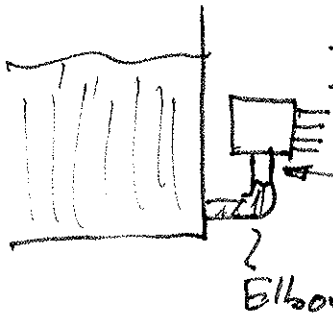


$$mV_{output} = \frac{Head''}{27.7} \times 42 \times SG_{Liquid}$$

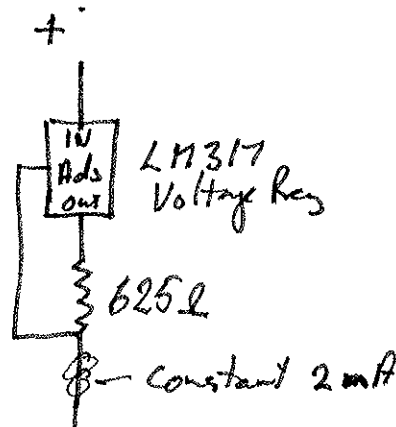
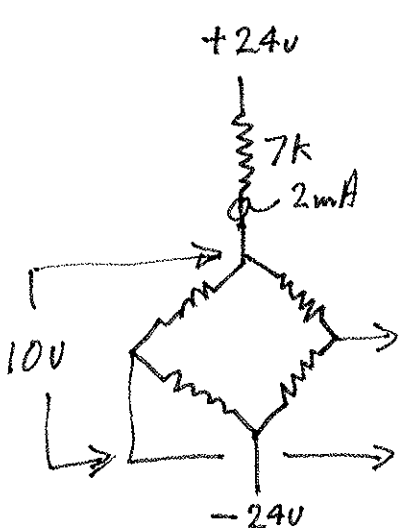
↑
(for 1 psi cell)

22 PC for open top
24 PC for closed top (differential)



I don't think the oil will hurt the cell
otherwise this might work.
Air Trapped to prevent
oil entering cell.

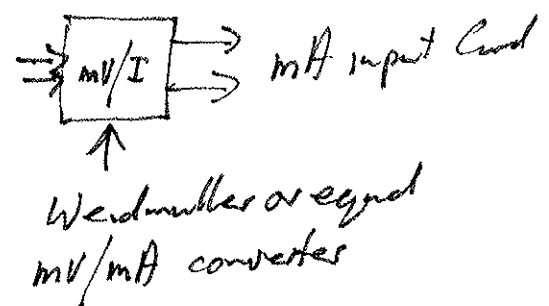
Excitation options



PLC

→ Mv Input card

OR





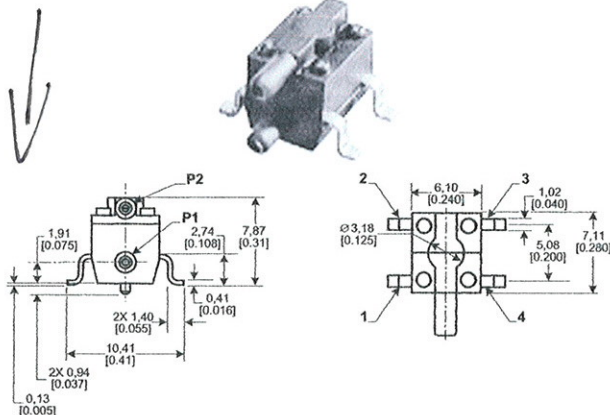
22PC SERIES PRESSURE SENSORS GAGE/UNAMPLIFIED-NONCOMPENSATED

FEATURES: Lowest prices pressure sensor. Miniature package. Can be used to measure with vacuum or positive pressure. Operable after exposure to frozen conditions. 2 mA constant current excitation significantly reduces sensitivity shift over temperature. Type of seal: fluorosilicone excitation voltage: 10VDC (12VDC max.). Operating temperature: -40°C to +100°C (-40°F to +185°F).

