



| GAS | MEASURES | APPLICATION |
|--------|-----------|----------------------------|
| OXYGEN | TRACE PPM | PROCESS CONTROL QUALITY |

SENSING TECHNOLOGY



KEY APPLICATIONS

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

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

UNRIVALLED PERFORMANCE

- MonoExact DF150E O₂ LDL
0-100: 50 ppb
0-1000: 250 ppb
0-10,000: 2.5 ppm
- Up to 5-year coulometric sensor warranty
- Non-depleting coulometric sensor
- Stab-El™ coulometric sensor now standard

FLEXIBLE

- Optimized for process control and product qualification applications
- Compact footprint for simple integration
- Compatible with DF-150E platform, including hardware wiring inputs and gas inlets
- 4-20mA and 0-10V DC analog output options[†]
- Battery and pump options available but, not in same analyzer^{††}
- External gas filter now mountable on the back of the analyzer (PN 222931)[†]

‡ Not for use with H₂, CH₄, or CO background gases

* Certain background gases must be configured with stainless steel inlet and outlet plumbing, consult Servomex applications

† Configuration dependent

EASY TO USE

- 5-inch high-brightness touchscreen and intuitive icon driven touchscreen user-interface
- 6 user ranges available with each sensor offered
- Servomex proprietary software makes reporting and parameter control simple

LOW COST OF OWNERSHIP

- No sensor zero calibration required
- Minimal training requirements
- Downloadable system file log and diagnostics means we can assess issues and upgrade remotely

BENCHMARK COMPLIANCE

- In compliance with Low Voltage, EMC, CE and CSA applicable directives
- Manufactured by Servomex - over 70 years' experience innovating, and pioneering gas analysis and thousands of units used in the field every year

For more information please contact us
Visit servomex.com/contact



PRODUCT OVERVIEW

SERVOPRO MonoExact DF150E

SAFE AREA

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 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.

USEFUL LINKS



P8TDSMED150E Rev. 4 Date: 08/23

These analyzers are not intended for any form of use on humans and are not medical devices as described in the Medical Devices Directive 93/42/EEC.

Please note: Whilst every effort has been made to ensure accuracy, no responsibility can be accepted for errors and 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.

Servomex has a policy of constant product improvement and reserves the right to change specifications without notice. © Servomex Group Limited. 2023. A Spectris company. All rights reserved.

TECHNICAL DATA SHEET

SERVOPRO MonoExact DF150E



SPECIFICATIONS

| | |
|----------------------------------|--|
| SAMPLE GASES | H ₂ , He, CH ₄ , CO, N ₂ , Ar and a host of fluorocarbons and slightly acidic HP gases* |
| TECHNOLOGY | Coulometric electrochemical cell |
| PERFORMANCE | |
| Gas measured | O ₂ trace (ppm) |
| Range | 0-100, 0-1000 or 10,000ppm |
| Intrinsic error (accuracy) | 0-100ppm: ±5% of the reading or ± 50 ppb, whichever is greater 0-1000ppm: ±5% of the reading or ± 250 ppb, whichever is greater 0-10,000ppm: ±5% of the reading or ± 2.5 ppm, whichever is greater |
| Response time (T ₉₀) | ~30 seconds at 0.50l/min |
| Zero drift/month | Negligible |
| SIGNAL OUTPUTS/INPUTS | |
| Analog outputs | Isolated 4-20mA DC output or isolated 0-10V DC output, which jam at 0, 2, 4 or 21.5mA |
| Output range | 6 preassigned adjustable ranges across each full sensor range |
| Fault status signals | Over 30 different fault statuses being self-monitored which are recorded within the system files and report if tripped to the analyzers home screen |
| Alarms | Up to 2 audible / visual concentration alarms, a choice between alarms are concentration flow, temperature and span reference† |
| Relay contacts | Up to 2 independently assigned contacts rated at 1.0 amp and up to 30V DC or AC† |
| SAMPLE CONDITION | |
| Gas | Sample must be oil free, non-corrosive and non-condensing (can handle slightly acidic gases) |
| Gas temperature | 0°C to +45°C (+32°F to +113°F) |
| Particulate size | Filtered to 2µm |
| Maximum dew point | +5°C/+9°F below minimum ambient |
| Zero gas | 5 or 5.5 9s pure N ₂ is preferable |
| Span gas | Optimal linearity achieved when calibrated between 40-80% of full range |
| Sample pressure | Flow driven: 1.4 - 6.9 kPa; 0.014 - 0.07 bar; 0.2 - 1 psig Pressure driven: 172.36-310.26 KPa; 1.72-3.10 bar; 25-45 psig Max sensor cell: 34.5 kPa; 0.35 bar; 5 psig |
| OPERATING ENVIRONMENT | |
| Temperature | 0°C to +45°C (+32°F to +113°F) |
| Relative humidity | 95% relative humidity, must be a non-condensing environment |
| Warm up time | New electrolyte 60 min, after that only the residence time for sample to reach sensor |
| Max altitude | 6,500 ft. or 2,000m above sea level |

* Certain background gases must be configured with stainless steel inlet and outlet plumbing, consult Servomex applications

