

# PRODUCT OVERVIEW

## SERVOPRO MultiExact 4200

SAFE AREA



**TRUSTED BY PLANT OPERATORS AND ENGINEERS FOR OVER 20 YEARS FOR THE ANALYSIS OF FLAMMABLE GAS SAMPLES AND TRACE CONTAMINANTS IN HYCO, SYNGAS AND GAS TRANSFER APPLICATIONS\***

GAS	MEASURES	APPLICATION
MULTIPLE	PERCENT	PROCESS CONTROL
	TRACE PPM	QUALITY

### SENSING TECHNOLOGY

GAS FILTER CORRELATION



INFRARED



PARAMAGNETIC



### UNRIVALLED PERFORMANCE

- 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

### EASY TO USE

- Intuitive integrated LCD interface
- Alarm, fault and calibration history logs
- Simple calibration

### LOW COST OF OWNERSHIP

- Reduced ongoing operational needs via automatic calibration option

### 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/ S485 data output and Modbus communications

### BENCHMARK COMPLIANCE

- In compliance with Low Voltage, EMC and applicable EU Directives
- Suitable for use with potentially flammable samples

### KEY APPLICATIONS

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

\* The MultiExact 4200 is the second generation of 4200 Series analyzers from Servomex, which reliably served industry for over 20 years

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### 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 MultiExact 4200 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 the 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 MultiExact 4200 offers resilient stainless steel pipework for additional measurement robustness.

### SIMPLE MAINTENANCE AND REDUCED ONGOING COSTS

The MultiExact 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 helps to extend calibration periods, whilst aspects like auto-calibration simplify ongoing device operation considerably. Overall, the MultiExact 4200 provides the complete, reliable and affordable solution to flammable industrial gas production.

### USEFUL LINKS



PBTDS ME4200 Rev. 0 Date: 02/21

*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.*

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# TECHNICAL DATA SHEET

## SERVOPRO MultiExact 4200



### SPECIFICATIONS

<b>GAS MEASURED</b>	MULTIPLE - see below			
<b>TECHNOLOGY</b>	Paramagnetic, SBSW IR and Infrared (Gfx) for other gases			
<b>PERFORMANCE</b>				
<b>Gas</b>	O <sub>2</sub> (control)	CO <sub>2</sub> (%)	CO (%)	CH <sub>4</sub> (%)
<b>Technology</b>	Paramagnetic	SBSW IR		
<b>Range</b>	0-100% max. 0-5% min.	0.25/0.5/1/2.5/5/ 10/25/50/100%	1/2/5/10/25/50%	5/25/50/100%
<b>Accuracy (intrinsic error)</b>	<0.15% O <sub>2</sub>	1% of FS		
<b>Repeatability</b>	<0.1% O <sub>2</sub>	1% of FS		
<b>Zero drift/week</b>	0.05% O <sub>2</sub>	<2% of FS		
<b>T<sub>90</sub> in secs</b>	<15s@200ml/min	<20s@200ml/min		
<b>PERFORMANCE CONT</b>				
<b>Gas</b>	CO <sub>2</sub> (trace)	CO (trace)	CH <sub>4</sub> (trace)	N <sub>2</sub> O (trace)
<b>Technology</b>	Infrared (Gfx)			
<b>Range</b>	0-5/0-100 ppm	0-50/0-500 ppm	0-50/0-500 ppm	0-50/500 ppm
<b>Accuracy (intrinsic error)</b>	1% rdg or <0.1 ppm*	1% rdg or <0.5 ppm*		
<b>Repeatability</b>	1% rdg or <0.1 ppm*	1% rdg or <0.5 ppm*		
<b>Zero drift/week</b>	<0.2ppm	<1ppm		
<b>T<sub>90</sub> in secs</b>	<20s@2000ml/min			
<b>SIGNAL OUTPUTS/ INPUTS</b>				
<b>Analog output</b>	Per measurement: 1 x 4-20mA (standard), 2 x 4-20 mA per transducer optional with addition of extra option board for 2 transducers, 1 x 0-10V (optional)			
<b>Analog input</b>	Up to 4 x 4-20mA inputs			
<b>Digital input</b>	Up to 8 digital inputs (2 per transducer)			
<b>Relays</b>	4 relays as standard (8 with autocal), up to 32 relays, 30V (dc or ac) /1A			
<b>Alarms</b>	2 alarms as standard, up to 32 alarms			
<b>Digital communications</b>	RS232/RS485 Modbus, PROFIBUS, Ethernet (Modbus TCP/IP) (all optional)			
<b>SAMPLE GAS</b>				
<b>Temperature</b>	5°C to 45°C (41°F to 104°F)			
<b>Dew Point</b>	5°C / 9°F below minimum ambient			
<b>Condition</b>	Oil free and non-condensing			
<b>Particulates</b>	2µm			
<b>Vent</b>	Each gas outlet should be connected to a separate atmospheric vent, free from any back pressure			
<b>Sample flow range</b>	2 – 15 l/min depending on the type and number of transducers installed			
<b>Connection</b>	Sample inlet is 1/8" NPT male Sample outlet is 1/4" NPT female			