Cat. No.	Pressure Range psi	Sensitivity psi	Type of Port	Overpressure Psi, Max.	Net Price
22PCAFA6G	1.0	42mV	Straight	20	\$13.39
22PCAFJ2G	1.0	42mV	Needle	20	13.39
22PCCFA6D	15	15	Straight	45	13.39
22PCCFB6G	15	15	Barbed	45	13.39

Open Tank

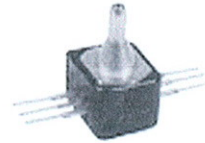
Closed Tank



24PC SMT AND 26PC SMT SERIES MICROSTRUCTURE PRESSURE SENSORS

FEATURES: Alignment pins for position accuracy. Small package size (less than one half the size of the 24PC and 26PC) and compact surface mount profile. 3, 18 mm (0.125 in) diameter pick-up feature for use in pick and place machines. Max peak reflow temperature of 260°C (500°F). Gage, vacuum gage, differential, wet/wet differential sensing available in one package. True wet/wet differential sensing. Proven elastomeric interconnections of the 20PC family. Port style: straight, 1.88 mm (0.74 in). Temperature compensated from 0°C to 50°C (32°F to 122°F) (26PC SMT only). Null and full-scale output are calibrated (26PC SMT only). Sensor consists of only five components. Elastomer construction. Wide operating temperature range -40°C to 85°C (-40°F to 185°F). Recommended excitation voltage: 10VDC (10VDC max.). **APPLICATIONS:** Blood glucose monitors. Oxygen conservers. Infusion pumps. Ventilators. Continuous positive airway pressure equipment. Residential fuel cells.

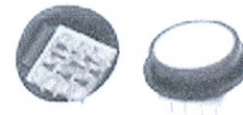
Cat. No.	Pressure Range	Net Price
24PC SMT		
24PC01SMT	0-1 psi	\$10.91
24PC05SMT	0-5 psi	10.91
24PC15SMT	0-15 psi	10.91
26PC SMT		
26PC01SMT	0-1 psi	10.91
26PC05SMT	0-5 psi	10.91
26PC15SMT	0-15 psi	10.91



40PC SERIES PRESSURE SENSORS MINIATURE SIGNAL CONDITIONED

FEATURES: Small amplified sensor package. Minimum PCB space. Fully signal conditioned. Silicon piezoresistive technology. Monolithic design. 6 pin DIP package. Port designed for O-ring interface. Excellent media compatibility. Accuracy of 0.2%. Supply voltage: 5VDC ±0.25. Supply current: 10mA max. Operating temperature: -45°C to +125°C (-49°F to +257°F).

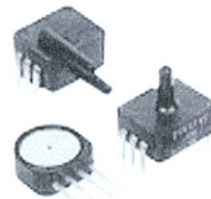
Cat. No.	Pressure Range psi	Pressure Type	Lead Style	Net Price
40PC001B1A	±50 mm Hg	Bi-directional	1-unformed	\$44.20
40PC015G1A	0-15	Gage	1-unformed	44.20
40PC100G1A	0-100	Gage	1-unformed	44.20
40PC150G1A	0-150	Gage	1-unformed	44.20



1865 SERIES FORCE/PRESSURE TRANSDUCER

The model 1865 is a high-performance transducer specifically designed to address the needs of medical and specialized OEM applications. Offering laser-trimmed compensation, the model 1865 may be specified to operate with either a constant current or voltage supply. Employs a solid state piezoresistive pressure transducer mounted in a plastic package. Precision height silicone diaphragm provides long life. **FEATURES:** Force measurement for infusion pump applications. Pressure measurement for liquid media. 8-pin DIP electrical connection. Ambient temperature: 27°C ± 1°C (80°F ± 2°F). Dimensions: .675" L x .300" H. **APPLICATIONS:** Infusion pumps. Anesthesia monitors. Non-corrosive, non-pressurized media-level sensors. Ventilation systems. Blood pressure equipment. Syringe pumps. Drug delivery systems.

