

# SERVOPRO 4200/4210

HIGH SPECIFICATION ANALYSIS OF FLAMMABLE GAS SAMPLES AND TRACE CONTAMINANTS IN INDUSTRIAL GASES APPLICATIONS INCLUDING HYCO AND SYNGAS MIXTURES



## SERVOPRO 4200/4210

Designed specifically to meet the needs of the industrial gases industry, in particular the monitoring of hydrogen, HyCO and Syngas mixtures, the SERVOPRO 4200 delivers unparalleled sensing capabilities for flexible flammable gas sample contaminate testing. Utilizing Servomex patented Paramagnetic and IR (SBSW and Gfx) technologies, the 4200 is able to measure up to four gas streams simultaneously. For higher concentrations of flammable gases, the 4210 model variant offers resilient stainless steel pipework.

The 4200/4210 provides excellent affordability over a long product life. Simplified and cost-effective ongoing maintenance is delivered through easy intuitive integrated menu configuration, and extended calibration intervals provided by the integration of non-depleting, ultra-low drift, high stability sensors.

### FLEXIBLE

- Measures % O<sub>2</sub>, CO<sub>2</sub>, CO and CH<sub>4</sub> / trace level CO, CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>
- Measures up to four flammable gas streams simultaneously
- External analog input facility
- RS232/RS485 serial data output and Modbus communications

### EASY TO USE

- Intuitive, engineer-friendly configuration via integrated LCD interface
- Integrated storage for alarm, fault and calibration history logs
- Simplified remote calibration

### LOW COST OF OWNERSHIP

- Reduced ongoing operational needs via automatic calibration option
- Easy set-up using integrated LCD and simple device installation

### UNRIVALLED PERFORMANCE

- Uses industry-leading, patented Paramagnetic and SBSW/Gfx IR technologies 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

- In compliance with Low Voltage, EMC and applicable Directives

Learn more about the SERVOPRO 4200/4210  
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# PRODUCT OVERVIEW: 4200/4210

## UNSURPASSED PERFORMANCE

When you work in flammable gas production, you need an analytical solution that can adapt to varying sampling needs, with the highest performance provision and reliability. The flexibility to measure percent and trace gas levels is imperative as is the ability to monitor multiple gas streams simultaneously. No matter what your application requirements, you'll want a flexible, feature-rich device that reduces ongoing costs. We don't believe you should have to compromise.

## A NO COMPROMISE SOLUTION

The 4200/4210 is specifically designed to address your exact needs, with its combination of industry-leading patented sensing technologies – Paramagnetic, SBSW IR and Gfx IR - delivering percent and trace measurements. Added to its impressive performance capability is 4200/4210's flexibility to measure up to four gas streams simultaneously. This analyzer also delivers ease of use, facilitated by intuitive, engineer-friendly integrated LCD interface and a full suite of outputs including comprehensive digital communications. The 4210 variant offers resilient stainless steel pipework for additional application flexibility.

## SIMPLE MAINTENANCE AND REDUCED ONGOING COSTS

The 4200 delivers an affordable low low-cost of ownership with its low maintenance requirements. The use of highly stable and ultra-selective sensing technologies with low drift potential help to extend calibration periods, whilst aspects like auto-calibration simplify ongoing device operation considerably. Overall, the 4200 provides the complete, reliable and affordable solution to flammable industrial gas production.

## ALTERNATIVE PRODUCTS

The SERVOPRO product range features a number of options designed to meet your application needs.

### MonoExact



When you need a small and compact single TCD measurement solution, choose the MonoExact. This device uses acclaimed TruRef TCD sensing technology, providing the ideal solution for ASU operators with its leading-edge monitoring performance for a range of gases.

## KEY APPLICATIONS

- Product quality validation in hydrogen plants
- Bottling/filling plants producing flammable gas blends
- HyCO process control



# PRODUCT DATA: 4200/4210

OPTIONS	DESCRIPTION	SPECIFICATION
Analog inputs	2 x 4-20mA	External analog input facilities
Output range	Analog output parameters	User selectable over the measurement range: isolated 4-20mA/0-20mA
Alarms and status relay cards	Up to 12 user configurable relays	30V dc 1A volt-free single pole relays
Auto- calibration	Controls calibration gas and helps to facilitate simplified ongoing operation	Independent auto-calibration up to 4 transducer groups
Sample system	Flow or pressure driven	4210 is flow driven only
Digital communications	RS232 and RS485 Modbus protocols	-
Serial output	Continuous output	ASCII output on RS232 / RS485
Mounting	Various options for flexible monitoring	Benchtop, panel or 19" rack mounting
Power lead	3 options	Choose from UK, European and North America formats

