

Marine Oxygen Analyzer System



Dual Oxygen Analysis for Marine Vapor Loading per USCG Regulations

USCG COMPLIANCE

Analyzer is compliant with the U.S. Coast Guard requirement found in 33 CFR 154.2106(g). Analyzer can be certified under 33 CFR Subpart P—Marine Vapor Control Systems.

OPERATOR INTERFACE

A convenient HMI with display is mounted in the front of the system enclosure. The HMI will display both analyzer concentrations, on/off control for analyzers, pump, and various fault status.

OPTIONAL FEATURES

- Heated Sample Line
- Heated Enclosure



At the heart of this system are two robust Tunable Diode Laser (TDL) analyzers manufactured by SICK. This analyzer is ideally suited for moist and aggressive process gases including measuring oxygen in hydrocarbon vapors during marine loading operations. The system is conditioned to control flow, temperature, pressure, clean and remove liquid to the analyzer on a continuous basis. Safety is always paramount in our design so all electrical components are suitable for hazardous areas. Each analyzer has a low flow meter to signal a blocked flow preventing or slowing response. Entire system is controlled by a pre-programmed PLC.

STANDARD FEATURES

- Redundant oxygen analyzers with digital LED displays, driven by microprocessor electronics continuously prompting and informing the operator.
- Air-calibration range for convenient spanning at 20.9%, zero-calibration can be any gas including natural gas that does not contain oxygen.
- Automatic calibration by timed or remote initiation.
- Entire system is mounted in a NEMA rated 304 stainless steel enclosure.

ADVANTAGES

- Analyzers are not partial pressure or flow sensitive.
- Hydrophobic filter to protect optics.
- Linearity of analysis across user defined range.
- TDL spectrometer design eliminates sample from contacting detector.
- Comprehensive self testing function.
- Small overall footprint allows for wall mounting.

WHO WE ARE

“Our experience in diverse industries and collaboration with numerous manufacturers allow for application of **best fit solutions**. This expertise drives our design and engineering to achieve the safest, highest performing, lowest cost of ownership, and most robust analytical system solutions.”

WHAT WE DO

Applied Controls is focused on the total Analyzer System from the sample point to sample return. We can design, engineer, build, start-up, train and service on-line continuous analyzer systems-from wall mounted units to complete shelter houses.

WHAT WE OFFER

- Environmental/Process Analyzer System Integration
- Analyzer System Engineering
- Sample Conditioning Systems
- Enclosure/Shelters
- F.A.T. Live Streaming
- Start-up/Commissioning/Training
- Field Service and Calibration
- Complete Turnkey Systems

VALUE-ADDED

- Technical Support
- Installation and Setup
- Maintenance
- Warranty

For more information on any of our products or services please visit us on at: Analyzer-Systems.com



Product Specifications

Operating Principle	Tunable Diode Laser (TDL) Spectrometer (Dual)
Operating Temperature	+32F to +110F
Measurement Range	Any range from 0-5 vol% to 0-25 vol%
Accuracy	± .2 vol% O ₂
Display	HMI panel mounted on sub-swing panel that can be viewed from front window of enclosure with 3.5” screen
Analysis Time	Determined by application; analyzers (t ₉₀) 3 s
Outputs	Two (2) 4-20 mA analogue, Two (2) low flow discrete, Two (2) analyzer fault discrete, and additional configurable outputs as required
Inputs	Start validation/calibration, pump on/off, and additional configurable inputs as required
Certifications	NEC Class, I, Div. 2, Groups B, C and D
Supply Voltage	120VAC 60Hz
Weatherproof Construction	NEMA/Type 4X
Weight	Approximately 190 lbs
Sample Conditioning System	Includes valve, pump, filter, rotometers
Power Requirements	120 VAC, 60HZ