\* Whichever is the greater

The performance specification has been written and verified in accordance with the international standard IEC 61207-1:1994 "Expression of performance of gas analyzers"



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PHYSICAL	
Size	Bench top: 432 (17) x 141.2 (5.6) x 543.6 (21.4), mm (inches), Width x Height x Depth Rack Mount: 482.6 (19) x 132.5 (5.2) x 543.6 (21.4) mm (inches)
Weight	Main unit: approx 14kg (30.9lb)
OPERATING ENVIRONMENT	
Operating temperature	5°C to 45°C (41°F to 113°F)
Storage temperature	0°C to 50°C (32°F to 122°F)
Ambient pressure range	101.3 kPa ± 10% (1.013 bar ± 10%)
Relative humidity	10-90% RH, non-condensing
Altitude	-500m (below sea level) to 2000m (above sea level)
Warm-up time	Warm up time is typically <20 minutes from cold start at 20°C (68°F), may be longer for the higher sensitivity measurements with heaters
UTILITIES	
Power	100-240V ac, 50-60 Hz (± 10% maximum fluctuation)
Max power consumption	500VA

## SAMPLE WETTED MATERIALS

	CONTROL PARAMAGNETIC	1210 SERIES GFX NDIR TRANSDUCER	1520 SERIES SBSW NDIR TRANSDUCER
303 stainless steel	●	●	●
316 stainless steel	●	●	●
Viton®	●	●	●
Borosilicate glass	●		
Platinum	●		
Platinum/iridium alloy	●		
Electroless nickel	●		
Gold		●	
Calcium fluoride		●	
Nickel		●	
Sapphire			●
Epoxy resin			●

