Description
Detcon Model DM-700-O2 is a non-intrusive “Smart” sensor designed to detect and monitor Oxygen in air over the range of 0-25% by volume using electrochemical sensor technology. The plug-in, field replaceable sensor cell is temperature compensated and features over-sized gold-plated connections that help prevent corrosion. The Model 700’s rugged framework includes an intrinsically safe electro-polished 316 stainless steel housing with fully encapsulated electronics and dual layer surge protection. This innovative design virtually eliminates sensor failure due to water ingress, corrosion, vibration, and transient spikes. A primary feature of the Model 700 is embedded intuitive software that simplifies operator interface by guiding the user through routine calibration, configuration, and fault diagnostic functions using a built-in alpha/numeric display. The Model 700 is equipped with standard analog 4-20mA, and Modbus™ RS-485 outputs. Among its unique features is a wireless option that can be used with Detcon's SmartWireless® product line. Additional integration options include a Remote Alarm Module (RAM), HART, and Foundation Fieldbus. Detcon's oxygen sensors have a long shelf life and are supported by an industry-leading warranty.

Features
Failsafe User-Friendly Interface
- LED Display (With Antiglare Cover)
- Full Text Display Method
- Non-intrusive Interface
- Auto Zero/Auto Span
- Pre-emptive Fault Diagnostics

Environmentally Bulletproof
- Electropolished 316SS Construction
- 100% Epoxy Encapsulated Circuitry
- Bulletproof I/O Protection
- Water-Proof, Corrosion-Proof, Vibration-Proof

Modular and Serviceable
- Modular Design
- Plug and Play Components
- Quick Thread Release (For Sensor Replacement)
- Integral Calibration Port

Applications
- Petrochemical
- Refineries
- Chemical plants
- Confined Space Monitoring
- Analyzer Shelters
- Wastewater treatment plants
- Wet wells-dry wells
- Pulp and paper
- Food and beverage
- Utilities

Electrochemical Fuel Cell
(Shown as PN 967-344520-025 in SS junction box)
System Specifications

**Sensor Type**
- Continuous diffusion/adsorption
- 2-electrode electrochemical cell
- Plug-in field replaceable Intelligent Type

**Sensor Life**
- 2 1/2 to 3 years typical

**Measurement Range**
- 0-25% Oxygen by volume

**Accuracy/Repeatability**
- ±1% FS

**Response/Clearing Time**
- T90 ≤ 10 seconds

**Span Drift**
- <5% of signal per year (in first two years)

**Outputs**
- Linear 4-20 mA DC
- RS-485 MODBUS-RTU

**Electrical Classification**
- Explosion proof
  - CSA and US (NRTL)
    - Class 1, Division 1, Groups B, C, D (Tamb = -40°C to +50°C)
    - Class 1, Zone 1, Group IIC
- ATEX
  - II 2 G Ex d ib IIIC T4 Gb (Tamb = -40°C to +50°C)

**Ingress Protection**
- NEMA 4X, IP66

**Safety Approvals**
- cCSAus
- ATEX
- CE Marking
- SIL2 Certified to IEC 61508

**Warranty**
- Plug-in Cell - 2 years; Transmitter - 2 Years

Environmental Specifications

**Operating Temperature Range**
- -40°F to +122°F; -40°C to +50°C

**Storage Temperature Range**
- -40°F to +122°F; -40°C to +50°C

**Operating Humidity Range**
- 0-99% RH non-condensing

**Operating Pressure Range**
- Atmospheric ±10%

Specifications subject to change without notice

Order Guide

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<th>PN</th>
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<tr>
<td>967-345520-025</td>
<td>DM-700-02 Sensor Assembly (no junction box)</td>
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<td>967-341520-025</td>
<td>DM-700-02 Sensor Assembly with Aluminum J-Box</td>
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<td>967-344520-025</td>
<td>DM-700-02 Sensor Assembly with 316 SS J-Box</td>
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Specify junction box options (below)

Integration Options

Remote Alarm Module (Remote Operation and 2 Alarm Relays plus Fault)
Hart Integration Module (Hart Communication Protocol version 7.0, HART Registered)
Foundation Fieldbus Integration Module (Foundation Fieldbus version 5.01)
Wireless Integration Module (Detcon Model RXT-320 SmartWireless™ Transceivers)

Houston  ■  Odessa  ■  Shanghai  ■  Dammam  ■  Del Carmen

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ISO 9001:2008 Certified