

Pressure Transmitters PXT Series



Features

- 4-20 mA Output Signal
- Precision Etched Silicon Sensor
- Corrosion Resistant Construction
- High Stability



The PXT Series pressure transmitter is a state-of-the-art instruments providing 4 to 20 mA outputs. It features a precision micro-machined silicon diaphragm with fully welded stainless steel pressure port for greater accuracy, stability and a wide range of compatibility.

Silicon technology is used to provide a miniature micro-machined diaphragm which is electrostatically bonded to a glass substrate and is then stitch-bonded within a glass to metal seal assembly to provide exceptional thermal and stress isolation. This technology assures you of high accuracy and stability over a wide range of operating conditions.

The enclosure is made of 316 stainless steel and all wetted parts are 316L stainless steel or HASTELLOY C276.

Applications

The PXT can be used in applications such as Compressors, Engines, Process Control, Liquid Level and Pumps.

Specifications

Accuracy (Full Scale, Best Straight Line):

±0.25% including non-linearity, hysteresis and repeatability. Long term stability better than 0.2% FS over twelve (12) months.

Zero Setting: ±0.5% of full scale (0.25% typical).

Span Setting: ±0.5% of full scale BSL (RSS).

Overpressure/Proof Pressure: 400% for up to 500 psi (3.45 MPa) [34 Bar]. 200% for higher ranges.

Burst Pressure: Ranges 0-1000 psi = 600% of full scale or 4000 psi whichever is lower. Ranges 2000 psi [137 Bar] = 20,000 psi (27.5 MPa) [275 Bar].

Response Time: Frequency response better than 2 kHz.

Storage Temperature: -65 to 200°F (-54 to 93°C).

Operating Temperature: -40 to 180°F (-40 to 82°C).

Compensated Temperature: -20 to 160°F (-29 to 71°C).

Total Thermal Effects Over Compensated Range: ±2% FS TEB.

Physical:

Enclosure: Weather Resistant.

Body: 316 stainless steel. Meets NACE MR01-75.

Wetted Parts: 316L stainless steel or HASTELLOY C276.

Process Connection: 1/4 NPT female.

Electrical Cable: Integral; 60 in. (914 mm); vented. 1/2 in. NPT male conduit connection

Environmental Effect:

Humidity: No effect.

Mounting: Position/orientation has negligible effect.

Reverse polarity protected

Shock: 1000g 1ms Half sine Pulse in each of 3 mutually perpendicular axis will not affect performance.

Vibration: Effect on output response is less than 0.05% FS/g at 30g Peak 10Hz to 2kHz, limited by 0.05 in double amplitude. (MIL STD 810C Proc. 514.2-2 curve L). PXT Power Requirements: Typically 24 VDC is required, using the Loop Resistance Graph, 9-30 VDC.

PXT Series Transmitter Output: 4–20 mA, 2-wire.

Insulation: Greater than 10 Mohms @ 500 VDC.

RFI Protection: To the European standards of BS EN 50082-2:1991 in accordance with IEC 801 parts 1 to 6 for susceptibility to EMC and to BS EN 50081-1992 for emissions.

Voltage Surge/Spike: Protected against a 600 V spike to IEC 60-2. Reverse polarity protected.

Sealed: Sealed at one atmosphere at sea level for ranges > 1000 psi (6.89 MPa) [68 Bar].

Vented: Vented for ranges ≤ 1000 psi (6.89 MPa) [68 Bar].

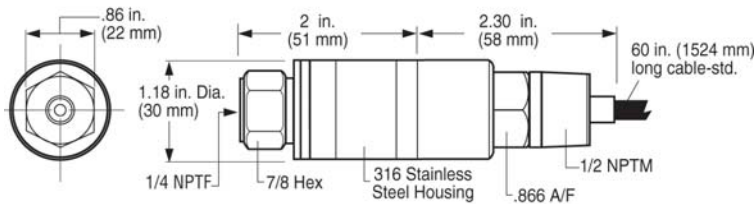
UL Certification: Class I, Division 2, Groups A, B, C and D; Class II, Groups E, F and G. Pressure transmitter, Model PXT. Intrinsically safe when installed per system, Diagram No. 05-08-0754. UL File #E169675

Shipping Weight: 0.90 lb. (408 g).

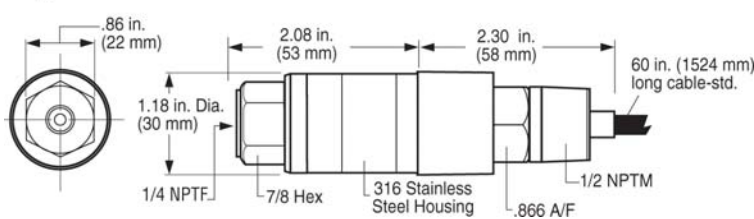
Shipping Dimensions: 5 x 5 x 5 inches (127 x 127 x 127 mm).

