

# SERVOTOUGH SpectraExact 2500

**HIGHLY ADAPTABLE PHOTOMETRIC PROCESS MONITORING FOR SINGLE, DUAL OR TRIPLE COMPONENT GAS ANALYZER**



## SERVOTOUGH SpectraExact 2500

Designed to provide a highly flexible analytical solution adaptable to many applications, the SpectraExact (2500) range delivers a winning combination of proven performance and flexible operation in a resilient and reliable design.

The SpectraExact adapts to your process effortlessly to deliver a leading-edge, real-time online monitoring solution capable of single and multi-component analysis. Field mounting capabilities enables flexible use in harsh process conditions.

The SpectraExact delivers affordability to match its flexibility; it uses an intelligent design that incorporates state-of-the-art non-depleting sensing technologies to help to extend maintenance intervals and dramatically reduce ongoing costs.

### FLEXIBLE

- On line, real time analysis.
- Highly reliable, accurate and stable
- Multi or single component gas analysis
- IP66/NEMA 4

### EASY TO USE

- Modbus RTU/Modbus TCP (Ethernet) options
- Ideal for diverse gas sample types (0-180°C / 32-356°F and 0-150 psig/0-10 barg/0-1000kPag)

### LOW COST OF OWNERSHIP

- Separate cell allows simple cleaning and servicing
- Field proven technologies

### UNRIVALLED PERFORMANCE

- ATEX certified for gases and dust
- Suitable for mounting in hazardous area locations

### BENCHMARK COMPLIANCE

- ATEX, IECEx and North American hazardous area approvals
- SIL 1 approved

Learn more about the SpectraExact 2500  
VISIT [SERVOMEX.COM](http://SERVOMEX.COM)



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# PRODUCT OVERVIEW: SpectraExact 2500

## ENHANCED SAFETY FOR THE MOST DANGEROUS LOCATIONS

When you work on applications with complex process application requirements, you need a highly flexible, easy-to-use solution that is adaptable to your exact process specification monitoring needs.

The SpectraExact is fully certified for gas and dust zone 1 and 2 areas.

## MORE FEATURES, MORE FLEXIBILITY

With four model variants to choose from, each utilizing industry-leading IR or UV non-depleting sensing technologies, the SpectraExact offers an exceptional range of options to meet your specific application needs.

A full suite of digital communications platforms enable the full functionality of the SpectraExact to be controlled remotely and safely, with Modbus implemented through a choice of MODBUS RTU or MODBUS TCP/IP (Ethernet) protocols.

Options include a High Integrity cell, supplied with specialist chemraz "O" rings to ensure improved leak tightness for use in high concentration, highly toxic gas measurements. Meanwhile a heated cell is a standard option available on safe area, IEC Ex, ATEX, and US class 1 division 2 variants.

## UNBEATABLE VALUE OVER PRODUCT LIFE

The ability to reduce ongoing costs and leverage maximum efficiency from safety equipment is essential to your business. This is why SpectraExact features an intelligent design that helps to reduce the frequency of maintenance requirements via sample cell and electronics segregation. This, combined with the use of non-depleting IR and UV photometric sensing technologies, ensures the SpectraExact delivers a long life of performance with a low lifetime cost-of-ownership.

## ALTERNATIVE PRODUCTS

The Servomex product range offers alternative options designed to meet your application needs.

### SpectraScan



If your focus is the continuous analysis of light hydrocarbons (C1-C5+), SpectraScan is the ideal monitoring solution, delivering highly sensitive and accurate real-time monitoring.

### LaserSP 2930



When the highest level of analytical capability and lowest cross-interference is demanded, choose LaserSP. This device is ideal for reliable emissions monitoring in the hottest, most dangerous locations.

## KEY APPLICATIONS

- Water in EDC/solvents
- FCCU
- Ethylene production
- Coal gasification
- TDI Production
- Chlorine production



# PRODUCT DATA: SpectraExact 2500

## TYPICAL MEASUREMENTS

2500 Gas	2500 Gas	2500 Liquid	2510	2520	2550	2550
Acetic Acid Acetone Acetylene Ammonia Benzene Butane CO <sub>2</sub> CO CS <sub>2</sub> COS Chloroform Ethane Ethanol Ethylene Ethylene Oxide HCl Trichlorotrifluoroethane Acetaldehyde Freons	HCN H <sub>2</sub> S Hexane Methane Methanol NCO NO N <sub>2</sub> O NO <sub>2</sub> Hexane Phosgene Propane Propylene SO <sub>2</sub> THC Toluene H <sub>2</sub> O (vap)	H <sub>2</sub> O in: Acetic Acid Acetone EDC Glycols NMP THF VAM VCM Methanol Ethanol Isobutanol NaOH	Acetylene CO <sub>2</sub> CO HCl NO SO <sub>2</sub> N <sub>2</sub> O CH <sub>4</sub> C <sub>2</sub> H <sub>4</sub>	Chlorine Cl <sub>2</sub> Fluorine F <sub>2</sub> Bromine Br <sub>2</sub>	C <sub>2</sub> H <sub>4</sub> and CO CO <sub>2</sub> & CO C <sub>2</sub> H <sub>4</sub> & CO <sub>2</sub> C <sub>2</sub> H <sub>4</sub> , CO & CO <sub>2</sub> CH <sub>4</sub> & CO CH <sub>4</sub> & CO <sub>2</sub> CH <sub>4</sub> , CO & CO <sub>2</sub> CH <sub>4</sub> & C <sub>2</sub> H <sub>4</sub> Propane & CO Butane, CO & CO <sub>2</sub> Butane & Propylene Ethylene & Propylene CO <sub>2</sub> & Acetylene Butane & H <sub>2</sub> O (vap) CO & DME Methyl acetylene & Propadiene	COS & SO <sub>2</sub> C <sub>2</sub> H <sub>4</sub> & C <sub>2</sub> H <sub>6</sub> C <sub>3</sub> H <sub>6</sub> & C <sub>3</sub> H <sub>8</sub> Acetone & CO

