

LaserGas™ III SP Oxygen Analyzer



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NEO Monitors LaserGas™ III SP oxygen analyzer (3rd generation) is specifically designed for service in hazardous areas. The analyzer consists of transmitter and receiver unit that are mounted diametrically opposite each other on stack, ducts or reactors. The laser will cross the process gas and concentration changes are detected in-situ and in real time. LaserGas™ III sets a new standard for fast and reliable Tunable Diode Laser Absorption Spectroscopy analysis (TDLAS). The laser scans the absorption line in milliseconds.

Features

- 3. Gen compact LaserGas™ electronics
- For ATEX Ex-d and Class I Division 1 areas
- Fast response time
- Low power < 10 Watt
- Suitable for SIL2 applications
- No interference from other gases
- Stable calibration, no zero drift
- No gas sampling: In-situ measurement
- Safety application
- Zero gas application
- No consumables

Applications

- Safety application
- Chemical industry:
inertisation control of reactors,
Vinyl Chloride or PVC, Acryl Acid.
Solvent acid, carbon black etc
- Petrochemical industry:
FCC units, tail gas treatment, flare
gas monitoring, vent headers of
incinerators, process heaters etc.
- Steel industry:
Coke oven gas, converter coal gas,
reheating furnaces
- and more

Customer benefits

- In-situ monitoring
- Highly reliable real time analyzer
- Low maintenance cost
- Reduce emission to the environment
- Easy to install and operate
- Reduce daily operation costs
- Optimize process
- Well proven measurement technique
- Less fuel consumptions
- Reduced downtime
- Suitable for SIL2

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Technical Data

Specifications Detection limit (O ₂): 100 ppm ** Max. process gas temperature: 1500 °C Max. process gas pressure: 10 barA Optical path length: Typically 0,5 - 20 m Repeatability: 1% of range (gas & application specific)	Safety Laser class: Class 1 according to IEC 60825-1, eye safe CE: Certified EMC: Conformant with directive 2014/30/EU Approvals ATEX zone 1: II 2 G Ex d [op is] IIC T4 Gb (TU/RU) II 2 D Ex tb IIIC T78°C Db II 2 D Ex tb IIIC T88°C Db (Lasergas III Ext) CSA: Class I Div. 1, Groups B, C and D ATEX rating connection box: II 2 GD Ex e IIC T5 Gb -40°C ≤TA≤65°C Functional safety: Designed according to SIL 2; IEC 61508	CSA: Class I Div. 1, Groups B, C and D Maintenance Calibration: Check recommended every 12 months Dimension and weight Transmitter and receiver unit (TU/RU): 215 mm (length, add 50 mm for purge unit) x 125 mm (diameter), 3,5 kg each Window unit (optional): Wu 60 (length) Wu 100 (length) TU/RU connection box: 260 mm x 160 mm x 90 mm, 2,5kg
Environmental conditions Operating temperature: -40 °C to +65 °C Storage temperature: -40 °C to +70 °C Protection classification: IP65	Installation and Operation Flange dimension: DN50/PN10 or ANSI 2"/150 lbs (other dimensions on request) Alignment tolerances: Flanges parallel within 1.5° Purging of windows: Dry and oil-free pressurised air or gas, or by fan Purge flow: 10-50 l/min (application dependent) Calibration: Check recommended every 12 months	**NOTE: Detection limits are specified as the 95% confidence interval for 1 m optical path and gas temperature / pressure = 25°C / 1 barA. Measured in N ₂ .
Inputs / Outputs Analog output (3): 4 - 20 mA current loop (concentration and transmission) Digital output: 10/100 Base T Ethernet (Modbus TCP) Relay output (2): High gas, warning and fault (normally closed) Analog input: 4 - 20 mA process temperature and pressure reading		
Ratings Power supply: 24VDC range 18-32 VDC Power consumption : Max. 10 W 4 - 20 mA output: 500 Ohm max. load impedance, not isolated Relay output: 1 A at 30 V DC/AC		

* NEO Monitors reserve the right to change specifications without prior notice

Your local distributor:



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Prost Stabels vei 22 • N-2019 Skedsmokorset, Norway • Phone +47 67 97 47 00 • www.neomonitors.com



Measure . Prevent . Protect . Control

ProDetec Pty.Ltd.

P. +61 (02) 9620 8700

F. +61 (02) 9620 8755

E. info@prodetec.com.au

A. 17/38 Powers Rd,

Seven Hills NSW 2147

www.prodetec.com.au