

GPR-1600/2600/3000/3100

PPB, PPM & Percent Level Oxygen Analyzers



This range of industrial analyzers from AII covers all purity applications from ppb O₂ in pure gases, such as nitrogen, argon or helium to measuring pure oxygen.

The analyzers can be bench, wall, panel or 19" rack mounted and all share a common Human Machine Interface (HMI).

All units are capable of auto-ranging or being manually locked on a single range.

Highlights

- 4 or 5 Ranges available from 0-100 ppb up to 100%
- GPR-3100 has suppressed zero ranges up to 90-100%
- Universal power supply
- Up to 24 months sensor life
- Barometric pressure and temperature compensation as standard
- Stainless steel wetted parts
- Orbitally welded sample system for UHP analyzer
- Sensitivity 0.5% full scale

Applications

- Trace oxygen analysis for gas purity
- O₂ purity (GPR-3100)
- Ultra high purity gases for semi-conductor industry (GPR-1600 UHP)

Technical Specifications

Common Specifications		
Accuracy	<2% of full scale range under constant conditions*	
Analysis ranges	See individual models on reverse	
Calibration	3 month interval using air or certified span gas or air with O ₂ value approximating 80% of full scale range balance N ₂ (GPR-1600 UHP see note below**)	
Compensation	Barometric pressure and temperature compensation as standard	
Connections	See individual models on reverse	
Controls	Water resistant keypad; menu driven range selection, calibration, alarm and system functions	
Display	Graphical LCD 13 x 7cm; resolution - see individual models on reverse	
Enclosure	Material	Painted aluminium
	Size	19 x 27 x 31cm (h x w x d) - panel mount 19" rack or wall mounting options
Sample flow rate	See individual models on reverse	
Linearity	<1% of full scale	
Pressure	Inlet	Regulate to 0.3 to 2 barg to deliver 0.5 to 0.9 NI/min flow to transmitter
	Vent	Atmospheric
Power	100 to 120 V DC or 200 to 220 V AC	
Response time	90% of final full scale reading in 10 seconds (<60 seconds for GPR-1600 UHP)	
Sensitivity	<0.5% of full scale range	
Sensor model	See individual models on reverse	
Sensor life	15 to 32 months, see individual models on reverse	
Signal output	4-20 mA or 0-1 V; optional Modbus RTU	
Temperature range	+5 to +45°C (GPR sensor) -20 to +45°C (XLT sensor)	
Warranty	12 months analyzer, 12 months sensor	
Wetted parts	Stainless steel	
Optional Equipment		
Sample conditioning - contact Michell Instruments		

*Accuracy <1% full scale for GPR-1600 UHP

**Calibration interval for GPR-1600 UHP is a weekly zero in first month and then 1 to 3 monthly span calibrations thereafter

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All analyzers below have the following features as standard (unless otherwise stated):

- 4 or 5 ranges
- Standard sensor models are designated GPR, for gases containing >0.5% CO₂ the XLT sensor should be selected
- 2 adjustable alarm relay contacts non latching indicating “weak sensor”, “power failure” or “system failure”
- Temperature and barometric pressure compensation, fitted as standard
- Stainless steel wetted parts
- 3 month calibration intervals
- 4 button user interface with LCD display
- Mains powered

Model	Range	Sample flow rate	Sensor type	Sensor life (months)	Model specific features
GPR-1600	0-10, 0-100, 0-1000 ppm, 0-1%, 0-25% (CAL)	1 NI/min	GPR-11-32-RTS or XLT-11-24-RTS	GPR =32 XLT = 24	N/A
GPR-1600MS	0-1, 0-10, 0-100, 0-1000 ppm	0.5 NI/min	GPR-12-2000MS	GPR =24	Heated sample system and sensor for measurement stability
GPR-1600 UHP	0-100 ppb, 0-1, 0-10, 0-100 ppm	0.5 to 1.5 NI/min	GPR-13-2000UHP	GPR =15	Atmospheric sampling; Inlet pressure for cal gas as per standard spec; (see note on front regarding calibration**). Optional sample system includes; manual pressure regulation, flow control indicator, pneumatic valves control sample and span gas inlets, bypass and isolation of sensor and integral sample gas system, electro-polished tubing with orbitally welded of VCR connections
GPR-2600	0-1%, 0-5%, 0-10%, 0-25%	1 NI/min	GPR-11-32-4 or XLT-11-24-4	GPR =32 XLT = 24	Atmospheric sampling; Inlet pressure for cal gas as per standard spec;
GPR-3000T	0-10, 0-100, 0-1000 ppm, 0-25% (CAL) 0-100% O ₂	1 NI/min	GPR-11-32-4 or XLT-11-24-4	GPR =32 XLT = 32	Barometric pressure compensation; 2 user configurable alarms, field programmable***; 12 to 28 V DC 2 wire loop or 110 to 220 V AC (mains powered)
GPR-3100	90-100%, 80-100%, 50-100%, 0-100%	1 NI/min	GPR-11-32-RTS or XLT-11-24-RTS	GPR =32 XLT = 24	N/A

Mounting Options

There are 4 main mounting options available.

- Bench mounting (dimensions: 35.3 x 25.1 x 34cm)
- Panel mounting (dimensions: 19 x 27.4 x 28.6cm)
- 19" rack mounting with optional bezel (dimensions: 19" x 48 x 72cm)
- Wall mounting brackets (dimensions: 34.6 x 26.7 x 17.8cm)