



# Lopress<sup>®</sup> 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 while 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.

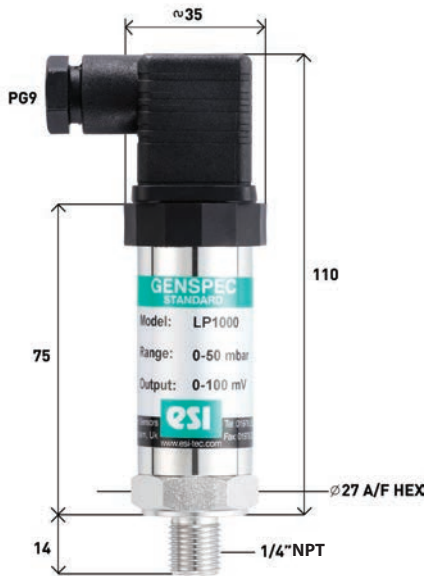
Applications include laboratory and test, air and gas pressure monitoring, leak detection, low pressure liquid and hydrostatic pressure measurements.



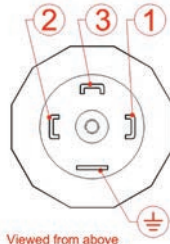
## PRESSURE RANGES LP1000

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

## DIMENSIONS (in mm)



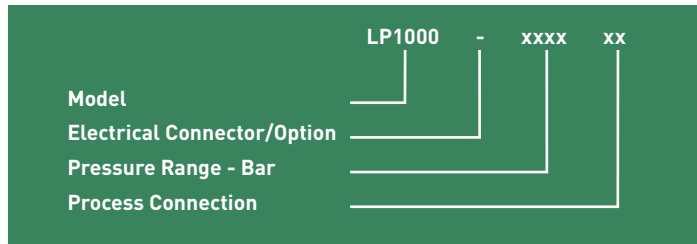
ELECTRICAL CONNECTION (mA)	
Pin No.	2 wire
1	+supply
2	4-20mA signal
3	not fitted to case



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 (0-1.4 psi)  
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 500bar to 1000mbar

### OUTPUT SIGNAL

0-100mV [nominal] (4 wire non-amplified)  
Zero offset:  $\pm 1$ 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  $\pm 0.08$ mA

### ZERO OFFSET AND SPAN TOLERANCE

$\pm 0.08$ 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:  $-20^\circ\text{C}$  to  $+85^\circ\text{C}$  ( $-4^\circ\text{F}$  to  $+185^\circ\text{F}$ )  
Storage:  $+5^\circ\text{C}$  to  $+40^\circ\text{C}$  ( $41^\circ\text{F}$  to  $+104^\circ\text{F}$ )

### INSULATION RESISTANCE

100Mohm @50Vdc all electrical connection to case

### PRESSURE CONNECTION

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

### ELECTRICAL CONNECTION

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

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

