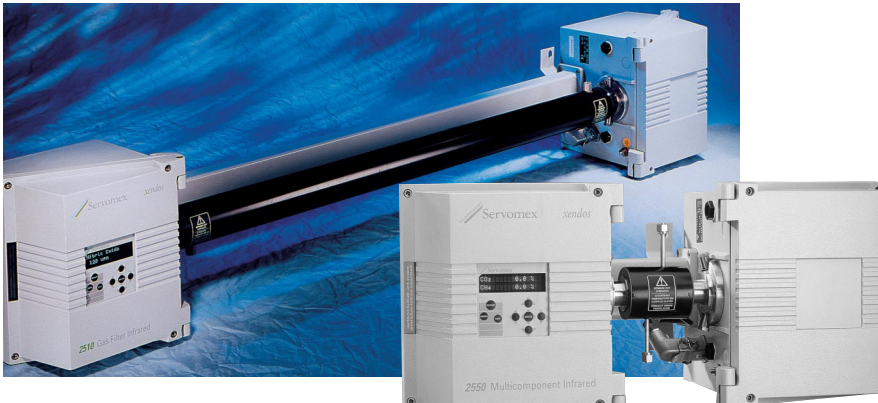


The Servomex 2500 series of photometric process analysers offer single, dual or triple component gas analysis solutions to suit virtually any process, combustion or emissions gas analysis application.



- On-line, real time process analysis
- High reliability, accuracy and stability
- Low cost of ownership & long maintenance intervals
- Single & multi-component analysis capability
- Easy integration with DCS and other control systems
- Suitable for field mounting in hazardous area locations

Specification	2500	2510	2520	2550
Analysers:	2500	2510	2520	2550
PERFORMANCE	Infrared Process Analyser	GFC emissions Analyser	Soft UV Process Analyser	Multicomponent Infrared Analyser
Range:	see inside	see inside	see inside	see inside
Intrinsic Error: (accuracy)	<1% fsd*	<1% fsd*	<1% fsd*	<1% fsd*
Linearity Error:	<1% fsd	<1% fsd	<1% fsd	<1% fsd
Repeatability:	0.5% fsd	0.5% fsd	0.5% fsd	0.5% fsd
Response time (T₉₀)	11 sec†	11 sec†	11 sec†	11 sec†
Zero Drift/week:	<1% fsd	<1% fsd	<2% fsd	<1% fsd
SIGNAL OUTPUTS	Two Isolated 4-20mA/0-20mA as standard. Additional outputs may be added.			
Analogue Outputs:	Freely selectable over the measurement range			
Analogue output range:	Three volt free single pole relays (264VAC/0.5A or 30VDC at 1.0A). Additional relays may be added			
Alarms:	Three dry relay contacts for calibration outputs			
Serial Outputs:	Uni-directional RS232 serial data output			
PHYSICAL				
Dimensions (W x D x H)	max: 1620 x 284 x 500mm / 11.2 x 63.7 x 20.0" (inc. allowance to open covers) min: 620 x 284 x 241mm/ 11.2 x 24.2 x 9.5"			
Weight:	from 27 kg/55lbs			
Hazardous Area	European: Zone 1/Zone 2/Safe Area. US: Class I Div 2			
Ingress Protection:	IP65/NEMA 4 (IP50 with electrical cell heater)			
Mounting:	Wall			

*Error when used under reference conditions

†minimum, electronic only, excludes sampling.

Sample Gas

Temperature:	0-180°C/32-356°F
Pressure:	0-150psig/0-10barg/0-1000kPag. (For high pressure operation contact Servomex)
Flow Rate:	0.2-5.0 litres/min gas applications 0.3-1.0 litres/min liquid applications*
Sample Connection:	¼" OD Tube
Sample Wetted Materials	316 Stainless Steel, CaF ₂ , Viton (Standard analysers only)

* Not available on 2550 analyser.

