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LOPRES® LP1000

Low Pressure Transmitter

- Low pressure measurement from 0-50 mbar
- Robust stainless steel construction for durability and reliability
- Low hysteresis and excellent long-term stability
- Ideal for low pressure fluid and gas applications
- Adjustable zero and span access



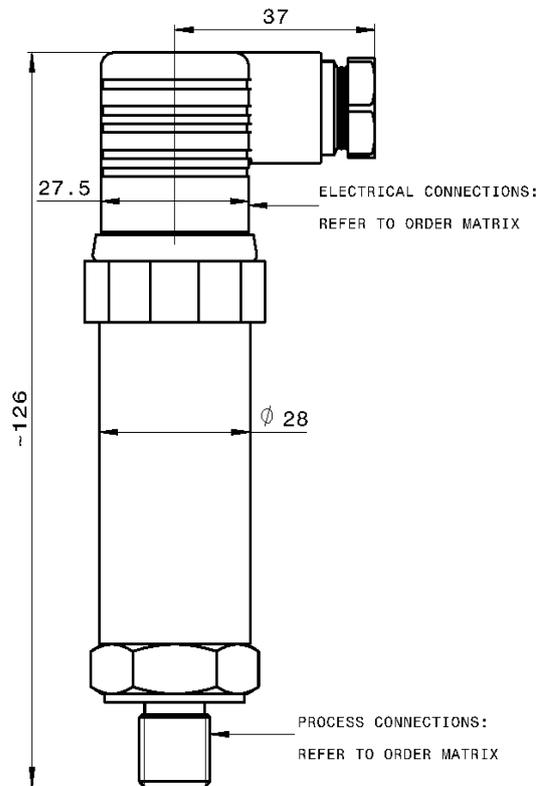
Specifications

The **LOPRES LP1000 series** now extends pressure sensor technology into very low-pressure applications, with operating ranges down to 0-50 mbar whilst still maintaining high performance. Offering a low cost solution for accurate measurement at low pressures, the LP1000 is designed for use with a wide variety of liquids and gases compatible with 316L stainless steel and nitrile (NPR).

Typical applications include:

- Laboratory and test
- Air & gas pressure monitoring
- Leak detection
- Low pressure liquid & hydrostatic pressure measurement

Dimensions (in mm)



Electrical Connections

Pin No.	DIN Connection		
	2 wire	3 wire	4 wire
1	+supply	common	-supply
2	4-20mA	+supply	+supply
3	N/C	+output	+output
⊥	to case	to case	-output

Pin No.	M12 Connection		
	2 pin	3 pin	4 pin
1	+supply	-supply	-supply
2	N/C	+supply	+supply
3	4-20mA	+output	+output
4	N/C	N/C	-output

Technical Data

Type	LP1000	LP1001/LP1011	LP1002/LP1012	LP1003
Sensor Technology	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 range)			
Protection of Supply Voltage:	Protected against supply voltage reversal up to 50 V (amplified version)			
Standard Pressure Ranges (bar):	0-50 mbar; 0-100 mbar; 0-250 mbar; 0-500 mbar; 0-1000 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 psi; 0-15 psi; 0-15 psi (other ranges available)			
Overpressure Safety:	4x ranges for 50 mbar to 250 mbar; 3x for ranges 500 mbar to 1000 mbar			
Load Driving Capability:	4-20 mA: $RL < [UB - 13V] / 20 \text{ mA}$ (e.g. with supply voltage (UB) of 36V, max. load (RL) is 1150Ω); 10mV/V: n/a; 0-5V: max. load $RL > 5K\Omega$; 10 V: max. load $RL > 10K\Omega$			
Accuracy NLHR:	$\leq \pm 0.5 \%$ of span 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 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)			
Temperature Effects:	$\pm 3\%$ FS total error band for -20°C to +70°C. Typical thermal zero and span coefficients $\pm 0.05 \%$ FS/°C			
Storage Temperature:	+5°C to +40°C (+41°F to +104°F) recommended Best Practice			
Electromagnetic Compatibility:	Emissions: BS EN 61000-6-3: Immunity: BS EN 61000-6-2: Certification: CE/UKCA Marked			
Insulation Resistance:	$> 100M\Omega @ 50 \text{ vdc}$			
Response time 10-90%:	1 mS			
Wetted Parts:	SAE 316 stainless steel and Nitrile NBR O-ring			
Pressure Media:	All fluids compatible with SAE 316 stainless steel and Nitrile NBR			
Pressure Connection:	1/4" BSP male (G1/4); 1/4" NPT male; 1/2" BSP (G1/2); 1/2" NPT male (other options available)			
Electrical Connection:	Mating micro DIN socket EN175301-803 Form A (ex DIN43650) rated IP65 with PG9 cable entry (other options available)			
Net. wight (Kg):	0.3Kg			

Order Matrix

Output	Wires	Type	Electrical Connection/Options	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 (IP65)			-		
Cable outlet 1m screened (IP65)			A		
M12 connector (IP67 when mated with equivalent 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	
0-1000 mbar				1000	
0-1000 mbar Absolute				01KA	
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

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, traceable to national measurement standards.