

MOD-1040 OXYGEN ANALYZER

MOD-1040 Oxygen Analyzer is designed to provide accurate and reliable in-situ measurements of oxygen levels in high-pressure pipeline, making it ideal for a range of industrial applications. With its advanced optical sensor technology and rugged construction, MOD-1040 delivers precise measurements even in the harshest of conditions. Its intuitive control make it easy to operate, while its compact design allows for easy installation directly on process pipe without any sample extraction.



FEATURES:

Key features of the Oxygen Analyzer for high-pressure applications include:

- High-accuracy measurement of oxygen levels up to 100%
 - Explosion proof certified: ATEX/IECEX Zone 1
 - Explosion proof certified: Class 1 Div. 1 (pending)
 - Safety Integrity certified: SIL-2
- Response time (T90): <5 sec
Ambient temperature: -20 to 60 degC (-4 to 140 degF)
In-situ direct oxygen measurements
Flexible installation with zero maintenance

BENEFITS:

- Whether you're working in the oil and gas industry, hydrogen production, chemical processing, or any other process industry, the MOD-1040 Oxygen Analyzer is an ideal solution for precise and reliable oxygen measurement.
- The MOD-1040 overcomes the limitations of traditional oxygen analysis technologies—such as paramagnetic, zirconia, coulometric, and TDL—by enabling reliable performance in high-pressure environments without the need for gas sample extraction or conditioning.
- The MOD-1040 enables direct (in-situ) oxygen measurement in high-pressure pipelines, eliminating the need for gas sample extraction or conditioning.
- Reducing the potential for leaks can create difficulties in sampling gas from high-pressure pipelines, making it challenging to perform accurate oxygen analysis. Traditional oxygen analysis technologies, including paramagnetic, zirconia, coulometric and TDL, are not designed to withstand high gas pressures and therefore require gas sample extraction and conditioning prior to analysis. MOD-1040 allows for direct (in-situ) measurement of oxygen content in high pressure pipelines, eliminating the need for gas sample extraction or conditioning.



TECHNICAL DATA

ANALYZER PERFORMANCE:

Configuration	Measuring Range	Lower Detection Limit (LDL)	High Detection Limit (HDL)
Low Range (L)	0 – 1 % O ₂	1 ppm @ 1 Bar(g) 0.1 ppm @ 200 Bar(g)	1 % O ₂ @ 1 Bar(g)
Mid Range (M)	0 – 10 % O ₂	50 ppm @ 1 Bar(g) 0.5 ppm @ 200 Bar(g)	20 % O ₂ @ 1 Bar(g) 0.1 % O ₂ @ 200 bar
High Range (H)	0 – 100 % O ₂	200 ppm @ 1 Bar(g) 1 ppm @ 200 Bar(g)	100 % O ₂ @ 2 Bar(g) 0.5 % O ₂ @ 200 Bar(g)

PERFORMANCE:

Repeatability:	<0.5% of the calibrated span
Linearity:	<0.5% of the calibrated span
Zero drift:	<1% year
Response time (T90):	<5sec
*determined according to IEC 61207-1	

TECHNICAL DETAILS:

Power supply:	24 VDC, 1A
Outputs:	2 x 4-20mA
Communication interface:	Modbus RS485
Operation temperature:	-20 to 60 degC (-4 to 140 degF)
Ingress protection:	IP 67
Material	Dual rated Stainless Steel (316/316L)
Hazardous area:	ATEX/IECEx Zone1 (II 2 G Ex d IIC T4 Gb); Class 1 Div. 1 (pending)
Safety Integrity:	SIL-2

SAMPLE REQUIREMENTS:

Maximum sample pressure:	Up to 350 Bar(g) (5psig)
Maximum sample temperature	65 degC (150 degF)
Process connection:	NPT ½"
Material:	Hastelloy C276/Nickel 201(200)/Inconel 6000
Options:	- Extended maximum process temperature - Temperature/pressure compensation - Customized sample systems - Remote display - Calibration manifold

