



# DF-130E Oxygen Analyzer

## Standard Features & Specifications

Effective: April 2010

### Performance

**Accuracy:** (at constant conditions)  
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**  
Responds instantaneously to O<sub>2</sub> change  
Typically less than 10 seconds to read 90% of a step change

**Range**  
Ranges are available from 0-10 ppm to 25%

**Ambient Operating Temperature**  
32° to 120° F (0° to 50° C)

**Background Gas Compatibility**  
*Standard Sensor:*  
All inert and passive gases including N<sub>2</sub>, H<sub>2</sub>, CO, freons, hydrocarbons, etc.  
*Sensor with Stab-EL Option*  
Neutralizes trace contaminants including acids such as CO<sub>2</sub>, H<sub>2</sub>S, Cl<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, etc. (Consult Delta F for concentration limits)

### Gas Sample Conditions

**Sample Pressure**  
Operating limits:  
0.2 to 1.0 psig (1.03 to 1.08 BarA) - Standard  
2.0 psi vacuum to 0.2 psig (.88 to 1.03 BarA) use pump  
1.0 to 10 psig (1.08 to 1.72 BarA) use valve or regulator  
Above 10 psig (1.7 BarA) use regulator

*Sensor overpressure damage limit:* 10 psig (1.7 BarA)

**Return Pressure:** Atmospheric Vent (optional)  
*Limits* +5 psig (1.36 BarA) to -5 psig (.67 BarA)

**Flow Rate:** 0.5 to 1.5 SCFH (0.24 to 0.7 slpm)

**Temperature (Gas Sample):** 0° to 150° F (-17.8° to 66°C)

**Moisture:** No limits (avoid condensation)

**Oil/Solvent Mist:** < 0.5 mg/ft<sup>3</sup> (standard)  
> 0.5 mg/ft<sup>3</sup> – use filter

**Solid Particles:** < 2 mg/ft<sup>3</sup> (standard)  
> 2 mg/ft<sup>3</sup> use filter

### Gas Flow System

**Construction Materials:** 304 and 316 SS

**Gas Connections:** 1/8" compression tube fittings

### Construction

**Enclosure:** NEMA 1

**Weight:** 15 lbs. (7 kg.)

**Dimensions:** 7.75" W x 8.5" H x 10" D  
(19.7 cm W x 21.6 cm H x 25.4 cm D)

### Electrical

**Power Input** 115 VAC, 50/60 Hz or  
230 VAC, 50/60 Hz

**Output Signal** 0-10 VDC (standard)  
**OR** 0-1, 0-2, 0-5 VDC (optional)  
Isolated 4-20 mA DC (optional)

**Alarm, Visual** Electrolyte Condition (standard)

**Alarms, Optional** Low Oxygen or High Oxygen  
(adjustable set-point, relay contacts only)

**Alarm Relay Rating** SPDT - 5 amps at 110 or 220 VAC  
CE version: 3 Amps at 30 VDC  
Failsafe Action

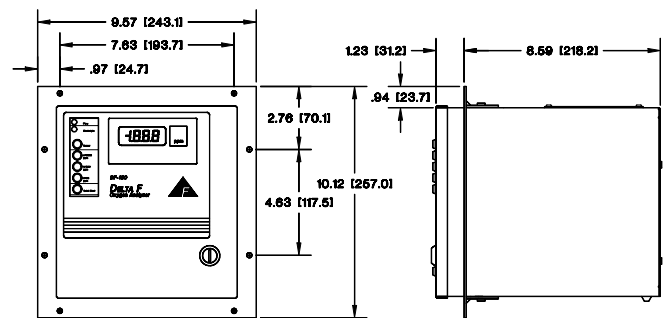
**Indicator, optional** Sensor Off (contacts only)  
No Failsafe Action

