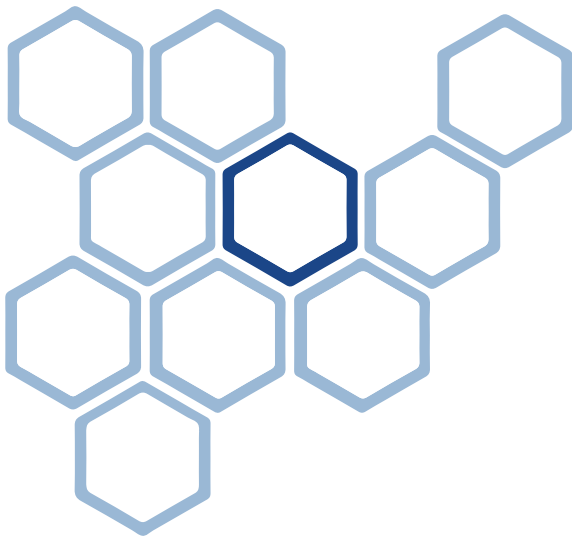
- Nitrogen or oxygen generators
- Glove boxes
- Oxygen injection in fish farms
- Confined space monitoring
- Sintering and other metal processing
- Delignification and bleaching in pulp & paper

## Sensor Technology

The sensors from AII have been designed to avoid potential weaknesses common in typical galvanic cell design. Our materials, construction and assembly methods have been continuously refined over decades. Each sensor type has been specifically engineered to provide the optimum balance between performance and longevity for individual applications. The result is confidence in the measurement and low maintenance. In the absence of oxygen, the sensor will produce zero output and the sensor is linear up to 100%, therefore only a span calibration is required in most cases (see graph).



Sensor Construction



Typical sensor output

## The Analytical Industries' XLT sensor

For applications with a background gas containing more than 0.5%  $\text{CO}_2$ , the specially designed XLT sensor should be selected. With most standard electrochemical sensors an alkaline electrolyte is used and this is neutralised over time when exposed to acidic gases, such as  $\text{CO}_2$ . To combat this, AII developed the XLT sensor with a special electrolyte formula which has the added benefit of being able to operate in temperatures as low as  $-10^\circ\text{C}$ .

## **Options available for all models**

**Power:** 12-28 V DC or 100-240 V AC 50/60Hz

**Outputs:** 4-20 mA or 1-5V

**Range ID:** 4-20 mA, 1-5V or relays (alarms re-assigned)

## **GPR-1900**

The favourite instrument for trace measurements as low as 0.1 ppm O<sub>2</sub>. The sensor housing is made from stainless steel to offer a high measurement integrity. The analyzer has a maximum operational range of 0-1,000 ppm but also allows the user to switch temporarily to 0-25% for calibration with ambient air in the absence of a reference gas. The GPR-1900 also displays real time ambient temperature and pressure.

### **Options:**

- XLT sensor available.

**Ranges available:** 0-10, 0-100, 0-1,000 ppm & 0-1% O<sub>2</sub> (0-25% for calibration only)

## **GPR-2900**

For percentage level measurements up to 100% O<sub>2</sub> with the same features as the GPR-1900. The sensor housing is made from Delrin as standard.

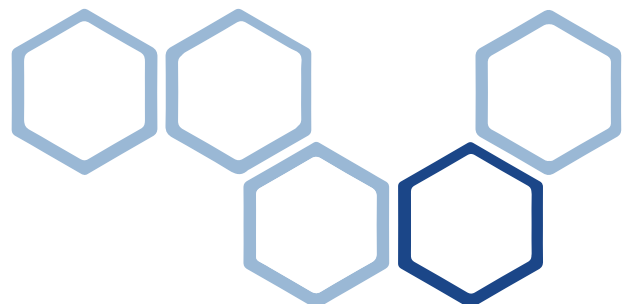
### **Options:**

- Stainless steel sensor housing.
- XLT sensor available.
- 0-100% O<sub>2</sub> (in place of 25%).
- Ranges available: 0-1%, 0-5%, 0-10% & 0-25% O<sub>2</sub>



## Technical Specifications

	GPR-1900	GPR-2900
Measurement range	0-10, 0-100, 0-1000 ppm, 0-1%, 0-25%	0-1%, 0-5%, 0-10%, 0-25%; optional 0-1%, 0-5%, 0-10%, 0-100%
Accuracy	< 2% of selected range at constant conditions	
Response time	T90 < 10 seconds	
Recovery time	60 seconds in air to < 10 ppm in < 1 hr on N <sub>2</sub> purge	NA
Sensitivity (LDL)	0.05 ppm	0.005%
Linearity	< 0.5% of scale	
Sensor model	GPR-12-333 XLT-12-333-for gases containing > 0.5% CO <sub>2</sub>	GPR-11-60-4 XLT-11-24-4 for gases containing > 0.5% CO <sub>2</sub>
Sensor life at 25°C (77°F) and 1 atm	24 months in < 1000 ppm O <sub>2</sub> 6 months in air	GPR-11-60-4 60 months in air XLT-11-24-4 24 months in air
Calibration interval	30 days	
Inlet pressure	0.34 2 barg (5-30 psig) with atmospheric vent	
Flow rate	0.5 1.0 l/m (1-2 SCFH)	
Gas connections	1/8" compression tube fittings	
Wetted parts	Stainless steel	Delrin; stainless steel optional
Display	Graphical LCD 12.7 x 7cm (5 x 2.75"); resolution 0.001 ppm GPR-1900 MS2, 0.01 ppm GPR-1999, 0.001% GPR-2900	
Enclosure	Painted sheet metal 6" x 4" x 4" panel mount	
Compensation	Barometric pressure and temperature	
Signal output	4-20 mA or 1-5V	
Range ID	4-20 mA non-isolated or 1-5V Option: reassign relay contacts as range ID (eliminates standard alarms).	
Alarms	Two user configurable alarms: magnetic coil relays rated 3A at 100 V AC	
Operating temperature	GPR sensors: 5°C to 45°C (41°F to 113°F) XLT sensors: -10°C to 45°C (14°F to 113°F)	
Power	100-240 V AC or 12-28 V DC	



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Please note: Analytical Industries Inc. adopts a continuous development program which sometimes necessitates specification changes without notice. Please contact us for the latest version. Issue No: Oxygen Analyzers With Remote Sensors\_partnumber\_V2\_UK\_1018