**Performance**

**Accuracy:** (at constant conditions)
- **Standard Models:** the greater of +/-3% Reading or 0.5% of Range
- **High Resolution Models:** the greater of +/-3% of Reading or 0.02% of Range (except for 340E-H00100: +/-3% Reading or 50 ppb)

**Oxygen Sensitivity:**
- Minimum Detectable Change: 3 ppb (310E-H0050M Model)
- Low Detection Limit: 3 ppb (310E-H0050M Model)

**Response Time**
Responds instantaneously to O2 change. Typically less than 10 seconds to read 90% of a step change. (Equilibrium time depends on specific conditions.)

**Range:**
Ranges are available from 0.5ppm to 25%

**Ambient Operating Temperature:**
32º to 113ºF (0º to 45ºC)

**Background Gas Compatibility**
- **Basic Sensor:**
  All inert and passive gases including N2, H2, CO, freons, hydrocarbons, etc.
- **Sensor with Stab-EL Option:**
  Neutralizes trace contaminants including acids such as CO2, H2S, Cl2, NOx, SOx, 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
  15-25 psig with welded sample inlet (orifice restricted)
  2.0 psi vacuum to 0.2 psig (0.88 to 1.03 BarA) use pump
  1.0 to 10 psig (1.08 to 1.7 BarA) use valve (optional) or regulator (optional)
  Above 10 psig (1.7 BarA) use regulator

**Return Pressure:**
- Atmospheric Vent (optional)

**Flow Rate:**
1.0 to 3.0 SCFH (0.5 to 1.5 slpm)

**Temperature (Gas Sample):**
0º to 150º F (-17.8º to 66ºC)

**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
  1/4” VCR compatible (optional except standard for 310E-H0050M)

**Construction**

**Enclosure:** NEMA 4
**Weight:** 35 lbs. (15.9 kg)
**Dimensions:**
14.0” W x 13.18” H x 11.42” D
(35.6 cm W x 33.5 cm H x 29.0 cm D)

**Electrical**

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

**Output Signals:**
- Isolated 0-5, 10 VDC
- Isolated 4 to 20 mA (optional)
- User adjustable to 10% of Full Scale to Full Scale (Std Res)
- User adjustable to 1% of Full Scale to Full Scale (High Res)
- User selectable Output Freeze during Calibration

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

**Electrolyte Condition (standard)**

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

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

**Back Lighted Display:**
Supertwist LCD graphics

**Certifications:**

**Dimensions**

**NEMA 4 Enclosure**
DF-340E Process Oxygen Analyzer
Configurations and Options

**Range Options**

**PPM Ranges**

<table>
<thead>
<tr>
<th>PPM Range</th>
<th>Standard Resolution</th>
<th>Price</th>
<th>High Resolution</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 10,000</td>
<td>S10000</td>
<td></td>
<td>H10000</td>
<td></td>
</tr>
<tr>
<td>0 to 5,000</td>
<td>S05000</td>
<td></td>
<td>H05000</td>
<td></td>
</tr>
<tr>
<td>0 to 1,000</td>
<td>S01000</td>
<td></td>
<td>H01000</td>
<td></td>
</tr>
<tr>
<td>0 to 500</td>
<td>S00500</td>
<td></td>
<td>H00500</td>
<td></td>
</tr>
<tr>
<td>0 to 100</td>
<td>S00100</td>
<td></td>
<td>H00100</td>
<td></td>
</tr>
<tr>
<td>0 to 50</td>
<td>S00050</td>
<td></td>
<td>H00050</td>
<td></td>
</tr>
</tbody>
</table>

**Percent Ranges**

<table>
<thead>
<tr>
<th>% Ranges</th>
<th>Standard Resolution</th>
<th>Price</th>
<th>High Resolution</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 25%</td>
<td>S00P25</td>
<td></td>
<td>H00P25</td>
<td></td>
</tr>
<tr>
<td>0 to 10%</td>
<td>S00P10</td>
<td></td>
<td>H00P10</td>
<td></td>
</tr>
<tr>
<td>0 to 5%</td>
<td>S000P5</td>
<td></td>
<td>H000P5</td>
<td></td>
</tr>
</tbody>
</table>

**Sensor Options**

B Basic Sensor
S Stab-El Sensor System
Enables operation with trace levels of acid gas or any ionic contamination (within limits-consult factory for guidelines)

**Sensor Mounting Options**

LS Local Sensor in Benchtop Cabinet
RB Remote Sensor with Baseplate Bracket (NO flowmeter)
RA Remote Sensor on Wall Mount Bracket with flowmeter
R7 Remote NEMA 7 Sensor with flowmeter

**Power Input Options**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>024</td>
<td>22-28 VDC Input, 1Amp (max)</td>
</tr>
<tr>
<td>110</td>
<td>110 VAC, 50/60 Hz</td>
</tr>
<tr>
<td>220</td>
<td>220 VAC, 50/60 Hz</td>
</tr>
</tbody>
</table>

**Outputs**

340-RS232 RS232 Two-Way Serial Communications
340-RS485 RS485 Two-Way Serial Communications
340-4-20 Isolated 4-20mA DC output
340-2-20 Isolated 4-20mA DC output with a live zero at 4 mA and sensor off or disconnected at 2mA
340-ERS-OUT Expanded Range Scale

**Alarms**

340-OA2 Two Oxygen Alarms
340-OA4 Four Oxygen Alarms
340-FA Low Flow Alarm
340-TA Temperature Alarm

**Relay Contacts**

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

**Plumbing**

340-P Pump w/ Down Stream Control Valve
Diaphragm pump for negative pressures to 2.0 psi vacuum (0.88 Bar), or outlet vent back pressure to 3.0 psig (1.2 Bar)
(not compatible with NT-SSOL)
340-PR Pressure Regulator
Out-board 316L Stainless Steel Pressure Regulator, 3000 psig inlet capacity; 28 in Hg vac-15 psig adjustable outlet pressure
340-HPR High Purity Pressure Regulator
340-HPR-MNT High Purity Regulator Mounting
Welded tube assembly and bracket for mounting 340-HPR regulator to analyzer cabinet
340-WSI Welded Sample Inlet w/VCR compatible fittings
(standard on 340-H0050M Range)
340-SSOL Stainless Steel Outlet Line
340-F2R Standard Filter Element (particle size >1 micron )
340-F2R-B Fine Filter Element (particle size <1 micron )

**Miscellaneous**

340-Y04 Scale Factor
Required for accurate read-out of oxygen in background gases other than N2, such as HE, H2, hydrocarbons or mixtures
340-PASS Password Protection
340-BAT Supplemental Battery Input Power
Permits portable operation independent of AC power
340-XTC-RS Extension Cable per foot (for remote sensors)
340-SSTAG Stainless Steel Tags
340-RSH Remote Sensor Enclosure Heater
340-EXT-SNSROFF External Control of Sensor On/Off
340-EXT-PUMPOFF External Control of Pump
340-N2CP Case Purge for Combustible Applications
(NT-SSOL Required with this option; not compatible with 340-PM)
340-ZPK Type Z Purge Protection System
For 340E or NEMA 4 Remote Sensor Enclosure

Notes:
1. Remote sensors not available with CE Certification
2. Recommended when measuring combustible gases, such as H2
3. For use with system status indicators and optional alarms
4. Not available with on-board pump, 310-P

Build your analyzer by selecting one option from numbers 1-4, then add on part numbers for all additional options.