LaserGas™ II MP

NEO Monitors LaserGas™ is using Tunable Diode Laser Absorption Spectroscopy (TDLAS) i.e. a non-contact optical measurement method employing solid-state laser sources. Therefore, the sensor remains unaffected by contaminants and corrosives and does not require regular maintenance. The laser beam is coupled into a Herriott cell, where it is reflected multiple times between two spherical mirrors in order to enhance the analyser sensitivity.
The MP monitor is a turn-key instrument. No other operations than connecting power, sample gas tubes and optional purge are required during installation. To avoid fouling of optical parts in the Multipass cell the cleanliness of the sample gas must be ensured. Filtering the sample gas in an appropriate extractive system may be required for some applications.

Features

- Short response time (flow depended)
- Very low detection limits (ppb for most gases)
- No interference from background gases
- Stable calibration
- No zero drift
- Offline gas analysis in controlled environment
- No moving parts, no consumables, turn-key instrument
- ATEX and CSA certified

Applications

- Chemical industry
- Petrochemical industry (contaminants like H_2S in NG)
- Industrial gas (impurities in pure gases)
- Semiconductor industry
- Power plants (stack testing of corrosive emission gases)
- H_2S emission monitoring (pulp & paper, refineries, biogas production)
- and more

Customer benefits

- The multipass cell concept combines a long measurement path length with a compact analyzer design
- Measures trace levels of gases, offline in a controlled environment
- Optimize process
- Limited need for maintenance
- Highly reliable real time analyzer
- Reduce emission to the environment
- Easy to install and operate
- Reduce daily operation costs
- Well proven measurement technique
- Low maintenance cost

LaserGas™ II MP

Technical Data

Specifications

Optical path length:	2. 7 and 11.4 m
Response time:	< 20 sec (depending on sample gas flow)
Accuracy:	Application dependent
Repeatability:	1% of range (gas and application specific)

Environmental conditions

Operating temperature:	0 ˚C to +55 ˚C
Storage temperature:	-20 ˚C to +55 ˚C
Protection classification:	IP65

Inputs / Outputs

Analog output (1-3):	4 – 20 mA current loop (concentration, transmission)
Digital output(Optional):	TCP/IP, MODBUS, Optional fibre optic
Relay output (3):	High gas-, Maintenance, Warning - and Fault relays
Analog input:	4 – 20 mA process temperature and pressure reading

Ratings

Input power:	100 – 240 VAC, 50/60 Hz, 0.36 – 0.26 A or 18 - 36 VDC, max 20W
4 – 20 mA output:	500 Ohm max. isolated
Relay output:	1 A at 30 V DC/AC

Safety

Laser class:	Class 1 according to IEC 60825-1
CE:	Certified
EMC:	Conformant with directive 2014/30/EU

Approvals

IECEx/ATEX zone 2:	II 3 G Ex nA nC op is IIC T4 Gb II 3 D Ex td A22
T100°C	
CSA:	Class I, Div 2 Groups A, B, C and D; Temp. Code T4; non-incendive

Installation and Operation

Gas inlet / outlet:	6 mm or 1/4 " / 8 mm (5/16") Swagelok (other dimensions on request)
Sample gas flow:	Recommended 2 – 10 l/min
Sample inlet pressure:	1 – 1.5 BarA (14.5 – 21.7 psia)
Cell temperature:	0-55 ˚C
Purging of laser chamber (optional):	Dry and oil free pressurised air and gas, Nitrogen for O_2 and CO_2
Purge flow:	Maximum 0.5 l/min

Maintenance

Calibration:	Check recommended every 12 months

Dimension and weight

Cabinet:	500 mm x 510 mm x 215mm 18.4 kg

Gas	Detection limit
O_2	10 ppm
H_2S	0.5 ppm
CH_4	20 ppb
CO	20 ppb
CO_2	0.2 ppm
HCN	50 ppb
NH_3	30 ppb
HCl	10 ppb
H_2	200 ppm

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

NOTE: Detection limits are specified as the 95% confidence interval for the standard 11.4 m cell and gas temperature / pressure = 25 °C / 1 barA measured in N_2.

Also available are NO_2, CH_2CHCl (VCM), C_2H_4O (EtO), CH_2Cl_2 (DCM).

Other gases are available, please contact us with your request.

Dual Gas: $CO+CO_2$, $CO+CH_4$

Your local distributor:

neoMONITORS

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