

# SERVOPRO

## MonoExact DF150E

**NEXT-GENERATION COULOMETRIC OXYGEN ANALYZER, DESIGNED SPECIFICALLY FOR USE IN A DIVERSE RANGE OF INDUSTRIAL APPLICATIONS**



### MonoExact DF150E

The MonoExact DF150E combines Servomex's latest advances in sensor and analyzer design into an advanced platform designed specifically for a range of industrial applications including use in glove boxes, heat treating, solder reflow ovens, laboratory and industrial gas (IG) production.

Built around the latest innovations in software and hardware, including an updated Coulometric digital oxygen sensor, the MonoExact DF150E brings users new operational and maintenance benefits that improve user control and reduce cost of ownership.

A direct successor to the DF-150E, the MonoExact DF150E delivers the same precise, accurate oxygen measurement in a backwards-compatible design that integrates easily into existing systems. This ensures the MonoExact DF150E complies with existing standards and customer agreements, without the need for re-testing or re-qualification.

### Flexible

- Optimized for process control and product qualification applications
- Compact footprint for simple integration
- Back-compatible with DF-150E platform, including hardware wiring inputs and gas inlets
- 4-20mA analog output and 0-10 VDC output options

### Easy to use

- Advanced 5-inch high-brightness touchscreen GUI for intuitive hands-on operation
- Servomex proprietary software makes reporting and parameter control simple

### Low cost of ownership

- No sensor calibration required
- Minimal training requirements
- Five year warranty on Coulometric sensor

### Unrivalled performance

- Utilizes enhanced Hummingbird digital Coulometric sensing technology for precision process measurement
- 100, 1000 and 10000 ppm ranges available
- Manufactured by Servomex - over 60 years' experience innovating and pioneering gas analysis and thousands of units used in the field every year

### Benchmark compliance

- Complies with Low Voltage, EMC and applicable directives

Learn more about the SERVOPRO MonoExact DF150E  
Visit [servomex.com/MonoExactDF150E](http://servomex.com/MonoExactDF150E)



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# PRODUCT OVERVIEW: MonoExact DF150E

## A new analyzer platform, optimized for IG customers

IG customers requiring accurate process control and product qualification rely on the precision measurements provided by Servomex's DF and SERVOPRO analyzers. MonoExact DF150E forms part of Servomex's next-generation industrial analyzer platform, which advances and standardizes a complete, integrated IG analysis capability through the latest innovations in software, hardware and sensor design.

By delivering the same high quality measurements and ensuring backwards compatibility with previous analyzers, customers get new control and maintenance benefits – while training requirements are minimized, re-testing and re-qualification problems are avoided and products meets the high standards of global supply agreements.

## An upgraded sensor for reduced maintenance

At the heart of the MonoExact DF150E is Servomex's Hummingbird Coulometric sensor, which builds on the original DF Coulometric sensor's ultra-accurate trace measurements. Significant design improvements have been made that reduce analyzer downtime.

## Operation has never been easier

The MonoExact DF150E is built around Servomex's new advanced user interface, which offers immediate hands-on control via a high brightness touchscreen display. Intuitive to use, Servomex's software is optimized for a simple user journey, with the touchscreen GUI making reporting or adjusting control parameters effortless. Standard 0-10V output with optional 4-20mA available to export rich data to a control system, managing gas analysis has never been easier.

## ALTERNATIVE PRODUCTS

Servomex offers a range of alternative analyzers for your application needs:

### MonoExact DF310E



Designed specifically to accurately measure oxygen in industrial gas applications, the DF310E is a next-generation digital oxygen analyzer that combines precision trace-level measurement with new performance benefits and extended digital communications compatibility.

### MultiExact 5400



Delivering stable, high performance monitoring across all key industrial gases, the MultiExact's dual measurement capability benefits from a choice of four leading-edge sensing technologies, including new GFx sensing capability for CO, CO<sub>2</sub> and CH<sub>4</sub>.

### Chroma



Utilizing a unique, non-depleting plasma emission detector, the Chroma is a mainframe customized to your application. Offering multi-component trace measurement at ppb, ppm or % level, the Chroma can monitor H<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, Ar, CH<sub>4</sub>, CO, CO<sub>2</sub> and NMHC impurities in H<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, Ar and He.

