

PTX 7800 Series

Druck Pressure Transmitters

Features

- Full scale (FS) ranges from 1.5 to 10,000 psi (100 mbar to 700 bar)
- Gauge and absolute configurations
- Hastelloy and stainless steel wetted parts.
- RFI protected to heavy industrial EMC standard
- FM, CSA and ATEX intrinsically safe and explosion-proof versions available
- Accuracy $\pm 0.25\%$ FS terminal straight line (TSL)
- Compact, rugged and lightweight



PTX 7800 Specifications

General

Operating Pressure Ranges

- Any 0 based FS from 1.5 to 1000 psi (100 mbar to 70 bar) gauge or absolute.
- Any 0 based FS above 1000 to 10,000 psi (70 to 700 bar) sealed gauge or absolute.
- Compound ranges available on request.
- Other pressure units available on request.

Overpressure

The operating pressure range can be exceeded by the following without degrading performance

- 12 x for 1.5 psi (100 mbar) range
- 8 x for 2.5 psi (160 mbar) range
- 6 x for 3.5 and 7.5 psi (250 and 500 mbar) range
- 4 x for 15 and 30 psi (1 and 2 bar) range
- 3 x for 50 to 2000 psi (3.5 to 140 bar) range; to a maximum of 3000 psi (200 bar)
- 2 x for 3000 to 10,000 psi (200 to 700 bar) range; to a maximum of 15,000 psi (1000 bar)

Pressure Containment

Gauge Ranges

- 16 x for 1.5 psi (100 mbar) range
- 12 x for 2.5 psi (160 mbar) range
- 8 x for 3.5 and 7.5 psi (250 and 500 mbar) ranges
- 6 x for 15 and 30 psi (1 and 2 bar) ranges
- 4 x for 50 to 1000 psi (3.5 to 70 bar) ranges; to a maximum of 3500 psi (250 bar)

Absolute and Sealed Gauge Ranges

- 3500 psi (250 bar) for ranges 1.5 to 2000 psi (100 mbar to 140 bar)
- 15,000 psi (1000 bar) for ranges 3000 to 10,000 psi (200 to 700 bar)

Pressure Media

Fluids compatible with 316L stainless steel and hastelloy C276.

Supply Voltage

- 9 to 30 V at PTX terminals. (9 to 28 V for IS units)
- Maximum load $\Omega = 50 \times (\text{Supply Voltage} - 9)$

Supply Sensitivity

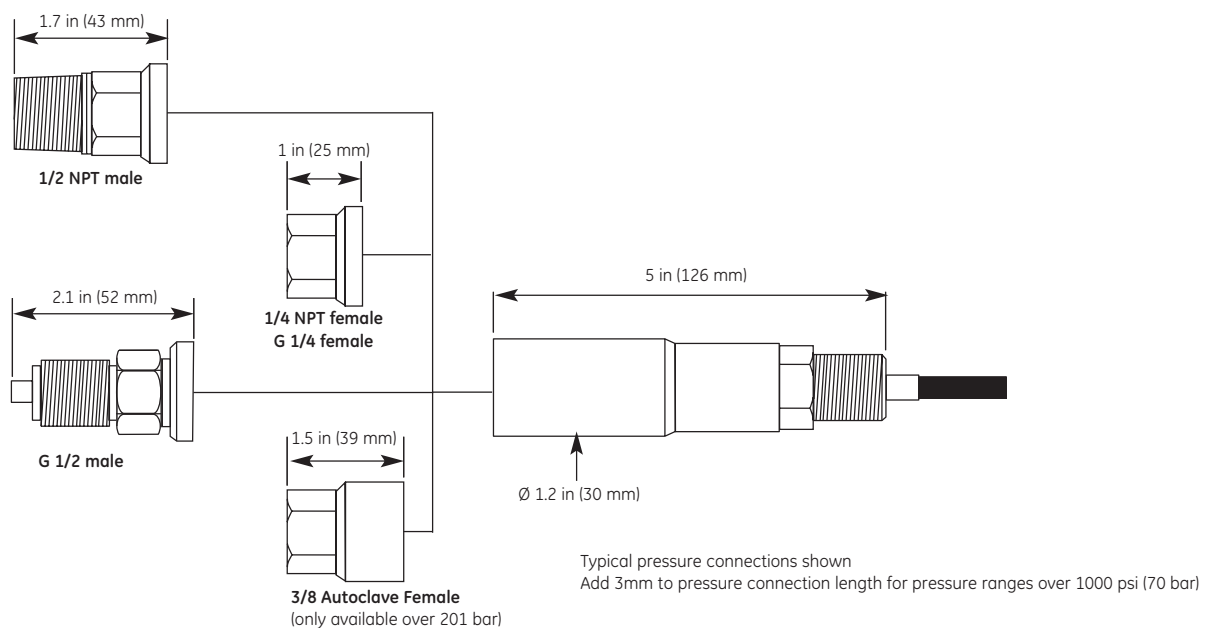
0.005% FS/Volt

Insulation Resistance

>10 M Ω @ 500 VDC @ 68°F (20°C)

