PTX/PMP 1200

PTX/PMP 1200 SERIES

Druck

Industrial Pressure Transmitters

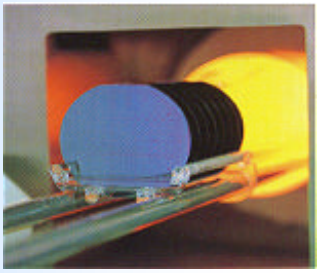
- ± 0.25% FS accuracy
- NACE compatible wetted parts
- Low-cost, rugged construction
- Class I, Div 1, Intrinsically safe certified
- Ranges from 2.5 to 10,000 psi

PTX/PMP 1200 Series

Industrial Pressure Transmitters

For over 25 years Druck has manufactured precision pressure sensors with a capability to meet critical applications in industrial, aerospace, and research environments.

The PTX/PMP 1200 Series is a complete range of pressure transmitters designed to optimize the relationship between price and performance while providing flexibility from a standard production device.



Silicon wafers being loaded into an oxidation furnace.

At the heart of the 1200 Series is an advanced, high stability pressure measurement element, micro-machined from single crystal silicon within Druck's own Class 100 processing facility. The silicon element is mounted within a high integrity glass to metal seal and is fully isolated from the pressure media by a hastelloy isolation diaphragm, electron beam welded to the front of the glass to metal seal. Druck's proprietary low oil volume isolation allows fast dynamic response plus minimal thermal error. The high output silicon allows for high overload capacity.

Surface mount electronics condition the output from the silicon diaphragm, correct for thermally induced errors, and configure the output to the required 4-20mA or 1-5Vdc output. Advanced design features built into the electronic circuitry enable minimum sensor size with the utmost reliability. The electronics incorporate power supply regulation, reverse polarity, overvoltage and short circuit protection, coupled with EMC protection components.

The fully encapsulated solid state design ensures integrity of the product under high levels of shock and vibration, with an ingress protection rating of NEMA 4X, depending on electrical termination selected.

A fully tested pressure core is stocked in quantity, requiring only the addition of the electrical termination. Prior to shipping, the sensor is adjusted to meet the particular pressure range and units and terminated with the electrical connection.

Some configurations allow access to zero and span potentiometers for adjustments during set up and calibration. Others are fixed and cannot be adjusted.

A range of stainless steel pressure adapters are available to modify the standard 1/4" NPT female pressure port.

The PTX/PMP 1200 Series is ideally suited to meet the rigorous demands of the Industrial, Automotive, Aerospace and Oil & Gas markets. The PMP 1200 is designed for applications where batteries and/or solar powered systems require very low power consumption. The PTX/PMP 1240 is also being qualified for Class I, Div 1 Explosion-proof service.

Applications include general purpose industrial, refrigeration, oil & gas well head monitoring and control, compressor performance monitoring and static pressure measurements in flow applications.

Computerized testing and calibration of pressure transducers.

Standard specification

SPECIFICATION

Operating Pressure Ranges
0 to 2.5, 5, 10 psig
15, 20, 30, 50, 60, 100, 150, 200, 300, 500, 600, 750 psig or psia.
0 to 1000, 1500, 2000, 3000, 5000, 7500, 10,000, 15,000 psi sg or psia
-15 to 30 psig; 0 to -5 and 0 to -15 psig
11.5 to 17.0 psia (Barometric)
Please refer to manufacturer for additional ranges.

Overpressure
The rated pressure can be exceeded by the following without degrading performance:
4x for ranges to 900 psi g
2x for ranges 1000 to 10,000 psi sg
1.5x for range 15,000 psi

Pressure Containment
6x Full Scale for vented gauge
2500 psi for all absolute and sealed gauge ranges 2000 psi and below
20,000 psi for all absolute and sealed gauge ranges above 2000 psi
Refer to manufacturer for higher containment.

Pressure Media
Fluids compatible with 316L Stainless Steel and Hastelloy C276 (NACE compatible)

Supply Voltage
PTX 1200
9 to 30 Vdc
The minimum supply voltage (V_{min}) that must appear across the transmitter terminals is 9 Vdc and is calculated by:

$$V_{min}V_s-(0.02xR_1)$$

Where V_s is supply voltage in volts
R_L is total loop resistance in ohms

PMP 1200
8-30 Vdc, <2ma

Output
PTX 1200
4-20mA (2-wire configuration)

PMP 1200
1-5 Vdc (less than 2mA)

Zero and Span Offset
± 0.5% F.S.

Long term Stability
± 0.2% F.S./annum

Combined Non-linearity, Hysteresis and Repeatability
± 0.25% F.S. BSL maximum

Zero and Span Accessability
Models 1210, 1225 and 1265 only
Zero ±5% FS
Span ±5% FS

Temperature Limits
Process: -40% to +250°F
Storage: -50% to +185°F
Compensated: -4° to +180°F

Operating Temperature Range
-40° to +185°F

Temperature Effects
±2% F.S. typically; ±3% F.S. Thermal Error Band Maximum over compensated temperature range. Errors increase pro rata below 5 psi

Weight
10 oz. Nominal

Pressure Connection
1/4" NPT female
3/8" Autoclave for 15,000 psi range

Electrical Connection
1210 DIN connector zero and span accessible
1225 Cable out with zero and span accessible
1240 1/2" NPT male conduit fitting
1260 6 pin bayonet connection
1265 6 pin bayonet zero and span accessible

Ingress Protection
Designed to meet Nema 4X when properly installed with conduit fitting connection

Voltage Spike Protection
Units will withstand 600V spike test to ENV 50142 without damage applied between excitations lines and case