**Indicator Contact Rating** SPST – 0.5 amps at 24 VDC

**Display:** 3.5 Digit LCD  
4.5 Digit LCD (range dependent)

**Certifications:** CE Conformance (optional)

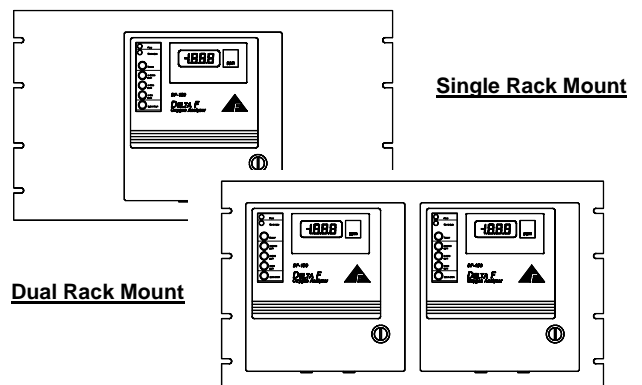
#### Panel Mount



#### Dual 19" Rack Mount

Height: 10.46" [26.57 cm]

Depth: Same as Panel Mount (above)



# DF-130E Oxygen Analyzer

## Optional Equipment

### Base Models

#### Trace Range Analyzers

PPM Range	DF-130E Model
0 to 5,000	131E-5000
1,000	131E-1000
500	131E-500
100	131E-100
50	131E-50
10	131E-10

#### Percent Range Analyzers

% Ranges	DF-130E Model
0 to 25%	131E-P25
10%	131E-P10
5%	131E-P5
1%	131E-P1

### Options

#### **Base Options**

**130-S Stab-El Acid Gas System**

**130-220 220 VAC Line Voltage** (110 VAC is standard)

**130-CE CE Conformance**

Provides added EMI/RFI and conducted interference immunity

#### **Alarms** Choose only 1 alarm option

**130-OAL Oxygen Alarm - Low**

**130-OAH Oxygen Alarm - High**

#### **Cabinet**

**130-PM Panel Mount**

**130-SRM Single Rack Mount**

**130-DRM Double Rack Mount**

#### **Plumbing**

**130-P Pump with Down Stream Control Valve**

On-board diaphragm pump for negative pressures to 2.0 psi vacuum (0.88 BarA), or outlet vent back pressure to 3.0 psig (1.2 BarA)

(Not compatible with NT-SSOL)

**130-GPR Gauge Pressure Regulator**

Out-board 316 Stainless Steel Pressure Regulator, 3000 psig (208 BarA) inlet capacity; 0-10 psig (1.7 BarA) adjustable outlet pressure.

Requires 5 psig (1.36 Bar) minimum inlet pressure

**130-APR Absolute Pressure Regulator**

Vacuum to 500 psig (35.5 BarA) inlet capacity; 4 psia to 25 psia (-10 to +10 psig) (0.32 BarA to 1.7 BarA) adjustable outlet pressure

**130-FCV Flow Control Valve**

Up stream control for pressures less than 10 psig (1.7 BarA)

**130-SSOL Stainless Steel Outlet Line**<sup>NOTE 1</sup>

**130-FH Filter Housing**

(Includes Standard Filter Element)

#### **Indicator**

**130-SOI Sensor Off Indication** (SPST contacts only)

#### **Outputs**

Choose 1 only of 150-SAOA, B, or C

**130-SAOA Special Analog Output 0 to 1 VDC**

**130-SAOB Special Analog Output 0 to 2 VDC**

**130-SAOC Special Analog Output 0 to 5 VDC**

**130-420 4 to 20 mA Isolated Output**

#### **Miscellaneous**

**130-GSF Gas Scale Factor**

Required for accurate read-out of Oxygen in one additional background gas. Nitrogen is standard. He and H2 require the GSF. For other Gases, contact Delta F.

**130-SFE Standard Filter Element** ( > 1 micron )

**130-FFE Fine Filter Element** ( <1 micron )

**DF E-Lectrolyte Blue Electrolyte**

**DF RSA Replenishment Solution**

#### **Notes:**

1. Suggested for flammable gases. Not available with on-board pump, 130-P.