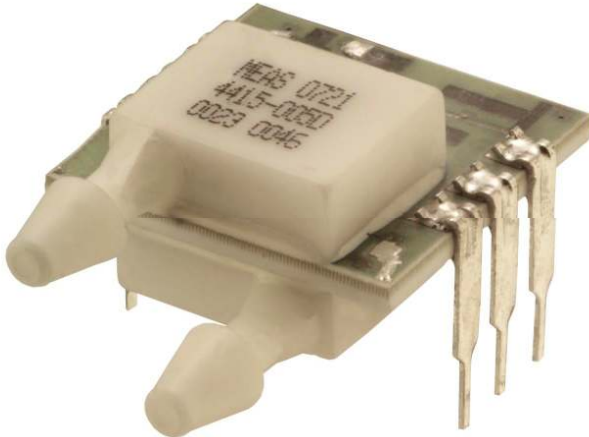


# AP4415



- **PC Board Mountable Pressure Sensor**
- **mV Output**
- **Voltage Excitation**
- **Differential Pressure**
- **Temperature Compensated**

## DESCRIPTION

The 4415 is a temperature compensated, piezoresistive silicon pressure sensor packaged in a dual-in-line configuration and intended for cost sensitive applications where excellent performance at low pressure ranges is required.

Integral temperature compensation is provided over a range of 0-50°C using laser-trimmed resistors. The pressure sensor is available in differential pressure ranges from 0-5 and 0-10 in H<sub>2</sub>O. The pressure ports are 1/8" barbed ports which mate with 3/32" ID tubing. These tubes are parallel to the printed circuit board to allow other boards to be located above the sensor. For a vertical mounted tube in gage pressure, refer to model 4416. For pressures above 1 psi, refer to the model 4425/4426.

## FEATURES

- Dual-in-Line Package
- Low Pressure Ranges
- 0°C to 50°C Compensated Temperature Range
- ±0.3% Pressure Non-linearity
- Solid State Reliability

## APPLICATIONS

- Respirators/Ventilators
- CPAP/Sleep Apnea Instruments
- Medical Instruments
- Air Flow Management
- HVAC Air Duct Flow
- Leak Detection

## STANDARD RANGES

Range	in H <sub>2</sub> O
0 to 2	•
0 to 4	•
0 to 5	•
0 to 10	•
0 to 20	•
0 to 30	•

# AP4415

## PERFORMANCE SPECIFICATIONS

**Supply Voltage: 12V****Ambient Temperature: 25°C (unless otherwise specified)****Pressure applied to Port 2**

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Span (See Table Below)				mV	1
Zero Pressure Output	-1	±0.2	1	mV	1
Pressure Non Linearity	-0.5		0.5	% Span	2
Pressure Hysteresis		±0.2		% Span	
Input Resistance	4	15	35	KΩ	
Output Resistance	2750	5000	6000	Ω	
Temperature Error – Span	-1		1	% Span	3
Temperature Error – Zero	-0.75	±0.2	0.75	mV	3
Supply Voltage		12	20	V	
Long Term Stability (Offset & Span)		±0.1		mV	4
Pressure Overload (Differential)			3	psi	
Common Mode Pressure			150	psi	
Compensated Temperature	0		50	°C	
Operating Temperature	-25		+85	°C	
Storage Temperature	-40		+125	°C	
Humidity	0		85	% RH	
Weight			3	grams	
Solder Temperature	260°C Max 5 Sec.				5
Media	Non-Corrosive Dry Gases Compatible with Silicon, Pyrex, RTV, Ceramic & Gold				

**Notes**

1. Ratiometric to supply voltage.
2. Best fit straight line.
3. Maximum temperature error between 0°C and 50°C with respect to 25°C.
4. Long term stability over a one year period with constant voltage and temperature.
5. For more details refer to 4425/4426 Mounting Application Note.

