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Neo Monitors LaserGas™ is using Tuneable Diode Laser Absorption Spectroscopy (TDLAS) i.e a non-contact optical measurement method employing solid-state laser sources. The sensor remains unaffected by contaminants corrosives and does not require regular maintenance. The absence of extractive conditioning systems further improves availability of the measurements and eliminates errors related to sample handling. The monitor is mounted directly onto flanges, which include purge gas connections and a tilting mechanism for easy alignment. Continuous purge flow prevents dust and other contamination from settling on the optical windows. Once power and data lines are connected, measurements are performed in real-time.

Features

- Response time down to 1 second
- No gas sampling: In-situ measurement
- No interference from background gases
- Applicable for many process conditions:
 - high/low temperature
 - high dust
 - corrosive gases
- Line measurement, integral concentration over the full stack diameter
- ATEX and CSA certified
- TÜV, MCERTS, GOST approved technology
- Integrated span check option available
- Suitable for harsh environment
- No moving parts
- No zero drift
- Stable calibration
- Long OPLs

Applications

LaserGas™ II SP is designed for reliable and fast measurement of all kinds of gases in any environment, most typically:

- Chemical industry
- Petrochemical industry
- Metal industry
- Power plants
- Waste incinerators
- Cement industry
- Automotive industry
- Scrubber technology
- Glass industry
- PVC production
- Pulp and paper
- 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

LaserGas™ II SP

Technical Data

<p>Specifications</p> <p>Optical path length: Typically 0.1-1m Response time: 1 – 2 sec Accuracy: Application depended Repeatability: 1% of range (gas & application specific)</p> <p>Environmental conditions</p> <p>Operating temperature: -4 °F to +131 °F (special version up to +149 °F on request) Storage temperature: -4 °F to +131 °F Protection classification: IP66</p> <p>Inputs / Outputs</p> <p>Analogue output (3): 4 – 20 mA current loop (concentration, transmission) Digital output: TCP/IP, MODBUS, Optional fibre optic Relay output (3): High gas-, Warning - and Fault relays (normally closed circuit relays) Analogue input (2): 4 – 20 mA process temperature and pressure reading</p> <p>Ratings</p> <p>Input power supply unit: 100 – 240 VAC, 50/60 Hz, 0.36 – 0.26 A Output power supply unit: 24 VDC, 900 – 1000 mA</p>	<p>Input transmitter unit: 18 – 36 VDC, max. 20W 4 – 20 mA output 500 Ohm max. isolated</p> <p>Relay output: 1 A at 30 VDC/AC</p> <p>Installation and Operation</p> <p>Flange dimension alignment: DN50/PN10 or ANSI 2"/150lbs (other dimensions on request)</p> <p>Alignment tolerances: Flanges parallel within 1.5°</p> <p>Purge flow: Dry and oil-free pressurised air or nitrogen (application dependent)</p> <p>Maintenance</p> <p>Visual inspection: Recommended every 6 – 12 months (no consumables needed)</p> <p>Calibration: Check recommended every 12 months</p> <p>Validation: In-situ span check with optional internal cell (EN 14181 compliant)</p> <p>Safety</p> <p>Laser class: Class 1 according to IEC 60825-1</p> <p>CE: Certified, conformant with LVD 73/23/EEC, including 93/68/EEC</p> <p>EMC: Conformant with directive 2004/108/EC</p>	<p>Explosion protection (optional)</p> <p>ATEX zone 1: II 2 G Ex px [op is] Ga/Gb IIC T4/T5, II 2 D Ex p IIIC T147°F Db</p> <p>ATEX zone 2: II 3 G Ex nA nC [op is] IIC T4 Gb, II 3 D Ex td A22 T212°F</p> <p>CSA: Class I, Div. 2, Groups A, B, C and D; Temp. Code T4; non-incendive</p> <p>Dimension and weight</p> <p>Transmitter unit: 405 (plus 65 for purge unit) x 270 x 170 mm, 13 lbs Transmitter unit: (Ex version) 65 for purge unit) x 270 x 310 mm, 17 lbs Receiver unit: 355 (plus 65 for purge unit) x 125 x 125 mm, 8 lbs Power supply unit: 180 x 85 x 70 mm, 3 lbs</p>
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Gas	Detection limit (ppm)	Max temp (°F)	Max pressure (bar abs)
NH ₃	0,15	1112	2
HCl	0,05	1112	2
HF	0,015	752	2
H ₂ S	3	573	2
O ₂	100	2732	20
% H ₂ O	50	2732	2
ppm H ₂ O	0,1	752	2
% CO	30	2732	2
% CO ₂	30	1200	2
ppm CO	0,3	2732	2
ppm CO ₂	0,2	572	2
NO	10	572	2
N ₂ O	1	392	2
CH ₄	0,2	572	3

NOTE: Detection limits are specified as the 95% confidence interval for 1m optical path and gas temperature / pressure = 77 °F / 1 bar abs. Measured in N₂.

Other gases might be available on request.

Dual Gas: NH₃+H₂O, HCl+H₂O, CO+CO₂, CO+H₂O, CO+CH₄, O₂+temp,

CO+temp. Higher pressure may be available on request for certain gases.

Please contact us for details.

TÜV and MCERTS, GOST approval available for some gases

Your local distributor:



neomonitors

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