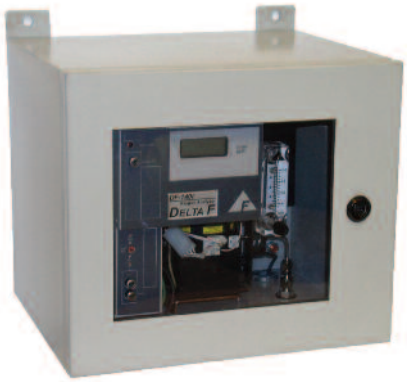
SERVOMEX
PROCESS ANALYZERS



DF-140E

The DF-140E is a Coulometric sensor based analog oxygen analyzer designed to measure trace and percent levels of oxygen in a broad variety of applications. The NEMA 4X enclosure allows the DF-140E to be installed in a non-protected environment.

FEATURES

- Non-depleting sensor with 5 year sensor warranty
- Factory calibrated
- Minimum maintenance
- Fast response time and recovery from upset conditions
- NEMA 4X suitable for outdoor installation

APPLICATIONS

- Pressure swing absorber nitrogen skids
- Reactor process control
- Blanketing and inerting

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DF-140E

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.

Broad Operating Range

Can be configured to operate as a single range or 3 range analyzer to meet the specific application need.

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.

EC DIRECTIVE COMPLIANCE

The DF-140E is in compliance with:
Low Voltage Directive (2002/73/23EEC).
EMC Directive (2001/89/336/EEC).

DESCRIPTION

		Options
Power lead:	There are 3 options for the Power lead: 22-28V dc, 1Amp (max) 100-120V ac 220-240V ac	❑ American
Outputs:	Analyzer supplied with a 0-10V dc output as standard	❑ Voltage output
Mounting:	The DF-140E comes as standard with a wall mount cabinet	❑ Benchtop
User manual:		❑ English

DF-140ε

SPECIFICATIONS

Gas Type:	O_2
TECHNOLOGY	Coulometric, non-depleting electrochemical sensor
PERFORMANCE	
Operating ranges:	0-1ppm up to 0-25% *any range between these ranges
Smallest recommended output range:	0-1ppm
Intrinsic error (accuracy):	The greater of ± 3% reading or 0.5% of measurement range, but not lower than 0.05% of full analyzer range for 3 range analyzers
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 0-10V dc
Output range:	Any range between 0-1ppm to 0-25%. *configuration dependent
Alarm	Electrolyte condition
OPTIONS	**NOTE**: For samples containing above trace levels of acidic components contact Servomex for sample preconditioning 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
Low flow/concentration alarms:	Up to 2 audible/visual concentration alarms - choice between 1 concentration alarm and low flow alarm, or 2 concentration alarms
Relay contacts:	Up to 2 independently assignable contacts rated at 5Amps at 110 or 220V ac, or 0.3Amps at 30V dc for CE
Voltage output:	Choice of 0-1V dc, 0-2V dc, 0-5V dc non-isolated outputs
Analog output:	Isolated 4-20mA dc output
Pump:	Integral diaphragm pump for negative pressures to 2psig (1.05mm Hg) vacuum or vent pressures to 3psig (155mm Hg)
Remote sensor:	Sensor mounted in NEMA 4 or NEMA 7 enclosure up to 984ft from control unit. NEMA 4 and 7 enclosure can be heated
Type Z purge protection system:	For DF-140 or NEMA 4 remote sensor enclosure, includes loss of purge pressure switch and enables Class I/II, Div. 2 area use
Mounting:	Wall mount
Sample pressure regulator:	Outboard 316 stainless steel pressure regulator, 3000psig (208BarA) inlet capacity; 0-10psig (1.7BarA) adjustable outlet pressure requires 5psig (1.36BarA) minimum inlet pressure
Flow control valve:	Upstream control for pressures less than 10psig (1.7BarA)
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:	32°F to 122°F (0°C to 50°C)
Dew point:	9°F (5°C) 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

DF-140E

SPECIFICATION CONT.

Ambient Conditions

Temperature:	+32°F to +113°F (stable) (+0°C to +45°C)
Relative humidity:	0 to 95% RH non-condensing
Altitude:	6500ft (2000m) above sea level

SAMPLE WETTED MATERIALS

Analyzer fitted with:
Stainless steel
G10 Epoxy
Polypropylene
Tygon

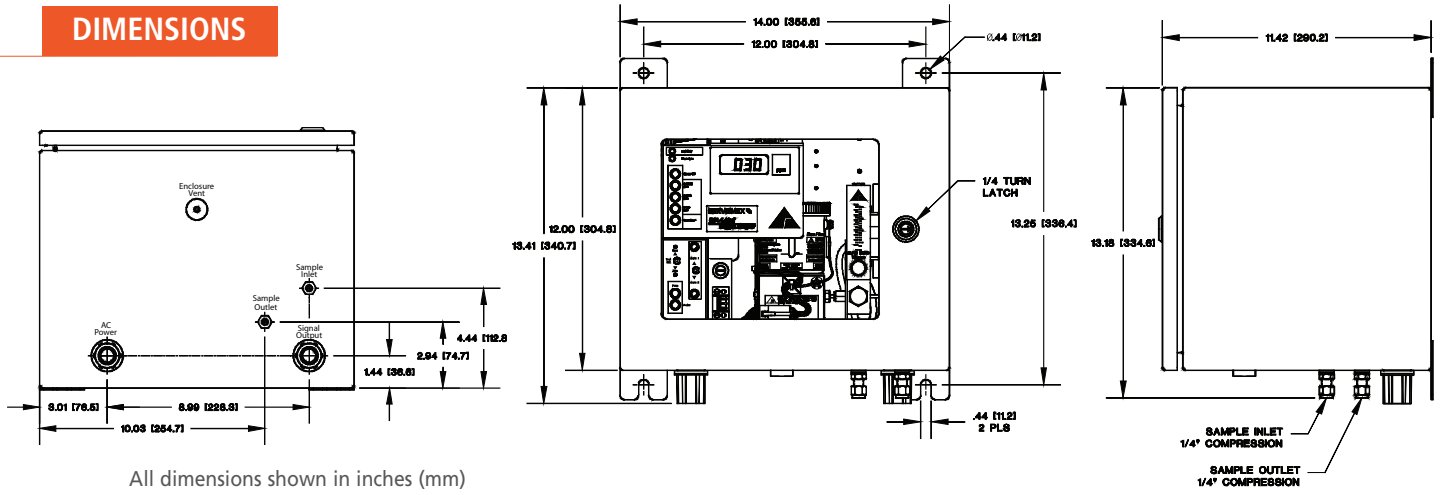
UTILITIES REQUIRED

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 O_2 in N_2 within the operating range of the sensor

SERVICE & SUPPORT

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

DIMENSIONS



All dimensions shown in inches (mm)

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