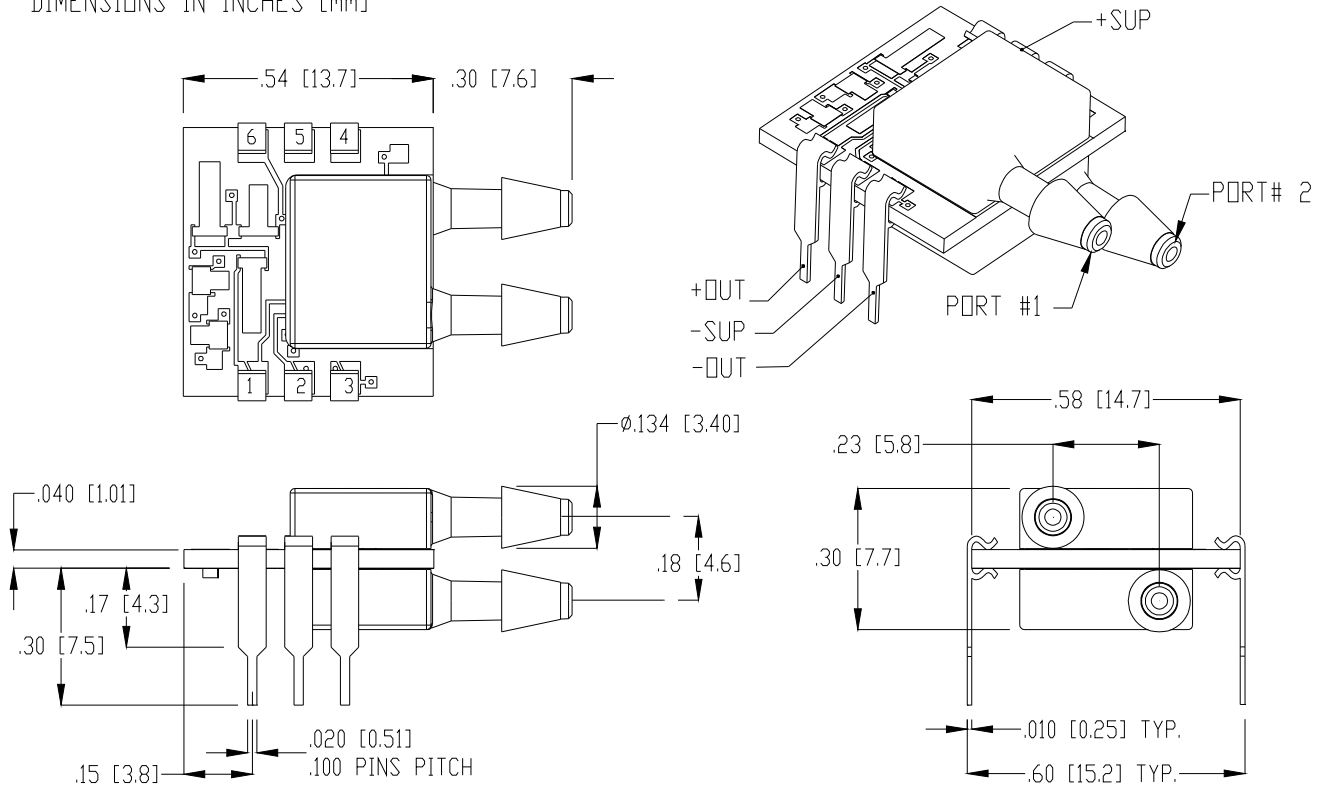
**Span**

Range	MIN	TYP	MAX
0 to 2	19.5	20	20.5
0 to 4	39.5	40	40.5
0 to 5	19.5	20	20.5
0 to 10	39.5	40	40.5
0 to 20	79.5	80	80.5
0 to 30	119.5	120	120.5

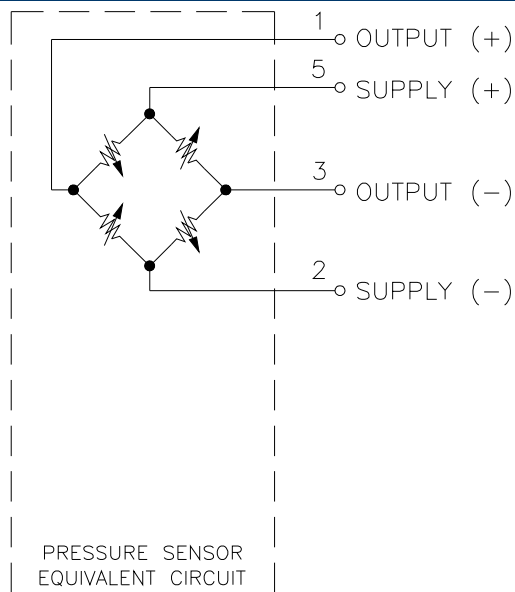
# AP4415

## DIMENSIONS

DIMENSIONS IN INCHES [mm]



## CONNECTIONS



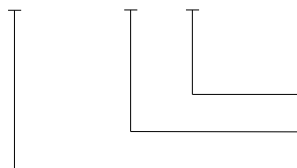
# AP4415

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## ORDERING INFORMATION

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4415 - 005 D



Type (D = Differential)

Pressure Range

Model