

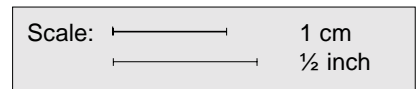
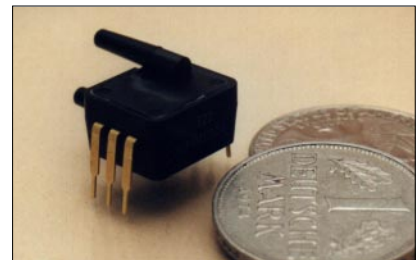
FEATURES

- 0...10 "H₂O
- Accurate low pressure readings
- Low cost
- High impedance bridge
- Low noise
- Low power consumption for battery operation

GENERAL DESCRIPTION

The SXL010D pressure sensor provides lowest cost components for measuring very low pressures. These devices were specifically designed to accurately measure differential and gage pressures of 0 to 10 "H₂O. They are compatible for use with non-corrosive and non-ionic media, such as air and dry gases.

These differential devices allow application of pressure to either side of the diaphragm and can be used for gage or differential pressure measurements.



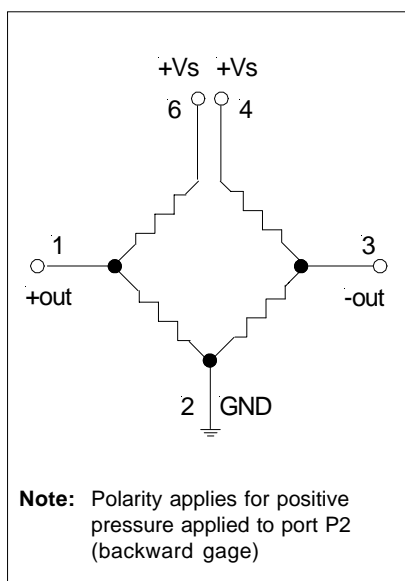
APPLICATIONS

- Medical instrumentation
- Portable and battery powered equipment
- Air flow monitoring
- HVAC
- Industrial controls

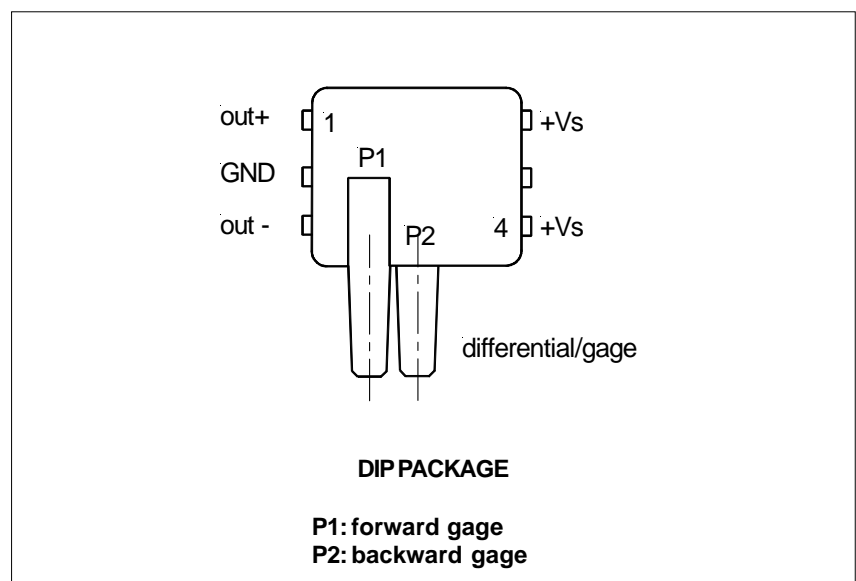
ABSOLUTE MAXIMUM RATINGS

Supply voltage(V)	12 V _{DC}
Temperature range	
Operating	-40 to +85°C
Storage	-55 to +125°C
Proof-mode pressure ⁹	7 psi
Common mode pressure	50 psi
Lead temperature (soldering 4 sec.)	250°

EQUIVALENT CIRCUIT



ELECTRICAL CONNECTION



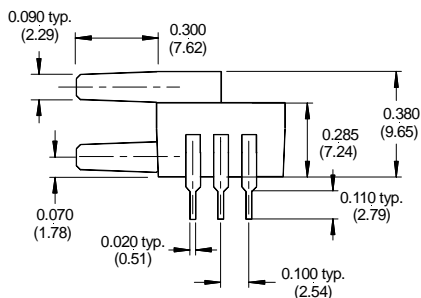
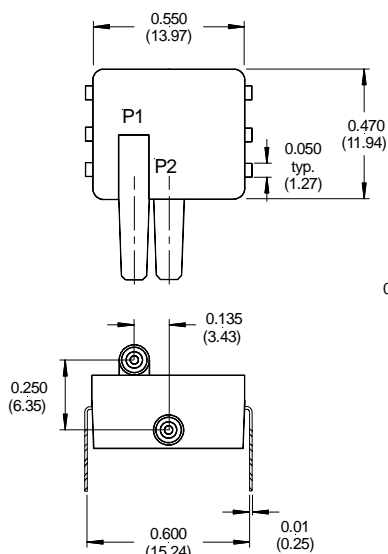
PERFORMANCE CHARACTERISTICS¹

Characteristics	Min.	Typ.	Max.	Unit
Operating pressure			10	In. H ₂ O
Sensitivity T _A =25°C	0.40	0.65	1.60	mV/V/in.H ₂ O
Full-scale span 10 "H ₂ O ²	20.0	32.5	80.0	mV
Temperature coefficient of span ^{5,8}		-2300		ppm/°C
Zero pressure offset T _A =25°C	-20	10	+35	mV
Temperature coefficient of offset ⁵		±4		µV/V/°C
Combined linearity and hysteresis ³		0.2	±1.0	%FS
Long term stability of offset and sensitivity ⁷		±0.1		mV
Response time (10 to 90 %) ⁶		100		µs
Input resistance T _A = 25°C		4.0		kΩ
Temperature coefficient of resistance ^{5,8}		+750		ppm/°C
Output impedance	3.0	4.2	6.0	kΩ
Repeatability ⁴		0.5		%FS
Position sensitivity		2		µV/V/g

Specification notes:

- Reference conditions: supply voltage, V_S = 5 V_{DC}, T_A = 25°C, common-mode line pressure = 0 psig, pressure applied to P2.
- Span is the algebraic difference between the output voltage at full scale pressure and the output at zero pressure.
- See Definition of Terms: *Hysteresis* - the maximum output difference at any point within the operating pressure range for increasing and decreasing pressure. *Linearity* - the maximum deviation of measure output of constant temperature (25°C) from "Best Straight Line" determined by three points, offset, full scale pressure and half full scale pressure.
- Maximum difference in output at any pressure with the operating pressure range an temperature within 0 to +70°C after:
 - 100 temperature cycles, 0 to 70°C
 - 1.0 million pressure cycles, 0 psi to full-scale span
- Slope of the best straight line from 0 to 70°C. For operation outside this temperature, contact factory for more specific application information.
- Response time for a 0 psi to full-scale span pressure step change. 10 to 90 % rise time.
- Long term stability over a one year period.
- This parameter is is not 100 % tested. It is guaranteed by process design and tested on a sample basis only.
- If max. proof pressure is exceeded, even momentarily, the package may leak or burst, or the pressure sensing die may fracture.

PHYSICAL DIMENSIONS



mass: 1 g

dimensions in inches (mm)

ORDERING INFORMATION

pressure range	DIP package, dual ported
0 to 10 "H ₂ O	SXL010DD4

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