

PTX 7800 Series

Pressure Transmitters

- Standard ranges or custom scaled
- Gauge and absolute configurations
- Hastelloy and stainless steel wetted parts
- RFI protected to CE Heavy Industrial standard
- ATEX Intrinsically Safe and Flameproof versions available
- 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 piezo-resistive silicon sensor. This technology is extensively qualified and proven, for example in aerospace and subsea programmes which demand the highest levels of performance and long term reliability.

The sensor features a Hastelloy isolation diaphragm and is enclosed in an electron beam welded stainless steel body. This rugged construction ensures full compatibility with a wide range of pressure media and operating conditions.

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

Pressure Transmitters

STANDARD SPECIFICATIONS

Pressure Measurement

Operating Pressure Ranges

0 to 70mbar gauge, 100, 160, 250mbar, 500mbar, 1, 2, 3.5, 7, 10, 20, 35, 70 bar gauge and absolute. 0 to 140, 200, 350, 700 bar sealed gauge and absolute. Compound ranges available on request. *Note: Any pressure unit and span can be specified between 70mbar and 700 bar F.S.*

Overpressure

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

- 14 x FS for 70mbar range
- 12 x FS for 100mbar range
- 8 x FS for 160mbar range
- 6 x FS for ranges 250 and 500mbar
- 4 x FS for ranges 1 and 2 bar
- 3 x FS (200 bar max) for ranges 3.5 to 140 bar
- 2 x FS (1000 bar max) for ranges 200 to 700 bar

Pressure Containment

Gauge ranges:

- 20 x FS for 70mbar and over
- 16 x FS for 100mbar range
- 12 x FS for 160 bar range
- 8 x FS for gauge ranges 250 and 500mbar
- 6 x FS for gauge ranges 1 and 2 bar
- 4 x FS (250 bar max) for gauge ranges 3.5 to 70 bar
- 250 bar for absolute ranges 100mbar to 140 bar.
- 1000 bar for 200 bar to 700 bar ranges

Pressure Media

Fluids compatible with a welded assembly of 316L stainless steel and Hastelloy C276. (NACE compatible grades).

Supply Voltage

9 to 30V at the transmitter terminals. (9 to 28V for IS units).
Maximum load (Ω) = $50 \times$ (Supply Voltage - 9).

Supply Sensitivity

0.005% F.S./Volt.

Insulation Resistance

>10M Ω @ 500 Vd.c. (@ 20°C).

Surge Protection

Ranges up to 140 bar: withstands 2kV spike.
Ranges above 140 bar: 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

$\pm 0.25\%$ 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 100°C; Process: -40 to 120°C

Temperature Effects

For ranges 500mbar and above, the output will not deviate from room temperature calibration by more than:-

- 1% F.S. over -10° to 50°C (0.7% F.S. typical)
- 2% F.S. over -20° to 80°C (1.5% F.S. typical)

For ranges below 500mbar, these values will increase pro-rata with span.

Physical

Pressure Connection

G $1/4$ female, G $1/2$ male to BS EN387-1 (DIN 16288) or $1/2$ NPT male.

Electrical Connection

M20 male conduit fitting with 1m integral cable.

Ingress Protection

Designed to meet IP67 when properly installed with conduit fitting connection.


Weight

200 grams nominal.


OPTIONS

(O) Standard - CE Category 1 Pressure Accessory to Pressure Equipment directive (PED) 97/23/EC. Note: 'Operating Pressure Range' is equivalent to maximum working pressure (Ps) as referred to in the PED

(I) Intrinsically Safe Approval

 II 1G EExia IIC T4 (Ta = 80°C) to ATEX directive 94/9/EC

(D) Flameproof Approval

 II 2G EExd IIC T6 (Ta = 70°C) to ATEX directive 94/9/EC

All options are compliant with EMC Directive 89/336/EEC

EMC Emissions: EN50081-1, EN55022
EMC Immunity: EN61000-6-2: 1999 (10V/m Heavy Industrial).

ORDERING INFORMATION

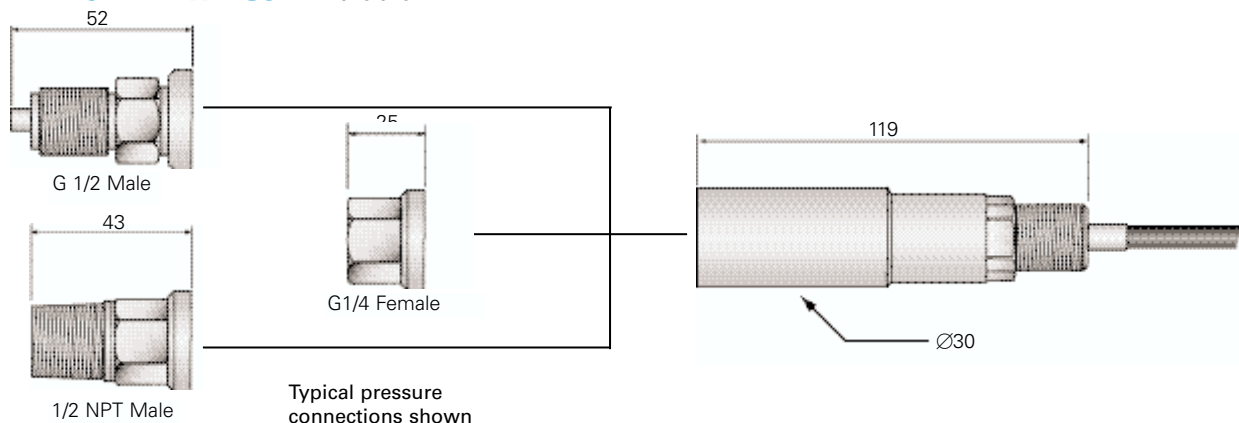
(1) Select model number:

Code	Model
PTX 7800	Base Model
Code	Pressure Connection
1	G $1/4$ Female
2	G $1/2$ Male to BS EN387-1
4	$1/2$ NPT Male
Code	Approvals
0	None
I	ATEX Intrinsically Safe
D	ATEX Flameproof
PTX 7800 - 1	- D Typical Model No.

(2) State pressure range/units
(3) State cable length (for lengths > 1metre)

Continuing development sometimes necessitates specification changes without notice.

INSTALLATION DRAWINGS - Dimensions in mm



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instrumentation
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