

PT 410 | 412 | TPT 412

Alternate Fill Pressure Sensors

Ideal For Food Or Medical Applications



Description

The PT410, PT412 and TPT412 series of mercury-free sensors are sensors with an accuracy of $\pm 0.25\%$ of the range, which are ideal for sensing melt pressure in pharmaceutical and food applications. The sensors have easy installation, repeatability and reliability. These sensors provide a 3.33 mV / V output signal that is designed to work with most pressure indicators. The sensors are equipped with an 8-pin Bendix connector. The NaK filling material meets the requirements set by the FDA and USDA for production in contact with food and medical products. Optional thermocouples or RTD configurations are also available for sensing melt temperature and pressure at a single point. The sensors are equipped with a 1 / 2-20-UNF thread as standard for mounting in standard mounting holes and can be supplied with a number of other electrical connections.

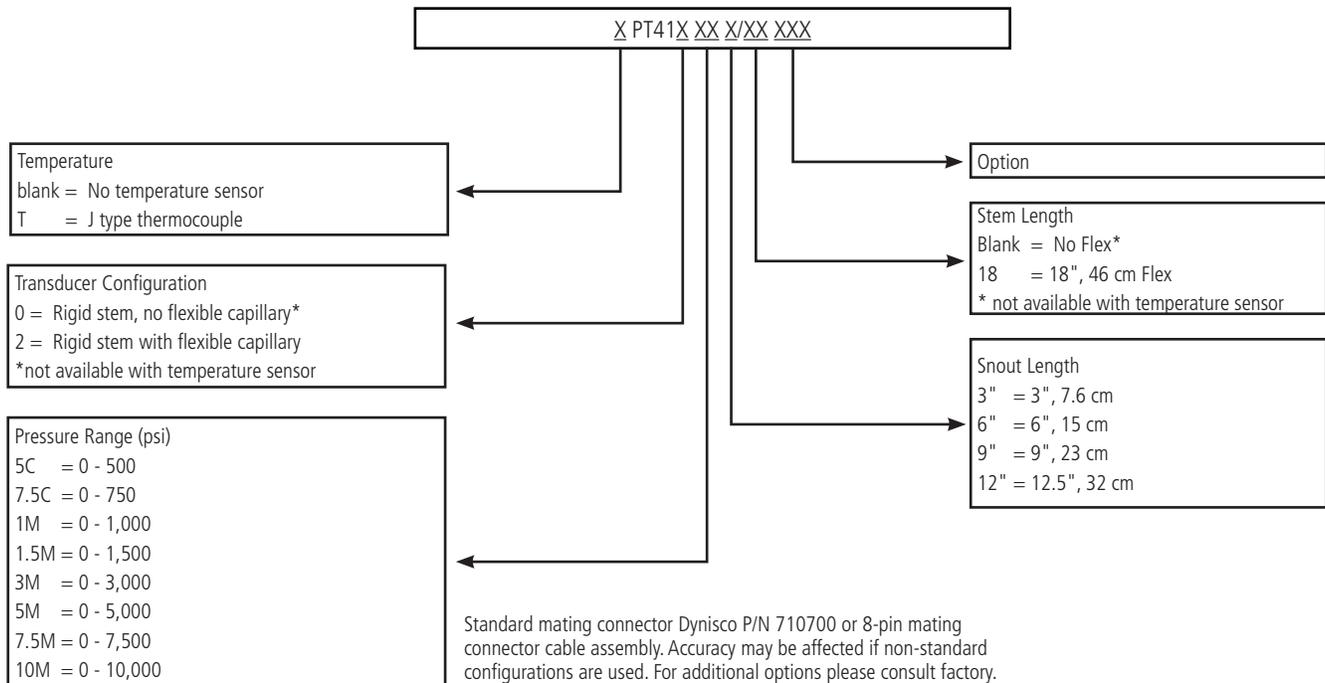
Features

- Accuracy better than $\pm 0.25\%$
- Measures up to 1000°F (538°C)
- NaK fill meets FDA and USDA requirements
- Inconel diaphragm
- 0 - 500 to 0 -10,000 psi
- 3.33 mV/V FSO

Performance Characteristics	
Output:	3.33 mV/V \pm 2.0%
Input Voltage:	10 Vdc recommended, 12 Vdc maximum
Combined Error:	\pm 0.25% FSO, (Including Linearity, Repeatability & Hysteresis) \pm 0.5% FSO for 500, 750, 1,000 psi ranges
Repeatability:	\pm 0.1%FSO, \pm 0.2% FSO for 500, 750, 1,000 psi ranges
Configuration:	Four-arm bonded foil Wheatstone bridge strain gage
Bridge Resistance:	Input: 345 Ohms minimum Output: 350 Ohms \pm 10%
Over Pressure:	2 X FSO or 35,000 psi whichever is less
Zero Balance:	\pm 5% FSO
Internal Shunt Calibration (R-Cal):	80% FSO \pm 0.5%
Insulation Resistance:	1000 megohms @ 50 Vdc

Temperature & Mechanical Characteristics	
Max Diaphragm Temperature:	1000°F (538°C)
Zero Shift (Due To Temperature Change):	30 psi/100°F Typical (54 psi/100°C)
Electronics Operating Temperature:	250°F (121°C)
Zero Shift (Due to Temperature Change):	\pm 0.01% FS/oF max (\pm 0.02% FS/oC max)
Sensitivity Shift (Due to Temperature Change):	\pm 0.005% FS/°F max (\pm 0.01% FS/°C max) \pm 0.01% FS/°F max (\pm 0.02% FS/°C max) for 500, 750, 1,000 psi ranges
Mounting Torque:	500 inch/lbs. maximum
Standard Wetted Parts:	Inconel 718

