

Pressure Transmitter PTX-7900

* $\pm 0.25\%$ Accuracy * Hastelloy and Stainless Steel Construction

Function: 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 sensor is Druck's own piezo-resistive silicon sensor. A hastelloy isolation diaphragm and electron beam welded 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.



Sensors - PRESSURE

SPECIFICATIONS

INPUTS:

Operating Pressure Ranges

0 to 70mbar gauge, 100, 160, 250mbar, 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 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
- 2 x for ranges 200 to 700 bar

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 maximum)

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 and Hastelloy C276 (NACE compatible grades)

OUTPUTS:

Current

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

Loading (Ohms)

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

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 $\pm 5.0\%$ 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

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% F.S. / Volt

Insulation Resistance

> 100 Mohms @ 500V DC (@20°C)

PHYSICAL:

Electrical Connection

M20 $\frac{1}{2}$ " female conduit
 $\frac{1}{2}$ " NPT or PG 13.5 female conduit (via adaptor)

Process Connection

G $\frac{1}{2}$ " female, G $\frac{1}{2}$ " male to BS EN387-1 (DIN16288), $\frac{1}{2}$ " NPT female or $\frac{1}{2}$ " NPT male

Ingress Protection Level

Designed to meet IP67 when properly installed with conduit fitting connection

Weight

1Kg nominal

GENERAL:

Operating Temperature

Ambient: -40 to +100°C
Process: -40 to +120°C

Temperature Effects

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

Surge Protection

Up to 140 bar: withstand 2kV spike
Above 140 bar: withstand 1kV spike
Spike test conforms to EN61000-4-5

OPTIONS

(i) 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

(ii) Intrinsically Safe Approval

CE II 1G EExia IIC T4 (Ta = 80°C)

to ATEX directive 94/9/EC

(iii) Flameproof Approval

CE II 2G EExd IIC T6 (Ta = 70°C)

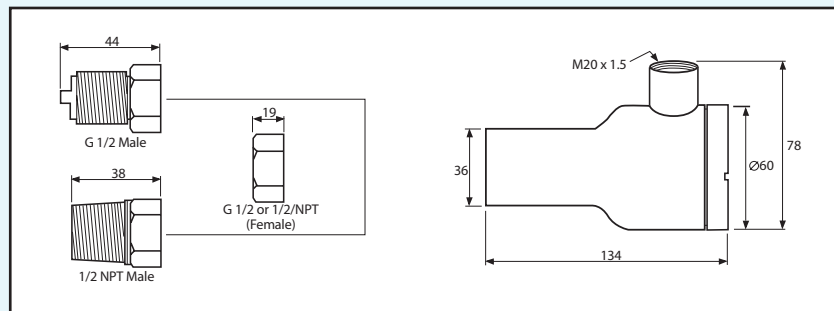
to ATEX directive 94/9/EC

All options are compliant with EMC directive 89/336/EC

CE Conformity

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

MECHANICAL DETAILS



ORDERING DETAILS

- (a) Give Model Number, i.e. PTX-7901
- (b) Give details of Process Connection required, i.e. G $\frac{1}{2}$ " Male
- (c) Give details of pressure range/units, i.e. 0 to 10 bar absolute
- (d) Give details of any options required, i.e. IS Version

MODEL DETAILS:

- PTX-7900 = Base Model with M20 female conduit entry
- PTX-7901 = Base Model with $\frac{1}{2}$ " NPT female conduit entry
- PTX-7902 = Base Model with PG 13.5 female conduit entry



LEE-DICKENS LTD

Desborough, Kettering, Northants NN14 2QW U.K.

Tel: (01536) 760156 Fax (01536) 762552