

SERVOTOUGH LaserExact 2950

ULTRA-LOW TRACE GAS MONITORING OF MULTIPASS LONG PATH LENGTH CELLS IN A
COMPACT ANALYZER WITH SMALL INSTALLATION FOOTPRINT



SERVOTOUGH LaserExact 2950

Specifically designed for extractive trace analysis applications, the LaserExact gas analyzer delivers the exceptional benefits of Tunable Diode Laser (TDL) Technology within a robust and compact analyzer design.

Able to detect gases including O₂, HCl, HF, NH₃, CO, CO₂, H₂O, H₂S, the LaserExact combines an advanced multipass long path length cell with Servomex's superior signal processing. Combined with feature rich operation and a range of digital communication options, the result is unsurpassed low ppb detection limits for most gases - making the LaserExact ideal for the measurement of trace gases offline.

FLEXIBLE

- Ultra-low detection of 8 gases: O₂, H₂O, H₂S, CO, CO₂, NH₃, HCl and HF
- Various communications platforms: RS-232, Optical 10 or 10/100 Base T Ethernet, optional fiber optic (ASCII)

EASY TO USE

- Intuitive, engineer-friendly interaction and use
- Easily operable via analog and digital communication options
- Compact design with small installation footprint
- SIL 1 approved

LOW COST OF OWNERSHIP

- Drift-free TDL technology extends maintenance periods, reducing costs
- Remote device interaction via full suite of communications protocols
- High grade laser technology provides long life, zero drift solution

UNRIVALLED PERFORMANCE

- Uses industry-leading TDL technologies and advanced algorithms for sensitive monitoring
- Ultra-low offline trace gas analysis down to 10ppb (gas specific and application dependent)
- Manufactured by Servomex - over 60 years' experience innovating and pioneering gas analysis and thousands of units used in the field every year

BENCHMARK COMPLIANCE

- Designed for use in Zone 2/ Division 2 hazard rated locations
- Designed for Zone 2/Division 2 use without purge

Learn more about the SERVOTOUGH LaserExact 2950
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PRODUCT OVERVIEW: LaserExact 2950

UNBEATABLE PERFORMANCE FOR OFFLINE LONG PATH CELL MEASUREMENTS

When you work in refinery monitoring processes, industrial gas manufacture or other applications where you need an in situ measurement across long pathways, your preferred device must be able to deliver ultra-sensitive analysis of diverse gases. The flexibility to perform both single and dual monitoring is advantageous and the ideal device will also be easy to integrate into existing process monitoring systems. And we don't believe you should have to compromise.

A NO COMPROMISE SOLUTION

The LaserExact's advanced TDL technology delivers a fast response time, highly stable performance and minimal interference from background gases. The LaserExact utilises advanced peak-locking technology, which eliminates drift over extended operational periods by automatically tracking on the measured gas absorption line or - in applications where the measured gas is not normally present - tracking the absorption line of another gas present in the stream. This robust tracking mechanism ensures a highly accurate operation by the LaserExact over long periods, with calibration frequencies extended beyond twelve months for many applications.

UNBEATABLE VALUE OVER PRODUCT LIFE

Designed for easy installation and integration, the LaserExact is immediately ready for operation following the connection of power, sample gas and optional purge gas. With gas concentrations provided as 4-20mA outputs with the option of Ethernet communication, the LaserExact delivers immediate class-leading performance that meets ATEX and Class1 Div2 CSA approvals. With no moving parts or consumables, the LaserExact minimizes operating costs, while the stable, drift-free performance reduces the downtime incurred by the calibration requirements of other analyzer technologies.

ALTERNATIVE PRODUCTS

The SERVOTOUGH product range features alternative TDL laser products, each optimized for specific application needs.

LaserSP 2930



If you require a flexible in-situ TDL solution for diverse process and emissions monitoring over longer paths, we recommend LaserSP. With 21 gas/gas blend monitoring capabilities, this device is ideal for diverse emissions and process monitoring in hazard rated locations.

LaserCompact 2940



When you need an in-situ, short distance TDL analyzer, we recommend LaserCompact. This device is optimized for petrochemical, chemical and metallurgy applications.

