

TrueMelt™ Pressure Transducer (XPTK-Series, NaK-filled)



Introduction

TrueMelt™ XPTK-Series is designed to accurately measure as low as 0-250psi at extreme temperatures near 1000°F. Previously, pressure sensing at extreme temperatures are significantly impeded by thermal zero shift; typically 30psi/100°F which renders accurate low pressure measurements unfeasible.

True-Melt™ Pressure Transducer while based on the traditional strain gauge design, incorporates advanced thermal compensation to virtually eliminate all zero shift errors at the point of measurement. Finally, accurate pressure sensing is possible at the highest temperatures.

Features and Benefits

- For pressure sensing at extreme temperatures of 1000°F. (Eg. molten salt, advanced physics)
- 0-250 psi to 0-10,000psi ranges
- Lowest thermal drift error ever, max 30psi at 1000°F
- 6-Pin, 8-pin, 1/2-20" UNF, 1/4NPT, M18, TCK output options
- Inconel 718 diaphragm
- USDA and FDA approved Nak filling
- 2 years warranty
- Manufactured in Canada, Hardware made in USA,

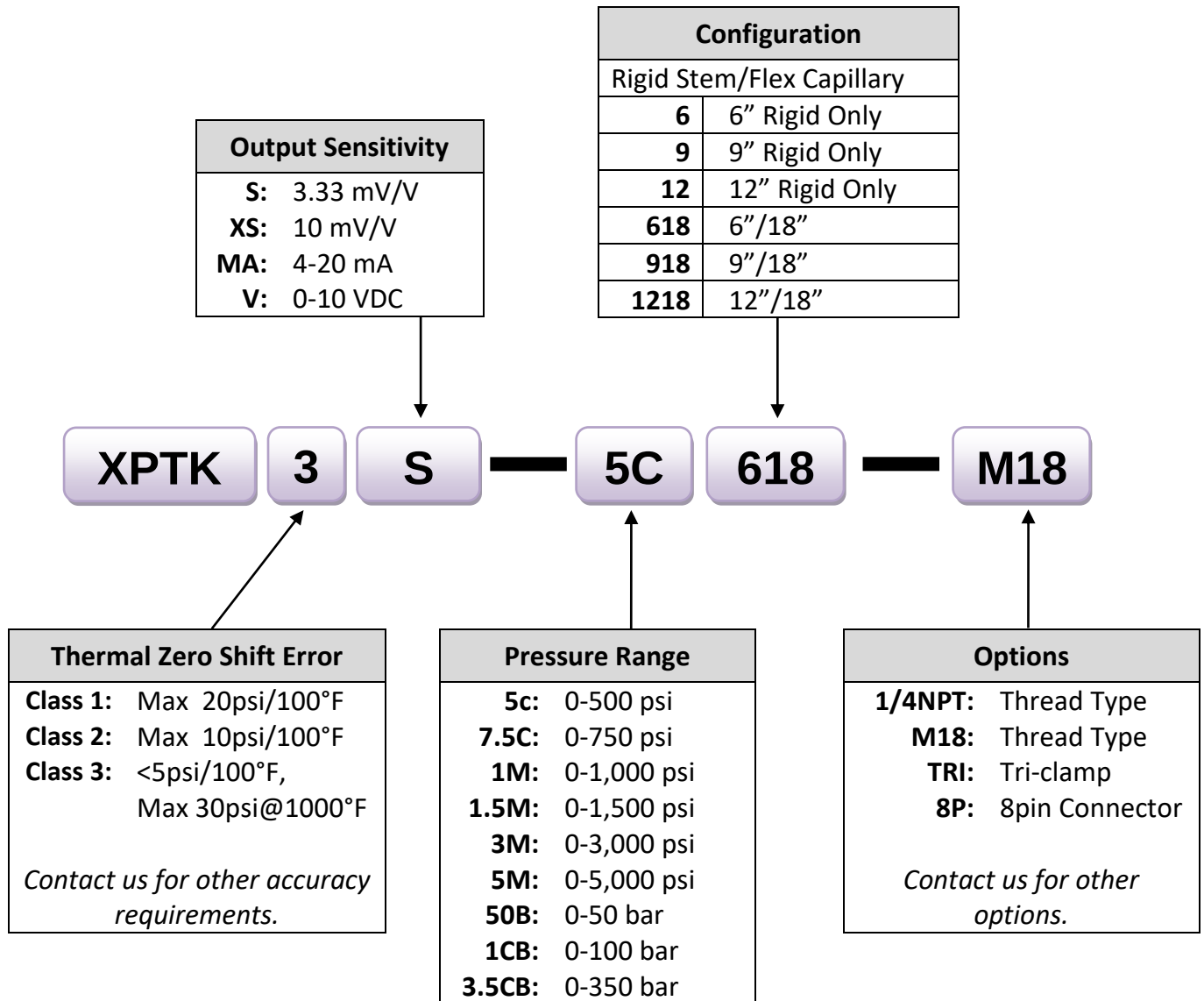
Performance Specifications

Output:	3.33mV/V, 10mV/V, 4-20mA, 0-10VDC
Excitation:	5 - 12 VDC (mV/V output) 12 – 30 VDC (mA, VDC output)
Pressure Range:	0-250 psi to 0-5,000 psi
Combined Error (linearity, repeatability, hysteresis):	0.25% FSO
Repeatability:	0.2%FSO
Over Pressure:	150% FSO
Zero Balance:	±1% FSO
Configuration:	Wheatstone Bridge, bonded strain design
Bridge Resistance:	350 Ohm
Shunt Calibration:	Internal 80% FSO

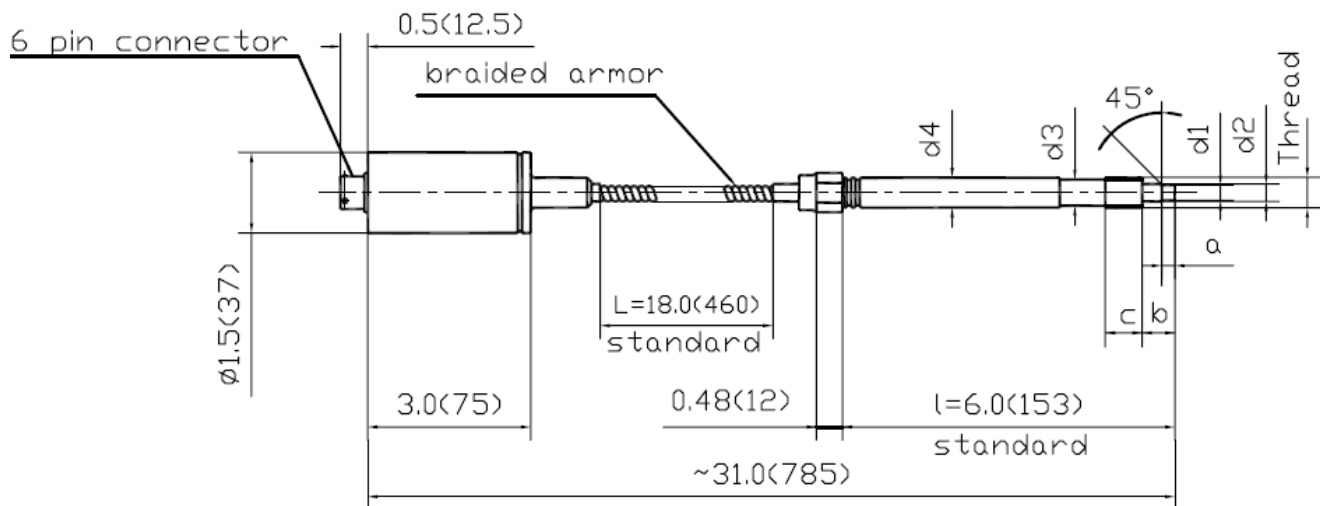
Temperature and Physical Specifications

Thermal Zero Shift Error	Industry typical 30psi/100°F
XPT1- (Class 1):	20 psi/100°F
XPT2- (Class 2):	10 psi/100°F
XPT3- (Class 3):	<5psi/100°F, max 30psi@1000°F
Diaphragm:	Inconel 718, NaK filling
Diaphragm Temperature	1000°F or 538°C
Electronics Temperature	220°F or 105°C
Options:	6-Pin, 8-pin, 1/2-20" UNF, 1/4NPT, M18, TCK output
Mounting Torque:	250 inch/lbs to 500 inch/lbs

Ordering Guide



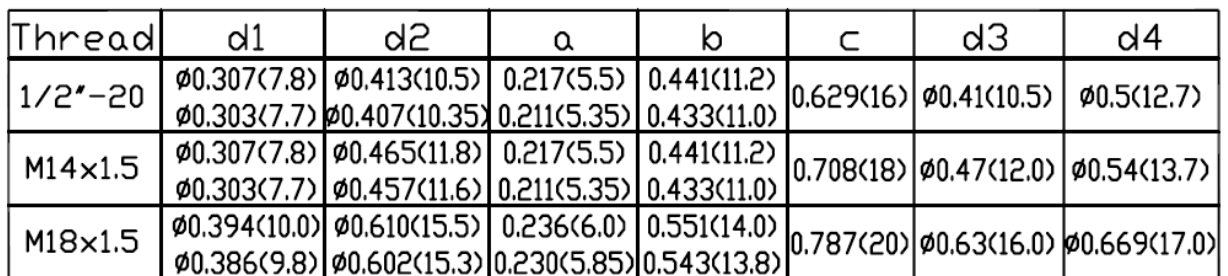
Drawings (Rigid + Flex Armor)



