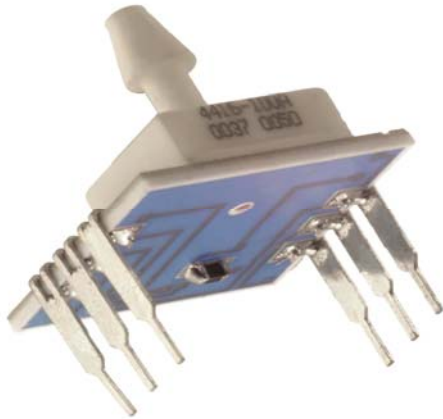


MS4416



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

DESCRIPTION

The MS4416 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 gauge pressure ranges from 0-2 and 0-30 in H₂O. The pressure ports are 1/8" barbed ports which mate with 3/32" ID tubing. The tube is vertically mounted to the printed circuit board. For a horizontally mounted tube in differential and gauge pressure, refer to model 4415. For pressures above 1 psi, refer to the model MS4425/MS4426.

FEATURES

- Dual-in-Line Package
- Low Pressure Ranges
- 0°C to 50°C Compensated Temperature Range
- ±0.5% 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 ₂ O
0 to 2	•
0 to 4	•
0 to 5	•
0 to 10	•
0 to 20	•
0 to 30	•

MS4416

PERFORMANCE SPECIFICATIONS

Supply Voltage: 12V

Ambient Temperature: 25°C (unless otherwise specified)

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	-0.3	±0.1	0.3	% Span	
Input Resistance	4	15	35	KΩ	
Output Resistance	2750	5000	6000	Ω	
Temperature Error – Span	-1		1	% Span	3
Temperature Error – Zero	-1	±0.2	1	mV	3
Supply Voltage		12	20	V	
Long Term Stability (Offset & Span)		±0.1		mV	4
Pressure Overload (See Table Below)				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. Non linearity for 10inH2O is 0.75%.
3. Maximum temperature error between 0°C and 50°C with respect to 25°C.
4. Long term stability over a one year period.
5. For more details refer to 4425/4426 Mounting Application Note.