Product Dimensions

Low Pressure Units

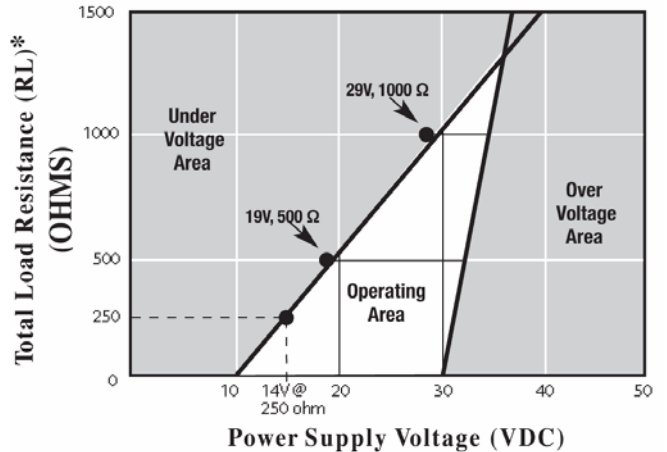


High Pressure Units



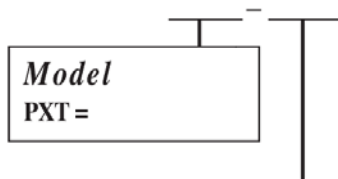
Loop Resistance Graph

Supply voltage for the PXT must be within range of 9-30 VDC. The graph below shows the minimum supply voltage (VDC) required for a given load resistance (RL).



*NOTE: Cable resistance effect included in RL.

How to Order



Pressure Range†:

Specify For this range

30V30WC	-30" H2O to +30" H2O (-76 cm H2O to +76 cm H2O) [+/-0.075 Bar]		
30V30	-30" Hg to +30 psig (-76 cm Hg to 207 kPa) [2.07 Bar]		
30V100	-30" Hg to +100 psig (-76 cm Hg to 689 kPa) [6.89 Bar]		
15	0-15 psi	(103.4 kPa)	[1.03 Bar]
60	0-60 psi	(413.7 kPa)	[4.13 Bar]
100	0-100 psi	(689 kPa)	[6.89 Bar]
200	0-200 psi	(1.38 kPa)	[13.78 Bar]
300	0-300 psi	(2.07 kPa)	[20.67 Bar]
400	0-400 psi	(2.75 MPa)	[27.56 Bar]
600	0-600 psi	(4.14 kPa)	[41.34 Bar]
1000	0-1,000 psi	(6.89 MPa)	[68.9 Bar]
2000	0-2,000 psi	(13.79 MPa)	[137.8 Bar]
3000	0-3,000 psi	(20.69 MPa)	[206.7 Bar]
5000	0-5,000 psi	(34.48 MPa)	[344.5 Bar]
6000	0-6,000 psi	(41.37 MPa)	[413.4 Bar]

†NOTE: Conversions are approximate.

To order, use the model number designation **PXT**, and then add the Pressure Range.



For example: **PXT-100**

Warranty - A limited warranty on materials and workmanship is given with this FW Murphy product. A copy of the warranty may be viewed or printed by going to <http://www.fwmurphy.com/warranty>

PXT and PXT-K Series Pressure Transmitter Cabling Identification

The PXT Series Pressure Transmitters have been changed. Previous pressure transmitters in this series were identified as **PXT Pressure Transmitters**. The newest version is the **PXT-K Series Pressure Transmitters**. Identification of electrical cable color is NOT interchangeable between the two series of pressure transmitters.

This document contains information to assist you in identifying the pressure transmitter unit you have and the correct electrical cable colors to avoid wiring mistakes.

PXT SERIES		PXT-K SERIES	
 <p>Indentations on the hex coupling for controlled locking.</p> <p>Product has a step-down between the transmitter body and hex coupling.</p>		 <p>No step-down between the body and the hex coupling.</p> <p>No indentations on the hex coupling.</p>	
Cable Color	Connection	Cable Color	Connection
RED	POWER	RED	POWER
BLUE	SIGNAL	BLUE	N/A
BLACK	CASE GROUND	BLACK	SIGNAL
ORANGE, YELLOW, WHITE	N/A	ORANGE, YELLOW, WHITE	N/A
Installation Instructions	00-02-0475	Installation Manual	00-02-0840
Installation Diagram	05-08-0754	Installation Diagram	05-08-0763

