LPM/LPX 2000

# LPM/LPX 2000 Series

## High Accuracy, Low Absolute Pressure Sensors

- Accuracy: <±0.2% FS BSL
- Ranges: 0 to 0.03 through 0-150 psia
- Lowest Measurement 0.03 x $10^{-4}$ psia
- Outputs: 2-wire 4-20 mA, 3-wire 0-5Vdc, 0-10 Vdc
- All media compatible with 316L SS, Inconel X750, Inconel 600


The LPM/LPX 2000 Series absolute pressure transducers are suitable for high-precision applications such as Secondary Calibration Standards, Chemical Reactor Vessels, Leak Detectors, or anywhere critical measurements are required. The high overpressure, chemical compatibility and excellent long-term stability, assure the highest reliability available in the industry.

The measurement cell is an Inconel X750 capsule, vacuum sealed to 1 X 10-6 Torr. The eddy current sensor, formed by two coils, perfectly sealed from the measurand by the force-collection diaphragm, measures the displacement of the capsule without any mechanical contact.

When the diaphragm moves under the effect of applied pressure, eddy current losses generated in the target results in a variation in inductance in the coil. This variation is measured relative to the reference inductance of a second coil, which after conditioning, presents a standardized signal directly proportional to pressure.

This measurement system allows the use of metallic capsules over very low displacements, thus working well within elasticity and fatigue limits.

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Druck

### STANDARD SPECIFICATION

**FS Pressure Range PSI (mmHg)**
0.03(1.5), 0.15(7.5), 0.75(40), 1.5(75), 7.5(400), 15(750), 75(4000), 150(7500)

**Overpressure**
75 psia Ranges 0.03 to 1.5 psi
120 psia Ranges 7.5 to 15 psi
150 psia Range 75 psi
225 psia Range 150 psi

**Burst Pressure**
Greater than 750 psia

**Pressure Media**
Fluid/gases compatible with 316L SS, Inconel X750 and Inconel 600

**Relative Humidity**
0 to 100%

**Transduction Principle**
Variable inductance (eddy current)

**Excitation Voltage**
10-30 Vdc 4-20mA, 0-5 Vdc
15-30 Vdc 0-10 Vdc

**Supply Sensitivity**
0.005%FS/Volt

**Insulation Resistance**
>100 Megohms @ 50 Vdc

**Output Signal**
LPX: 4-20mA (2 wire)
LPM: 0-5 Vdc (3 wire)
0-10 Vdc (3 wire)

**Load Impedance**
LPX: 0.05 ($V_{supply}$-10) KOhm maximum
LPM: 0-10 Vdc output: 5 KOhm min
0-5 Vdc output: 2 KOhm min

### Performance Specification

**Combined Non-linearity, Hysteresis and Repeatability**
±0.2% Full Scale BSL maximum

**Zero Setting Range**
±10% Full Scale

**Span Setting Range**
±10% Full Scale

**Operating Temperature Range**
-40°F to +212°F
This temperature range may be extended to -451° to +340°F by using the remote electronic option

**Compensated Temperature Range**
+22°F to +122°F

**Temperature Effects**
Zero: ±0.005% FS/°F, ±0.012% FS/°FS for 0.03 psi
Span: ±0.012% Rdg/°F all ranges

**Response Time**
<10 msec

**Dead Volume**
6cm³ Ranges 0.03 and 0.15 psia
8cm³ Ranges 0.75 to 15 psia
9cm³ Ranges 75 to 150 psia

**Vibration**
50g up to 3KHz

**Weight**
2.1 lbs.

**Sensor Body**
316L stainless steel

**Electronic Cover**
316L stainless steel

**Measuring Diaphragm**
Inconel X750

**Environmental Sealing**
NEMA 4X (IP66)

**Electrical Connection**
PG7 cable gland with screw terminal block accessible under cover

**Pressure Connection**
1/2" smooth tube

### OPTIONS

Remote electronics

The following pressure connections are available:
KFDN16 or DN25, 8VCR, 8VCD

*Please refer to manufacturer*

### ORDERING INFORMATION

(1) Select model number

| Code | Model |
|---|---|
| LPX | Current output |
| LPM | Voltage output |

| Code | Base Model |
|---|---|
| 2 | |

| Code | Diaphragm Material |
|---|---|
| 3 | Inconel X750 |

| Code | Electrical Connection |
|---|---|
| 8 | Cable gland, PG7 |

| Code | Temp. Comp. |
|---|---|
| 0 | 22 to 122°F |

LPX 2 3 8 0

(2) State pressure range
(3) State output required
(4) State options (if required)

*Continuing development sometimes necessitates specification changes without notice.*

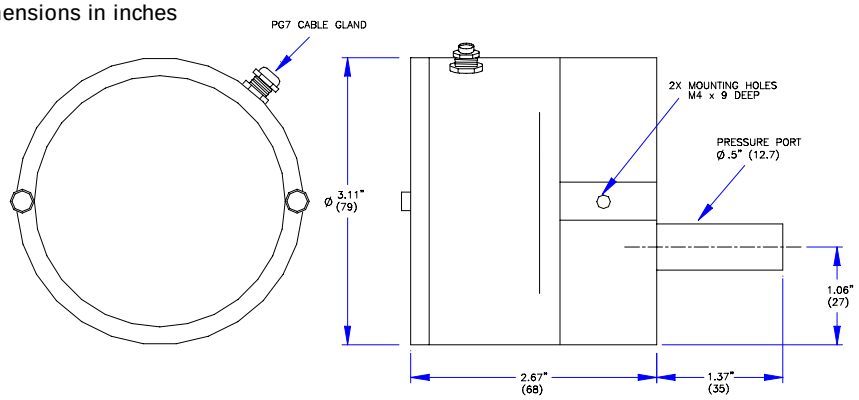
### ASSOCIATED PRODUCTS

**Signal Conditioning/Digital Readouts**
Refer to DPI 260 and DPI 280

**Calibration Instruments**
Refer to DPI 510, DPI 602, DPI 605
Druck/Pressurements
V1600 Series Dead Weight Tester

***Druck is an ISO 9001 registered company***

## INSTALLATION DRAWINGS: Dimensions in inches





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


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