

PTX 7500 SERIES PRESSURE TRANSMITTERS



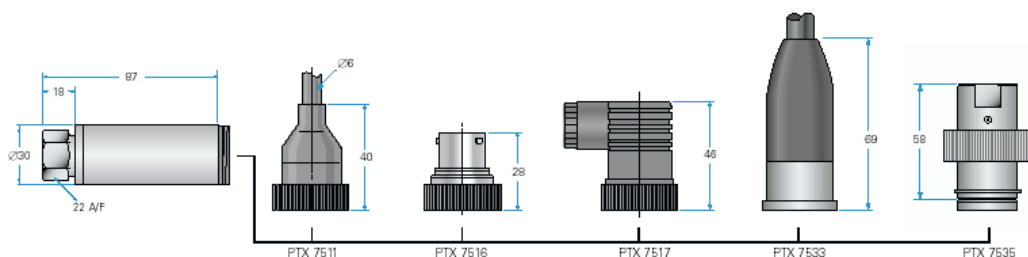
- Standard ranges or custom scaled
- 0.15% accuracy
- Temperature range -40 to 100_C
- Wide range of electrical connections
- RFI protected to CE Heavy Industrial Standard
- ATEX Intrinsically Safe versions available

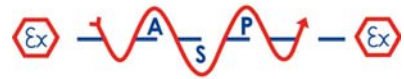
The PTX 7500 series combines modular design with the latest advances in ASIC technology and surface mounted electronics. This provides a lightweight and cost effective solution for a range of industrial pressure measurement applications.

At the heart of the transmitter is the piezoresistive 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.

On-site trimming of the transmitter output is via noninteractive potentiometers readily located within the electrical connector. The PTX 7500 series also offers excellent RFI immunity, meeting the highest level of CE marking requirements for heavy industrial use.

INSTALLATION DRAWINGS - Dimensions in mm





STANDARD SPECIFICATIONS:

Pressure Measurement

Operating Pressure Ranges

0 to 70, 100, 160, 250, 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. Note: Any pressure unit and span can be specified between 70mbar and 700 bar F.S. including compound, offset and barometric ranges.

Overpressure

The operating pressure range can be exceeded as below without degrading performance:

12 x for ranges up to 100mbar
8 x for 160mbar range
6 x for ranges from 250 to 500mbar
4 x for 1 and 2 bar ranges
3 x for 3.5 to 140 bar ranges (200 bar max)
2 x for 140 to 700 bar ranges

Pressure Containment

Gauge ranges:

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

Pressure Media

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

Supply Voltage

9 to 30V at PTX terminals. (IS units 9 to 28V).
Maximum load (I) = 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 EN61000-4-4 and EN61000-4-5.

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

Performance

Accuracy

Combined Non-linearity, Hysteresis, Repeatability.
Terminal definition: the output will not deviate from a straight line connecting zero and full scale output by more than 0.15% typical (0.3% max.).
Best Straight Line: $\pm 0.1\%$ F.S. typical ($\pm 0.2\%$ max.).

Zero Offset and Span Setting

Factory set ± 0.05 mA. Further nominal $\pm 5\%$ site adjustment via non-interacting potentiometers.
N.B. Adjustment not available with PTX 7533.

Long Term Stability

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

Operating Temperature Range

40 to 100_°C (80_°C max. for PTX 7511/7533).

Temperature Effects

For ranges of 500mbar and above the output will not deviate from room temperature calibration by more than:-
0.7% F.S. typical (1% F.S. max.) over - 10_° to 50_°C
1.5% F.S. typical (2% F.S. max.) over - 20_° to 80_°C
For ranges below 500mbar, these values will increase pro-rata with span.

Time Response

1msec time constant (63% response to step change in pressure).

Start-up Time: 500msec max. at power up. For pulse power applications please refer to Manufacturer.

Physical

Pressure Connection: G_{1/4} female. Optional adaptors available.

Electrical Connection

1m integral cable (longer lengths available), 6 pin bayonet plug, DIN 43650A plug/socket or M20 female conduit entry. For gauge ranges up to 70 bar, vented cable (P/N 192-004) required.

Weight: 200 grams nominal.

CE Conformity

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

OPTIONS

(A) Intrinsic Safety Approval

BAS 01 ATEX 1254.
EEx ia IIC T4 (-40_°C < Tamb < 80_°C).
300m max integral cable length (PTX 7511/7533).
Extra cable may be added during installation in accordance with the system certificate (Ex 99E2163).

(B) Screw-in male/male adaptors with bonded seal

G_{1/4} male (P/N 190-040).
1/4 NPT male (P/N 190-038).
7/16 UNF male to MS 33656 (P/N 190-042).
M14 x 1.5 male (P/N 190-036).
G_{1/2} (pressure gauge)(P/N 190-039).
All adaptors 316 stainless steel construction.

ORDERING INFORMATION

(1) Select model number:
Code Model PTX 75 Base Model
Code Electrical Connection
11 Integral Cable (IP 65)
16 6 Pin Bayonet (IP 65)
17 DIN 43650A Plug/Socket (IP 65)
33 Integral Cable (IP 67)
35 M20 Female Conduit (IP 65)

PTX 75 11 Typical Model Number

(2) Pressure range/units required.
(3) Options (if required).

Continuing development sometimes necessitates specification changes without notice.

Supplied by:

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