Power Supply

115/230VAC, 50/60Hz, or 100/200VAC, 50/60Hz, 100VA without optional cell heater, 350VA with Optional Cell heater. The output will change by <1% fsd for a deviation from the selected supply voltage of up to 15%. The output will change by <1% fsd for a 5% deviation from the selected supply frequency.

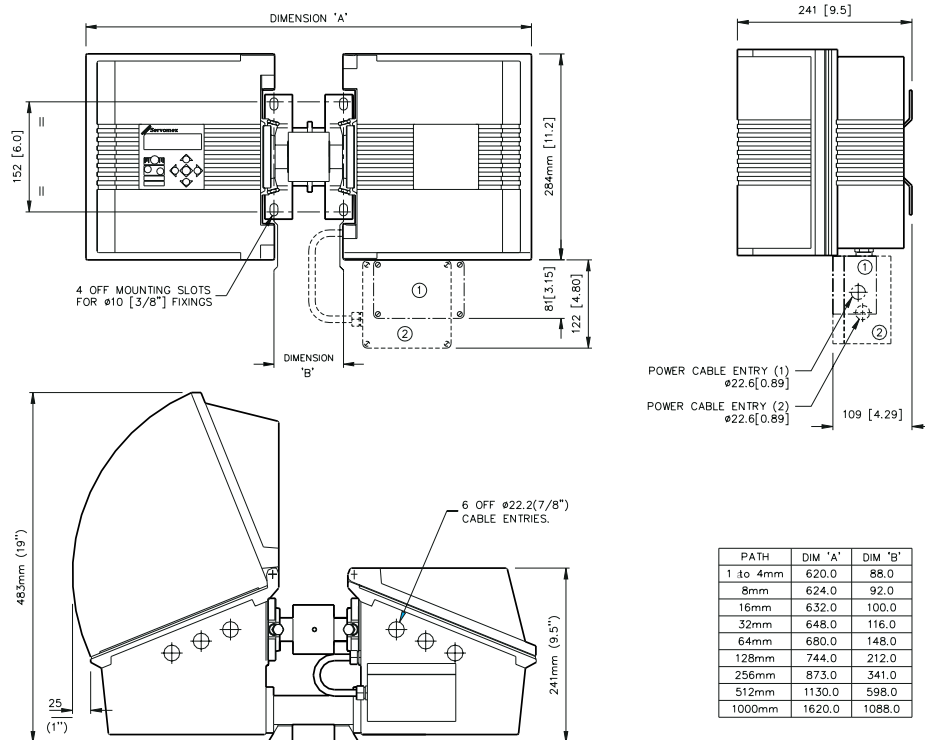
Operating Environment

Temperature:
 Operating: 0°C to 55°C/32°F to 131°F
 (UK2: 0°C to 50°C (32°F to 122°F)
 (Heated cell >130°C: max 50°C/122°F)
 Storage: -40°C to 70°C/-40°F to 158°F

Relative Humidity:
 0-95% RH, non-condensing

Warm Up Time:
 typically 2 - 10h, depending on application and environment

Rate of ambient temperature change:
 <25°C/h (45°F/h)



Solid lines show the 02500A2FM2, 02510A2FM2, 02520A2FM2 and 02550A2FM2.

Broken lines, ① show the additional mains filter fitted to the 02500A2GEN, 02510A2GEN, 02520A2GEN, 02550A2GEN, 02500A2UK2, 02510A2UK2, 02520A2UK2, and 02550A2UK2, 02510A2HTV ② show the additional mains filter fitted to the 02500A2EUR, 02510A2EUR, and 02550A2EUR.

Hazardous Area Approval

2500UK2, 2510UK2, 2550UK2	
SIRA (Europe)	Ex N IIC T3 (cells up to 130°C) Ex N IIC T4 (cells up to 80°C)
2500FM2, 2510FM2, 2550FM2	
FM (USA)	Class I, Div 2 Groups A, B, C & D
2500EUR, 2510EUR, 2550EUR	
CENELEC (Europe)	EExp IIT5 (requires the use of Servomex 485 pneumatic purge controller).

