

PRESS RELEASE

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NEW COMPACT TDL OXYGEN ANALYSER FOR HAZARDOUS AREAS

NEO Monitors AS, the Norwegian manufacturer of cutting edge laser-based gas analysers, launches with the **LaserGas III Single Path (SP) for O₂** its 3rd generation of LaserGas analysers. This new oxygen analyser is specifically designed for operation in hazardous areas. The entire instrument is built into compact flameproof enclosures making it fit for zone 1 and division 1 applications without any purge.

State of the art technology

NEO Monitors LaserGas is using Tuneable Diode Laser Spectroscopy (TDLS) i.e. a non-contact optical measurement method employing solid-state laser sources.

The highly selective laser source operating at room temperature scans the single gas absorption line specific to oxygen, thus eliminating cross interference from other gases. A detector located opposite the laser detects the light absorption caused by the oxygen molecules, after which the gas concentration is calculated. Transmission changes caused by varying dust load do not interfere with the measurement. Automatic correction for process temperature and pressure variations is included.

Compact, low power model

The LaserGas III O₂ consists of equally sized transmitter and receiver units that are mounted diametrically opposite each other on stacks, ducts or reactors. The laser light will cross the process gas and concentration changes are detected in-situ. Compared to our well-proven LaserGas II line of analysers, instrument weight and dimensions have been further reduced; albeit all electronics now are build into flameproof (Ex de rated) enclosures. The new digital electronic design requires very low power of less than 10 W.



LaserGas III SP O₂ – Transmitter unit

Fast and reliable

The LaserGas III O₂ sets a new standard for fast and reliable TDL analysis. The laser scans the absorption line in milliseconds. This enables overall instrument response times of less than 100 ms and critical oxygen concentration changes are detected immediately. Measurement readings are emitted through current loop outputs or digital outputs (Ethernet, USB, RS-485) and the Modbus protocol is supported. The LaserGas III O₂ is our most reliable gas sensor with all electronics designed according to standard IEC 61508, SIL 2 (safety integrity level).

Key applications

Focused applications are inertisation control of reactors, tail gas treatment, and flare gas monitoring in the chemical and petro-chemical industry as well as off-gas analysis in incinerators and furnaces in the minerals & metals industry. The LaserGas III O₂ is the solution for reliable and fast measurement of oxygen in corrosive, dusty, sooty gas mixtures and in gas mixtures that contain condensates or tar. Process gases may be measured up to 10 bar pressure and 1500 °C temperature. A spectroscopic temperature measurement utilizing the same laser source is available as option.

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Other gases such as NH₃, HCl, HF, H₂S, H₂O, CO, CO₂, CH₄, NO, N₂O etc. are available through our present LaserGas II product line, but will be continuously added to the 3^d generation of LaserGas analysers.

About NEO Monitors

NEO Monitors AS – a subsidiary of Norsk Elektro Optikk AS (NEO) – is the leading manufacturer of laser-based gas analysers and dust monitors. The company offers the most complete line of instruments based on TDLS with the lowest detection limits in the market. NEO Monitors products are mainly sold to the process and combustion control market and the continuous emission monitoring (CEM) market. Europe is the most important market, but the company has also a significant market base in North America and Asia. NEO Monitors' heritage goes back to 1985.

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