PLO Series

Precision very low pressure sensors / mV-output

FEATURES

- **Ranges from 0.5 to 30 inch H_2O gage or differential**
- **Precision temperature compensated**
- **Calibrated offset and span**
- **Extremely low position sensitivity**
- **Excellent long term stability**

MEDIA COMPATIBILITY

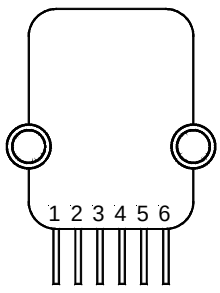
To be used with non-corrosive, non-ionic working fluids such as clean dry air, dry gases and the like.

SPECIFICATIONS

Maximum ratings

Supply voltage V_S	16 V_{DC}
Lead temperature (soldering 2-4 sec.)	270 °C
Temperature ranges	
Compensated	0...50 (70) °C
Operating	-25...85 °C
Storage	-40...125 °C
Humidity limits (non-condensing)	0...95 % RH
Common mode pressure	10 psig

ELECTRICAL CONNECTION



Bottom view

Pin 1: N/C
Pin 2: +Vs
Pin 3: +Vout
Pin 4: -Vs
Pin 5: -Vout
Pin 6: N/C

Note:
The polarity indicated is for pressure applied to port B.

PRESSURE SENSOR CHARACTERISTICS[1]

Part no.	Operating pressure	Proof pressure[2]	Burst pressure[3]
PLOH0x5D	0 ... 0.5 "H_2O	0 ... 100 "H_2O	0 ... 200 "H_2O
PLOH001D	0 ... 1 "H_2O	0 ... 100 "H_2O	0 ... 200 "H_2O
PLOH002D	0 ... 2 "H_2O	0 ... 100 "H_2O	0 ... 200 "H_2O
PLOH005D	0 ... 5 "H_2O	0 ... 200 "H_2O	0 ... 300 "H_2O
PLOH010D	0 ... 10 "H_2O	0 ... 200 "H_2O	0 ... 300 "H_2O
PLOH020D	0 ... 20 "H_2O	0 ... 200 "H_2O	0 ... 500 "H_2O
PLOH030D	0 ... 30 "H_2O	0 ... 200 "H_2O	0 ... 800 "H_2O

PERFORMANCE CHARACTERISTICS[1]

PLOH0x5D

Characteristics		Min.	Typ.	Max.	Unit
Zero pressure offset				±0.5	mV
Full scale span (FSS)[4]		9.0	10.0	11.0	
Combined non-linearity and hysteresis[5]			±0.05	±0.25	%FS
Temperature effects (0...50 °C)[6]	Offset Span			±250 ±200	µV
Offset warm-up shift[7]			±100		
Offset position sensitivity (±1 g)			±5		
Offset long term stability (one year)			±200		
Input resistance			4.5		kΩ
Output resistance			1.5		
Response time[8]			100		µsec

PLOH001D, PLOH002D

Characteristics		Min.	Typ.	Max.	Unit
Zero pressure offset				±0.5	mV
Full scale span (FSS)[4]		9.0	10.0	11.0	
Combined non-linearity and hysteresis[5]			±0.05	±0.25	%FS
Temperature effects (0...50 °C)[6]	Offset Span			±250 ±200	µV
Offset warm-up shift[7]			±100		
Offset position sensitivity (±1 g)			±50		
Offset long term stability (one year)			±200		
Input resistance			4.5		kΩ
Output resistance			1.5		
Response time[8]			100		µsec

PERFORMANCE CHARACTERISTICS[1] (cont.)

PLOH005D

Characteristics		Min.	Typ.	Max.	Unit
Zero pressure offset				±0.5	mV
Full scale span (FSS)[4]		19.0	20.0	21.0	
Combined non-linearity and hysteresis[5]			±0.05	±0.25	%FS
Temperature effects (0...50 °C)[6]	Offset Span			±150 ±200	µV
Offset warm-up shift[7]			±50		
Offset position sensitivity (±1 g)			±10		
Offset long term stability (one year)			±100		
Input resistance			4.5		kΩ
Output resistance			1.5		
Response time[8]			100		µsec

