

Installation Instructions for 180PC Pressure Sensors

PK 88621

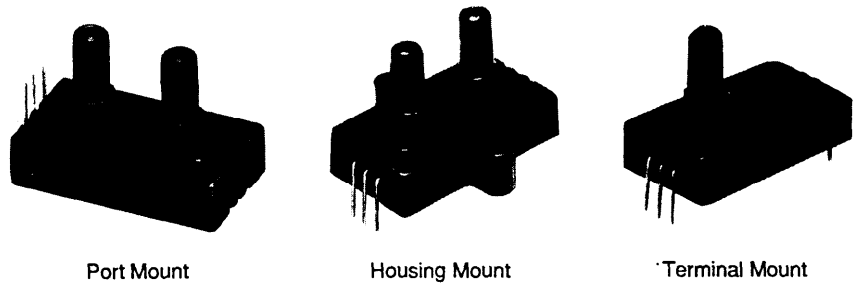
GENERAL INFORMATION

180PC pressure sensors provide output voltage proportional to pressure applied. They operate from a single, positive supply voltage ranging from 7 to 16 VDC. Signal conditioning results in directly usable outputs; temperature compensation results in predictable performance over specified temperature ranges.

MEASURAND COMPATIBILITY

P1 Port: Dry gasses only (active side of IC.)

P2 Port: Wetted materials are polyester, epoxy adhesive, and silicon bonded to borosilicate glass with an electrostatic bond.

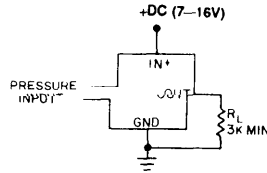


Port Mount

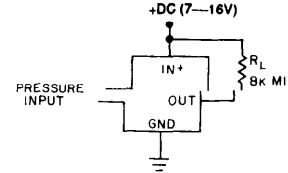
Housing Mount

Terminal Mount

ELECTRICAL AND PRESSURE CONNECTIONS



Current Source



Current Sink

Sensor Type Measurand Applied To:

Absolute (A)	P1 port only
Differential (D)	P1 and P2 ports
Gage (G)	P2 port only

SOLDERING

Limit soldering to 315°C (600°F) maximum, with 10 seconds maximum duration.

CLEANING

Proper cleaning fluids should be selected based on the type of contaminant to be removed. MICRO SWITCH recommends use of alcohols and fluorinated solvents.

MOUNTING

Terminal mount: Double sided tape between sensor and printed circuit board increases mounting strength in high vibration and mechanical shock conditions.

Housing mount: Null offset output will shift less than 25 mV (at 8 VDC supply) when mounting sensor with 4-40, 1/2 inch long fasteners torqued less than 75 inch ounces.

WARNING
Damage may result from reversal of supply and ground connections.

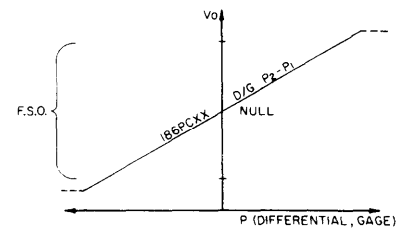
PRESSURE REFERENCE

Absolute pressure is measured with respect to a vacuum reference.

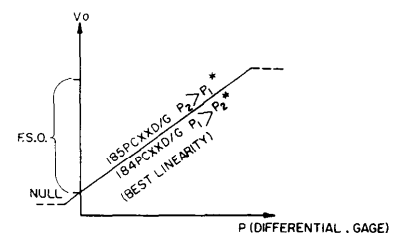
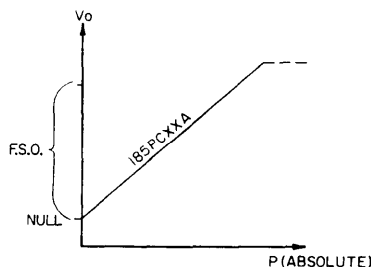
Differential pressure transducers apply P1 to the active (connection) side of the chip, and P2 to the passive side

Gage pressure is measured with respect to atmospheric (room) pressure reference.