Safety Classifications
UL Intrinsically Safe for Class I, Div 1, Grps A, B, C and D, Class II, Grps E, F, G
cUL Intrinsically Safe for Class I, Div 1, Grps A, B, C and D, Class II, Grps E, F, G

Factory Mutual Approvals (Pending)
Intrinsically Safe for Class I, Div 1, Grps A, B, C, D for hazardous locations

PTX/PMP 1240 only
Explosion-proof and intrinsically safe pending for Class I, Div 1, Grps A, B, C, D; Class I, Div 2, Grps A, B, C, D;
Class II, Grps E,, F, G;
Class III for hazardous locations

Canadian Standards Association (CSA) Approvals (Pending)
Intrinsically Safe in hazardous locations
Class I, Div 1, Grps A, B, C, D

PTX/PMP 1240 only
Explosion-proof and intrinsically safe pending in hazardous locations
Class I, Div 1, Grps A, B, C, D;
Class I, Div 2, Grps A, B, C, D;
Class II, Grps E, F, G;
Class III

Venting is provided by a flame-arresting filter designed to allow the transmitter to breathe while preventing the ingress of fluids.

Wiring Details

Function	PTX/PMP 1225/1240 Wire Color	PTX/PMP 1260/1265 Pin Letter	PTX/PMP 1210 Pin Number
Supply +	Red	A	(1)
Supply -	Black	B	(2)
Output + (PMP versions only	White	C	(3)
Case Ground	Shield	F	(⏚)

OPTIONS

Pressure port:
1/2" NPT female via adapter
1/4" NPT male via adapter
1/2" NPT male, welded adapter
Conduit Fitting:
1/2" NPT female, via adapter
CSA/FM/UL Approval
(state which logo on transducer)
Extra Cable Length
(state length in feet or meters)
NIST Room Temperature 9-pt Calibration Certificate
Alternate Engineering Units
(equivalent to standard psi ranges)

ORDERING INFORMATION

Please state the following:
(1) Type number PTX or PMP 1200

Code	Model
PTX	2 wire, 4-20 mA current output
PMP	3 wire, 1 to 5Vdc, Low power

Code	
1210	DIN Connector (demountable)
1225	Cable (demountable)
1240	1/2" NPT Male Conduit Fitting
1260	6-pin Bayonet Connector
1265	6-pin Bayonet Connector (demountable)

(2) Operating pressure range (gauge, sealed gauge or absolute)
(3) Options (if required)

RELATED PRODUCTS

LPM/LPX 8000 Series Wet/Wet Low Pressure Differential
PTX 500/600 Pressure Transmitters
PTX 1230/1830 Submersible Pressure Transmitters
MDK-24/MDK-LV lightning Arresters
DPI 610 Portable Pressure Calibrators
DPI 280 Series Indicators

Please refer to the manufacturer for further information and data sheets

Continuing development sometimes necessitates specification changes without notice.

Druck is an ISO 9001 registered company.

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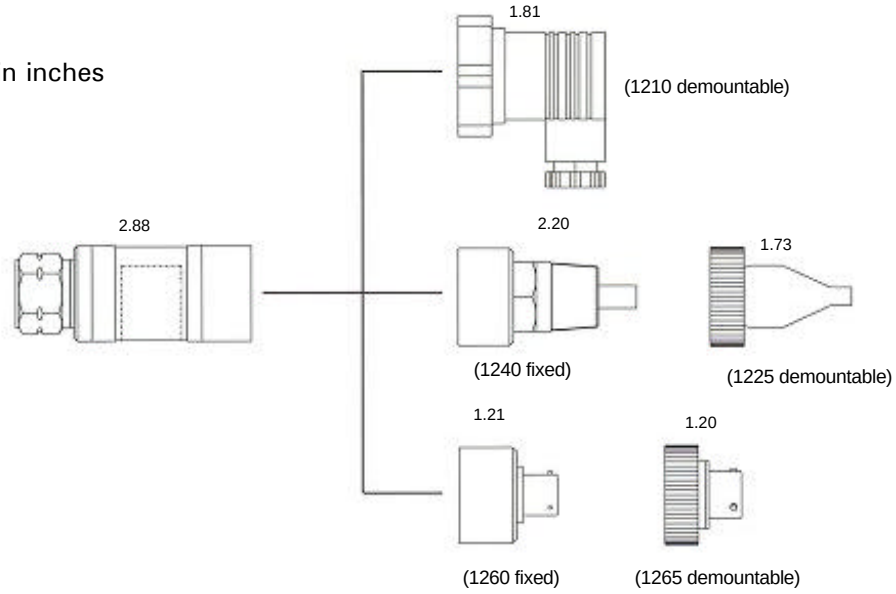
Installation Drawings - dimensions in inches



A full range of alternative cable and connector versions are available - refer to Druck for further information

Associated Products

Left: DPI 610 Field Portable Pressure Calibrator
Center: DPI 145 Multi-Function Digital Meter
Right: DPI 605 Precision Portable Pressure Calibrator
Inset: LP Series of Low Pressure Sensors

Druck manufactures a comprehensive range of pressure instrumentation to complement the PTX/PMP 1200 Series.

Portable pressure, temperature and electrical field calibrators allow for local calibration reducing plant down time while maintaining the quality requirements of ISO 9000. In addition, the Druck range of calibration equipment is completed by primary standard deadweight testers.

The LP Series provides full scale absolute ranges as low as 0.03 psia and differential ranges as low as ±0.04 inches H2O wet/wet differential pressure.

For further information and product data sheets - refer to Druck.

Druck Incorporated
4 Dunham Drive
New Fairfield, CT 06812
Tel: (203)-746-0400
Fax: (203)-746-2494
E-Mail: usa.sales@druck.com
http://www.druckinc.com

Representative