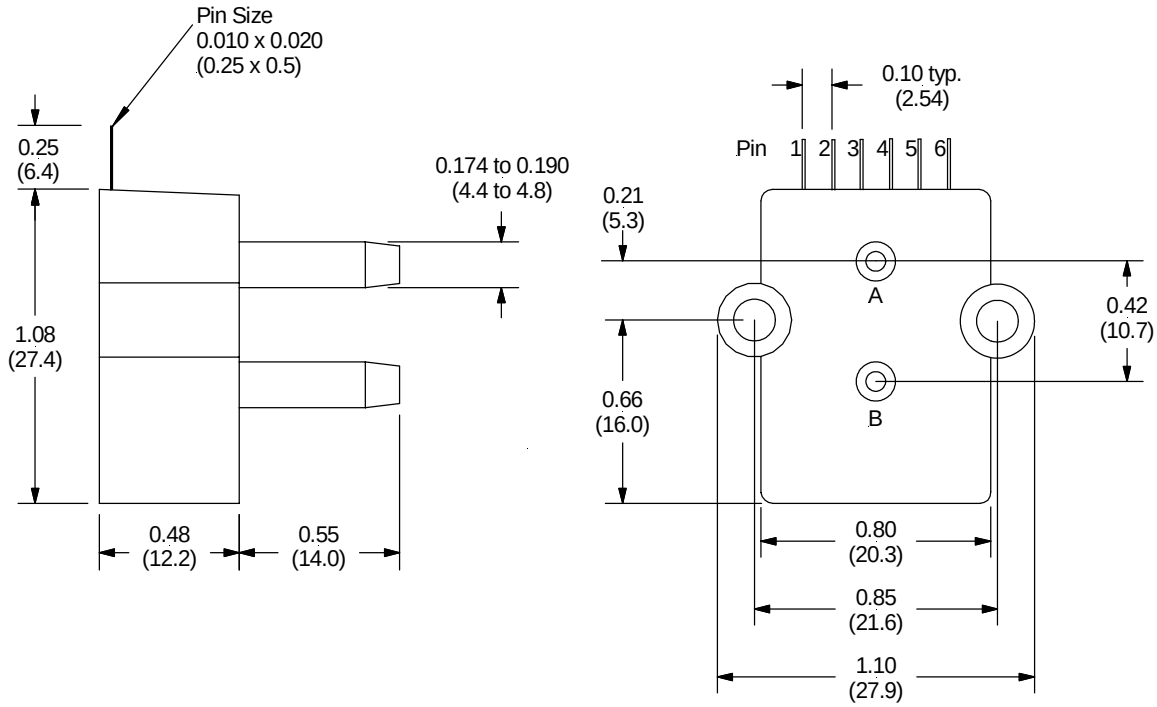
PLOH010D, PLOH020D, PLOH030D

Characteristics		Min.	Typ.	Max.	Unit
Zero pressure offset				±0.5	mV
Full scale span (FSS)[4]		19.0	20.0	21.0	
Combined non-linearity and hysteresis[5]			±0.05	±0.25	%FS
Temperature effects (0...70 °C)[6]	Offset Span			±150 ±200	µV
Offset warm-up shift[7]			±50		
Offset position sensitivity (±1 g)			±5		
Offset long term stability (one year)			±100		
Input resistance			4.5		kΩ
Output resistance			1.5		
Response time[8]			100		µsec

Specification notes:

1. Reference conditions: supply voltage V_S = 12 V, T_A = 25°C, common-mode pressure 0, positive pressure applied to port B.
2. Proof pressure is the maximum pressure which may be applied without causing durable shifts of the electrical parameters of the sensing element.
3. Burst pressure is the maximum pressure which may be applied without causing damage to the sensing element or leading to leaks of the housing.
4. Full scale span is the algebraic difference between the output voltage at full-scale pressure at the output at zero pressure. The span is ratiometric to the supply voltage.
5. Non-linearity refers to the **B**est **S**traight **L**ine fit measured for offset pressure, full-scale pressure and ½ full-scale pressure.
6. Shifts relative to 25°C.
7. Shifts within the first hour of excitation applied to the sensor.
8. Response time for a 0 bar to full-scale span pressure step change, 10 % to 90 % rise time.

PHYSICAL DIMENSIONS



dimensions in inches (mm)