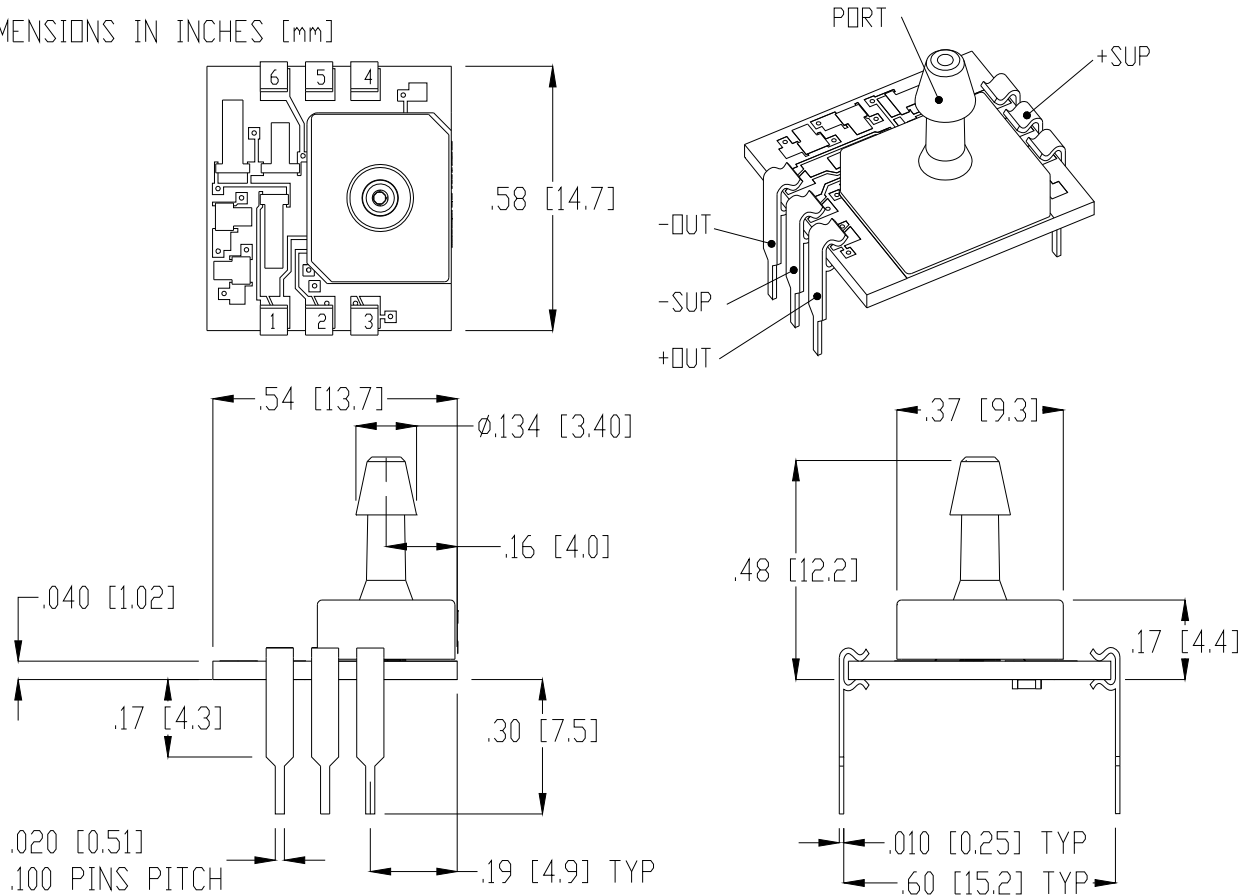
Span & Pressure Overload

Range	MIN	TYP	MAX	Overload
0 to 2	19.0	20	21.0	10
0 to 4	39.0	40	41.0	10
0 to 5	19.0	20	21.0	20
0 to 10	39.0	40	41.0	20
0 to 20	39.0	40	41.0	30
0 to 30	59.0	60	61.0	30

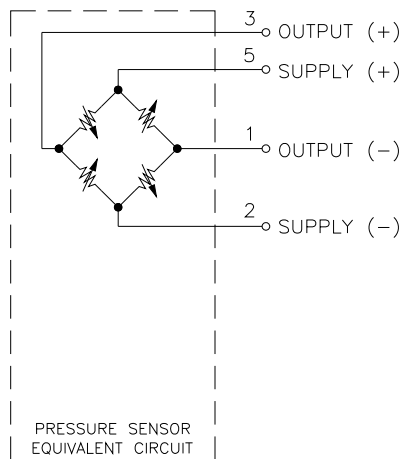
MS4416

DIMENSIONS

DIMENSIONS IN INCHES [mm]



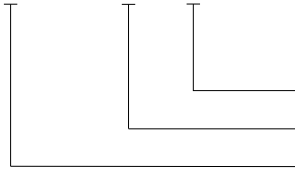
CONNECTIONS



ORDERING INFORMATION

MS4416

4416 - 005 G



Type (G = Gage)

Pressure Range

Model

NORTH AMERICA

Measurement Specialties
45738 Northport Loop West
Fremont, CA 94538
Tel: 1-800-767-1888
Fax: 1-510-498-1578
Sales: pfg.cs.amer@meas-spec.com

EUROPE

Measurement Specialties
(Europe), Ltd.
26 Rue des Dames
78340 Les Clayes-sous-Bois, France
Tel: +33 (0) 130 79 33 00
Fax: +33 (0) 134 81 03 59
Sales: pfg.cs.emea@meas-spec.com

ASIA

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(China), Ltd.
No. 26 Langshan Road
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Nanshan District, Shenzhen 518107
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Tel: +86 755 3330 5088
Fax: +86 755 3330 5099
Sales: pfg.cs.asia@meas-spec.com

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