

GE Sensing

Features

- Pressure ranges to 8700 psig (600 bar)
- Gauge and absolute formats
- 0 to 5 V or 4 to 20 mA outputs
- 0.15% typical accuracy
- Low cost, Ex-stock delivery
- Intrinsically safe, CE marked, PED compliant

The PTX/PMP 1400 Series of Industrial Pressure sensors have been designed for use with aggressive pressure media found in many industrial and process applications.

The stainless steel isolation diaphragm and fully welded stainless steel pressure module ensures excellent media compatibility without compromising the performance from GE's own micro-machined silicon pressure diaphragm.

Integral electronics provide a three-wire 0 to 5 V (PMP 1400) or two-wire 4 to 20 mA (PTX 1400) output proportional to applied pressure. Integral non-interactive zero and span controls ensure system interchangeability and ease of calibration.

The PTX/PMP 1400 Series incorporates developments from aerospace applications and volume manufacturing to achieve high performance with competitive pricing. Ex-stock delivery is provided by holding a stock of compensated and calibrated sensors in DIN pressure ranges.

These sensors feature compact, rugged design with field proven electronics to ensure long term reliable measurement and low cost of ownership.

PTX/PMP 1400 Series

Druck Industrial Pressure Sensors

PTX/PMP 1400 Series is a Druck product. Druck has joined other GE high-technology sensing businesses under a new name—GE Industrial, Sensing.



PTX/PMP 1400 Specifications

Pressure Measurement

Operating Pressure Ranges

- 0, to 1.5, 3.75, 6, 9, 15, 24, 37.5, 60, 90, 160, 240, 375, 600, 900 psi (0 to 100, 250, 400, 600 mbar, 1, 1.6, 2.5, 4, 6, 10, 16, 25, 40, 60 bar) gauge and absolute
- 0 to 1500, 2400, 3750, 6000, 9000, psi (0 to 100, 160, 250, 400, 600 bar) sealed gauge and absolute
- Barometric
 - 12 to 18 psia (800 to 1200 mbar); PTX 1400 only
 - -15 to 24 psig (-1 to 1.6 bar); compound
 - -15 to 37.5 psig (-1 to 2.5 bar); compound
 - -15 to 60 psig (-1 to 4 bar); compound

Overpressure

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

- 4 x FS for ranges up to 15 psi (1 bar)
- 2 x FS (2700 psi/180 bar maximum) for ranges 15 to 1500 psi (1 to 100 bar)
- 2 x FS (13,500 psi/900 bar maximum) for ranges 2400 to 9000 psi (160 to 600 bar)

Containment

- 6 x FS for ranges up to 15 psi (1 bar)
- 3 x FS for ranges up to 1500 up to 2700 psi (100 bar to 180 bar) max
- 20,000 psi (1400 bar) max above 1500 psi (100 bar).

Pressure Media

Fluids compatible with a fully welded assembly of:

- 316L stainless steel for ranges 3.75 psi (250 mbar) and below
- 316L stainless steel and Hastelloy C276 for all other ranges

Supply Voltage

PMP 1400: 9 to 30 VDC

PTX 1400: 9 to 28 VDC

Minimum supply voltage that must appear across transmitter terminals is 9V and is given by

$$V_{min} = V_s - (0.02 \times RL)$$

Where V_s = supply volts

RL = total loop Ohms

Supply voltage reversal—units will withstand reversed polarity without damage.

Output Voltage

PMP 1400: 0 to 5V - calibrated between 5 to 100% full scale (FS) (three-wire pedestal configuration)

PTX 1400: 4 to 20mA (two-wire configuration)

Load Impedance (PMP version)

Greater than 100 k ohms for quoted performance

Performance

Accuracy

Combined non-linearity, hysteresis and repeatability: $\pm 0.15\%$ typical, $\pm 0.25\%$ maximum best straight line (BSL) definition

Zero Offset and Span Setting

Factory set to 0.5% FS, then $\pm 5\%$ site adjustable by sealed, non-interacting potentiometers

Long Term Stability

0.2% FS range per annum typical

Operating Temperature Range

-4°F to 176°F (-20°C to 80°C)

Temperature Effects

- Total error band (TEB) 1.5% FS typical, 2% FS maximum, -4°F to 176°F (-20°C to 80°C)
- For ranges below 6 psi (400 mbar) values increase pro-rata with calibrated span

Physical

Pressure Connection

G 1/4 female

Electrical Connection

DIN 43650 plug supplied with mating socket

Weight

0.4 lb (200 g) nominal

Ingress Protection

Sealed to IP65

CE marking

CE marked for use in potentially explosive atmospheres, pressure equipment directive and electromagnetic compatibility

PTX/PMP 1400 Specifications

Hazardous Area Certification

PTX 1400 supplied Intrinsically Safe certified as standard, for use with barrier systems to:

Ⓔ II 1G EEx ia IIC T4 (-20°C ≤ Ta ≤ 80°C)

ATEX directive 94/9/EC

Certificate Baseefa 02ATEX0235X

Options

- (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
- (C) Vented cable for gauge pressure ranges 900 psi (60 bar) and below, the PTX/PMP 1400 requires vented cable (P/N 192-004). Specify required length on order (supplied unfitted).
- (D) Pressure snubber adaptor (DA0839-1-02) Screw in adaptor providing a G 1/4 female thread. Protects against unwanted fast transient pressure spikes. Refer to snubber product note for further detail.

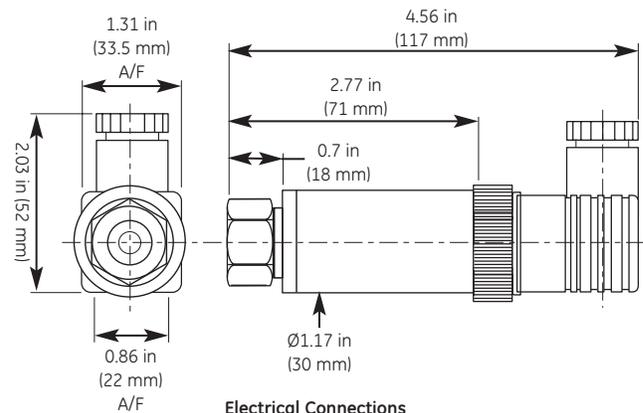
Ordering Information

Please state the following:

- (1) Type number PTX 1400 or PMP 1400
- (2) Operating pressure range
- (3) Gauge (sealed gauge) or absolute
- (4) Options—as above. Order as separate line items (supplied unfitted).

Related Products

GE manufactures a comprehensive range of pressure sensors, indicators, controllers and calibrators. Product datasheets available.



Electrical Connections

- PIN 1 +ve supply
- PIN 2 -ve supply
- PIN 3 +ve output (PMP 1400 only)

[Installation drawings](#)

GE
Sensing



©2005 GE All rights reserved.
920-097A

All specifications are subject to change for product improvement without notice.
GE® is a registered trademark of General Electric Co. Other company or product names mentioned in this document may be trademarks or registered trademarks of their respective companies, which are not affiliated with GE.

www.gesensing.com