Output Current

4 to 20 mA (two-wire) proportional for zero to FS pressure



PTX 7800 Series dimensions

Performance

Accuracy

±0.25% FS TSL combined non-linearity, hysteresis and repeatability.

Long Term Stability

At standard reference conditions the calibration will not change by more than 0.1% FS per year.

Operating Temperature Range

- Process: -40°F to 250°F (-40 °C to 120°C)
 - Transmitter: -40°F to 210°F (-40°C to 100°C)
 - Cable (non-CSA models): -40°F to 176°F (-40°C to 80°C)
 - Cable (CSA models): -40°F to 167°F (-40°C to 75°C)
- (See hazardous area approvals for restrictions)

Temperature Effects

For ranges 7.5 psi (500 mbar) and above, output will not deviate from room temperature calibration by more than:

- ±1% FS RTE over 15°F to 120°F (-10°C to 50°C)
- ±2% FS RTE over -5°F to 175°F (-20°C to 80°C)

For ranges below 7.5 psi (500 mbar) these values will increase pro-rata with calibration span.

Conformity

CE marked.

Category I pressure accessory to Pressure Equipment Directive (PED) 97/23/EC.

EMC Emissions: EN 61000-6-3, EN 61326-1.

EMC Susceptibility: EN 61000-6-2. Surge protection 2 kV per EN 61000-4-5 between electrical connection and case (1 kV for ranges above 70 bar)

Physical

Pressure Connection

Available options are:

- G1/4 female
- G1/2 male
- 1/4 NPT female
- 1/2 NPT male
- 3/8 autoclave female (only available with pressure range above 3000 psi (201 bar))

Electrical Connection

Available options are:

- M20 male conduit with integral cable (PTX 7800)
- 1/2 NPT male conduit with integral cable (PTX 7801)

Cable length to be specified on order (see Ordering Information)

Cable Type and Wiring

All models (excluding CSA approval):

Black polyurethane cable: Red: +VE
Blue: -VE

PTX7801 with CSA approval:

Grey PVC cable: Red: +VE
Black: -VE
Clear: Earth (Chassis)

Ingress Protection

Designed to meet Type 4X/IP67 when properly installed with conduit fitting connection.

Weight

12 oz (0.35 kg)

Hazard Area Approvals

ATEX intrinsically safe:

Ex ia IIC T4 Ga (-40°C ≤ Ta ≤ 80°C)
per certificate no. BAS01ATEX1254

ATEX flameproof:

Ex d IIC T6 (-40°C ≤ Tamb ≤ 70°C)
per certificate no. SIRA 02ATEX1089X

FM:

Intrinsically safe (Division 1 / Zone 0,1)
Explosion / dust ignition-proof (Division 1)
Non-incendive (Division 2 / Zone 2)
per FM certificate no. 3017485

CSA:

Intrinsically safe (Division 1 / Zone 0)
Explosion / dust ignition-proof (Division 1)
Non-incendive (Division 2)
per CSA certificate no. 1359379

Approval options

Up to 2 approvals can be offered on any single unit.
Allowed combinations are:

	7800	7801
None (standard)	✓	✓
ATEX IS only	✓	✓
ATEX flameproof only	✓	✓
ATEX IS and flameproof	✓	✓
FM only		✓
CSA only		✓
FM and CSA		✓
ATEX IS and FM		✓
ATEX flameproof and FM		✓

Note: once used in a non-intrinsically safe installation, the product can not subsequently be used in an intrinsically safe installation

Ordering Information

(1) Select model number

PTX 780	Base Code	Model Conduit	Code	Pressure Connection
	0	M20		
	1	1/2 NPT		
			1	G 1/4 female
			2	G 1/2 male
			3	1/4 NPT female
			4	1/2 NPT male
			5	3/8 autoclave female (only available over 201 bar)

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- (2) State pressure range/units
- (3) State cable length (for lengths > 3.3 ft (1.0 m). 984 ft (300 m) maximum)
- (4) State approval required (see Approval Options for availability)
- (5) State required installation instructions language (ATEX approvals only):
English only, or English and French / German / Italian / Portuguese / Spanish



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