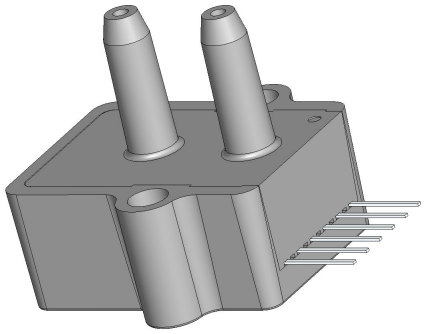
Additel Custom Millivolt Output Pressure Sensors



Customer Specific Features

- 30 Psig and 100 Psig Pressure Range
- Constructed using specific wafer per customer requirement
- Dual Die configuration
- Epoxy Sub construction
- Parylene Coated

Applications

- Additel Custom

General Description

The Millivolt Output pressure sensors is based upon a proprietary packaging technology to reduce output offset or common mode errors. This model provides a calibrated millivolt output with excellent output offset characteristics. In addition the sensor utilizes a silicon, micromachined, stress concentration enhanced structure to provide a very linear output to measured pressure.

These calibrated and temperature compensated sensors give an accurate and stable output over a wide temperature range. This series is intended for use with non-corrosive, non-ionic working fluids such as air, dry gases and the like. The PRIME grade is a high accuracy version of the millivolt output pressure sensors.

The output of the device is ratiometric to the supply voltage and operation from any D.C. supply voltage up to +16 V is acceptable.

Standard Pressure Ranges

Part Number	Operating Pressure	Nominal Span	Proof Pressure	Burst Pressure
30 PSI-D-PRIME-MV-P-ADT	0 - 30 PSI	90 mV	90 PSI	150 PSI
100 PSI-D-PRIME-MV-P-ADT	0 - 100 PSI	100 mV	200 PSI	250 PSI

Pressure Sensor Characteristics Maximum Ratings

Supply Voltage, Vs	16 Vdc
Common-mode pressure	50 psig
Lead Temperature (soldering 2-4 sec.)	250°C

Environmental Specifications

Temperature Ranges	
Compensated	0 to 70° C
Operating	-25 to 85° C
Storage	-40 to 125° C
Humidity Limits	0 to 95% RH (non condens-

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Performance Characteristics for Additel Custom Millivolt Pressure Sensors

All parameters are measured at **12.0 volt** excitation for the nominal full scale pressure and room temperature unless otherwise specified. Pressure measurements are with positive pressure applied to PORT B

Parameter [5]	Minimum	Nominal	Maximum	Units	Specification Notes
Output Span					
30 PSI-PRIME-MV-P-ADT	89.1	90.0	90.9	mV	3, 4
100 PSI-PRIME-MV-P-ADT	99.0	100.0	101.0	mV	3, 4
Offset Voltage @ zero differential pressure	-	-	±0.3	mV	-
Offset Temperature Shift (0°C - 70°C)	-	-	±250	µV	1
Linearity, Hysteresis error	-	0.15	0.3	%FSS	2, 3
Span Temperature Shift (0°C - 70°C)	-	-	±1.5	%FSS	1

Specification Notes

Note 1: Shift is relative to 25°C .

Note 2: Shift is within the first hour of excitation applied to the device.

Note 3: Measured at one-half full scale rated pressure using best straight line curve fit.

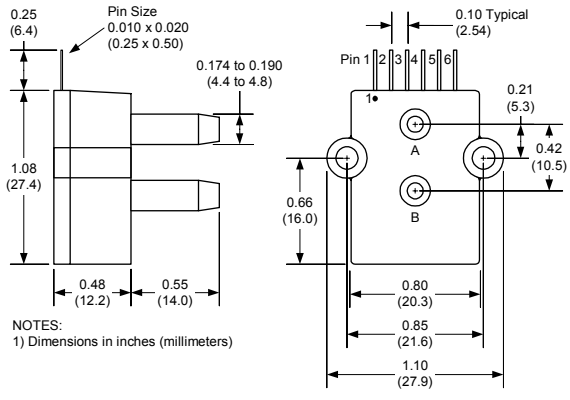
Note 4: The voltage added to the offset voltage at full scale pressure.

Note 5: Specific wafer used for part construction. See Table 1 for allowable wafer.

Table 1

Part Number	AllSensors Die	Wafer QUAL#	Cutoff Lot#	Datasheet Rev
30 PSI-D-PRIME-MV-P-ADT	AS02-01-006	10790A	Before R18D24-01	Obsoleted at Rev A
		12739B	After R18D24-01	Active at Rev B
100 PSI-D-PRIME-MV-P-ADT	AS02-01-010	12879A	Not Applicable	Active at Rev B

Physical Dimensions



Pinout (note 1)

pin 1: N/C

pin 2: +V supply

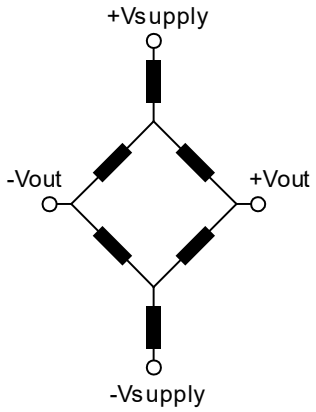
pin 3: +Voutput

pin 4: -Vsupply

pin 5: -Voutput

pin 6: N/C

Equivalent Circuit



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