



TEL-TRU MANUFACTURING COMPANY

MODEL P621 SANITARY PRESSURE TRANSMITTER

Industrial *Silicon Glass Fused* Sensor Series



KEY BENEFITS

- Unique **glass fused** strain gauge sensor provides exceptional calibration stability
- All 316L stainless steel welded construction for long service life in demanding applications
- Integrated design without threads or crevices to trap and grow bacteria
- Compatible with CIP and SIP maintenance procedures
- Designed and manufactured in compliance with 3-A standards
- Optional integral cable for IP69K service
- FDA approved actuating fill fluids
- Electro-polished sanitary contact surfaces available
- Re-rangeable in the field
- Available with Tri-Clamp® or Cherry-Burrell® process connections
- Process connections from 1-1/2" through 4" flush diaphragms

APPLICATIONS:

- Dairy
- Food and Beverage
- Pharmaceutical
- Cosmetic
- Biotech

RANGES:

Many ranges from Vacuum to 0-1,000psi; also metric standard Bar and Kg/cm² ranges. Custom ranges readily accommodated.

CONNECTIONS:

Many pressure and electrical connections available. Custom connections can be accommodated.

OPTIONS:

- Certificate of Conformance
- Certificate of Calibration traceable to NIST, with five check points
- Silicone gel potting of electronics housing for added shock and vibration protection
- Electro-polished sanitary contact surfaces
- Tamper-proof unit without customer accessible zero and span adjustment
- PDT-1 local plug-in loop powered indicator for use with the DIN 43650 A electrical connection and 4-20mA output electronics
- FDA approved glycerine actuating fill fluid

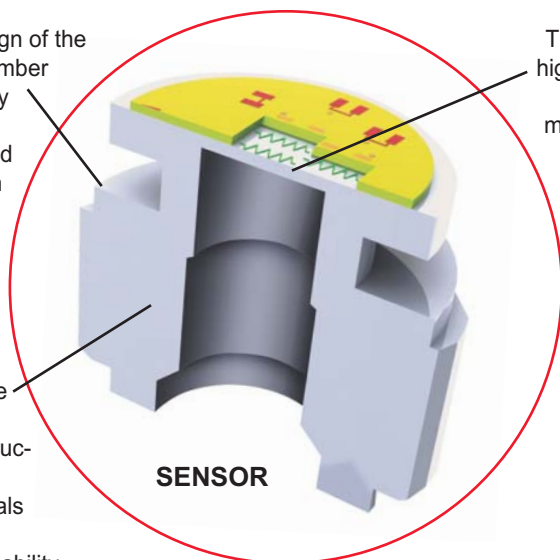
WARRANTY:

Three-year warranty, see website for details: www.teltru.com/t-P600.aspx

Stepped design of the pressure chamber minimizes any effect on the sensor caused by installation stresses

Thicker diaphragm and high output silicon glass fused strain gauge maximize cycle life and protection from pressure spikes

Robust, single piece, 316L sensor construction without O-rings or seals provides leak-proof reliability



SENSOR



Tri-Clamp® is a registered trademark of Ladish Company
Cherry-Burrell® is a registered trademark of United Dominion Industries, Inc.

www.teltru.com

World-Class Instruments

Since 1916

MODEL P621 SANITARY PRESSURE TRANSMITTER - Additional specs at www.teltru.com/t-P600.aspx

FUNCTIONAL SPECIFICATIONS

Proof Pressure:

Up to 2 times URL *

Burst Pressure:

Up to 5 times URL

Strength and Safety:

Pressure chamber structure tested to 40,000psi

Zero Adjustability:

Up to +/- 30% of calibrated span (output dependent), externally accessible

* URL = Upper Range Limit (see range code list on website, www.teltru.com/t-P600.aspx)

** All voltage outputs are customer configurable with external zero and span adjustments

Span Adjustability:

Up to 2.5 to 1 turndown of URL, externally accessible

Outputs:

4-20mA, 2-wire 1-5V, 3-wire **
0-5V, 3-wire ** 1-6V, 3-wire **
0-10V, 3-wire ** 1-11V, 3-wire **

Output Impedance:

4-20mA: >10K Ohms
0-5V, 0-10V, 1-5V, 1-6V, 1-11V: <100 Ohms

Current Consumption:

4-20mA: 20mA
0-5V, 0-10V, 1-5V, 1-6V, 1-11V: <10mA @ 12V

Output Load:

4-20mA: 0-1000 Ohms @ 10-30Vdc
1-5V, 0-10V, 1-5V, 1-6V, 1-11V: >10K Ohms

Output Noise:

4-20mA: Negligible
0-5V, 0-10V, 1-5V, 1-6V, 1-11V: <2mV RMS

Power Supply Requirements:

