

/ LaserGas™ III OP Gas Detector



All Rights Reserved, Copyright © August 2022, NEO Monitors AS

NEO Monitors LaserGas™ III Open Path Gas Detector is based on our highly successful LaserGas™ III platform and is specifically designed for measurements in critical emission monitoring and fence line applications in hazardous areas. Utilizing separate compact Exd flameproof enclosures, the transmitter and receiver units can be mounted up to 100 meters apart (application dependent), allowing gas concentration measurements along the optical path to be detected in real-time.

Features

- Zone 1 Exd certified for operation in hazardous areas
- Suitable for use in SIL2 systems
- Compact footprint
- Automatic continuous system health check
- Low power requirements <15 watts
- Factory calibrated with no zero drift
- No interference from other background gases
- Low maintenance TDLAS measurement technique

Applications

- Safety critical open path and fence-line emission monitoring across a wide range of industrial sites, including:
 - Oil & Gas
 - Petrochemicals
 - Chemical plants
 - Metals Industry

Customer benefits

- High performance reliable and proven optical laser measurement technique
- NEO Monitors measurement algorithm ensures no cross-interference
- Very low maintenance
- Low cost of ownership
- Flexible installation



Technical data

Specifications

Type:	Near IR Diode Laser Spectroscopy
Path length:	5-100 m
Self-test:	Continuous
Calibration:	Factory set, no field calibration necessary
Zero:	<+/- 1% of full scale
Repeatability:	<+/- 1% of full scale
Response time:	5 sec (adjustable)

Environmental conditions

Storage temperature:	-55 °C - 75 °C (-67°F - 167°F)
Operating:	-40 °C - 65 °C (-40°F - 149°F)
Humidity (operational):	100% RH

Input/output

Standard:	4-20 mA source or sink, max load impedance 500 Ohm
Options:	Ethernet
Fault signals:	Fault 1 mA Beam Block 2 mA Warning 3 mA

Rating

Power Supply:	24V DC range 18-32V DC
Power consumption:	Max 20W.

Safety

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

Approvals

IECEX/ATEX zone 1:	II 2 G Ex db [op is Ga] IIC T4 Gb II 2 D Ex tb [op is Da] IIIC T100 °C Db
--------------------	--

CSA: Groups and D, T4	Class I, Div. 2, (Canada only) B, C
--------------------------	--

Protection classification: IP65
IEC 61508 SIL2 capability

Materials

TU and RU:	Stainless steel (ASTM 316)
------------	----------------------------

Optics

Alignment:	+/- 0.15 deg
Obscuration:	> 90%

Dimensions / weight

Footprint/weight:	Ø 125mm x 250 mm/ (4.92" x 9.84") 5.5 Kg (12 lbs.) per TU or RU
-------------------	---

Optional junction box (technical data)
Junction box: GRP / aluminum

Footprint Junction box:	250 mm x 250 mm/ (9.84" x 9.84") 2.0 Kg (4.4 lbs. per Junction Box)
-------------------------	---

ATEX rating: II 2 G Ex e I IC T4/T5/T6

Gas	Detection limit (LDL)	Pathlength	Minimum Range
NH3	2 ppm * m	5-100 m	0-40 ppm * m
HF	0.1 ppm * m	5-100 m	0-1 ppm * m
CO	5 ppm * m	5-60 m	0-100 ppm * m
CH4	5 ppm * m	5-100 m	0-100 ppm * m
H2S	20 ppm * m	5-100 m	200 ppm * m

NEO Monitors reserve the right to change specifications without prior notice

PERFORMANCE YOU CAN TRUST

www.neomonitors.com

