

Model P800-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

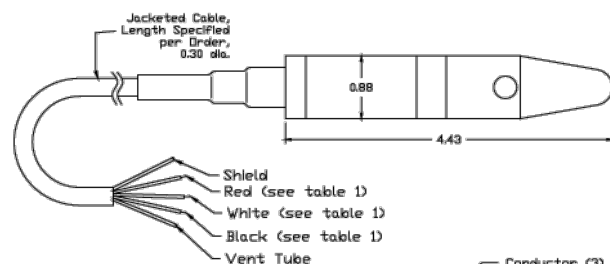
PTI's 800-IS submersible pressure transducers is a high accuracy, all stainless steel device engineered for the most demanding level applications in Hazardous Areas. It's long term stability of the Fused Bond Sensor, and standard RFI/EMI protection provide the most rugged and reliable sensor for industrial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



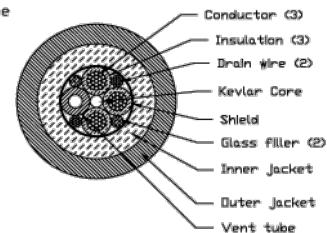
FEATURES

- 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	I/V



MODEL P800-IS Submersible Series

Ordering Guide. Example: P800IS-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	Specify Pressure Range	1=PSIG 2=Inches WC 3=Feet WC 6=Other	D=4-20mA E=1-5VDC R=0.5-4.5V	2=0.25%BFSL	SC1=6' vented cable (polyurethane) SCX=Alternate cable material – specify type.
B=Bullet Nose with 316 ss sensor	(0-5 to 0-100 psi)		ratiometric		

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: <math>< 10\text{mA}</math>
Zero Offset: <math>< \pm 1.0\%</math> of FS
Span Tolerance: <math>< \pm 2.0\%</math> 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: <math>< \pm 1.0\%</math> FS ($\pm 1.5\%$ for 316L)
Temp Comp Span: <math>< \pm 1.0\%</math> FS ($\pm 1.5\%$ for 316L)

Physical Data

Sensor: Wetted Material 17-4 pH SS, 316 ss (others on request)
Pressure Connection: 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

Vmax=28 Vdc
Imax=150mA
C1=0.44 uF
L1=0

Imax 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:

Voc or Vt $\leq V_{\text{max}}$ Ca >math>= C1 + C_{\text{leads}}</math>
Isc or It $\leq I_{\text{max}}$ La >math>= L1 = L_{\text{leads}}</math>

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 ANSO/NFPA 70.

PT Instruments

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