PRESSURE REFERENCE (Differential, Gage)



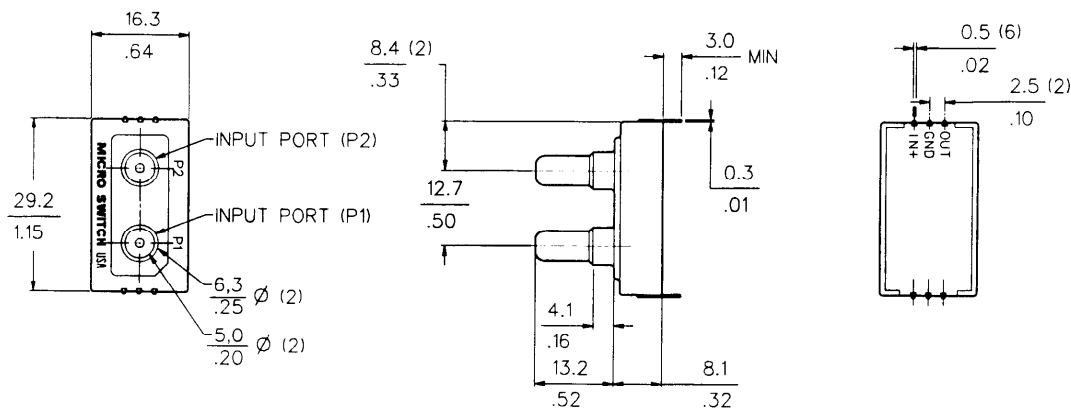
PRESSURE REFERENCE (Absolute)



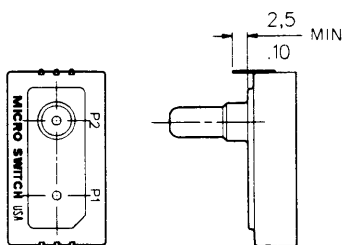
*Reversing the pressure relationship of 184PC or 185PC sensors will cause the output to saturate below null.

MOUNTING DIMENSIONS $0.0 = \text{mm}$
 $0.00 = \text{in.}$

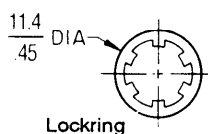
Terminal Mount



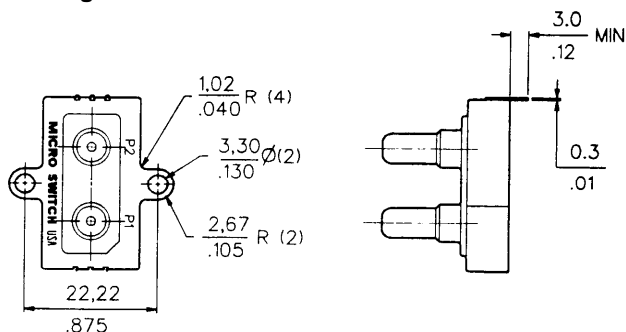
Port Mount



Mounting Hardware



Housing Mount



TYPICAL OUTPUT AT 8.00 ±0.01 VDC Excitation, 25°C

Parameter	184PC	185PC	186PC
Null Offset(V)	1.00	1.00	3.50
Output at Full Pressure (V)	---	6.00	6.00
Output at Full Vacuum (V)	6.00	---	1.00
F.S.O.* (V)	5.00	5.00	5.00

*Full Scale Output (the algebraic difference between output end points).

184/185/186PC PERFORMANCE LIMITATIONS

Parameter	Min.	Typ.	Max.
Supply Voltage (V)	7.0	8.0	16.00
Overpressure (psi)			
0-5 psi, ±5 psi			2.0
0-15 psi, ±15 psi			4.5
0-30 psi			6.0
Operating Temperature	-40°C		85°C
Storage Temperature	-55°C		125°C

WARRANTY/REMEDY

Seller warrants its products to be free from defects in design, material and workmanship under normal use and service. Seller will repair or replace without charge any such product it finds to be so defective on its return to Seller within 18 months after date of shipment by Seller. **The foregoing is in lieu of all other expressed or implied warranties (except of title), including those of merchantability and fitness for a particular purpose. The foregoing is also Purchaser's sole remedy and is in lieu of all other guarantees, obligations, or liabilities or any consequential, incidental, or punitive damages attributable to negligence or strict liability, all by way of example.**

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