



Lopres LP1000 Series

Low Pressure Transmitter



- Piezoresistive sensor technology for high performance
- Low pressure measurement from 50mbar
- Robust stainless steel construction for durability
- Low hysteresis and excellent long term stability
- Wide operating temperature
- On-site zero and span adjustment

DESCRIPTION

LP1000 series transmitters are designed for 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 combination of stainless steel housing, nitrile O-ring and stainless steel sensing element means that the LP1000 is suitable for use with most liquids in pressure ranges 0-100mbar and above. For pressure ranges below 100mbar, the stainless steel sensing element is replaced with a silicon sensor making it ideal for use with non-corrosive gases and various liquids compatible with silicon. The design enables the product to maintain accurate performance and excellent durability. Available in pressure ranges from 0-50mbar to 0-500mbar 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.

DIMENSIONS (in mm)

Viewed from above
with socket removed.

ELECTRICAL CONNECTION (mA)

Pin. No.	2 wire
1	+ supply
2	4-20 mA signal
3	N/C
⏚	to case

ELECTRICAL CONNECTION (V)

Pin. No.	4 wire	3 wire
1	- supply	common
2	+ supply	+ supply
3	+ output	+ output
⏚	- output	to case



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TECHNICAL DATA

Type:	LP1000	LP1001/LP1011	LP1002/ LP1012	LP1003
Output signal:	10 mV/V typical (4 wire)	0-5 V (3 or 4 wire)	0-10 V (3 or 4 wire)	4-20 mA (2 wire)
Supply Voltage:	10 VDC	13-30 VDC	13-30 VDC	10-36 VDC
Pressure Reference:	Gauge			
Protection of Supply Voltage:	Protected against supply voltage reversal up to 50 V (amplified versions)			
Standard Pressure Ranges:	0-50 mbar; 0-100 mbar; 0-250 mbar; 0-500 mbar (other ranges available)			
Overpressure Safety:	4 x for ranges 50 mbar to 250 mbar; 3x for 500 mbar range			
Load Driving Capability:	4-20 mA: $R_L < [U_B - 13 V] / 20 \text{ mA}$ (e.g. with supply voltage (U_B) of 36V, max. load (R_L) is 1150 Ω) 10 mV/V: n/a 0-5 V: max. load $R_L > 5 \text{ K}\Omega$ 0-10 V: max. load $R_L > 10 \text{ K}\Omega$			
Accuracy NLHR:	$\pm 0.50\%$ FS typical max. BFSL			
Zero Offset and Span Tolerance:	$\pm 0.5\%$ FS at room temperature (LP1000: $\pm 1 \text{ mV}$) $\pm 5\%$ FS (approx.) adjustment with easy access trimming potentiometers on amplified versions only			
Operating Media Temperature:	-20°C to +85°C			
Operating Media Temperature:	-20°C to +85°C			
Storage Temperature:	+5°C to +40°C (recommended best practice)			
Temperature Effects:	$\pm 3.0\%$ FS total error band for -20°C to +70°C. Typical thermal zero and span coefficients $\pm 0.05\%$ FS/ °C			
Electromagnetic Capability:	Emissions: EN61000-6-4 Immunity: EN61000-6-2 Certification: CE Marked			
Insulation Resistance:	> 100 M Ω @ 50 VDC			
Wetted Parts:	<100mbar: SAE 316 stainless steel, Nitrile O-ring and silicon		>100mbar SAE 316 stainless steel and Nitrile O-ring	
Pressure Media:	Non-corrosive, non-ionic fluids, such as air and dry gases			
Pressure Connection:	1/4"BSP male (other options available)			
Electrical Connection:	Mating socket EN175301-803 Form A (ex DIN43650), a screw terminal connector rated IP65 with PG9 cable entry (other options available)			

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.

ORDER MATRIX

Output		Wires	Type	Electrical Connector	Pressure Range	Process Connection			
10 mV/V	Model 100 mbar and above	4	LP1000						
	Model below 100 mbar	4	LP1100						
0-5 V	Model 100 mbar and above	4	LP1001						
	Model below 100 mbar	4	LP1101						
	Model 100 mbar and above	3	LP1011						
	Model below 100 mbar	3	LP1111						
0-10 V	Model 100 mbar and above	4	LP1002						
	Model below 100 mbar	4	LP1102						
	Model 100 mbar and above	3	LP1012						
	Model below 100 mbar	3	LP1112						
4-20 mA	Model 100 mbar and above	2	LP1003						
	Model below 100 mbar	2	LP1103						
Electrical Connection / Option									
DIN EN175301 plug and socket							-		
Cable outlet 1m screened							A		
M12 connector							B		
Cable outlet 1m screened IP67 protection				C					
Pressure Range in bar									
0-50 mbar					0050				
0-100 mbar					0100				
0-250 mbar					0250				
0-500 mbar					0500				
Process Connection									
1/4" BSP male						AB			
1/2" BSP male						AC			
1/4" NPT male						AM			
1/2" NPT male						AN			

Order Number Example

LP1003-0050AC

For options not listed please contact sales team.



LP1003