



DF-320E

The DF-320E is a Coulometric sensor based oxygen analyser suitable for installation in a Division 2 hazardous area and is designed to measure trace and percent level oxygen in pure and multi-gas backgrounds. The DF-320E is microprocessor driven for easy configuration and maintenance and improved accuracy.

FEATURES

- Non-depleting sensor with 5 year sensor warranty
- Factory calibrated
- Minimum maintenance
- Fast response time and recovery from upset condition
- CSA certified for installation in areas certified as Class I, Division 2, Group A,B,C,&D

APPLICATIONS

- Hydrogen production
- Polypropylene production
- Polyethylene production
- Oil refining and petrochemical applications

DF-320E

KEY FEATURES

Low Cost of Ownership

Sensor is highly stable and requires annual SPAN calibration only. No programmed cell replacement required. Sensor warranty of 5 years as standard.

Highly Sensitive

Lower detection limit (LDL) of 3ppb when operating on 0-1ppm or lower range.

ELECTRICAL SAFETY

Electrical safety to IEC 61010-1: Ed 2.

The product is rated for "Installation Category II" in accordance with IEC 60664-1.

The product is rated for "Pollution Degree 2" in accordance with IEC 60664-1.

CSA Certified for Class I, Division 2, Groups A, B, C, & D.

EC DIRECTIVE COMPLIANCE

The DF-320E is in compliance with:

Low Voltage Directive (2002/73/23EEC).

EMC Directive (2001/89/336/EEC).

DESCRIPTION

Power lead:

There are 3 options for the Power lead:
22-28V dc, 1Amp (max)
100-120V ac
220-240V ac

Outputs:

Analyser supplied with a 0-10V dc output as standard

Mounting:

The DF-320E comes standard with a benchtop cabinet, but can be panel and rack mounted

User manual:

Options

- American
- Voltage output
- Benchtop
- English

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SPECIFICATIONS

Gas Type :	O ₂
TECHNOLOGY	Coulometric non-depleting electrochemical sensor
PERFORMANCE	
Operating ranges:	0-0.5ppm up to 0-25% * Any range between these ranges
Smallest recommended output range:	0-0.5ppm
Intrinsic error (accuracy):	+/- 3% of reading or +/- 0.5% FSD for standard models * +/- 3% of reading or +/- 0.02% FSD for high resolution models * +/- 3% of reading or 50ppb for 0-100ppm high resolution model * +/- 3% of reading or 25ppb for 0-50ppm high resolution model *
Response time (T ₉₀) at sample flow rate:	<10 seconds at 0.75l/min
Zero drift/month:	Negligible
Span drift/month:	Negligible
OUTPUTS/INPUTS	
Output:	Non isolated 0-5V dc or 0-10V dc
Output range:	Any range between 0-0.5ppm to 0-25%. *configuration dependent
Alarm	Electrolyte condition
OPTIONS	
Stab-El sensor system:	Enables operation with trace levels of acid gases or ionic contamination. Samples containing trace samples of acidic components must use the Stab-el option
Concentration alarms:	Up to 4 audible/visual concentration alarms
Low flow alarm:	1 audible/visual flow alarm
Relay contacts:	Up to 4 independently assignable contacts rated at 0.3Amps at 30V dc
Voltage output:	Choice of 0-1V dc, 0-2V dc, 0-5V dc non-isolated outputs
Analogue output:	Isolated 4-20mA dc output or Isolated 4-20mA output which reads 2mA when sensor is off
Serial communication:	RS232 or RS 485 Two-Way Serial Communications
Dual scale range:	Up to 2 calibrated ranges on 4-20mA output with range ID
Mounting:	Panel mount, 19" rack mount, & dual 19" rack mount options
Pump:	Integral diaphragm pump for negative pressures to 2psig (1.05mm Hg) vacuum or vent pressures to 3psig (155mm Hg)
Sample pressure regulator:	316LSS Pressure regulator with 3000psig inlet and 28 in Hg to 30psig output. Standard or high purity version. Supplied mounted or loose
High purity inlet:	VCR welded sample inlet (standard on 0-50ppm high resolution model)
Stainless steel outlet:	Recommended for flammable samples
Sample filter:	Stainless steel filter with standard or fine filter element (not available with VCR welded sample inlet)
Flow control valve:	Integral upstream flow control valve (not available on 0-50ppm range model or with VCR welded sample inlet)
Gas scale factor:	Background gas compensation for gases other than N ₂ or Ar
SAMPLE GAS	
Temperature:	0°C to 50°C (32°F to 122°F)
Dew point:	5°C (9°F) below minimum ambient
Condition:	Oil free, non-corrosive, non-condensing, non-flammable
Particulates:	Filtered to 2µm
Vent:	Vent to atmosphere
Sample flow:	0.5 to 1.4l/min
Sample pressure:	0.2 to 1psig

NOTE: For samples containing above trace levels of acidic components contact Servomex for sample preconditioning options

* whichever is greater

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SPECIFICATION CONT.

Ambient Conditions

Temperature: +0°C to +45°C (stable)
Relative humidity: 0 to 95% RH non-condensing
Altitude: 2000 meters above sea level

UTILITIES REQUIRED

Power 22-28V dc, 1Amp (max) 110V ac or 220V ac 50/60Hz, 35 Watt maximum consumption
ZERO Gas Not required
SPAN Gas Any blend of O₂ in N₂ within the operating range of the sensor

SAMPLE WETTED MATERIALS

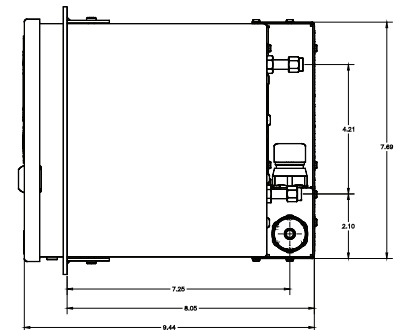
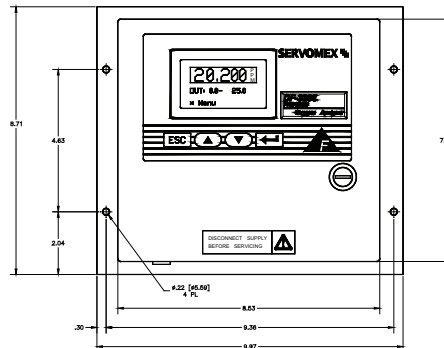
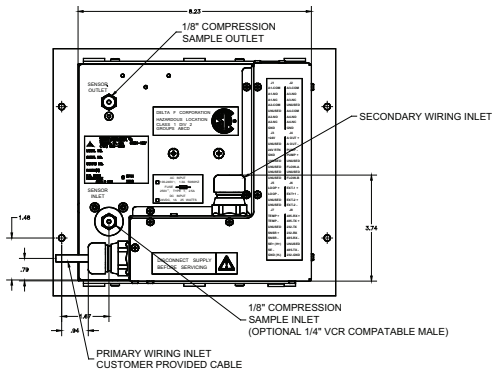
Analyser fitted with:

Stainless steel
G10 Epoxy
Polypropylene
Tygon

SERVICE & SUPPORT

For new installations and replacement of older Servomex and competitor products, we will work with you to develop a bespoke service and support package, ensuring full measurement availability and plant operation within your timescales and budget.

DIMENSIONS



All dimensions shown in inches (mm)



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.