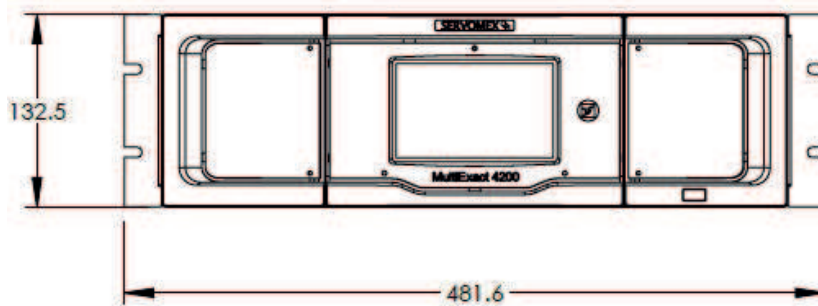
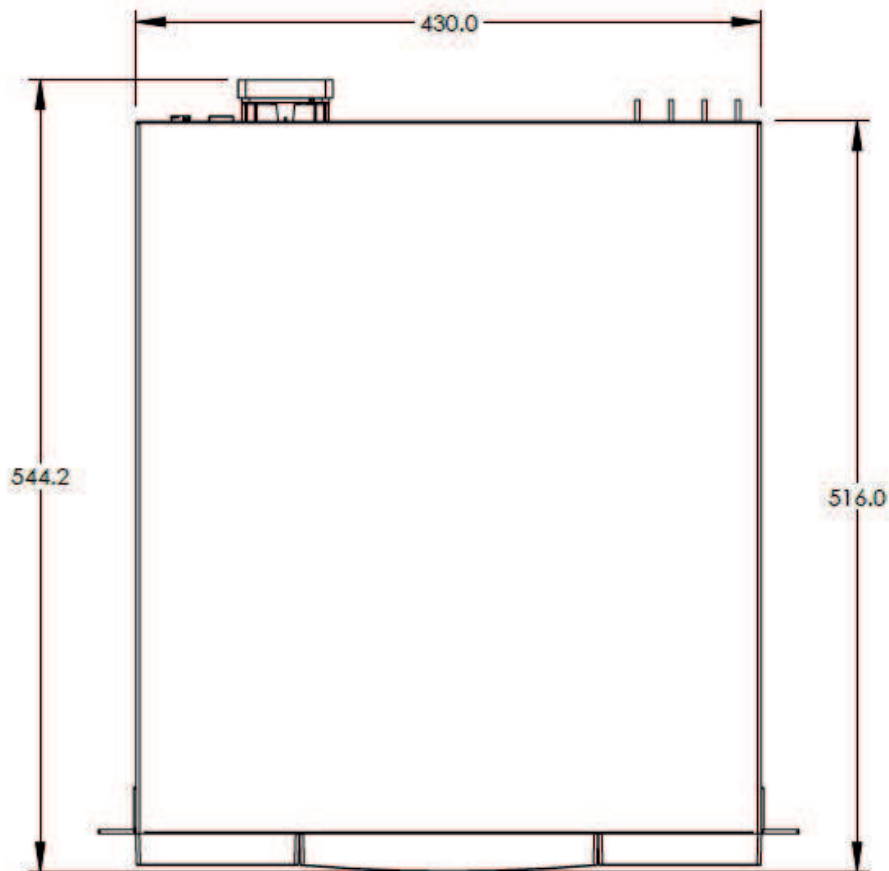
## COMPLIANCE

EC DIRECTIVES	This product complies with the EMC Directive, the Low Voltage Directive, and all other applicable directives.
ELECTRICAL SAFETY	Electrical safety to EN 61010-1 Rated for "Overvoltage Category II" and "Pollution Degree 2"



## DIMENSIONAL DRAWINGS

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Dimensions shown in millimetres



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**ANALYZERS**  
HIGH-PERFORMANCE GAS ANALYSIS

## OPTIONS

### NOTE

Some module and option combinations are not available. Please consult Servomex.

ANALYZER CONFIGURATION		MODULE 1	MODULE 2
Measurement	O <sub>2</sub> Control	<input type="checkbox"/>	<input type="checkbox"/>
	100% CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	50% CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	25% CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	10% CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	5% CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	1% CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	5,000vpm CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	2,500vpm CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	0-5/100vpm CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	50% CO	<input type="checkbox"/>	<input type="checkbox"/>
	25% CO	<input type="checkbox"/>	<input type="checkbox"/>
	10% CO	<input type="checkbox"/>	<input type="checkbox"/>
	2.5% CO	<input type="checkbox"/>	<input type="checkbox"/>
	1% CO	<input type="checkbox"/>	<input type="checkbox"/>
	0-50/500vpm CO	<input type="checkbox"/>	<input type="checkbox"/>
	0-50/500vpm N <sub>2</sub> O	<input type="checkbox"/>	<input type="checkbox"/>
	100% CH <sub>4</sub>	<input type="checkbox"/>	<input type="checkbox"/>
50% CH <sub>4</sub>	<input type="checkbox"/>	<input type="checkbox"/>	
25% CH <sub>4</sub>	<input type="checkbox"/>	<input type="checkbox"/>	
5% CH <sub>4</sub>	<input type="checkbox"/>	<input type="checkbox"/>	
0-50/500vpm CH <sub>4</sub>	<input type="checkbox"/>	<input type="checkbox"/>	
Configurable alarms	Two alarms (standard)	<input type="checkbox"/>	<input type="checkbox"/>
	Four alarms	<input type="checkbox"/>	<input type="checkbox"/>
	Eight alarms	<input type="checkbox"/>	<input type="checkbox"/>
Isolated analog output	Isolated 4-20mA (standard)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0-10 V dc output	Not required	<input type="checkbox"/>	<input type="checkbox"/>
	0-10 V dc	<input type="checkbox"/>	<input type="checkbox"/>
Dual analog output	Single (standard)	<input type="checkbox"/>	<input type="checkbox"/>
	Dual	<input type="checkbox"/>	<input type="checkbox"/>
Digital input	Not required	<input type="checkbox"/>	<input type="checkbox"/>
	2 digital	<input type="checkbox"/>	<input type="checkbox"/>
Isolated analog input	Not required	<input type="checkbox"/>	<input type="checkbox"/>
	Isolated 4-20mA	<input type="checkbox"/>	<input type="checkbox"/>

