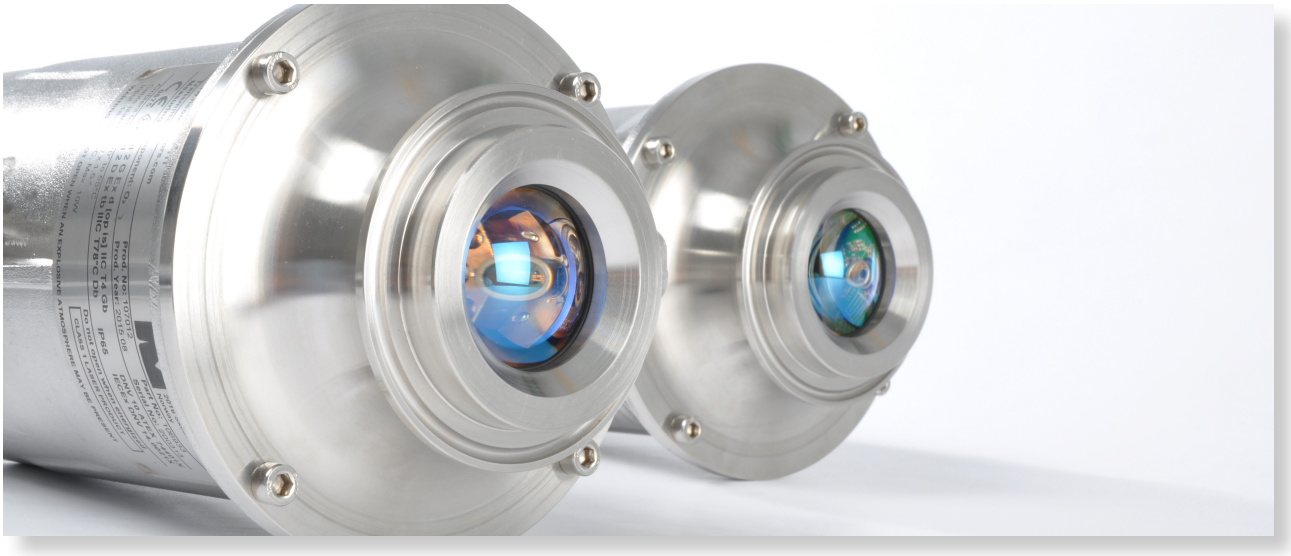
/ LaserGas™ III Ultra SP Coke oven gas (COG) H_2S



LaserGas™ III Ultra COG H_2S uses the innovative baseline-insensitive TDLAS technique specifically designed for high performance H_2S measurement in complex coke oven gas sample streams and where high sensitivity is required across with very long path lengths.

Thanks to the baseline insensitivity and the use of NEO Monitors' proprietary IROSS™ signal processing algorithm, this challenging application is no problem for the Ultra.

LaserGas™ III Ultra is the perfect analysis partner for reliable measurement in this demanding application.

Features

- In-situ real time measurements
- TDLAS technology
- Baseline-insensitive
- IROSS™ signal processing
- High dynamic range
- Fast response time
- Low detection limit
- No interference from other gases
- Not affected by high dust load
- Lifetime calibration, no zero drift
- Integrated span check
- Compact design
- Low power consumption (< 10W)
- Ethernet connectivity

Applications

- Coke oven gas (COG)

In:
- Refineries
- Power Plants
- Chemical industries
- Steel industry
- and more

Customer benefits

- Process control & process safety in a single analyzer
- Reliable in-situ H_2S measurement
- Measurements in real time
- Designed for long OPLs & high ranges
- Simple installation, ease of use
- Low maintenance cost
- No consumables
- No sampling systems
- Compressed air purge (no need for Nitrogen)
- No regular calibrations needed
- Designed for applications with complex gas mixtures

IROSS™ - *In-situ Real-time Overlapping Spectral Separation*

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Technical data

Specifications

Detection limit (LDL):	See Table below
Max process gas temperature range:	See Table below
Max process gas pressure range:	See Table below
Optical path length:	Typically 0.5 - 30m
Repeatability:	See Table below
Linearity:	< 1 % of range
Response time:	≤ 5 sec

Environmental conditions

Operating temperature:	-40 ˚C to +65 ˚C
Storage temperature:	-40 ˚C to +70 ˚C
Protection classification:	IP65

Inputs / Outputs

Analog output (3):	4 - 20 mA current loop (concentration and transmission)
Digital output:	10/100 Base T Ethernet (Modbus TCP)
Relay output (2):	High gas, warning and fault (normally closed)
Analog input:	4 - 20 mA process temperature and pressure reading

Ratings

Power supply:	24VDC range 18-32 VDC
Power consumption :	Max. 20 W
4 – 20 mA output:	500 Ohm max. load impedance, not isolated
Relay output:	1 A at 30 V DC

Safety

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

Approvals

ATEX zone 1:	Ex db [op is Ga] IIC T4 Gb Ex tb [op is Da] IIIC T100°C Db
CSA:	Class I Div. 2, Groups B, C and D, T4
ATEX rating connection box:	II 2 GD Ex e IIC T5 II 2 D Ex e tb IIIC T85°C Db

Installation and Operation

Flange dimension:	DN50/PN10 or ANSI 2”/150 lbs (other dimensions on request)
Alignment tolerances:	Flanges parallel within 1.5˚
Purging of windows:	Dry and oil-free pressurised air or gas, or by fan
Purge flow:	10-50 l/min (application dependent)

Maintenance

Calibration:	Check recommended every 12 months
Validation:	In-situ span check with optional internal cell (application depenent)

Dimension and weight

Transmitter and receiver unit (TU/RU):	215 mm (length, add 50 mm for purge unit) x 125 mm (diameter), 3,5 kg each
TU/RU connection box:	260 mm x 160 mm x 90 mm, 2.5kg

Special process conditions on request

NEO Monitors reserves the right to change specifications without prior notice.

Spesifications LaserGas™ III Ultra COG H_2S

	H_2S	
Measurement range	Min	Max
	0-250ppm	0-10.000ppm
Detection limit (LDL)**	5ppm	
Precision	LDL or 1% of reading	
Process temperature	+20 ˚C	+70 ˚C
Process pressure	0.9 barA	1.3 barA
Repeatability	0.2ppm	
Response time	2 s	
Measurement update time	1 s	

Typical process conditions

Gas	Concentration
H_2	55 - 60 %
CH_4	22 - 25 %
C_2H_4	2 - 3 %
CO	5 - 10 %
CO_2	1 - 5 %
Other gases	< 2 %

Other gas compositions are available upon request

**NOTE:
LDL is defined as the maximum peak-to-peak value of a 24 hour temperature cycle test (-40 to +65˚C) using 1 s. update time.
LDL also includes typical background interferences not explicitly defined in the table.

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