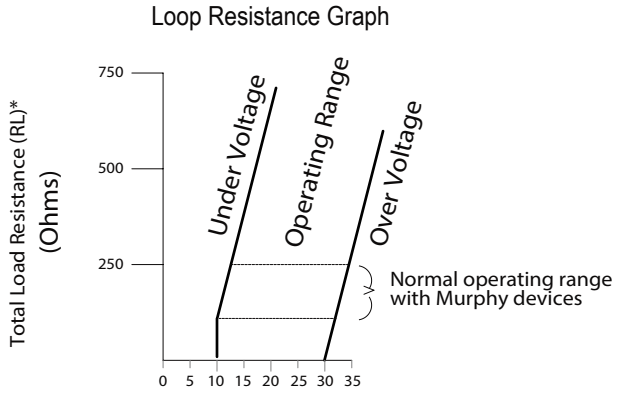
# Pressure Transmitters
## PXT-K Series

The PXT-K Series pressure transmitters are state-of-the-art instruments providing 4-20 mA output. Each piezoresistive pressure transmitter contains a transducer comprised of a piezoresistive silicon chip mounted on a glass-metal feed-through header welded into a stainless steel or Inconel housing and filled with oil. The very thin laser-welded stainless steel isolation-diaphragm completes the front side. Media pressure is transferred from the stainless steel isolation-diaphragm via the oil inside the cell to the silicon measuring chip. This construction, combined with the advanced internal signal conditioning circuitry, results in a rugged instrument with extremely small temperature error and class-leading EMI/RFI resistance.
The enclosure and all wetted parts are made of 316L stainless steel / alloy 625 (Inconel).

PXT-K Series Pressure Transmitters can be used in applications such as compressors, engines, process control, liquid level and pumps.

## Operating Range

Supply voltage for the PXT-K must be within range of 10-30 VDC. The graph below shows the minimum supply voltage (VDC) required for a given load resistance (R).




*Note: Cable resistance effect included in RL.

| Minimum Voltage for Common Input Modules | | |
|---|---|---|
| **Model** | **Input Impedance** | **Vmin** |
| Centurion C4-1 | 231 Ω | 13.62 |
| MX5 | 221 Ω | 13.42 |
| Centurion C5 | 200 Ω | 13.00 |
| MX5-R2 | | |
| Third-Party PLC (typical) | 249 Ω | 13.98 |

## Specifications

**Operating Pressure Range:** See table, Pressure Range under How to Order section.
**Operating Temperature Range:** -22 to 212° F (-30 to 100° C)
**Certified Temperature Range:** -22 to 176° F (-30 to 80° C)
**Compensated Temp Range:** -20 to 160° F (-29 to 71° C)
**Process Connection:**
1/4"-18 NPT female with 7/8" hex nut (2000 psig and below) or 15/16" hex nut (3000 psig and above)
**Electrical Connection:**
PXT-K: 1/2" NPT male conduit connection, 60" long cable, vented
PXT-KM: M12 connector
**Enclosure Rating:** IP65
**Body:** 316L stainless steel / alloy 625 (Inconel)
**Wetted Parts:** 316L stainless steel
**Environmental Effect (Humidity):**
No effect for 0-95%, non-condensing
**Mounting:** All axis positions, has negligible effect on performance as long as it is perpendicular to the flow being monitored
**Shock Resistance:**
800g per IEC 60068-2-27 (Mechanical shock)
**Vibration Resistance:**
20G per IEC 60068-2-6 (Vibration under resonance)
**Wiring Protection:** Protected against reverse polarity and short circuit, 48 VDC Maximum
**Supply Voltage:** 10 - 30 VDC (Typically 24 VDC)
**Transmitter Output:**
4-20 mA, two wire configurations with load characteristics
**Insulation:** Greater than 10 MΩ @ 300 VDC
**Electromagnetic Compatibility (EMC):** Standards; EN 61000-6-2:2005, EN 61000-6-3:2007, EN 61326-2-3:2006
**Voltage Surge/Spike Protection:**
Protection against a 600 volt spike per IEC 60-2

**Applicable Standards**

**CSA (c/us):** Class I / II / III, Div 1, Groups A-F T4
Class I / II / III, Div 2, Groups A-D,F,G T4
**ATEX:** IBExU 10 ATEX 1124 X
II 1G Ex ia IIC T6-T4
II 3G Ex nA IIC T6
**Canadian Registration Number:** OF15236.2 (all providences and territories)

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## Specifications (continued)

**Accuracy:**

| | |
|---|---|
| **% of Span (BFSL)** | +/- 0.25% of span* |
| **Zero/Span Setting Tolerance** | +/- 2.5% of full scale* max. (30V30WC only)<br>+/- 0.25% of span* typical,<br>+/-0.5% of span* max (all other ranges) |
| **Operating Temperature** | +/- 2.5% of span T.E.B. |
| **Compensated Temperature** | +/- 1.7% of span T.E.B. |
| **Response Time** | <5mS |

* Accuracy tolerance to be applied at 25° C.