Please tick the box for required MODULE 1 & 2 options



## OPTIONS

ANALYZER CONFIGURATION		MODULE 3	MODULE 4
Measurement	O <sub>2</sub> Control	<input type="checkbox"/>	<input type="checkbox"/>
	100% CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	50% CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	25% CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	10% CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	5% CO <sub>2</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	50% CO	<input type="checkbox"/>	<input type="checkbox"/>
	25% CO	<input type="checkbox"/>	<input type="checkbox"/>
	100% CH <sub>4</sub>	<input type="checkbox"/>	<input type="checkbox"/>
	50% CH <sub>4</sub>	<input type="checkbox"/>	<input type="checkbox"/>
25% CH <sub>4</sub>	<input type="checkbox"/>	<input type="checkbox"/>	
Configurable alarms	Two alarms (standard)	<input type="checkbox"/>	<input type="checkbox"/>
	Four alarms	<input type="checkbox"/>	<input type="checkbox"/>
	Eight alarms	<input type="checkbox"/>	<input type="checkbox"/>
Isolated analog output	Isolated 4-20mA (standard)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0-10 V dc output	Not required	<input type="checkbox"/>	<input type="checkbox"/>
	0-10 V dc	<input type="checkbox"/>	<input type="checkbox"/>
Dual analog output	Single (standard)	<input type="checkbox"/>	<input type="checkbox"/>
	Dual	<input type="checkbox"/>	N/A
Digital input	Not required	<input type="checkbox"/>	<input type="checkbox"/>
	2 digital	<input type="checkbox"/>	<input type="checkbox"/>
Isolated analog input	Not required	<input type="checkbox"/>	<input type="checkbox"/>
	Isolated 4-20mA	<input type="checkbox"/>	<input type="checkbox"/>

Please tick the box for required MODULE 3 & 4 options

GENERAL CONFIGURATION		
Power cord	Not required	<input type="checkbox"/>
	USA	<input type="checkbox"/>
	Europe	<input type="checkbox"/>
	UK	<input type="checkbox"/>
Flow alarm	Not required	<input type="checkbox"/>
	Fitted to module 1	<input type="checkbox"/>
	Fitted to module 2 (coming soon)	<input type="checkbox"/>
Serial communications	Not required	<input type="checkbox"/>
	RS232 communication	<input type="checkbox"/>
	RS485 communication w/Modbus	<input type="checkbox"/>
	RS232 & RS485 comm combo	<input type="checkbox"/>
Modbus	Not required	<input type="checkbox"/>
	Required	<input type="checkbox"/>
Mounting	Bench top	<input type="checkbox"/>
	Rack mount w/ears	<input type="checkbox"/>
	Rack mount w/slides	<input type="checkbox"/>
Autocal	Not required	<input type="checkbox"/>
	Required	<input type="checkbox"/>
Relay contacts	4 relay contacts (standard)	<input type="checkbox"/>
	8 relay contacts w/connectors	<input type="checkbox"/>
	16 relay contacts w/connectors	<input type="checkbox"/>
	24 relay contacts w/connectors	<input type="checkbox"/>
	32 relay contacts w/connectors	<input type="checkbox"/>
Operator manual	English	<input type="checkbox"/>

Please tick the box for required options



# > WE'RE READY TO HELP

WHATEVER YOUR GAS ANALYSIS REQUIREMENTS, WHEREVER YOU ARE

PBTDS ME4200 Rev. 0 Date: 01/21

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