



OXY4400

PRECISION OXYGEN ANALYZER

KEY FEATURES

- Small Optical Sensor, no membrane or consumable chemicals
- Excellent long term stability
- Not affected by H₂S or other sulfur species
- No H₂S scrubber
- Fast and continuous
- No moving parts, simple operation
- Not affected by electrical interferences and magnetic fields
- NEMA 4 system
- Hazardous Area Certified CSA Class I Div 2

SpectraSensors OXY4400 Oxygen Analyzer is a compact, stand-alone one-channel meter with an LCD display and data logger. The electronics are certified for hazardous area use. The sensor probe is inserted into the process stream and is connected to the controller by an optical fiber.

Full sample conditioning systems are available with the OXY4400 as well as software for PC interface.

LOW MAINTENANCE The analyzer uses an optical method that detects oxygen using a probe that is inserted into the gas stream. The probe can be easily cleaned and has a lifetime measured in years.

Calibration of the analyzer is a simple procedure that can be performed in minutes using a binary standard with oxygen in nitrogen.

ACCURATE AND RELIABLE The OXY4400 technology is ideally suited for measuring in Natural Gas.

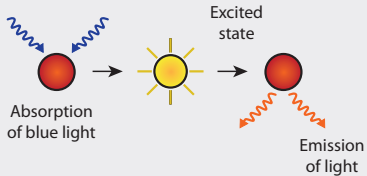
The sensor is not affected by even high levels of H₂S or other sulfur species. There is no cross sensitivity to contaminants or other gases in natural gas.

Because there is no measurement drift, the accuracy and reliability of the measurements are superior to electrochemical analyzers.

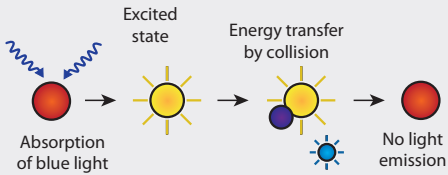


THE QUENCH FLUORESCENCE METHOD

1. Blue LED light is transmitted to the sensor tip causing it to emit "fluorescence".



2. When the sensor tip comes into contact with oxygen, the O₂ molecules absorb energy, preventing the emission.



The amount of oxygen is inversely proportional to the intensity and duration of the luminescence.

OXY4400 Oxygen Analyzer



SPECIFICATIONS

Application Data

Target Components	O ₂		
	BOS-1*	BOS-2*	BOS-3*
Typical Measurement Ranges	0-4.2%	0-50%	0-100 ppmv default, 0-10 to 0-1,000 ppmv user setting
Lower Limit of Detection	20 ppm	300 ppm	0.5 ppmv
Accuracy at 20°C	±3% of Reading	±2% of Reading	±5% of Reading
Measurement Response Time	Programmable Sampling Rate (Default 3 seconds)		
Principle of Measurement	Fluorescent Quenching		
Environmental Temperature Range	0 to 50°C (32° to 122°F)		
Sample Inlet Pressure	140-350 kPaG (20-50 PSIG) to sample panel regulator		
Sample Probe Temperature Range	Up to 50°C		
Maximum Probe Pressure	200 psig		
Sample Flow Rate	1.5 slpm (0.05 scfm)		
Recommended Calibration	Two-point calibration in oxygen-free environment (nitrogen) and a second span point (Binary Gas).		


Electrical & Communications

Input Power	100-240 VAC 50/60 Hz and 9-24 VDC max 0.83 Amps at 24 VDC
Controller to Probe Cable Length	0.7m standard (2.5m and 5.0 m - <i>optional</i>)
Communication	Analog: Qty 2 4-20 mA and Qty 2 0-10V, Independent, Isolated Serial: RS232C Interface, Isolated, 19200 Baud, 8 data-bits
LCD Display	Concentration, Temperature, Sample Rate, & Diagnostics

Physical

Enclosure Type	NEMA Type 4 , 304 Stainless Steel
Analyzer Dimensions	254 mm H x 203 mm W x 152 mm D (10 H x 8 W x 6 D inches) (not including Sample Conditioning System)
Weight	2.2 kg (4.9 lbs) (not including Sample Conditioning System)
Sample Probe Construction	316 Stainless Steel
Number of Measurement Channels	1

Area Classification

Certification	 Class I, Div 2, Groups A,B,C, and D ID 3035281 & 3035281C (CSA C22.2 No. 142 & 213)
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*BOS-1, -2 and -3 are optional sensor choices. Analyzer comes with one.