Model 800-IS Submersible Series
UL/CUL Listed, Intrinsically Safe Submersible Pressure Transducer

- Eliminate Drift – Fused Bond sensor technology for long term stability
- RFI/EMI protection on every transducer
- 4-20MA, 1-5V Outputs
- Temperature Compensation at sensor element
- Suitable for high shock and vibration applications
- No Silicone oil, no internal o-rings, no welded diaphragms!
- Ranges 0-5 PSI to 0-100 PSI
- UL/CUL listed Intrinsically Safe, Class 1, Div 1, Groups C & D when used with approved barrier. UL 913 (CSA 157)

DESCRIPTION
Spectre’s 800-IS submersible pressure transducers is a high accuracy, all stainless steel device engineered for the most demanding level applications in Hazardous Areas. It’s long term stability of the Fused Bond Sensor, and standard RFI/EMI protection provide the most rugged and reliable sensor for industrial and water management applications. The double jacketed, Kevlar core cable provides maximum protection against damage and cable collapse.

FEATURES
- Proprietary Fused Bond Sensor
- Accuracy 0.25%
- RFI/EMI Protection
- Temperature compensation at sensor element. (Faster, automatic, more accurate)
- Sensor Wetted Material Machined From Solid Stainless Steel Bar Stock (No Welds)
- Unparalleled Long Term Stability

DIMENSIONS

**Output Table**

<table>
<thead>
<tr>
<th>Table</th>
<th>Red</th>
<th>Black</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-20mA</td>
<td>+V Supply</td>
<td>-V Supply</td>
<td>+V Supply</td>
</tr>
</tbody>
</table>

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MODEL 800-IS Submersible Series
Ordering Guide. Example: 800IS-A-(0-30)-1-D-2-SC1

Please inquire for specials or options not shown

<table>
<thead>
<tr>
<th>A</th>
<th>(0-30)</th>
<th>1</th>
<th>D</th>
<th>2</th>
<th>SC1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Port</td>
<td>Range</td>
<td>Units</td>
<td>Output</td>
<td>Accuracy</td>
<td>Connector</td>
</tr>
<tr>
<td>A=Bullet Nose with 17-4 PH sensor</td>
<td>Specify Pressure Range</td>
<td>1=PSIG 2=Inches WC 3=Foot WC 6=Other</td>
<td>D=4-20mA E=1-5VDC R=0.5-4.5V ratiometric</td>
<td>2=0.25%BFSL</td>
<td>SC1=6' vented cable (polyurethane) SCX=Alternate cable material – specify type.</td>
</tr>
<tr>
<td>B=Bullet Nose with 316 ss sensor</td>
<td>(0-5 to 0-100 psi)</td>
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</tr>
</tbody>
</table>

Performance @ 25°C (77°F)
Accuracy(1): <±0.25% BFSL
Stability (1 year): ±0.25% FS, typical
Over range protection: 2X Rated Pressure
Burst Pressure: 5X Minimum
Pressure Cycles: >50 Million
Temperature Range: -55 to 125°C (-65 to 250°F)
Temperature Accuracy: ±1°F (±1°C)

Electrical Data
Excitation: 10-32 Vdc (4-20mA, 1-5V), 5 Vdc (0.5-4.5Vdc Ratiometric)
Option C29 – Maximum 29 Vdc excitation
Outputs: 4-20mA, 1-5Vdc, 0.5-4.5Vdc Ratiometric
Current Consumption: <10mA
Zero Offset: <±1.0% of FS
Span Tolerance: <±2.0% FS
Output load: > 5K Ohm

Environmental Data
Temperature
Operating: -40 to 85°C (-40 to 185°F)
Storage: -50 to 125°C (-60 to 250°F)
Thermal Limits
Compensated Range: 0 to 55°C (-30 to 130°F)
Temp Comp Zero: <±1.0% FS (±1.5% for 316L)
Temp Comp Span: <±1.0% FS (±1.5% for 316L)

Physical Data
Sensor: Wetted Material 17-4 pH SS, 316 ss (others on request)
Pressure Connection: ½" MNPT with bullet nose (others on request)
Electrical Connection: 6' vented cable std. Longer lengths available

These transducers are designed for installation in Class 1, Div 1, Groups C & D hazardous locations when connected to Associated Apparatus as described below:

Entity Parameters
Vmax=28 Vdc
Imax=150mA
C=0.44 uF
L=1

Notes:
1. Associated Apparatus shall provide intrinsically safe connections which meet the following parameters:
   Voc or Vt <=Vmax Ca=C1 + Cleads
   Isc or It <=Imax La=L1 = Lleads
2. Control Room apparatus shall not generate in excess of 250V (Umax)
3. Installation should be in accordance with Article 504 in the National Electrical Code ANSI/NFPA 70.

Model 800-IS / 101006