## MONITORING PERFORMANCE

Technology	Infrared	Gas Filter Correlation	Ultraviolet	Infrared
Model variant	2500	2510	2520	2550
Device	IR process analyzer	GFC emissions analyzer	Soft UV process analyzer	Multicomponent IR analyzer
Cell construction	316 Stainless Steel**	316 Stainless Steel**	316 Stainless Steel**	316 Stainless Steel**
Accuracy (intrinsic error) FS	<1%	<1%	<1%	<2%
Repeatability	0.5%	0.5%	0.5%	0.5%
Zero drift/week	<1%	<1%	<1%	<1%
T <sub>90</sub> in secs.	<11*	<11*	<11*	<11*
Operating Temp.	0-55°C (32-356°F)	0-55°C (32-356°F)	0-55°C (32-356°F)	0-55°C (32-356°F)

\* Minimum, electronic only, excludes sampling. \*\* Monel, Hastelloy, Titanium available on request.

OPTIONS	DESCRIPTION	SPECIFICATION
Analog output	2 x 20mA/measurement as standard	Two isolated 4-20mA/0-20mA as standard. Additional outputs can be added
Output range	Analog output parameters	Freely selectable over the measurement range
Alarms	3 x volt free single pole relays as standard	Additional relays can be added
Digital outputs	Optional Modus RTU RS485 or Modus TCP Ethernet	–

## ACCESSORIES

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

TUNABLE  
DIODE LASER



FLAME IONISATION  
DETECTOR



GAS  
CHROMATOGRAPHY



PLASMA



LASER MOISTURE



COULOMETRIC



SPECTROSCOPIC



# PRODUCT DATA: SpectraExact 2500

## DEVICE SPECIFICATION

### Size:

- Max: 1,620mm (63.7") Width x 500mm (19.6") High x 284mm (11.1") Deep

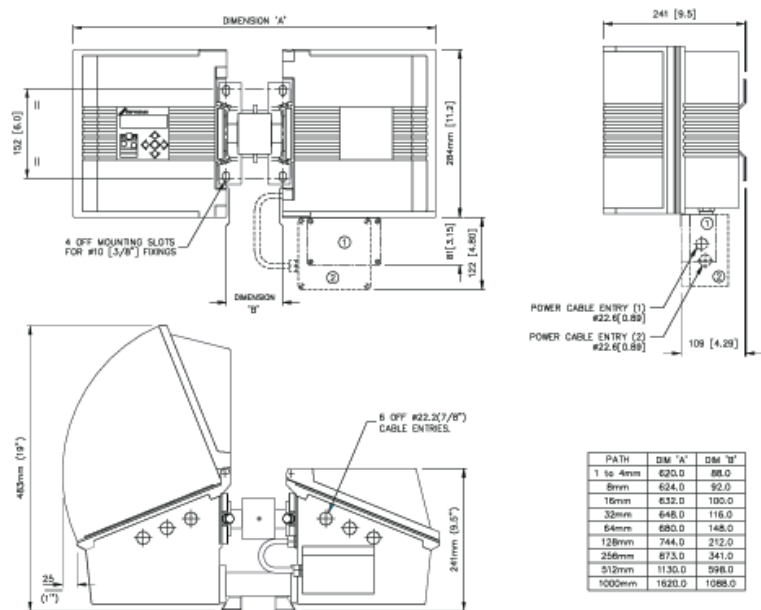
### Weight:

- 27kg (55lbs) to 50kg (110lbs)

### Certifications:

- ATEX IEC: Ex II 2G, Ex p ia IIC T4 (heated cell) and ATEX: Ex II 2G, Ex p ia IIC T5 (unheated cell) – models 2500EU1, 2510EU1, 2550EU1
- ATEX IEC: Ex II 3G, Ex nC IIC T4 (unheated cell) (heated cells T3/T4) – models 2500EU2, 2510EU2, 2520EU2, 2550EU2
- FM Class 1, Division 2, Group A, B, C, D, T4 (unheated cell) – heated cells T3/T4 - models 2500FM2, 2510FM2, 2520FM2, 2550FM2
- CE marked and in compliance with ATEX, EMC and WEE Directives scope
- UL approved and CE marked 100-240V / 43-70Hz AC power supply
- Hazardous area certified for gases and dust
- IP66 / NEMA4X

## DEVICE SCHEMATIC



## Signature:

## Email:

*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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