

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

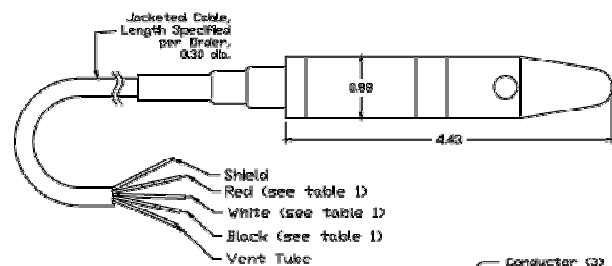
Spectre's 800-IS submersible pressure transducers is a high accuracy, all stainless steel device engineered for the most demanding level applications in Hazardous Areas. It's long term stability of the Fused Bond Sensor, and standard RFI/EMI protection provide the most rugged and reliable sensor for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



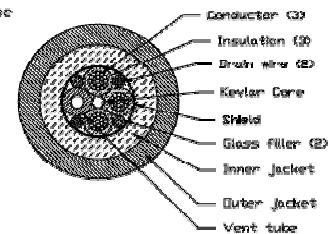
FEATURES

- 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	Red	Black	White
1-5V	+V Supply	-V Supply	Output
4-20mA	+V Supply	-V Supply	N/C



MODEL 800-IS Submersible Series

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

Please inquire for specials or options not shown

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

Performance @ 25°C (77°F)

Accuracy(1): $<\pm 0.25\%$ BFSL
Stability (1 year): $\pm 0.25\%$ 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: $\pm 1^\circ\text{F}$ ($\pm 1^\circ\text{C}$)

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: $<\pm 1.0\%$ of FS
Span Tolerance: $<\pm 2.0\%$ 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: $<\pm 1.0\%$ FS ($\pm 1.5\%$ for 316L)
Temp Comp Span: $<\pm 1.0\%$ FS ($\pm 1.5\%$ for 316L)

Physical Data

Sensor: Wetted Material 17-4 pH SS, 316 ss (others on request)
Pressure Connection: $\frac{1}{4}$ " 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

$V_{max}=28$ Vdc
 $I_{max}=150$ mA
 $C1=0.44$ uF
 $L1=0$

I_{max} is the total current consumption available from the Associates Apparatus under any condition

Notes:

1. Associated Apparatus shall provide intrinsically safe connections which meet the following parameters:

V_{oc} or $V_t \leq V_{max}$ $C_a \geq C1 + C_{leads}$
 I_{sc} or $I_t \leq I_{max}$ $L_a \geq L1 = L_{leads}$

2. Control Room apparatus shall not generate in excess of 250V (U_{max})
3. Installation should be in accordance with Article 504 in the National Electrical Code ANSO/NFPA 70.

Spectre Sensors

Contact Information

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