

Industrial Pressure Transmitters

PTX-7500 Series

Function: 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 a piezo-resistive silicon sensor. The transmitter also features a Hastelloy isolation diaphragm, which is enclosed in an electron beam welded stainless steel body. On-site trimming of the transmitter output is via non-interactive potentiometers located within the electrical connector. The PTX-7500 series offers excellent RFI immunity, meeting the highest level of CE marking requirements for heavy industrial use. Options on the PTX-7500 series includes ATEX Certification and a Male to Male screw in adaptor with a bonded seal.



Sensors - PRESSURE

SPECIFICATIONS

INPUTS:

Operating Pressure Ranges
0 to 70, 100, 160, 250, 500mbar, 1, 2, 3.5, 7, 10, 20, 35 and 70 bar gauge and absolute
0 to 140, 200, 350 and 700 bar sealed gauge and absolute.
N.B. Any pressure unit and span can be specified between 70mbar and 700 bar full scale including compound, offset and barometric.

Overpressure

The operating pressure range can be exceeded by the following values without degrading performance:
12 x for ranges up to 100mbar
8 x for 160mbar range
6 x for 250 and 500mbar ranges
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 250 and 500mbar ranges
6 x for 1 and 2 bar ranges
4 x for 3.5 to 70 bar ranges (250 bar max)
Absolute and Sealed Gauge:
250 bar for ranges 100mbar to 140 bar; 1000 bar for ranges 200 bar to 700 bar

INPUTS :

Pressure Media

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

OUTPUTS

Current

4 to 20mA (2 wire) proportional for zero to full scale pressure

Loading (Ohms)

$R_{L\ MAX} = 50 \times (V_{SUPPLY} - 9)$

PERFORMANCE:

Accuracy

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

Zero Offset and Span Setting

Factory Set $\pm 0.05\text{mA}$. Further nominal $\pm 5\%$ site adjustment via non-interacting potentiometers (N.B. Site adjustment not available with PTX7533)

SUPPLY:

Power Supply Voltage

9 to 30 Volt DC at the transmitter terminals (9 to 28 Volt DC for IS units)

Supply Sensitivity

0.005% of F.S. / Volt

Insulation Resistance

>10M ohms @ 500V DC (@ 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

PHYSICAL:

Electrical Connection

PTX-7511 1 metre integral cable (longer lengths available)
PTX-7516 6 pin bayonet plug
PTX-7517 DIN 43650A Hirschman plug and socket
PTX-7533 1 metre integral cable (longer lengths available) (IP67)
PTX-7535 M20 Female conduit

For gauge ranges up to 70 bar a vented 6mm cable is required

Process Connection

G¹/₄" female (optional adaptors available)

GENERAL:

Long Term Stability

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

Operating Temperature

-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 (typically):-
0.7% F.S. over -10 to +50°C
1.5% F.S. over -20 to +80°C
Maximum values will be:-
1.0% F.S. over -10 to +50°C
2.0% F.S. over -20 to +80°C
For ranges below 500mbar, these values will increase pro-rata with span

Protection Level

All IP65 except PTX-7533 which is IP67

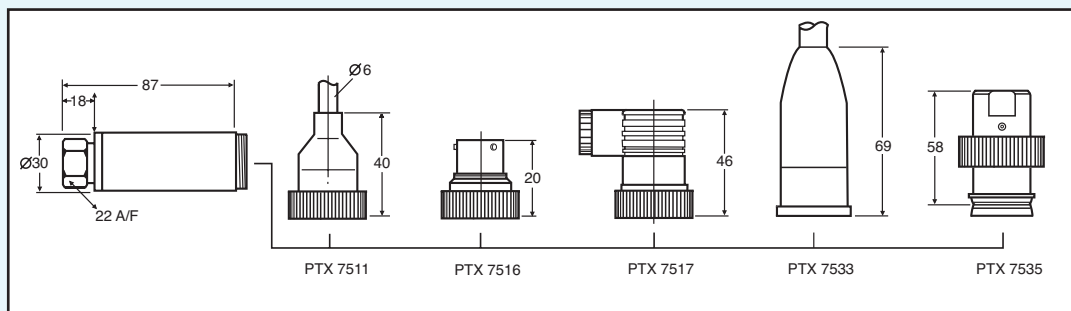
Weight

200 gms nominal

CE Conformity

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

MECHANICAL DETAILS



Options

- 1) I.S. Approved version BAS 01 ATEX 1254 to EEx ia IIC T4 (-40°C < T_{amb} < 80°C)
- 2) Screw-in male / male adaptors with bonded seal G¹/₄ male, 1/4 NPT male, 7/16 UNF male to MS33656, M14 x 1.5 male, G¹/₂ All adaptors 316 stainless steel construction

ORDERING DETAILS

- (a) Give identification code, i.e. PTX-7517
(b) Give details of input range, i.e. 0 to 10 bar gauge

- (c) Give details of any option required



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