

PTX 7900 Series

Pressure Transmitters

- Standard ranges or custom scaled
- Gauge and absolute configurations
- Hastelloy and stainless steel construction
- User accessible zero and span adjustment
- RFI protected to CE Heavy Industrial
- ATEX Intrinsically Safe and Flameproof versions



The PTX 7900 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.

A Hastelloy isolation diaphragm and electron beam welded stainless steel body, ensures compatibility with a wide range of hostile media. A 316 stainless steel electronics housing with aluminium/bronze end cap, provides a maintenance-free assembly suitable for the most arduous environments.

The PTX 7900 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 range can be exceeded by the following without degrading performance:
 12 x for ranges up to 100mbar
 8 x for 160mbar range
 6 x for ranges 250 and 500mbar
 4 x for ranges 1 and 2 bar
 3 x for ranges 3.5 to 140 bar (200 bar max)
 2 x for ranges 200 to 700 bar (1000 bar max)

Pressure Containment

Gauge ranges:
 16 x for ranges up to 100mbar
 12 x for 160mbar range
 8 x for ranges 250 and 500mbar
 6 x for ranges 1 and 2 bar
 4 x for ranges 3.5 to 70 bar (250 bar max)
 Absolute/sealed gauge ranges:
 250 bar for absolute ranges 100mbar to 140 bar.
 1000 bar for 200 bar to 700 bar 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

>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) for zero to FS pressure.

Performance Accuracy

$\pm 0.25\%$ F.S. Combined Non-linearity, Hysteresis and Repeatability.

Zero Offset and Span Setting

Factory set $\pm 0.05\text{mA}$. Further nominal $\pm 5\%$ site adjustment via non-interacting potentiometers.

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, output will not deviate from room temp 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)
 (< 500mbar, values increase pro-rata with span.)

Physical

Pressure Connection

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

Electrical Connection

M20 $1/2$ female conduit.
 $1/2$ NPT or PG 13.5 female conduit (via adaptor).

Ingress Protection

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

Weight

1kg 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
 CE 0600 II 1G EExia IIC T4 (Ta = 80°C)
 to ATEX directive 94/9/EC

(D) Flameproof Approval
 CE 0600 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 7900 | Base Model - M20 female conduit entry |
| PTX 7901 | Base Model - $1/2$ " NPT female conduit entry |
| PTX 7902 | Base Model - Pg 13.5 female conduit entry |

| Code | Pressure Connection |
|------|----------------------------|
| 1 | G $1/2$ Female |
| 2 | G $1/2$ Male to BS EN387-1 |
| 3 | $1/2$ NPT Female |
| 4 | $1/2$ NPT Male |

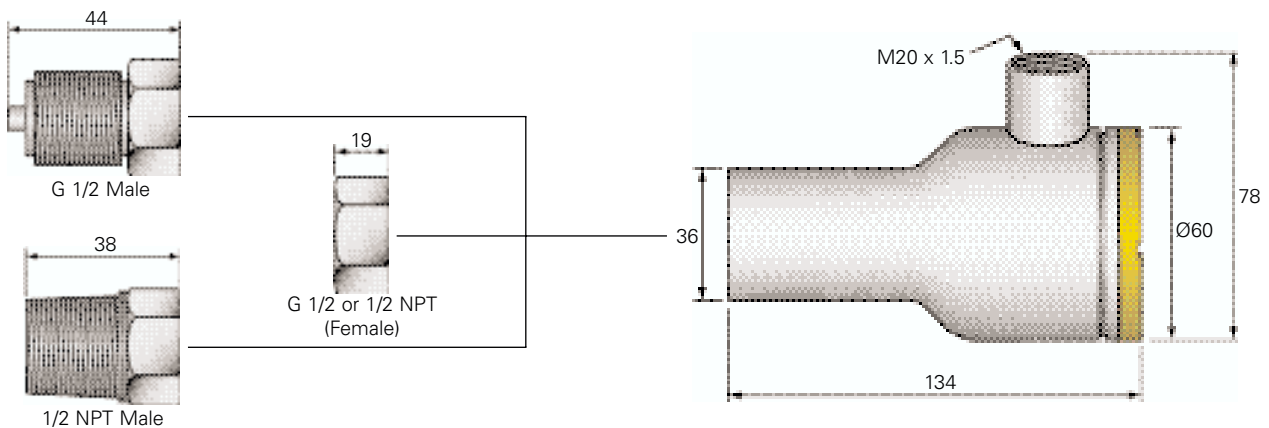
| Code | Approvals |
|------|-------------------------|
| 0 | None - Safe Area use |
| I | ATEX Intrinsically Safe |
| D | ATEX Flameproof |

| | | | | | |
|----------|---|---|---|---|-------------------|
| PTX 7900 | - | 1 | - | D | Typical Model No. |
|----------|---|---|---|---|-------------------|

(2) State pressure range/units

Continuing development can necessitate specification changes without notice.

INSTALLATION DRAWINGS - Dimensions in mm



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