LaserGas™ Q CF_4

NEO Monitors LaserGas™ Q CF_4 is using Tuneable Laser Absorption Spectroscopy (TLAS) 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

- Fast response time
- No gas sampling: In-situ measurement
- Line measurement, integral concentration over the full stack diameter
- Suitable for harsh environment
- No zero drift
- Stable calibration

Applications

LaserGas™ Q CF_4 is designed for reliable and fast measurement of tetrafluoromethane in continuous emission monitoring especially in the aluminum industry.

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

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Technical Data

Specifications

Optical path length:	Typically 0.5 -6 m
Response time:	Typically 10 - 20 sec
Accuracy:	Application dependent
Repeatability:	1% of range (gas & application specific)
Range CF_4 (preliminary):	0 - 4000 ppb*m
Detection limit:	< 20 ppb
Temperature:	Ambient to 200 °C
Pressure:	Max 1.5 bar abs
Windows material:	CaF_2

Environmental conditions

Operating temperature:	-20 °C to +55 °C
Storage temperature:	-20 °C to +55 °C
Protection classification:	IP66

Inputs / Outputs

Analog output (3):	4 - 20 mA current loop (concentration, transmission)
Digital output:	RS – 232 format, Optional 10 or 10/100 Base T Ethernet, Optional fiber optic (ASCII – format)
Relay output (3):	High gas-, Maintenance-, Warning - and Fault relays (normally closed-circuit relays)
Analog input (2):	4 – 20 mA process temperature and pressure reading

Ratings

Input power supply unit:	100 – 240 VAC, 50/60 Hz
Output power supply unit:	24 VDC, 900 – 1000 mA
Input transmitter unit:	18 – 36 VDC, max. 20W
4 – 20 mA output:	500 Ohm max. isolated
Relay output:	1 A at 30 V DC/AC

Installation and Operation

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 nitrogen 10 - 50 l/min (application dependent)
Purging of laser:	Clean dry air, ≈ 15 l/min **(Mandatory)**
Purging of windows:	Dry and oil-free pres surized air or gas, or by fan

Maintenance

Visual inspection:	Recommended every 6 – 12 months
Calibration:	Check recommended every 12 months

Safety

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 2014/30/EU
ATEX:	PENDING
CSA:	PENDING

Dimension and weight

Transmitter unit:	340 x 270 x 170 mm, 6.9 kg
Receiver unit:	260 x 270 x 170 mm, 5.5 kg
Power supply unit:	180 x 85 x 70 mm, 1.6 kg

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

Your local distributor:

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