PTX 7800

PTX 7800 Series

Druck

Pressure Transmitters

- Full scale ranges from 1 to 10,000 psi
- Gauge and absolute configurations
- Hastelloy and stainless steel wetted parts.
- RFI protected to CE Heavy Industrial standard
- FM and CSA Intrinsically Safe and Explosion Proof versions available
- Accuracy ±0.2% or ±0.1% FS
- Compact, rugged and lightweight

The PTX 7800 series combines modular design with the latest advances in ASIC technology and surface mounted electronics. This provides a lightweight and cost effective alternative to pressure gauges and switches in process industry applications.

At the heart of the transmitter is Druck's own piezoresistive silicon sensor. This technology is extensively qualified and proven in aerospace and subsea programs, industries that demand the highest levels of performance, stability and long-term reliability.

The sensor's Hastelloy isolation diaphragm and welded 316L stainless steel body and electronics housing provide a maintenance-free assembly suitable for use in a wide range of hostile media.

The PTX 7800 pressure transmitter also offers excellent RFI immunity, meeting the highest level of CE marking requirements for heavy industrial use

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STANDARD SPECIFICATIONS

Pressure Measurement

Operating Pressure Ranges
1, 2.5 psi gauge; 5, 10, 15, 30, 50, 100, 150, 300, 500, 1000 psi gauge and absolute; 1500, 3000, 5000, 10,000 psi sealed gauge or absolute. Compound ranges available on request.
Note: Any pressure unit and span can be specified between 1 and 10,000 psi F.S.

Overpressure
The operating pressure range can be exceeded by the following without degrading performance
8 x FS for 1 and 2.5 psi range
6 x FS for 5 and 10 psi ranges
4 x FS for 15 and 30 psi ranges
3 x FS for 50 to 1500 psi (3000 psi max)
2 x FS for 2000 to 10000 psi (15000 psi max.)

Pressure Containment
Gauge Ranges
12 x FS for 1 and 2.5 psi
8 x FS for 5 and 10 psi ranges
6 x FS for 15 and 30 psi ranges
4 x FS for 50 to 1000 psi (3600 max.)
Absolute and Sealed Gauge Ranges
3600 psi for 5 to 2000 psi ranges
15000 psi for 3000 to 10000 psi ranges

Pressure Media
Fluids compatible with 316L stainless steel and Hastelloy C276. (NACE compatible grades).

Supply Voltage
9 to 30V at PTX terminals. (9 to 28V for IS units).
Maximum load (Ω) = 50 x (Supply Voltage - 9).

Supply Sensitivity
0.005% F.S./Volt.

Insulation Resistance
>10MΩ @ 500 Vd.c. (@ 20°C).

Surge Protection
Ranges up to 2000 psi: withstands 2kV spike.
Ranges above 2000 psi: withstands 1kV spike.
Spike test conforms to EN61000-4-5.

Output Current
4 - 20mA (2-wire) proportional for zero to full scale pressure.

Performance

Accuracy
±0.20% F.S. Combined Non-linearity, Hysteresis and Repeatability.

Long Term Stability
At standard reference conditions the calibration will not change by more than 0.1% F.S. per year.

Operating Temperature Range
Ambient: -40 to 210°F
Process: -40 to 250°F

Temperature Effects
For ranges 10 psi and above, output will not deviate from room temp calibration by more than:
±1% F.S. over +14° to 122°F (0.7% F.S. typical)
±2% F.S. over -5° to 175°C (1.5% F.S. typical)
(< 10 psi, values increase pro-rata with span.)
For ranges below 10 psi, these values will increase pro-rata with span.
For improved performance, see Option A.

Physical

Pressure Connection
½"NPT male, ¼"NPT female, G¼ female or G½ male to BS EN387-1 (DIN 16288)

Electrical Connection
½ NPT male conduit fitting with 3 feet integral cable.

Ingress Protection
Designed to meet NEMA 4X when properly installed with conduit fitting connection.

Weight
12 oz. nominal.

HAZARDOUS AREA APPROVALS

Factory Mutual (FM)
Intrinsically safe, Class I, Div 1, Groups A,B,C,D; Class II, Groups E,F,G; Class III
Class I, Div 2 Non-incendive
Explosion proof, Class I, Div 1, Groups A,B,C,D

Canadian Standards Association (CSA)
Intrinsically safe, Class I, Div 1, Groups A,B,C,D; Class II, E,F,G; Class III
Class I, Div 2, Non-incendive;
Intrinsically safe, Ex II 1G Eexia II C T4 (Ta = 80ºC)
Explosion proof, Class I, Div 1, Groups A,B,C,D
Flameproof Ex II 2G Eexd IIC T6 (Ta = 70ºC)

Compliant with EMC Directive 89/336/EEC

EMC Emissions	EN50081-1, EN55022
EMC Immunity	EN61000-6-2: 1999 10V/m

CE Marked, Heavy Industrial

OPTIONS

Option A Improved Performance
±0.1% FS BSL
±0.7% FS TEB over 14 to 122°F
±1.5% FS TEB over -5 to 175°F

ORDERING INFORMATION

(1) Select model number:

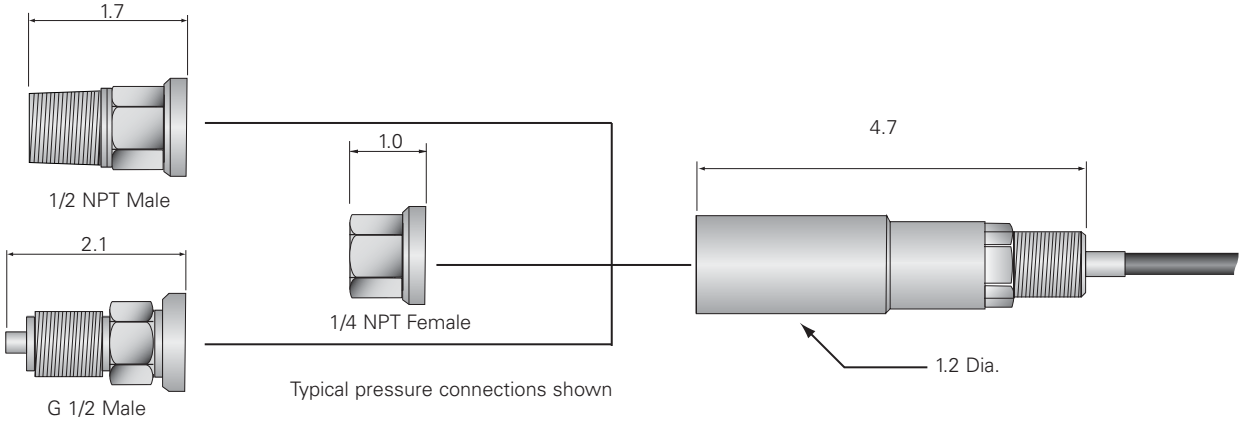
Code	Model	
PTX 7801	Base Model	
	Code	Pressure Connection
	1	G¼" Female
	2	G½" Male
	3	¼" NPT Female
	4	½" NPT Male
	A	Improved Accuracy (Option)
PTX 7801 - 3-A	Typical Model No.	

(2) State pressure range/units
(3) State cable length (for lengths > 3 feet)

Continuing development sometimes necessitates specification changes without notice.

Druck is an ISO 9001 registered company.

INSTALLATION DRAWINGS - Dimensions in inches



Typical pressure connections shown

Representative