Thread	d1	d2	a	b	c	d3	d4
1/2"-20	ø0.307(7.8) ø0.303(7.7)	ø0.413(10.5) ø0.407(10.35)	0.217(5.5) 0.211(5.35)	0.441(11.2) 0.433(11.0)	0.629(16)	ø0.41(10.5)	ø0.5(12.7)
M14x1.5	ø0.307(7.8) ø0.303(7.7)	ø0.465(11.8) ø0.457(11.6)	0.217(5.5) 0.211(5.35)	0.441(11.2) 0.433(11.0)	0.708(18)	ø0.47(12.0)	ø0.54(13.7)
M18x1.5	ø0.394(10.0) ø0.386(9.8)	ø0.610(15.5) ø0.602(15.3)	0.236(6.0) 0.230(5.85)	0.551(14.0) 0.543(13.8)	0.787(20)	ø0.63(16.0)	ø0.669(17.0)

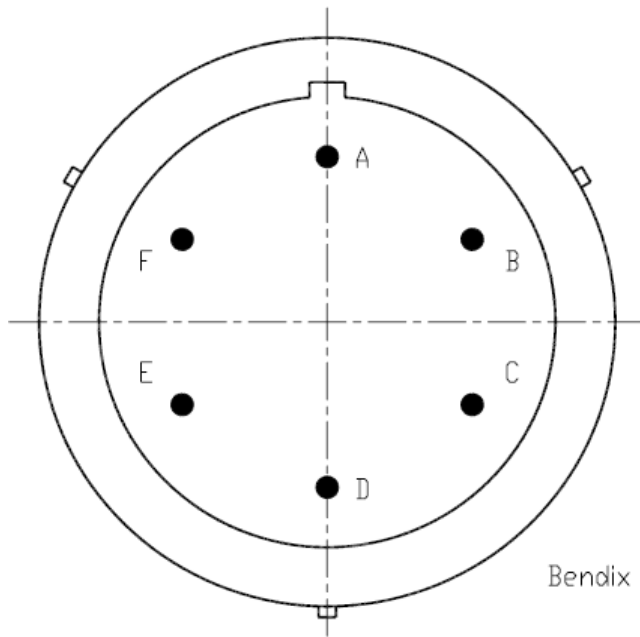
Thread	D1	D2	A	B	C
1/2"-20	ø0.314(7.98) ø0.312(7.92)	ø0.458(11.65) ø0.452(11.47)	0.225(5.72)	0.395(10.02)	0.75(19)
M14x1.5	ø0.314(7.98) ø0.312(7.92)	ø0.512(13.0) ø0.504(12.8)	0.225(5.72)	0.395(10.02)	0.827(21)
M18x1.5	ø0.401(10.19) ø0.399(10.13)	ø0.638(16.2) ø0.634(16.1)	0.242(6.15)	0.402(10.15)	1.00(25.4)

NOMINAL
Controls



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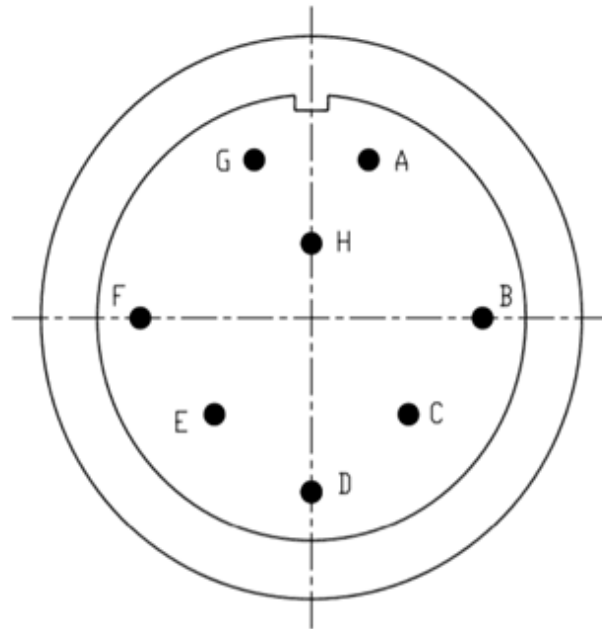
Wiring Diagram (6-pin)



Bendix PT02-10-6P or Equivalent

6-PIN Transducer	mV/V Output
Pin A/Red	Signal (+)
Pin B/Black	Signal (-)
Pin C/White	Excitation (+)
Pin D/Green	Excitation (-)
Pin E/Blue	Calibration 1
Pin F/Orange	Calibration 2

Wiring Diagram (8-pin)



Bendix PC02E-12-8P or Equivalent

8-PIN Transducer	mV/V Output
Pin A/White	Excitation (+)
Pin B/Red	Signal (+)
Pin C/Green	Excitation (-)
Pin D/Black	Signal (-)
Pin E/Blue	Calibration 1
Pin F/Orange	Calibration 2
G	N/A
H	N/A