



Lopress® LP1000

LOW PRESSURE TRANSDUCER



- PIEZORESISTIVE SENSOR TECHNOLOGY
- PRESSURE RANGES 0-50mbar TO 0-1000mbar
- OUTPUT OPTIONS 0-100mV, 0-5Vdc, 0-10Vdc OR 4-20mA
- ACCURACY 0.5% NLHR
- ROBUST STAINLESS STEEL CONSTRUCTION
- WIDE OPERATING TEMPERATURE RANGE
- ZERO SPAN & ADJUSTMENT

DESCRIPTION

LP1000 series now extends the pressure sensor technology into very low-pressure applications, with operating ranges down to 0-50mbar whilst still maintaining high performance. The advanced sensor design provides very low hysteresis and excellent long-term stability not normally achievable when measuring very low pressure.

The LP1000 offers a low cost solution for accurate measurement of very low pressures and is specifically designed for use in media such as air, non-corrosive gases and various liquids compatible with silicon. The stainless steel housing, fluorosilicone seals and silicon sensing element enables the product to maintain accurate performance and provide extremely good durability

Available in pressure ranges from 0-50mbar to 0-1000mbar and with electrical outputs of 0-100mV, 0-5Vdc, 0-10Vdc and 4-20mA.

Applications include laboratory and test, air and gas pressure monitoring, leak detection, low pressure liquid and hydrostatic pressure measurements.

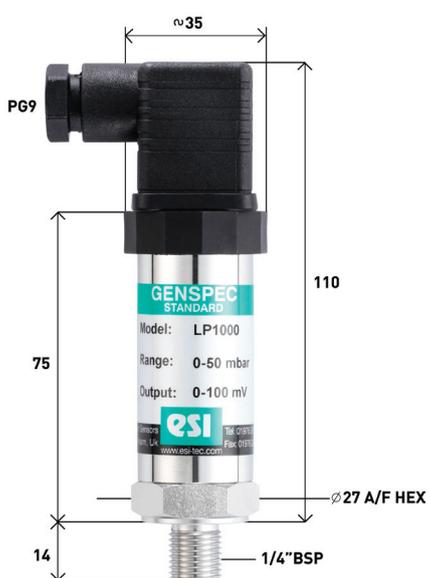


PRESSURE RANGES

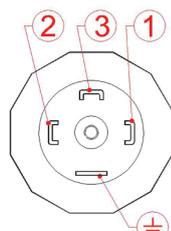
0 to 50mbar through to 0 to 1000mbar, see table below for list of all standard pressure ranges.

Range (mbar)	Order Code	Range (mbar)	Order Code
0-50	0050	0-500	0500
0-100	0100	0-1000	1000
0-250	0250		

DIMENSIONS (in mm)



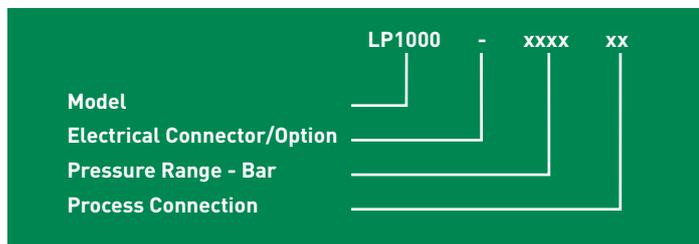
ELECTRICAL CONNECTION (mA)	
Pin No.	2 wire
1	+supply
2	4-20mA signal
3	not fitted
⊥	to case



Viewed from above with socket removed.

ELECTRICAL CONNECTION (Vdc)	
Pin No.	4 wire 3 wire
1	-supply common
2	+supply +supply
3	+output +output
⊥	-output to case

ORDERING INFORMATION



OUTPUT

0-100mV
0-5Vdc
0-10Vdc
4-20mA

ELECTRICAL CONNECTION/OPTION

DIN 43650 plug and socket
Cable outlet 1 metre screened

PROCESS CONNECTION

1/4" BSP male thread
1/2" BSP male thread
1/4" NPT male thread

EXAMPLE

Output signal 4-20mA
DIN43650 plug and socket
Pressure range 0-100mbar
Pressure connection 1/4" BSP male
Correct Part Number

For options not listed contact sales team

Model No.

LP1000
LP1001
LP1002
LP1003

Order Code

-
A

Order Code

AB
AC
AM

Order Code

LP1003
-
0100
AB
LP1003-0100AB

SPECIFICATION

PRESSURE REFERENCE

Gauge

OVERPRESSURE

Pressure can exceed rated range by the multiple shown below with no damage or change in calibration above $\pm 0.5\%$ FS.

4x for ranges 50mbar to 250mbar
3x for ranges 500mbar to 1000mbar

OUTPUT SIGNAL

0-100mV [nominal] (4 wire non-amplified)
Zero offset: ± 1 mV/V, Span tolerance: $\pm 30\%$ FSO
0-5 Vdc, 0-10 Vdc (4 wire amplified)
Zero Offset and Span Setting $\pm 0.5\%$ FSO
4-20mA (2 wire amplified)
Zero Offset and Span Setting ± 0.08 mA

ZERO OFFSET AND SPAN TOLERANCE

± 0.08 mA
 $\pm 5\%$ FS adjustment with easy access trimming Potentiometers on amplified version only

SUPPLY VOLTAGE

Measured across supply terminals on connector plug
10Vdc for 0-100mV version
13-30Vdc for 0-5Vdc and 0-10Vdc versions
10-36Vdc for 4-20mA version

PROTECTION OF SUPPLY VOLTAGE

Protected against supply voltage reversal up to 50Vdc

LOAD DRIVING CAPABILITY (4-20mA version only)

Calculate Maximum load $R_s = (U_b - 13V) / 20mA$
E.g. with supply voltage load of 36Vdc, maximum load is 1150ohms.

ACCURACY (NON LINEARITY, HYSTERESIS & REPEATABILITY)

$\pm 0.50\%$ FS Typical max. Best fit straight line.

PRESSURE MEDIA

All fluids compatible with 316 stainless steel, fluorosilicone and silicon.

OPERATING TEMPERATURE RANGE

Ambient/Media: -20°C to $+85^\circ\text{C}$
Storage: $+5^\circ\text{C}$ to $+40^\circ\text{C}$

INSULATION RESISTANCE

100Mohm @50Vdc all electrical connection to case

PRESSURE CONNECTION

1/4" BSP male (others on request)

ELECTRICAL CONNECTION

Mating socket with screw terminal connections to DIN 43650 rated IP65.

DISCLAIMER : ESI Technology Ltd operates a policy of continuous product development. We reserve the right to change specification without prior notice. All products manufactured by ESI Technology Ltd are calibrated using precision calibration equipment with traceability to international standards.

