

SERVOPRO 4900

HIGH PERFORMANCE CONTINUOUS EMISSIONS (CEMS) ANALYZER, DESIGNED FOR MULTI-GAS MEASUREMENT OF POLLUTANTS, GREENHOUSE GASES AND REFERENCE OXYGEN.



SERVOPRO 4900

The 4900 offers high specification multi-gas monitoring designed specifically for the continuous emissions monitoring of flue gas. This sensitive analyzer combines leading-edge patented sensing technologies – Paramagnetic and SBSW/Gfx Infrared – to provide unparalleled MCERTS/QAL1 measurements for reference O₂, CO, CO₂, NO, SO₂, CH₄ and N₂O, (when used with a suitable sampling system). The 4900 combines this monitoring power with low-cost of ownership, delivering a highly attractive analytical package.

With a compact and robust design, the small footprint of the 4900 requires minimum cabinet space and can be easily integrated into other systems, helping to reduce installation costs. Low operational requirements, facilitated through long calibration intervals by ultra-stable, high performance measurement technologies and auto-calibration capabilities, make the 4900 an ideal monitoring solution with an affordability to match its impressive monitoring performance.

FLEXIBLE

- Provides a complete continuous emissions monitoring solution for flue gas analysis
- Continuous multi-gas monitoring
- Ideal for pollutant/greenhouse gas monitoring: % O₂ and ppm SO₂, NO, CO, CH₄, and N₂O, and % CO₂

EASY TO USE

- Small and compact: designed for simplified integration into existing systems and easy fit into a cabinet
- Auto-calibration facility
- Digital communications options: RS232/RS485 Modbus protocol

LOW COST OF OWNERSHIP

- Reduced ongoing operational needs facilitated by auto-calibration function
- Extended calibration periods from ultra-stable, industry-leading Paramagnetic and SBSW/Gfx IR sensing technologies

UNRIVALLED PERFORMANCE

- Non-depleting sensors for ultra-stable, accurate and selective measurements
- Manufactured by Servomex - over 60 years' experience innovating and pioneering gas analysis and thousands of units used in the field every year

BENCHMARK COMPLIANCE

- MCERTS / TÜV approved measurements
- MCERTS/QAL1 certified to EN15267-3 (when used with the appropriate sampling system)
- FM/CSA Approval for Process Control Equipment
- In compliance with Low Voltage, EMC and applicable Directives

Learn more about the SERVOPRO 4900
VISIT SERVOMEX.COM



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PRODUCT OVERVIEW: 4900

A COMPLETE MONITORING SOLUTION FOR CEMS GAS ANALYSIS

For industries and processes including power generation, petrochemical, refining, waste incineration, iron and steel or cement manufacture, continuous emissions monitoring is a regulatory requirement. The solution must be capable of offering the highest sensitivity and accuracy when dealing with multiple measurements for pollutants and greenhouse gases. Certification to MCERTS/QAL1 is essential: added to this is the need to choose a flexible analyzer that can easily integrate into your existing infrastructure. No matter what your application needs, you'll want a solution that's easy to install and operate, while delivering attractive affordability. And we don't believe you should have to compromise.

A NO COMPROMISE SOLUTION

The 4900 meets all your CEMS requirements through a specific design and feature set optimized to continuous flue gas emissions monitoring applications. This compact, small-footprint analyzer integrates effortlessly into your established systems and, when used with the correct sampling system, delivers high grade MCERTS/QAL1 certified multi-gas monitoring of pollutant/greenhouse gases (% O₂ and ppm SO₂, SO, NO, CO, CH₄, and N₂O). The 4900 combines three sensitive and highly stable non-depleting technologies to deliver unsurpassed measurements you can rely on – Paramagnetic, SBSW IR and Gfx IR. In addition to its performance, the 4900 also comes with analog/serial outputs, with digital communications protocols (RS232/RS485 Modbus), for added flexibility in configuration and set-up.

SIMPLE MAINTENANCE AND REDUCED ONGOING COSTS

Added to its considerable measurement performance and stability, the 4900 delivers highly attractive cost reductions over product life. Not only is this device optimized for easy set-up and flexible integration, but an auto-calibration function permits easy, low-cost remote calibration.

ALTERNATIVE PRODUCTS

The Servomex product range features a variety of options designed to meet your application needs.

MiniMP 5200



The MiniMP 5200 is ideal for portable gas analysis of O₂ when EN15267-3 MCERTS approval is required. Optimized for CEMS testing, the MiniMP combines leading-edge gas analysis with simple, intuitive use and reduced ongoing maintenance.

SpectraExact 2500



When you need a high performance photometric analytical solution for the most demanding, hazardous area applications, choose the SpectraExact. This device delivers single and multi-gas component gas analysis of corrosive, toxic and flammable sample streams.

LaserSP 2930



Utilizing the latest TDL technology, the cross-stack measurements provided by the LaserSP offers continuous in-situ monitoring of O₂, HCl, HF, NH₃, CO, CO₂, H₂O, H₂S, HCN, CH₄ and other hydrocarbons, with the sample conditioning advantages of TDL technology.