Cat. No.	Pressure range	Pressure Type	Net Price
1865-01G-LDN	0-5 psi	1.5mA	\$170.00
1865-02G-LDN	0-10 psi	1.5mA	170.00
1865-03G-LDN	0-15 psi	1.5mA	170.00
1865-05G-LDN	0-25 psi	1.5mA	170.00
1865-07G-LDN	0-30 psi	1.5mA	170.00
1865-01G-KDN	0-5 psi	10 VDC	170.00
1865-02G-KDN	0-10 psi	10 VDC	170.00
1865-03G-KDN	0-15 psi	10 VDC	170.00
1865-05G-KDN	0-25 psi	10 VDC	170.00
1865-07G-KDN	0-30 psi	10 VDC	170.00



SLP SERIES LOW PRESSURE SENSOR

The SLP series of pressure sensors provides the lowest cost components for measuring very low pressures. These low pressure range devices were specifically designed to accurately measure differential and gage pressures of 0 inches to four inches of H₂O. They are meant for use with non-corrosive and non-ionic media, such as air, dry gases, and other like gases. These differential devices allow application of pressure to either side of the diaphragm and can be used for gage or differential pressure measurements. **FEATURES:** High impedance bridge. Low noise. Low power consumption for battery operation. Supply voltage: 7.5VDC. Operating temperature: 0°C to 50°C (32°F to 122°C).

Cat. No.	Pressure Range	Net Price
SENSOR IN BUTTON PACKAGE		
SLP004D	0 in H ₂ O to 4.0 in H ₂ O and 10.0 in H ₂ O	\$150.00
SENSOR IN DIP PACKAGE		
SLP004DD4	0 in H ₂ O to 4.0 in H ₂ O and 10.0 in H ₂ O	150.00

Pressure Sensors

Gage/Unamplified-Noncompensated

22PC Series

Basic Sensors



FEATURES

- Lowest priced pressure sensor
- Miniature package
- Can be used to measure with vacuum or positive pressure
- Operable after exposure to frozen conditions
- 2 mA constant current excitation significantly reduces sensitivity shift over temperature*

22PC SERIES PERFORMANCE CHARACTERISTICS at 10.0 ±0.01 VDC Excitation, 25°C

	Min.	Typ.	Max.	Units
Excitation	---	10	12	VDC
Null Shift, 25° to 0°, 25° to 50°C	---	±2.0	---	mV
Null Offset	-30	0	+30	mV
Linearity, P2 > P1, BFS	---	±0.25	±1.0	%Span
Span Shift, 25° to 0°, 25° to 50°C	---	±6.0	---	%Span
Repeatability & Hysteresis	---	±0.15	---	%Span
Response Time	---	---	1.0	msec
Input Resistance	4.0 K	5.0 K	6.0 K	ohms
Output Resistance	4.0 K	5.0 K	6.0 K	ohms
Weight	---	2	---	grams

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40° to +85°C (-40° to +185°F)
Storage Temperature	-55° to +100°C (-67° to +212°F)
Shock	Qualification tested to 150 g
Vibration	Qualification tested to 0 to 2 kHz, 20 g sine
Media (P1 & P2)	Limited only to those media which will not attack polyetherimide, silicon, fluorosilicone, silicone, EPDM, and neoprene seals

22PC SERIES ORDER GUIDE

Catalog Listing	Pressure Range psi	Span, mV			Sensitivity mV/psi Typ.	Overpressure psi, Max.
		Min.	Typ.	Max.		
22PCA Type	1.0	25	42	59	42	20
22PCC Type	15	156	225	294	15	45
22PCF Type	100	147	225	303	2.3	200

SENSOR SELECTION GUIDE

2 Product Family	2 Circuit Type	PC Pressure Transducer	A Pressure Range	F Type of Seal	A Type of Port	6 Termination Style	G Pressure Measurement
2 20PC Family	2 Noncompensated low cost		A 1 psi C 15 psi F 100 psi	E EPDM F Fluorosilicone N Neoprene S Silicone	A Straight B Barbed D Modular J Needle	2 2 x 2 6 1 x 4 (.600")	G Gage

Example: 22PCAFA6G

Non-compensated low cost 1 psi sensor with fluorosilicone seal, straight port, 1 x 4 termination and gage pressure measurement.

See Accessory Guide, page 27.

Note: Not all catalog listings are established. Please refer to the Order Guides, or contact the MICRO SWITCH Application Center at the 800 number.

*Non-compensated pressure sensors, excited by constant current instead of voltage, exhibit temperature compensation of Span. Application Note #1 briefly discusses current excitation.

Constant current excitation has an additional benefit of temperature measurement. When driven by a constant current source, a silicon pressure sensor's terminal voltage will rise with increased temperature. The rise in voltage not only compensates the Span, but is also an indication of die temperature.

Constant Current Excitation Schematic