EC Directive Compliance

The 02500GEN, 02500EUR, 02500UK2, 02510GEN, 02510EUR, 02510UK2, 02520GEN, 02520UK2, 02550GEN, 02550EUR and 02550UK2 comply with the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC (as amended by Directive 92/31/EEC), both as amended by Directive 93/68/EEC.

They conform to the following harmonised European standards for product safety and electromagnetic compatibility:

EN 50081-1: Generic emission standard

EN 50082-2: Generic immunity standard

EN 61010-1: Safety requirements for electrical equipment for measurement, control and laboratory use.

These products are rated for Installation Category II in accordance with IEC 664.

These products are rated for Pollution Degree 2 in accordance with IEC 664.

Performance Specification Continued				
Analyser:	2500	2510	2520	2550
Output Fluctuation (peak to peak noise)	<1% fsd *	<1% fsd * <2% for HCl	<1% fsd *	<1% fsd *
Influence Errors	Dependant on Application	Dependant on Application - see cross interference table below	Dependant on Application	Dependant on Application
Ambient Temperature Influence	Less than 1% fsd zero drift due to rate of ambient temperature change of 25°C/hr (45°F/hr) over a maximum of 25°C (45°F) change.	3% fsd per 10°C (18°F) change.	Less than 1% fsd zero drift due to rate of ambient temperature change of 25°C/hr (45°F/hr) over a maximum of 25°C (45°F) change.	Less than 1% fsd zero drift due to rate of ambient temperature change of 25°C/hr (45°F/hr) over a maximum of 25°C (45°F) change.
Obscuration	<3% fsd zero error for 50% broad band obscuration of cell windows			
Sample Pressure Stability	Output may change by up to 1.6% fsd for a 1% change in sample pressure. With optional empirical sample pressure compensation (not available for 2510) effect is reduced to 1% fsd or less for a 20% change in sample pressure for most typical samples.			
Sample Temperature Stability	Output may change by up to 0.3% fsd for gases (1.2% fsd for liquids, 2500 only) for a 1°C change in sample temperature. With optional empirical sample temperature compensation (2500 only) effect is reduced to 1% fsd or less for a 20°C change in sample temperature for most typical samples.			
Sample Flow Stability	Depends on cell volume and vent conditions but for unheated cells the primary effect is less than 1% fsd change in output for flow rate changes of 10%.			

2510 Cross Interferences																			
Analyser Measuring	common stack gas components										light hydrocarbons								
	CO ₂	CO	NO	NO ₂	N ₂ O	SO ₂	HCl	NH ₃	CH ₄	H ₂ O†	CH ₄	C ₂ H ₆	C ₃ H ₈	C ₄ H ₁₀	C ₂ H ₄	C ₃ H ₆	C ₄ H ₈	C ₄ H ₆	C ₆ H ₆
level (ppm(v) unless shown)	20%	100	350	20	10	0.3%	100	100	100	1%	100%	10%	20%	1.5%	100%	20%	2.5%	4.5%	1%
CO ppm(v)	0.5	-	0.0	0.0	0.3	-0.2	0.0	0.0	0.0	-0.5	-8.0	-1.0	-4.0	0.0	-26	-10	-5.0	+2.0	no data
NO ppm(v)	0.0	0.0	-	1.0	0.0	0.0	0.0	0.0	0.0	-5.0	-	-	-	-	-	-	-	-	-
HCl ppm(v)	0.0	-	-	-	-	0.0	-	-	0.5	0.2	-	-	-	-	-	-	-	-	-
CO ₂ ppm(v)	-	-	-	-	-	-	-	-	-	-	0.7	1.0	0.5	0.5	-0.6	-0.6	-0.3	0.3	0.0
or 1% FSD whichever is the greater																			

*at minimum T₉₀, † not applicable, ‡ 7EC dewpoint

Servomex companies, agents and representatives are located throughout the world. Your nearest contact is:

Visit www.servomex.com for technical data sheets, application and technology information for all Servomex analysers.

Servomex has a policy of constant product improvement and therefore reserves the right to change specifications without notice.



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