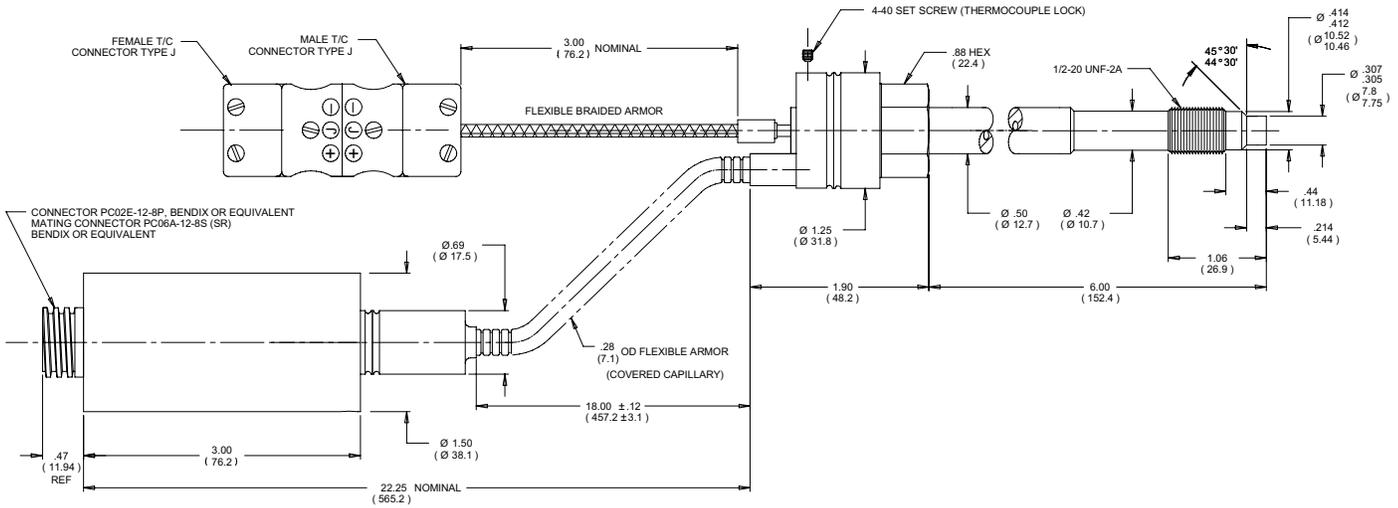
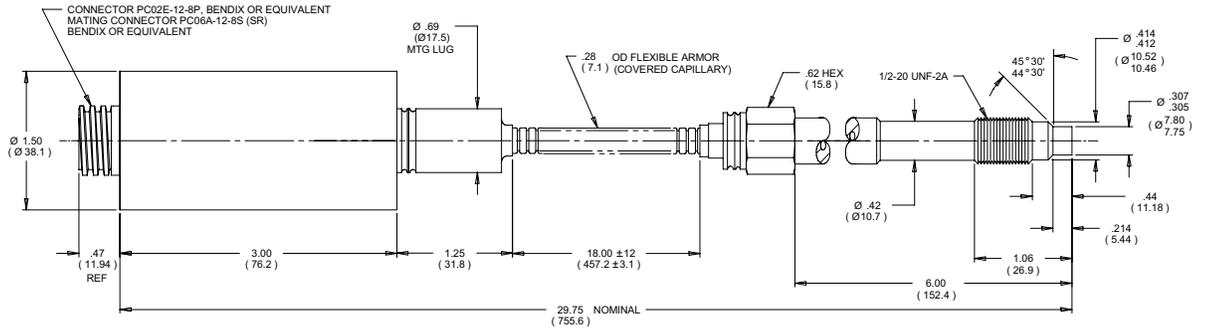
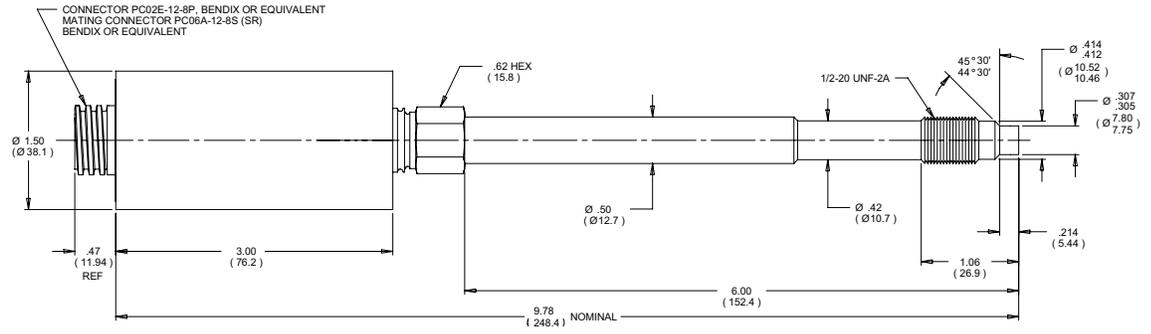
Ordering Guide for PT410/412



Dimensions

CONNECTOR WIRING	
PIN	FUNCTION
A	EXCITATION +
B	SIGNAL +
C	EXCITATION -
D	SIGNAL -
E	INTERNAL CALIBRATION RESISTOR
F	
G	
H	NO CONNECTION

NOTES
1. DIMENSIONS ARE IN INCHES (MILLIMETERS)



Azurr-Technology, s.r.o.
Dolní Bečva 579
756 55
Česká republika
Tel.: +420 571 647 228
Tel.: +420 571 647 310
Email: info@azurr-tech.cz
www.azurr-tech.cz



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