## KEY APPLICATIONS

- Glove boxes
- Heat treating
- Solder reflow ovens
- Laboratory
- Industrial gas production



# PRODUCT DATA: MonoExact DF150E

OPTIONS	DESCRIPTION	SPECIFICATION
Output	Non-isolated 0-10V DC	Supplied as standard
Analog outputs	Isolated 4-20mA DC	Optional
Analog output range	Analog output parameters	0-100, 0-1,000, 0-10,000 ppm ranges
Alarms	Option for 2 alarms: concentration (high/low), flow and temperature	Up to 2 audible / visual concentration alarms, a choice between alarms are concentration flow, temperature span reference (for samples containing above trace levels of acidic components, contact Servomex for sample preconditioning options)
Sample pressure regulator	Optional Outboard 316 stainless steel pressure regulator	3,000psig/208 BarA inlet capacity; 0-10psig/1.7BarA adjustable outlet pressure requires 5psig/1.36BarA minimum inlet pressure
Flow control valves	Upstream flow control options	Upstream control for pressures less than 10psig/1.7BarA
Flammable sample outlet and sample filter	Stainless steel	Not available with VCR sample inlet
Pump	Internal or external diaphragm pump for negative pressure sampling	Optional diaphragm pump for negative pressures up to 2psig/1.05mm Hg vacuum or vent pressures to 3psig/155mm Hg
Mounting	Various options for application flexibility	Panel mount, 19" rack mount, dual 19" rack mounting options
Relay contacts	Up to 2 independently assigned contacts	Rated at 1.0 amp at 30 volts AC or DC
<b>ACCESSORIES</b>	<b>ACCESSORIES AVAILABLE FOR SPECIFIC APPLICATIONS – CONTACT YOUR LOCAL SERVOMEX BUSINESS CENTER</b>	

MONITORING PERFORMANCE	
Gas	O <sub>2</sub> trace
Technology	Coulometric
Range	0-100, 0-1,000, 0-10,000 ppm ranges
Accuracy (intrinsic error) F5	0-100ppm - ±5% of the reading or ± 50ppb whichever is larger 0-1000ppm - ±5% of the reading or ± 250ppb whichever is larger 0-10,000ppm - ±5% of the reading or ± 2.5ppm whichever is larger
Zero drift/month	Negligible
T <sub>90</sub> in secs.	<20 seconds at 0.75liters/min



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## SAMPLE FOR MEASUREMENTS

Sample for measurement	Sample must be oil free, non-corrosive, non-condensing and non-flammable
Sample pressure	0.2 – 1psig
Dew point	5°C/9°F below minimum ambient
Particulates	Filtered to 2µm

## DEVICE SPECIFICATION

### Size:

- 210mm (8.5") Wide x 200mm (8.0") Height x 210mm (8.5") Deep, with handle and feet

### Weight:

- 3.9kg (8lbs)

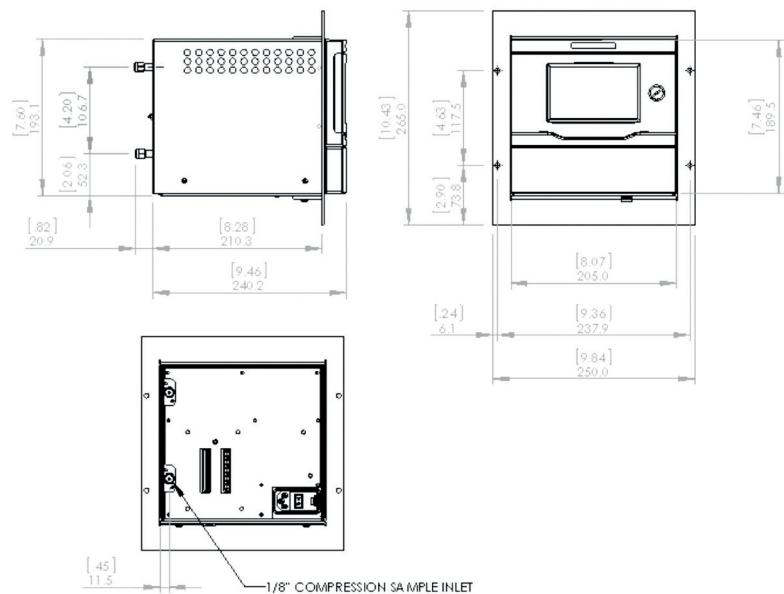
### Operating Temperature:

- 0°C - 45°C/0°F - 113°F

### Compliance:

- IEC 61010-1
- Overvoltage Category II, Pollution Degree 2
- EU EMC Directive
- EU Low Voltage Directive

## 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 December 2015. 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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