Lopres® LP1000

Low Pressure Transmitter

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

RoHS 2011/65/EU

CE

Vers. 20/1/Eng

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Description

LP1000 series now extends the pressure sensor technology into very low-pressure applications, with operating ranges down to 0-50 mbar 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 0-50 mbar to 0-1,000 mbar and with electrical outputs of
0-100 mV, 0-5 Vdc, 0-10 Vdc and 4-20 mA.

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

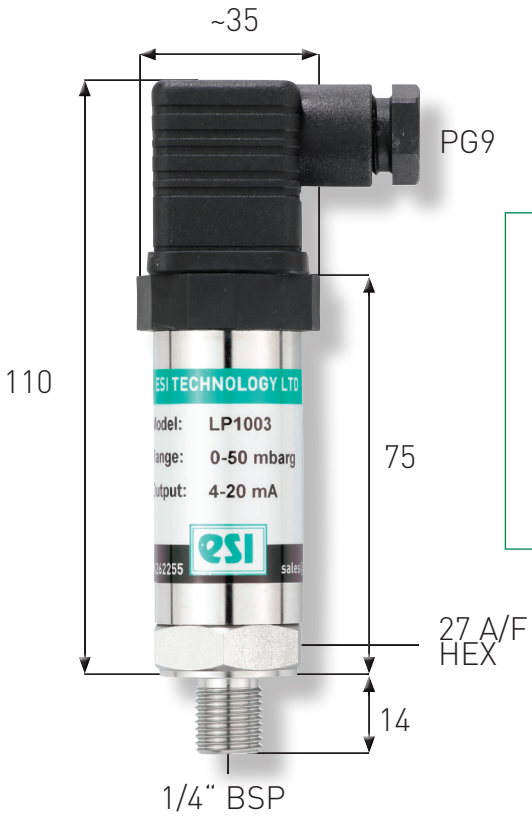
Dimensions
(in mm)

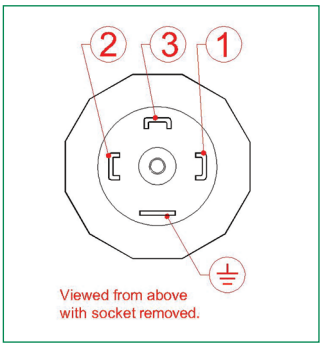
ELECTRICAL CONNECTION (mA)

Pin No.	2 wire
1	+supply
2	4-20mA signal
3	not fitted
⏚	to case

ELECTRICAL CONNECTION (Vdc)

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





Technical Data

Type	LP1000	LP10x1	LP10x2	LP1003
Sensor Technology:	Piezoresistive Silicon or Isolated Piezoresistive Silicon			
Output Signal:	10 mV/V typical (4 wire)	0 – 5 V (4 or 3 wire)	0 – 10 V (4 or 3 wire)	4 – 20 mA (2 wire)
Supply Voltage:	10 VDC	13 – 30 VDC	13 – 30 VDC	13 – 36 VDC
Pressure Reference:	Gauge or Absolute (limited ranges)			
Protection of Supply Voltage:	Protected against supply voltage reversal up to 50 V (amplified versions)			
Standard Pressure Ranges (bar):	0 – 50 mbar; 0 – 100 mbar; 0 – 250 mbar; 0 – 500 mbar; 0 – 1,000 mbar (other ranges available); Absolute ranges from 0-500 mbar			
Standard Pressure Ranges (psi):	0-0.75 psi; 0-1.5 psi; 0-3 psi; 0-4 psi; 0-5 psi; 0-6 psi; 0-7.5 psi; 0-10 psi; 0-15 psi (other ranges available)			
Overpressure Safety:	4x for ranges 50 mbar to 250 mbar; 3x for ranges 500 mbar to 1,000 mbar			
Load Driving Capability:	4 – 20 mA: RL < [UB - 13 V] / 20 mA; (e.g. with supply voltage (UB) of 36V, max. load (RL) is 1150 Ω; 10 mV/V: n/a; 0 – 5 V: max. load RL > 5 KΩ; 0 – 10 V: max. load RL > 10 KΩ			
Accuracy NLHR:	≤ ±0.5 % of span BFSL			
Zero Offset and Span Tolerance:	±0.5 %FS at room temperature (LP1000: ±1 mV); ±5 %FS (approx.) adjustment with easy access trimming potentiometers on amplified versions only			
Operating Ambient Temperature:	-20 °C to +85 °C (-4 °F to +185 °F)			
Operating Media Temperature:	-20 °C to +85 °C (-4 °F to +185 °F)			
Storage Temperature:	+5 °C to +40 °C (+41 °F to +104°F) Recommended Best Practice			
Temperature Effects:	±3.0 %FS total error band for -20 °C to +70 °C. Typical thermal zero and span coefficients ±0.05 %FS/ °C			
Electromagnetic Compatibility:	Emissions: EN61000-6-3; Immunity: EN61000-6-2; Certification: CE Marked			
Insulation Resistance:	> 100 MΩ @ 50 VDC			
Response time 10-90 %:	1 mS			
Wetted Parts:	≥100mbar: SAE 316 stainless steel and Nitrile NBR O-ring; <100mbar: SAE 316 stainless steel, Nitrile NBR O-ring, silicon diaphragm, glass filled polyamide			
Pressure Media:	≥100mbar: All fluids compatible with SAE 316 stainless steel and Nitrile NBR; <100mbar: Non-corrosive, non-ionic fluids, air & dry gases			
Pressure Connection:	1/4" BSP male (G1/4); 1/4" NPT male; 1/2" BSP male (G1/2); 1/2" NPT male (other options available)			
Electrical Connection:	Mating socket EN175301-803 Form A (ex DIN43650) rated IP65 with PG9 cable entry (other options available)			
Net. Weight (Kg):	0.3 Kg			

Order Matrix

Output	Wires	Type	Electrical Connection	Pressure Range	Process Connection
10 mV/V	4	LP1000			
0-5 V	4	LP1001			
	3	LP1011			
0-10 V	4	LP1002			
	3	LP1012			
4-20 mA	2	LP1003			

Electrical Connection	
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 (Gauge only)	0050
0-100 mbar (Gauge only)	0100
0-250 mbar (Gauge only)	0250
0-500 mbar	0500
0-500 mbar Absolute	500A

Process Connection	
1/4" BSP male (G1/4)	AB
1/2" BSP male (G1/2)	AC
1/4" NPT male	AM
1/2" NPT male	AN

Order Number Example	LP1003-0050AC

For options not listed please contact the sales team