KEY APPLICATIONS

- Refinery monitoring: H₂S and CO₂ (during Natural Gas refinement)
- O₂ monitoring in flare gas recovery system
- HF and HCl impurity monitoring in process gas
- Monitoring pure gas impurities in industrial gas production
- Monitoring H₂S during biogas production
- H₂O and H₂S in natural gas



PRODUCT DATA: LaserExact 2950

GAS MEASURED	DETECTION LIMIT *	MIN. MEASURING RANGE
NH ₃	20ppb	0 - 2ppm
HCl	5ppb	0 - 0.5ppm
HF	2ppb	0 - 0.2ppb
H ₂ S	0.3ppm	0 - 30ppm
O ₂	3ppm	0 - 300ppm
H ₂ O (ppm)	10ppb	0 - 1ppm
CO (ppm)	50ppb	0 - 5ppm
CO ₂ (ppm)	50ppb	0 - 5ppm

* Detection limit is application dependent. Please consult Servomex

OPTIONS	DESCRIPTION	SPECIFICATION
Analog output	3 x configurable 4-20mA as standard	4-20mA current loop
Relays	3 x relay options: high gas, warning relay, fault relay	Normally closed circuit relays. Output: 1 A at 30v DC/AC
Digital outputs	Diverse options for added flexibility	RS-232, 10 or 10/100 Base, Ethernet and optional fibre optic (ASCII)
Analog input	For process temperature and pressure measurements	4-20mA format

ACCESSORIES

**ACCESSORIES AVAILABLE FOR SPECIFIC APPLICATIONS
- CONTACT YOUR LOCAL SERVOMEX BUSINESS CENTER**

SAMPLE FOR MEASUREMENTS

Sample gas	Sample must be dry and oil-free pressurized air or gas, N ₂ for O ₂ and H ₂ O applications
Flow Control	Recommended 5-10l/min.
Sample inlet connection	6mm or 1/4" Swagelok (other dimensions on request)
Sample wetted material	Standard: 304SS, 316SS, borosilicate glass, platinum, platinum/iridium alloy, electroless nickel, Viton®.
Inlet pressure	0.2-2 bar abs (2.9-29psia)



PRODUCT DATA:

LaserExact 2950

DEVICE SPECIFICATION

Size:

- Unit: 571mm (22.4") Width x 2200mm (7.8") High x 600mm (23.6") Deep

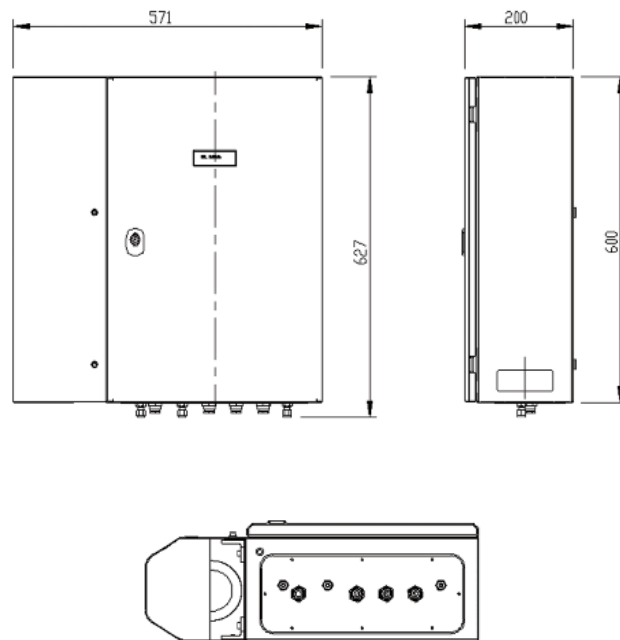
Weight:

- 28kg (62 lbs)

Certifications:

- ATEX Zone II 3 G Ex nA Nc op is Gc IIC T4, II 3 D Ex td A22 IP65 T100°C
- North America CSA: Class 1, Div. 2, Groups A, B, C and D, Temp. Code T4; non-incendive
- IP 65

DEVICE SCHEMATIC



These analyzers are not intended for any form of use on humans and are not medical devices as described in the Medical Devices Directive 93/42EEC.

Please note: This document was updated in August 2014. While every effort has been made to ensure accuracy, no responsibility can be accepted for errors or omissions. Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards and guidelines. This document is not intended to form the basis of a contract.

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