## ACCESSORIES

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

## MONITORING PERFORMANCE

Gas	O <sub>2</sub> (control)	CO <sub>2</sub> %	CO%	CH <sub>4</sub> %	CO <sub>2</sub> trace	CO trace	CH <sub>4</sub> trace	N <sub>2</sub> O trace
Technology	Paramagnetic	SBSW Infrared	SBSW Infrared	SBSW Infrared	Gfx Infrared	Gfx Infrared	Gfx Infrared	Gfx Infrared
Range	0-100% max. 0-5% min.	0.25/0.5/ 1/2.5/5/ 10/25/ 50/100%	1/2/ 5/10%	5/25 /50%	0-5/ 0-100 ppm	0-50/ 0-500 ppm	0-50/ 0-500 ppm	0-50/ 500 ppm
Accuracy (intrinsic error)	<0.15% O <sub>2</sub>	1% of FS	1% of FS	1% of FS	1% rdg or <0.1 ppm*	1% rdg or <0.5 ppm*	1% rdg or <0.5 ppm*	1% rdg or <0.5 ppm*
Repeatability	<0.1% O <sub>2</sub>	1% of FS	1% of FS	1% of FS	1% rdg or <0.1 ppm*	1% rdg or <0.5 ppm*	1% rdg or <0.5 ppm*	1% rdg or <0.5 ppm*
Zero drift/week	0.05% O <sub>2</sub>	<2% of FS	<2% of FS	<2% of FS	<0.2ppm	<1ppm	<1ppm	<1ppm
T <sub>90</sub> in secs	<15 @ 200ml / min	<20 @ 200ml / min	<20 @ 200ml / min	<20 @ 200ml / min	<20 @ 2000ml / min	<20 @ 2000ml / min	<20 @ 2000ml / min	<20 @ 2000ml / min

**Please note:** The 4200 is used with general flammable samples (and fitted with viton tubing). The 4210 is designed for use with samples containing more than 1% hydrogen or 0.5% acetylene. The 4210 is fitted with 316S pipework throughout. Both 4200 and 4210 should be installed in a freely ventilated non-hazardous area. \*Whichever is the greater.



# PRODUCT DATA: 4200/4210

## SAMPLE FOR MEASUREMENTS

Sample gas	5°C - 40°C (41°F - 104°F)
Vent	Vent to atmosphere
Sample pressure	35 ±21kPa (5±3 psig) (4210 offers flow driven option only, 100-2500ml/min)

## DEVICE SPECIFICATION

### Size:

- 483 mm (19") Wide x 133 mm (5.2") High x 478mm (18.8") or 608 mm (23.9") Deep max.

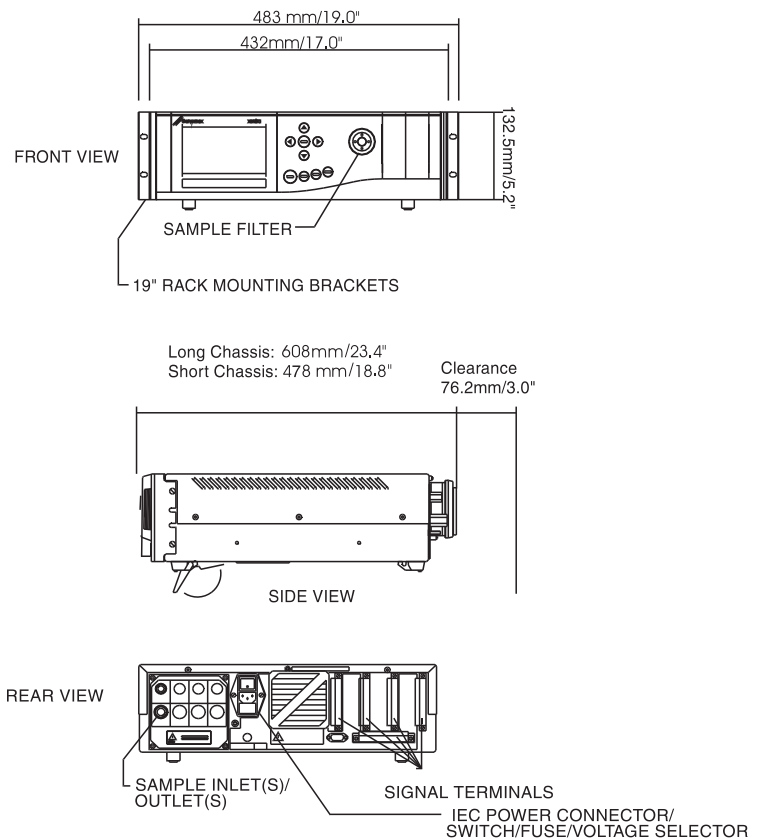
### Weight:

- <22kg (48.4lbs)

### Certifications:

- EN 61010-3: Safety requirements for electrical equipment for measurement, control and laboratory use
- EN 61326-1: Electrical equipment for measurement, control and laboratory use
- Installation Category II rated in accordance with IEC664

## 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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