10-30Vdc for 4-20mA
10-30Vdc for 0-5V, 1-5V, and 1-6V
14-30Vdc for 0-10V and 1-11V

Temperature Limits:

Process range: -20/300°F (-29/149°C) up to 325°F (163°C) if horizontal mount
Compensated range: 32/176°F (0/80°C)
Operating range: 4/176°F (-16/80°C)
Storage range: -40/212°F (-40/100°C)

PERFORMANCE SPECIFICATIONS

Accuracy:

+/-0.50% or +/-0.25% of calibrated span
+/-0.15% of calibrated span (4-20mA only)

Linearity:

+/-0.15% of calibrated span, BFSL***
+/-0.05% of calibrated span, BFSL (4-20mA only)

Hysteresis:

Better than 0.05% of calibrated span

Repeatability:

Better than 0.02% of calibrated span

*** Best-Fit-Straight-Line

Response Time:

Less than 5ms

Zero Offset:

Within calibrated accuracy (+/-1% of URL for sealed housing option)

Span Tolerance:

Within calibrated accuracy (+/-2% of URL for sealed housing option)

Stability:

Better than +/-0.25% of URL for 1 year, non-accumulating

Durability:

Greater than 100,000,000 full scale cycles

Thermal Effect on Zero:

Less than +/-0.02% URL/°F (+/-0.036% URL/°C)

Thermal Effect on Span:

Less than +/-0.018% of calibrated span/°F (+/-0.032% of calibrated span/°C)

Shock:

Designed to withstand 10Gs, 11ms, 1/2 sine (50Gs with optional silicone gel potting)

Vibration:

Designed to withstand 10Gs peak, 20-2400Hz (50Gs with optional silicone gel potting)

CE Compliant:

Interference emission per EN 50 081-1 and EN 50 081-2 by design; Interference immunity per EN 50 082-2 by design; RFI, EMI, and ESD protected

PHYSICAL SPECIFICATIONS

Wetted Materials:

Single piece 316L Stainless Steel diaphragm structure, with welded on 316L SS sanitary conn.

Housing Material:

316L Stainless Steel

Environmental Rating:

Integral PVC cable and 1/2" NPT conduit connections are IP65/IP67

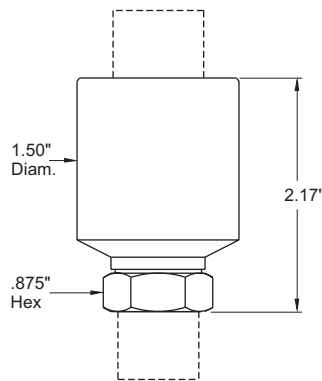
Optional integral polyurethane cable is IP69K

DIN 43650 A and C connections are IP65

M12 connection is IP65/IP67

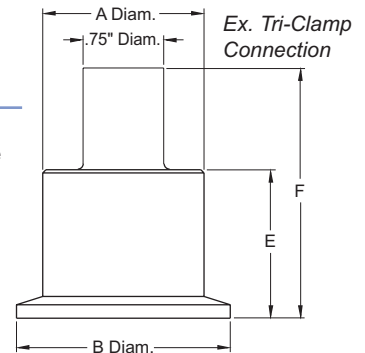
Hazardous Environment Rating:

Complies with Class 1, Div. 1, Groups A, B, C, D for intrinsically safe apparatus - Approval pending



PROCESS CONNECTIONS

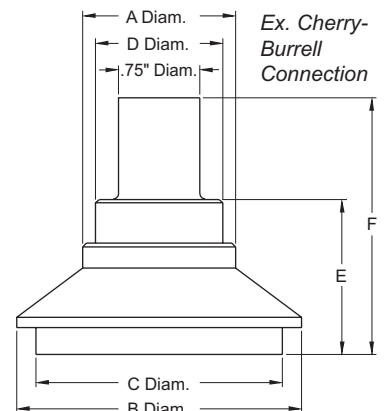
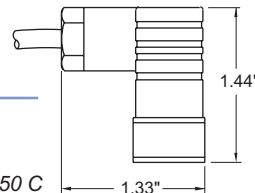
Numerous standard connections available



ELECTRICAL CONNECTIONS

Numerous standard connections available

Ex. Mini-DIN 43650 C



WIRING COLORS AND PINOUTS

Output	Function	Integral Cable or 1/2"NPT w/Cable	DIN 43650 A	DIN 43650 C	M12
4-20mA 2-wire	+ Supply	Red	1	1	1
	+ Output	Black	2	2	3
0-5V, 0-10V, 1-5V, 1-6V, 1-11V 3-wire	+ Supply	Red	1	1	1
	Common	Black	2	2	3
	+ Output	White	3	3	4



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