† Configuration dependent

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



SERVOMEX.COM

SERVOMEX 
a spectris company

| PHYSICAL | |
|---------------------------|---|
| Size | 205mm (8.0") Wide x 193mm (7.6") Height x 240mm (9.5") Deep (without handle and feet) |
| Weight | 4.3kg (9.5lbs) |
| Mounting | Benchtop, panel mount, 19" rack mount, dual 19" rack mounting |
| Supply voltage | 100-120Vac or 220-240Vac, 50/60Hz |
| Storage temperature | 0°C to +45°C (+32°F to +113°F) |
| Sensor storage conditions | We recommend that the analyzer be operated as intended, within 6 months of delivery |

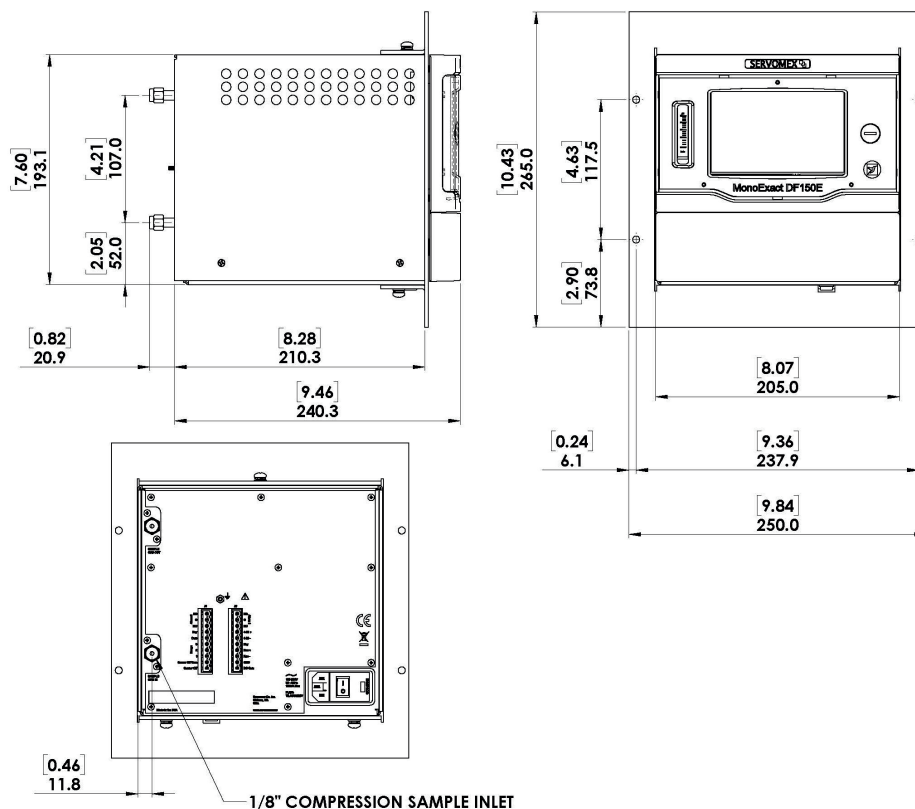
SAMPLE WETTED MATERIALS

| | |
|----------------------|---------------------------------------|
| ANALYZER FITTED WITH | 316L stainless steel, PFA and Acrylic |
|----------------------|---------------------------------------|

COMPLIANCE

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

DIMENSIONAL DRAWINGS



Dimensions shown in millimetres
(dimensions in square brackets are in inches)



| CONFIGURATION | | | |
|--|--|---|--|
| Standard Variant (SV01) | The pre configured standard variant (SV01) covers the most common applications and frequently ordered options. | | |
| User Configured (UC) | Other analyzer configuration options not covered by the above standard variant. | | |
| DF150E VARIANTS | | SV01 | UC |
| Built to stock | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Type | Dual rack mount No bench mount Panel mount Single rack mount Bench top unit | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| CHANNEL 1 | | | |
| Gas | O ₂ | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Measurement Range | 0-100 ppm 0-1000 ppm 0-10000 ppm | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Transducer Type | Coulometric w/SS sample lines | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Options | Flow driven Flow driven w/flow switch Pressure driven (orifice) Pressure driven (orifice) w/flow switch Pump driven Pump driven w/flow switch | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| HARDWARE OPTIONS | | | |
| Power cord | None USA Europe UK | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Stainless steel tags | None Required | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| Battery backup | None Required | <input checked="" type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| Pump O ₂ | None Required | <input checked="" type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| Pressure regulator O ₂ | None Standard | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| Stainless steel filter (O ₂) | None Required | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| Adapter 1/4" (O ₂) | None Required | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| SOFTWARE OPTIONS | | | |
| Configurable alarms | None Two alarms | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| Isolated output | None Isolated 4-20mA | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| Autocal | None | <input type="checkbox"/> | <input type="checkbox"/> |
| Relay contacts | 2 relay contacts | <input type="checkbox"/> | <input type="checkbox"/> |
| Gas scale factor | None Required | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| Certificate of Calibration | Not required Required | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| Coulometric cell warranty | 1 year standard 5 year extended | <input checked="" type="checkbox"/> <input type="checkbox"/> | <input checked="" type="checkbox"/> <input type="checkbox"/> |

Tick a single box for each selectable option

- Option selectable
- Option not available in that variant
- Pre-selected option



> WE'RE READY TO HELP

WHATEVER YOUR GAS ANALYSIS REQUIREMENTS, WHEREVER YOU ARE

PBTDSMEDF150E Rev. 4 Date: 08/23

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: *Whilst every effort has been made to ensure accuracy, no responsibility can be accepted for errors and 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.*

Servomex has a policy of constant product improvement and reserves the right to change specifications without notice. © Servomex Group Limited. 2023. A Spectris company. All rights reserved.