

# GPR-15/18/25/28

## Explosion-Proof Oxygen Analyzers and Transmitters



GPR-15/25

GPR-18/28

To compliment the Intrinsically Safe analysers and transmitters, AII have produced an Explosion-Proof range of oxygen analyzers with several variants capable of measuring from parts per billion (ppb) up to 25% O<sub>2</sub>.

Featuring advanced galvanic trace sensors for parts per million (ppm) analysis with proven life times of up to 36 months in normal operation. Percent level analyzers have a life time of up to 32 months.

Robust enclosures with Flame Arrestors designed to withstand the demands of operation in process environments.

Optional sample system items include flow meters, pumps, filters & scrubbers.

### Highlights

- ATEX Certified to Ex II 2G Ex d IIB + H2 T6 or T5 (not GPR-15/25)
- Ppb, ppm & % level measurements available
- Fast recovery to <10 ppm from exposure to air
- Sensor life, warranty and performance is unmatched
- Excellent compatibility in CO<sub>2</sub> backgrounds
- Operating temperature down to -20°C
- Sensitivity 0.5% full scale

### Applications

- Trace O<sub>2</sub> in hydrocarbon feed stocks
- Processing of "cleaned" natural gas
- O<sub>2</sub> contamination in pipelines (ethylene)
- Trace O<sub>2</sub> in blanketing gases for chemical storage
- Low level monitoring of H<sub>2</sub> cooling gas for turbine generators

### Technical Specifications

Common Specifications	
Accuracy	<2% of full scale range under constant conditions
Analysis ranges	See individual models on reverse
Approvals	See individual models on reverse
Alarms	See individual models on reverse
Area classification	See individual models on reverse
Calibration	3 month interval using certified span gas (preferred for fastest online time) or air with O <sub>2</sub> value approximating 80% of full scale range balance N <sub>2</sub>
Compensation	Temperature
Connections	1/8" compression tube fittings
Controls	Range selector and zero & span potentiometers Explosion-Proof actuators for GPR-18/28
Display	3½ digit display (see individual models)
Enclosure	Painted aluminium (see individual models for size and weight)
Flow sensitivity	See individual models
Linearity	<1% of full scale
Pressure	<b>Inlet</b> See individual models <b>Vent</b> Atmospheric
Power	GPR-15/25: 12 to 24 V DC two wire loop powered GPR-18/28: 100 to 120 or 220 to 240 V AC
Response time	See individual models
Sensitivity	<0.5% of full scale range
Sensor model	See individual models
Sensor life	See individual models
Signal output	4-20 mA and 0 to 1 V (GPR-18/28)
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
<b>Optional Equipment</b>	
Carrying case with custom foam insert	
Sample conditioning - pump, filter, scrubbers - contact Michell Instruments	

\*See certification box

**ATEX Certified - Directive 94/9/EC**  
Examination Cert: INERIS 07ATEX0025X



II 2 G  
Ex d IIB or d IIB + H2 T6 or T5



0080

# GPR-15/18/25/28

## Explosion-Proof Oxygen Analyzers and Transmitters

### GPR-15 & GPR-25 Oxygen Transmitters



#### Technical Specifications

Model	GPR-15	GPR-25
Range	0-100 ppm, 0-25%	0-5%, 0-25%
Sensor model & life expectancy	GPR-12-100-M - 24 months XLT-12-100-M for CO <sub>2</sub> - 24 months	GPR-11-32-RTS - 32 months XLT-11-24-RTS for CO <sub>2</sub> - 24 months
Approvals	Supplied in ATEX approved enclosure, with flame arrestors to following standard: EX II 2 G EExd IIC; EX II 2 D or EX II 2 G EExd IIB + H <sub>2</sub> ; EX II 2 D	
Display	LCD 3½ digits, resolution: 0.1 ppm	LCD 3½ digits, resolution: 0.01%
Enclosure	NEMA 4X, 30 x 20 x 25cm, 6.8kg	
Flow sensitivity	Not flow sensitive; recommended flow rate: 0.5 to 1 NI/min	
Pressure	Inlet: regulate to 0.3 to 2 barg	
Response time	15 seconds for 90%	

### GPR-18 MS



#### Technical Specifications

Range	0-1, 0-10, 0-100, 0-1000 ppm, 0-25%
Alarms	2 adjustable form C relay contacts non latching; sensor and power failure
Approvals	ATEX certified EX II 2G EX d IIB or IIB + H <sub>2</sub> T6 or T5*
Display	LED 3½ digits, resolution: 0.001 ppm
Enclosure	Painted aluminium wall mount, 45 x 40 x 28cm, 71.8kg
Flow sensitivity	Not flow sensitive; recommended flow rate: 0.5 NI/min
Pressure	Inlet: regulate to 1.5 to 3.5 barg, max: 10 barg
Response time	20 seconds for 90%
Sensor model & life expectancy	GPR-12-2000MS - 36 months in <100 ppm @ 25°C @ 1 atmosphere No sensor option available for gas streams containing >0.5% CO <sub>2</sub>

### GPR-18



#### Technical Specifications

Range	0-1, 0-10, 0-100, 0-1000 ppm, 0-25%
Alarms	2 adjustable form C relay contacts non latching; sensor and power failure
Approvals	ATEX certified EX II 2G EX d IIB or IIB + H <sub>2</sub> T6 or T5*
Display	LED 3½ digits, resolution: 0.01 ppm
Enclosure	Painted aluminium wall mount, 45 x 40 x 28cm, 71.8kg
Flow sensitivity	Not flow sensitive; recommended flow rate: 0.5 NI/min
Pressure	Inlet: regulate to 0.3 to 2 barg, max: 10 barg
Response time	10 seconds for 90%
Sensor model & life expectancy	GPR-12-333 - 24 months in <1000 ppm @ 25°C @ 1 atmosphere XLT-12-333 for CO <sub>2</sub> - 24 months

### GPR-28



#### Technical Specifications

Range	0-100 ppm, 0-25%
Alarms	2 adjustable form C relay contacts non latching; sensor and power failure
Approvals	ATEX certified EX II 2G EX d IIB or IIB + H <sub>2</sub> T6 or T5*
Display	LED 3½ digits, resolution: 0.001%
Enclosure	Painted aluminium wall mount, 45 x 40 x 28cm, 71.8kg
Flow sensitivity	Not flow sensitive; recommended flow rate: 0.5 NI/min
Pressure	Inlet: regulate to 0.3 to 2 barg, max: 10 barg
Response time	10 seconds for 90%
Sensor model & life expectancy	GPR-11-32 - 32 months in air @ 25°C @ 1 atmosphere XLT-11-24-4 for CO <sub>2</sub> - 24 months