

NEO Monitors

HYDROGEN MEASUREMENTS WITH LASERGAS™
CONTACTLESS, FAST, SENSITIVE, SELECTIVE, RELIABLE

H₂



neomonitors

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NEO Monitors' Hydrogen lineup

Hydrogen will become one of, if not the most important energy carrier in the coming decades. It is also used in industry, for example as a feedstock for chlorine and ammonia production.

NEO Monitors' laser-based gas measurement technology offers the possibility to perform the concentration measurement without physical contact with the gas to be measured.

This combined with the advantages of tunable diode laser absorption spectroscopy (TDLAS), high selectivity and sensitivity, high reliability and low maintenance requirements makes our technology a unique tool for a wide range of applications in many industries, from chemicals and petrochemicals to energy and metals.

NEO Monitors' can provide gas analyzers for more than 40 gases and combinations, and Hydrogen is one of them. We can measure Hydrogen directly with our in-situ or extractive analyzers; we can also measure impurities like oxygen, carbon monoxide, carbon dioxide or methane in pure Hydrogen in an extractive setup.

/ LaserGas™ II MP for impurity measurements

Extractive solution for impurity measurements in Hydrogen.



	LDL (in H2)	Range	
Oxygen (O2)	15 ppm	0-1000 ppm	
Carbon monoxide (CO)	0.05 ppm	0-5 ppm	
Methane (CH4)	0.05 ppm	0-5 ppm	
Carbon dioxide (CO2)	0.2 ppm	0-20 ppm	
Combo	CO	0.05 ppm	0-5 ppm
	CH4	0.2 ppm	0-20 ppm

/ LaserGas™ II SP Hydrogen analyzer

World's first in-situ TDLAS analyzer based on NEO Monitors' bestselling LaserGas™ II platform. Transmitter and receiver are mounted on diametrically opposite sides of a stack or duct; alternatively they can be mounted onto an extractive cell.



- in-situ real time H₂ monitoring
- high selectivity
- continuous internal health check
- incorporated cell for H₂ span check

// Performance specifications

DL, % vol	0.1
Resolution, % vol	0.03
Response time, s	< 2

DL (detection limit) is for ambient P&T, OPL=1 m, N₂/Air background

	Min	Max
Range, % vol	5	100
OPL, m	0.7	5
Process pressure, bar Abs	0.5	4
Process temperature, °C	-50	150

/ LaserGas™ II MP Hydrogen analyzer

Extractive solution with a multipass cell for Hydrogen applications with high demands on sensitivity.



- High selectivity
- Low detection limit
- Continuous internal health check

// Performance specifications

DL, % vol	0.015
Resolution, % vol	0.005
Response time, s	< 20

DL (detection limit) is for ambient P&T, OPL=1 m, N₂/Air background. Response time is flow-dependent

	Min	Max
Range	1	100
Process pressure, bar Abs	0.5	3
Process temperature, °C	-10	50