**Performance**

**Accuracy:** (at constant conditions)
- 3,000 ppm: The greater of +/-5 ppm or +/- 3% of reading
- 25%: The greater of +/-0.10% or +/- 3% of reading
- 100%: The greater of +/-1.0% or +/- 3% of reading

**Oxygen Sensitivity** (minimum detectable change)
- 3,000 ppm: 500 ppb
- 25%: 0.05%
- 100%: 0.1%

**Response Time:** <10 seconds to 90% of full range

**Ranges:** 3,000ppm, 25% or 100%

**Ambient Operating Temperature**
- 32° to 176° F (0° to 80° C)

**Background Gas Compatibility**
- Incompatible sample gases: containing hydrocarbons, combustibles, H2, CO, NO2, S, or Pb.
- Compatible sample gases: N2, Ar, and most Freons. For other gases contact factory.

**Gas Sample Conditions**

**Sample Pressure**
- Operating limits: Pressure: to 100 psig (7.9 BarA)
- Vacuum: down to 300 torr

**Flow Rate:**
- Ambient to 3.0 SCFH (1.5 slpm)

**Temperature (Gas Sample):**
- 32° to 176° F (0° to 80°C)

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

**Oil/Solvent Mist:**
- < 0.5 mg/ft³ (standard)
- > 0.5 mg/ft³ – use filter

**Solid Particles:**
- < 2 mg/ft³ (standard)
- > 2 mg/ft³ use filter

**Gas Flow System**

**Construction Materials:** 300 Series stainless steel

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

**Remote Sensors:**
- RS1 Standard Flow Through Sensor for Remote Mounting w/Bracket
- RS2 Bulkhead Fitting for Mounting in Thin Walled Vessel
- RS3 VCR Fitting, 1 inch for UHP Systems
- RS4 NPT Fitting, 1 inch Plug for Thick Walled Vessels
- RS5 Flow Through “T” Section with ¼ Barbed Fittings For Flexible Tubings

**Construction**

**Enclosure:** NEMA 1 - General Purpose

**Weight:** 10 lbs. (4.52 kg.) (NEMA 1)

**Dimensions:** 8.32” W x 7.75” H x 7.91” D
(21.1 cm W x 19.7 cm H x 20.1 cm D)

**Electrical**

**Power Input:**
- 110 VAC or 220 VAC, 50/60 Hz
- 22-28 VDC, 1 Amp (max)

**Output Signals**
- Non-Isolated 0-1, 2, 5, 10 VDC
- Isolated 4-20 mADC (optional)

- 25% and 100% Ranges: User adjustable from 10% of Full Scale to Full Scale
- 3000ppm Range: User adjustable from 1% of Full Scale to Full Scale

- User selectable Output Freeze during Calibration

**Alarms, audible/visual**
- 4 Oxygen (optional)
- (Adjustable set-point)

**Low Flow (optional)**

**Alarm Relays**
- 4 optional relays independently assignable to Alarms, In-Calibration, Sensor Off and Expanded Range Scale

**Alarm Relay Rating:** 0.3 Amps at 30 VDC

**Back Lighted Display:** Supertwist LCD graphics

**Certifications:** CE Conformance

**Dimensions:** NEMA 1 Enclosure (Panel Mount Optional)
DF-330E Process Oxygen Analyzer

Optional Equipment

Range Options

<table>
<thead>
<tr>
<th>Ranges</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 3,000 ppm</td>
<td>H03000</td>
</tr>
<tr>
<td>0 to 25%</td>
<td>S00P25</td>
</tr>
<tr>
<td>0 to 100%</td>
<td>S0P100</td>
</tr>
</tbody>
</table>

Sensor Mounting Options

Choose only 1 option

- LS Local Sensor in Benchtop Cabinet
- RS1 Standard Flow Through Sensor for Remote Mounting w/Bracket
- RS2 Bulkhead Fitting for Mounting in Thin Walled Vessel
- RS3 VCR Fitting, 1 inch for UHP Systems
- RS4 NPT Fitting, 1 inch Plug for Thick Walled Vessels
- RS5 Flow Through “T” Section with ¼ Barbed Fittings

Power Input Options

- 024 22-28 VDC Input, 1 Amp (max)
- 110 110 VAC, 50/60 Hz, 1.3 Amp
- 220 220 VAC, 50/60 Hz, 1.3 Amp

General Purpose Cabinet Mounting

- 330-PM Panel Mount (9.97"Wx8.71"Hx6.58"D)
- 330-RM 19" Rack Mount (19"Wx8.71"Hx6.58"D)
- 330-DRM 19” Dual Rack Mount
- 330-KL Key Lock

Outputs

- 330-420 Isolated 4-20 mADC output
- 330-220 Isolated 4-20 mADC output with a live zero at 4 mA and sensor off or disconnected at 2 mA

Choose only 1

- 330-RS232 RS232 Two-way Serial Communications
- 330-RS485 RS485 Two-way serial communications
- 330-ERS-OUT Expanded Range Scale

Audible/visual only

- 330-OA2 Two Oxygen Alarms
- 330-OA4 Four Oxygen Alarms
- 330-FA Low Flow Alarm

Relay Contacts

(Note 1: Independently assignable)

- 330-RLY1 One SPDT Relay Contact
- 330-RLY2 Two SPDT Relay Contacts
- 330-RLY3 Three SPDT Relay Contacts
- 330-RLY4 Four SPDT Relay Contacts

Plumbing

- 330-P Pump with Down Stream Control Valve
  Diaphragm pump for negative pressures to -2.0 psig vacuum (0.88 BarA), or outlet vent back pressure to 3.0 psig (1.2 BarA)
- 330-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 BarA) minimum inlet pressure
- 330-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
- 330-SSOL Stainless Steel Outlet Line
- 330-FH Stainless Steel Filter
- 330-FCV Upstream Flow Control Valve

Miscellaneous

- 330-PASS Password Protection
- 330-XTC-RS Extension Cable per foot (for remote difusser sensors)
- 330-SSTAG Stainless Steel Tags
- 330-EXT-SNSROFF External Control of Sensor On/Off
- 330-EXT-PUMPOFF External Control of Pump
- 330-SFE Standard Filter Element (particle size >1 micron)
- 330-FFE Fine Filter Element (particle size <1 micron)

Notes:

1. For use with system status indicators and optional alarms.
2. Each Remote Sensor includes a 10 ft cable with connector, sensor in a mechanical fitting and 6 in. pigtail with a connector.

Not available with CE Certification.