

LP 8000 Series

Low Differential Pressure Sensors

- Ranges from 10mbar to 10 bar
- Accuracy better than 0.25% FS BSL
- Line pressure from vacuum to 100 bar
- Uni-directional or bi-directional operation
- Excellent thermal and long term stability
- Full wet/wet media compatibility



The LP 8000 series accurately measure low differential or relative pressures of gases and liquids from 10mbar to 10 bar full scale. With a choice of current or voltage output, they are suitable for uni-directional (e.g. 0 to 20mbar) or bi-directional (e.g. -20 to 20mbar) pressure measurements.

An innovative eddy current measurement system enables the use of low displacement sensor diaphragms operating well within elasticity limits. In addition, the "dry cell" sensor concept means no internal fluid is used. Combined with a rugged design, this ensures high performance with long term reliability, even when operating over a wide temperature range.

The LP 8000 series are therefore ideally suited to a wide range of high precision applications including flow of liquids and gases, level measurement in pressurised tanks, leak detection and filter monitoring amongst many others.

Low Differential Pressure Sensors

STANDARD SPECIFICATIONS

Pressure Measurement

Operating Pressure Ranges

Range (mbar)	10	20	50	100	200	500
Overpressure (bar)	1	2	3	5	7	10

Range (bar)	1	2	5	10
Overpressure (bar)	25	40	40	50

For other ranges, please refer to manufacturer.
Sensors may be calibrated in other pressure units - please specify.

Zero & Span Adjustment

Site adjustable potentiometer trim

Zero: -15 to 15% F.S.

Span: 33 to 100% F.S.

Line Pressure

Vacuum to 100 bar.

Pressure Media

Fluids compatible with either:-

(A) 316L stainless steel, X750/600 Inconel and Viton.

(B) 316L stainless steel, beryllium copper, brass, soft soldering and Viton.

Supply Voltage

10 - 30 Vd.c.

15 - 30 Vd.c. (LPM with 0 - 10 Vd.c. output)

±12 Vd.c. (LPM with 0 ±5 Vd.c. output).

Output Voltage

LPX (uni-directional): 4 - 20mA (2 wire)

LPX (bi-directional): 12mA ±8mA (2 wire)

LPM (uni-directional): 0 - 5 Vd.c. (3 wire)

0 - 10 Vd.c. (3 wire)

LPM (bi-directional): 2.5 ±2.5V (3 wire)

5 ±5V (3 wire).

Load Impedance

LPX: 0.05 (Vsupply - 10) kΩ maximum.

LPM: 1kΩ minimum.

Performance

Accuracy

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

Long Term Stability

At standard reference conditions, calibration will not change by more than 0.3% F.S./annum.

Temperature Range

Ambient: -40° to 100°C

Process Media: -40° to 120°C

Storage: -50° to 110°C

Temperature Effects

Output deviation over -20° to 80°C will not exceed the following values:-

Zero: 0.01% F.S./°C

Span: 0.01% F.S./°C

Mounting Position Effect

No effect on span. Possible zero shift can be corrected via the adjustment potentiometer.

Supply Sensitivity

0.01% F.S./Volt maximum.

Humidity

Up to 100% RH non-condensing.

Response Time

10msec (standard setting) up to 2 seconds.

N.B. NOT user adjustable - must be specified as ordering information.

Physical

Pressure Connections

G¹/₈ female.

Purge Ports

G¹/₈ female.

Purge Screws

316L stainless steel.

Electrical Connection

Screw terminal block under cover plate.

Maximum wire area 4mm² via PG7 gland (cable diameter 4 to 7mm).

Housing Material

316L stainless steel.

Environmental Protection: IP66.

CE Compliance

EMC Emissions: EN50081-1

EMC Immunity: EN50082-1

Certification: CE marked.

Weight

1.5kg nominal.

OPTIONS

(A) Panel Mounting Bracket

(B) Calibration Certificate

(C) Response Time: Any value 10msec - 2 sec

RELATED PRODUCTS

Druck manufacture a comprehensive range of pressure transducers, transmitters, indicators, controllers, deadweight testers and calibrators. The range of portable calibrators also covers temperature and electrical parameters. Please refer to manufacturer for further information and data sheets.

CALIBRATION STANDARDS

Instruments manufactured by Druck Limited are calibrated against precision pressure calibration equipment which is traceable to International Standards.

ORDERING INFORMATION

(1) Select model number:

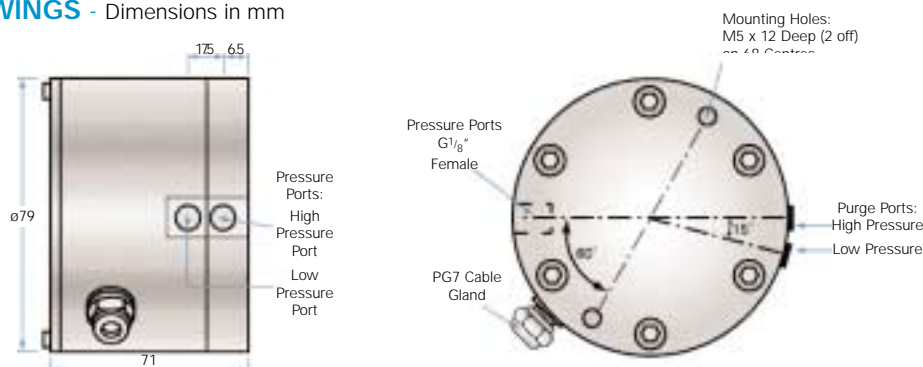
Code	Model
LPX	Current Output
LPM	Voltage Output
	Code
8	Base Model
	Code Diaphragm Material
3	Inconel X750
4	Beryllium copper
	Code Electrical Connection
8	Cable gland, PG7
	Code Temp. Comp
1	-20° to 80°C
LPX	8 4 8 1

(2) State minimum and maximum pressure and corresponding output signal.

(3) State options (if required).

Continuing development sometimes necessitates specification changes without notice.

INSTALLATION DRAWINGS - Dimensions in mm



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