

LaserGas™ II Compact



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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 and 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	Applications	Customer benefits
<ul style="list-style-type: none"> • Response time down to 1 second • No gas sampling: In-situ measurement • No interference from background gases • No moving parts, no consumables • ATEX and CSA certified • Can measure through very thin nozzles <10 mm diameter • Optimised for very short distance measurements across pipes and along short cells • Compact design • No zero drift • Stable calibration 	<p>LaserGas™ II SP is designed for reliable and fast measurement of all kinds of gases in any environment, most typically:</p> <ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • In-situ monitoring • Highly reliable real time analyzer • Limited need for maintenance • Low maintenance cost • Reduce emission to the environment • Easy to install and operate • Reduce daily operation costs • Optimize process • Well proven measurement technique • Requires low purge flow

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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 and application spesific)</p> <p>Environmental conditions</p> <p>Operating temperature: -20 °C to +55 °C Storage temperature: -20 °C to +55 °C 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-, Maintenance, Warning - and Fault relays (normally closed-circuit relays) Input: 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 Input transmitter unit: 18 – 36 VDC, max. 20 W 4 – 20 mA output: 500 Ohm max. isolated Relay output: 1 A at 30 V DC/AC</p>	<p>Installation and Operation</p> <p>Flange dimension alignment: DN50/PN10 or ANSI 2"/150lbs (other dimensions on request) Alignment tolerances: Flanges parallel within 1.5° Purge flow: Dry and oil-free pressurised air or gas or by fan 10-50 l/min per flange (application dependent) 2-4 l/min per flange when set up with thin nozzles (optinal)</p> <p>Maintenance</p> <p>Visual inspection: Recommended every 6 – 12 months (no consumables needed) Calibration: Recommended every 12 months Validation: With optional flow through cell</p> <p>Safety</p> <p>Laser class: Class 1 according to IEC 60825-1 CE: Certified, conformant with LVD 73/23/EEC, including 93/68/EEC EMC: Conformant with directive 2004/108/EC</p>	<p>Explosion protection (optional)</p> <p>ATEX zone 2: II 3 G Ex nA nC op is IIC T4 Gb II 3 D Ex tD A22 T100°C</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: 195 (plus 65 for purge unit) x 270x170 mm, 4.8 kg Transmitter unit: (EX ver.) 195 (plus 65 for purge unit) x 270x310 mm, 6.5 kg Receiver unit: 208 (plus 65 for purge unit) x 125 x 125 mm, 2.6 kg Power supply unit: 180 x 85 x 70 mm, 1.6 kg</p>
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Gas	Detection limit (ppm)	Max temp (°C)	Max pressure (bar abs)
NH ₃	0,15	600	2
HCl	0,05	600	2
HF	0,015	400	2
H ₂ S	3	300	2
O ₂	100	600	2
% H ₂ O	50	600	2
ppm H ₂ O	0,1	400	2
% CO	30	600	2
% CO ₂	30	600	2
ppm CO	0,3	600	2
ppm CO ₂	0,2	300	2
NO	10	300	2
N ₂ O	1	200	2
CH ₄	0,2	300	2

NOTE: Detection limits are specified as the 95% confidence interval for 1m optical path and gas temperature / pressure = 25 °C / 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 and others.

Higher pressure may be available on request for certain gases.

Please contact us for details.

Your local distributor:



neomonitors

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