Pressure Transmitters

PXT-01041B
Revised 07-04
Catalog Section 05
(00-02-0476)

PXT

PXT Series

- 0.25% Accuracy
- 4-20 mA Output Signal
- Precision Etched Silicon Sensor
- Corrosion Resistant Construction
- High Stability

Description

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 13.79 MPa) [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 suspectibility 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].

***Laboratory Approvals:** UL/cUL Class I, Div. 2, Groups A, B, C, D. Class II, Division 1, Groups E, F, G; when installed with approved barrier per drawing 05-08-0754 UL/cUL Class I, Div. 2, Groups A, B, C, D. Class II Groups E, F, G, non-incendive per drawing 05-08-0754.

Shipping Weigh: 0.90 lb. (408 g).

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

Warranty

A limited warranty on materials and workmanship is given with this FWMurphy product.

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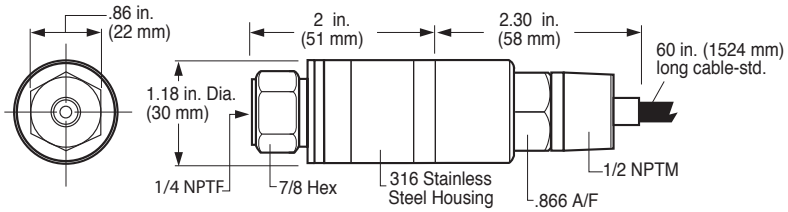
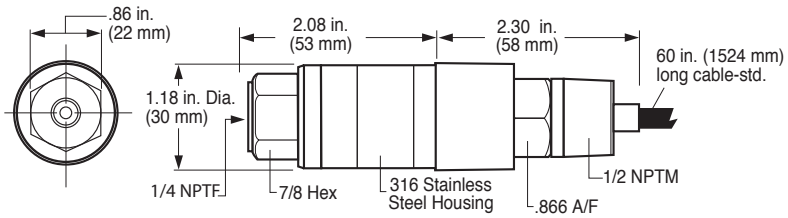
PXT Series Dimensions

Low Pressure Units

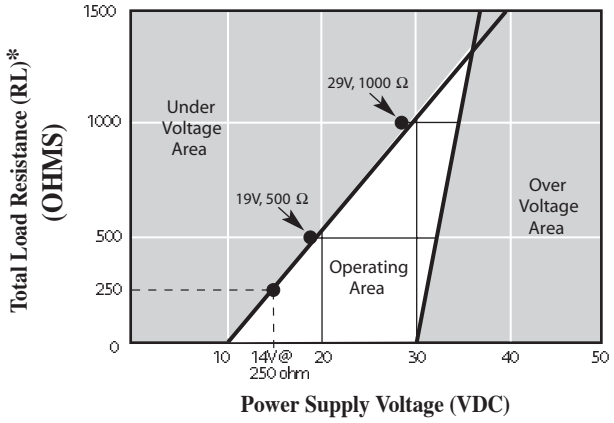


High Pressure Units



Loop Resistance Graph

Supply voltage for the PXMS 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

To order, please use the part number designation below.

Part number example: **PXT-100**

Model

PXT =

Pressure Range†:

Specify	*For this range*		
30V30WC	-30" Hg to +30" H20 (-76 cm Hg to 7.47 kPa) [0.07 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.

Replacement Parts–Order Separately

05052626 = stainless steel adapter bushing 1 NPSM x (2) 1/4 NPTF

05050459 = carbon steel adapter bushing 1 NPSM x (2) 1/4 NPTF

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