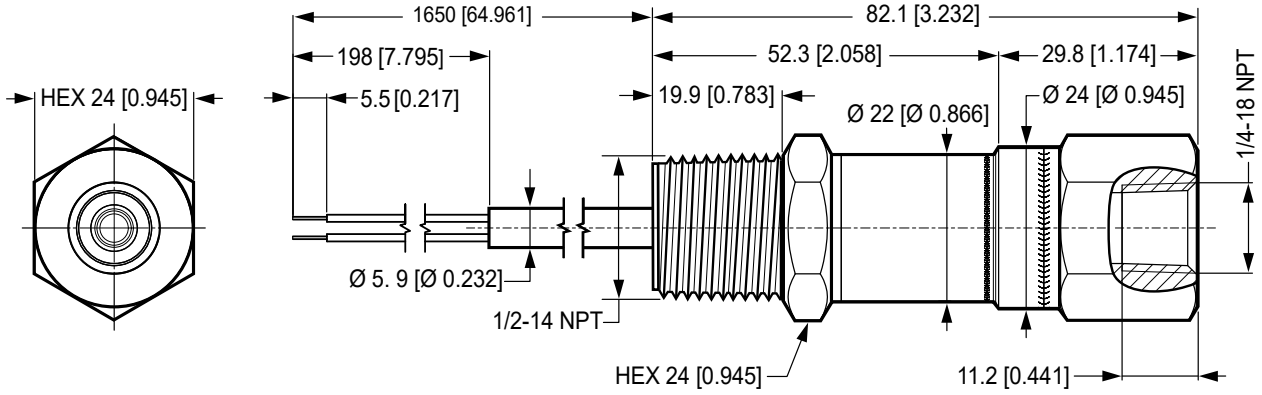
**Connections:**

| PXT-K Connections | |
|---|---|
| **Wire Color** | **2 Wire, 4-20 mA** |
| Black (BK) | V-/SIG |
| Red (RD) | + Vdc |

| PXT-KM Pin Assignment | |
|---|---|
| **Pin (Color)** | **2 Wire, 4-20 mA** |
| Pin 1 | N.C. |
| Pin 2 (Black) | V-/SIG |
| Pin 3 (Red) | + Vdc |
| Pin 4 | N.C. |

## Dimensions

The hex are for tightening process threads only. Do not twist the body. Hold hex when attaching to pressure source and when attaching conduit threads. The PXT-K 3000 psgi model is shown.




## How to Order

NOTE: Installation Manual 00-02-0840 and Installation Diagram 05-08-0763 are available at fwmurphy.com.

Options listed below. All configurations may not be available. Call your sales representative or FW Murphy for more information.

Example: PXT-K-600 = FW Murphy two wire Pressure Transmitter with Flying Lead Connection, 0-600 psig range.

| PXT | – | K | – | 600 |
|---|---|---|---|---|

| Connector | | |
|---|---|---|
| **K** | = | PXT (Flying Lead) |
| **KM** | = | PXM (M12 x 1 Connector) |

| Pressure Range | | | | | |
|---|---|---|---|---|---|
| **30V30WC** | = | (-30” H2O to +30” H2O) | **400** | = | 0-400 (psig) |
| **30V30** | = | (-30” HG to +30 psig) | **600** | = | 0-600 (psig) |
| **30V100** | = | (-30” HG to +100 psig) | **1000** | = | 0-1000 (psig) |
| **15** | = | 0-15 (psig) | **2000** | = | 0-2000 (psig) |
| **60** | = | 0-60 (psig) | **3000** | = | 0-3000 (psig) |
| **100** | = | 0-100 (psig) | **5000** | = | 0-5000 (psig) |
| **200** | = | 0-200 (psig) | **6000** | = | 0-6000 (psig) |
| **300** | = | 0-300 (psig) | **10000** | = | 0-10000 (psig) |

| Approximate Shipping Weight and Dimensions | | |
|---|---|---|
| Model | Weight | Dimension |
| PXT-K | 6.5 ounces | 4-3/4 x 4-3/4 x 2-3/4 in. (121 x 121 x 70 mm) |
| PXT-KM | 6.5 ounces | 4-3/4 x 4-3/4 x 2-3/4 in. (121 x 121 x 70 mm) |

| Part Number | Model and Description | Notes |
|---|---|---|
| 40051047 | Cable, PXT-KM, M12 X 3 ft. | |
| 40051048 | Cable, PXT-KM, M12 X 6 ft. | |
| 40051082 | Cable, PXT-KM, M12 X 30 ft. | |
| 40051049 | Cable, PXT-KM, M12 X 50 ft. | |
| 40051050 | Cable, PXT-KM, M12 X 100 ft. | |