KEY APPLICATIONS

- Utility boilers
- Clinical waste incinerators
- Chemical incinerators
- Crematoria
- Mobile labs
- Research into greenhouse gases



Zirconia



Gas Filter Correlation



Calorimetry



Thermal Conductivity



Paramagnetic



Infra-Red



Tunable Diode Laser Spectroscopy



Flame Ionisation Detector

PRODUCT DATA: 4900

OPTIONS	DESCRIPTION	SPECIFICATION
Analog inputs	2 x 4-20mA / 0-20mA measurements, isolated	Supplied as standard
Analog outputs	2 x isolated 4-20mA/0-20mA	Supplied as standard. Additional outputs can be added
Analog output range	Analog output parameters	User selectable over the measurement range
Alarms	3 x volt free single pole relays	264VAC or 30Vdc at 1.0A. Additional relays may be added
Digital communications	RS232/RS485 Modbus protocol	Supplied as standard
Auto-calibration	Controls calibration gas and helps to facilitate simplified ongoing maintenance	Independent auto-calibration up to 8 isolated Analog outputs and up to 12 relays with follow or freeze options
Sample system	Flow driven	5-1500ml/min
Power lead	Various available options	CSA/FM approved 110-120/220-240V ac ($\pm 10\%$), 50/60 Hz, 350VA maximum

ACCESSORIES

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

MONITORING PERFORMANCE

Gas	O ₂ control	SO ₂ (standard sensitivity)	SO ₂ (high sensitivity)	NO	CO (standard sensitivity)	CO (high sensitivity)	N ₂ O	CH ₄	%CO ₂ , CO
Technology	Paramagnetic	Infrared (Gfx)	Infrared (Gfx)	Infrared (Gfx)	Infrared (Gfx)	Infrared (Gfx)	Infrared (Gfx)	Infrared (Gfx)	Infrared (SBSW)
Range	0-25%	0-200/ 0-2,500 ppm	0-100 0-1,000 ppm	0-100/ 0-1,000 ppm	0-200/ 0-3,000 ppm	0-50/ 0-500 ppm	0-50/ 0-500 ppm	0-50/ 0-500 ppm	Various
Accuracy (intrinsic error)	<0.05% O ₂	1% of rdg or 5ppm*	1% of rdg or 2ppm*	1% of rdg or 2ppm*	1% of rdg or 2ppm*	1% of rdg or 0.5ppm*	1% of rdg or 0.5ppm*	1% of rdg or 0.5ppm*	<1%FS
Repeatability	<0.05% span of reading, or 0.01% O ₂ *	1% of rdg or 5ppm*	1% of rdg or 2ppm*	1% of rdg or 2ppm*	1% of rdg or 2ppm*	1% of rdg or 0.5ppm*	1% of rdg or 0.5ppm*	1% of rdg or 0.5ppm*	<1%FS
Zero drift/week	0.05% O ₂	5ppm	2ppm	2ppm	2ppm	1ppm	1ppm	1ppm	<2%FS
T ₉₀ in secs @1500ml/min	15	<30	<30	<30	<30	<30	<30	<30	<30

Please note: Warm up time is typically 24 hours from cold start at 20°C (68°F), may be longer for high sensitivity measurements.
*Which ever is the greater.

PRODUCT DATA: 4900

SAMPLE FOR MEASUREMENTS

Sample for measurement	Sample must be oil free, non-corrosive, non-condensing and non-flammable
Dew point	5°C/9°F below minimum ambient
Sample pressure	Externally regulated, to <1psig to provide specified flow rate
Particulates	<2µm
Flow rate	500-1,500ml/min.

DEVICE SPECIFICATION

Size:

- 483mm (19") Wide x 478mm (18.8") or 608mm (23.9") Deep x 132mm (5.1") High

Weight:

- <22kg (48.4lb)

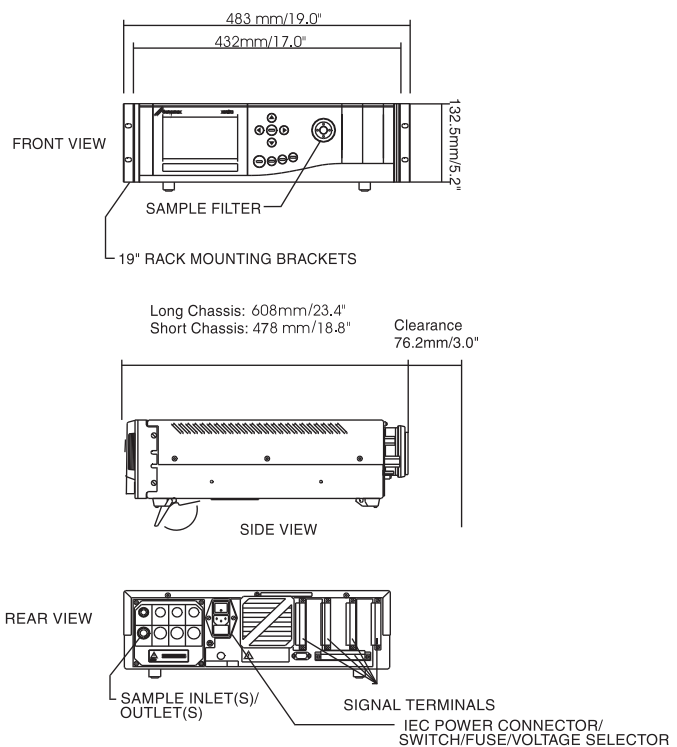
Operating temperature:

- 5°C - 45°C/41°F - 113°F

Certifications:

- EN61010-3: Safety requirements for electrical equipment for measurement, control and laboratory use
- EN61326-1: Electrical equipment for measurement, control and laboratory use
- In compliance with EMC Directives, rated for Overvoltage Category II and Pollution Degree 2

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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