



bar

## ALP1000 Low pressure transmitter

### OVERVIEW

The ALP1000 series now extends 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.

Offering a low cost solution for accurate measurement at low pressures, the ALP1000 is designed for use with a wide variety of liquids and gases compatible with 316L stainless steel and nitrile (NBR). It features a robust stainless steel housing offering reliable performance in demanding applications and is available with a wide selection of process and electrical connections options. 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. Zero and span potentiometers are accessible for fine adjustment of calibration if required.



### BENEFITS

- Piezoresistive silicon sensor technology for high performance
- 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

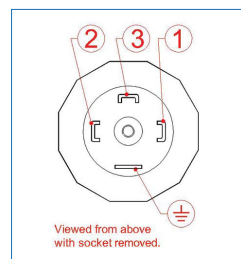
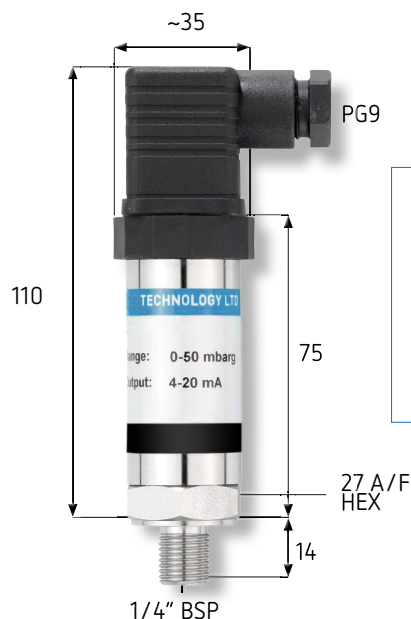
### APPLICATIONS

- Laboratory and test
- Air and gas pressure monitoring
- Leak detection
- Low pressure liquid
- 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	ALP1000	ALP10x1	ALP10x2	ALP1003
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 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 50 mbar to 1,000 mbar			
Load Driving Capability:	4 – 20 mA: RL < [UB - 13 V] / 20 mA x 10 <sup>-3</sup> ; (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:	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 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	ALP1000			
0-5 V	4	ALP1001			
	3	ALP1011			
0-10 V	4	ALP1002			
	3	ALP1012			
4-20 mA	2	ALP1003			
<b>Electrical Connection</b>					
DIN EN175301 plug and socket			-		
Cable outlet 1m screened			A		
M12 connector			B		
Cable outlet 1m screened IP67 protection			C		
<b>Pressure Range in bar</b>					
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	
<b>Process Connection</b>					
1/4" BSP male (G1/4)					AB
1/2" BSP male (G1/2)					AC
1/4" NPT male					AM
1/2" NPT male					AN
<b>Order Number Example</b>		ALP1003-0050AC			

For options not listed please contact the sales team