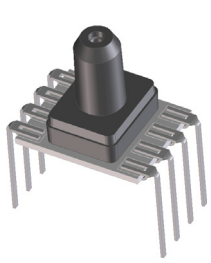
Baromtric Pressure Sensors Prime Grade



Features

- 600 to 1,100 mbar Pressure Range
- 0.10 % linearity...highest accuracy version
- Temperature Compensated
- Calibrated Zero and Span

Applications

- Medical Instrumentation
- Environmental Controls
- Weather Station
- Altimeters

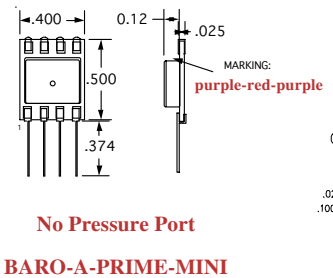
General Description

The Miniature series pressure sensors are based upon a proprietary technology to reduce the size of the sensor and yet maintain a high level of performance. This model provides a calibrated millivolt output with superior output characteristics. In addition the sensor utilizes a silicon, micromachined (MEMS) 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 the highest accuracy version of the millivolt output pressure sensors.

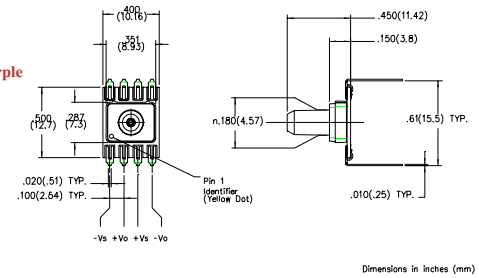
The output of the device is ratiometric to the supply voltage and operation from any D.C. supply voltage to 16 volts.

Physical Dimensions



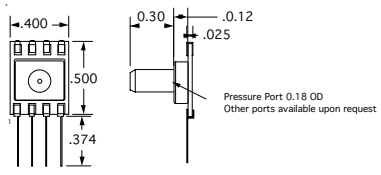
No Pressure Port

BARO-A-PRIME-MINI



Single Pressure Port Dual in Line

BARO-AF-PRIME-DIP



Single Pressure Port

BARO-AF-PRIME-MINI

A 16035 Vineyard Blvd. Morgan Hill, CA 95037 P 408 225 4314 F 408 225 2079 E www.allsensors.com

Pressure Sensor Characteristics Maximum Ratings

Supply Supply Voltage VS	16 Vdc
Lead Temperature (soldering 2-4 sec.)	250°C
Proof Pressure	60 psi

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 condensing)

Performance Characteristics

Parameter, note 1	Minimum	Nominal	Maximum	Units
Operating Range, absolute pressure	600	850	1100	mbar
Output Span, @ 1,100 mbar	94.7	95.7	96.7	mV
Output Voltage @ 600 mbar	51.2	52.2	53.2.	mV
Output Voltage 0 to 600 mbar		0.087		mV/mbar
Linearity, hysteresis error, note 4		0.05	0.25	%fs
Output Shift (0°C-70°C), note 2			±1	%fs

Specification Notes

NOTE 1: 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.

NOTE 2: SHIFT IS RELATIVE TO 25°C.

NOTE 3: SHIFT IS WITHIN THE FIRST HOUR OF EXCITATION APPLIED TO THE DEVICE.

NOTE 4: MEASURED AT ONE-HALF FULL SCALE RATED PRESSURE USING BEST STRAIGHT LINE CURVE FIT.

Equivalent Circuit

Input Resittance	15.0 kohm
Output Resistance	3.0 kohm