



- PC Board Mountable Pressure Sensor
- 0-100 mV Output
- Voltage Excitation
- Differential, Gage, and Absolute
- Temperature Compensated

DESCRIPTION

The MS4425 is a temperature compensated, piezoresistive silicon pressure sensor packaged in a dual-in-line configuration and intended for cost sensitive applications where excellent performance and long-term stability are required.

Integral temperature compensation is provided over a range of 0-50°C using laser-trimmed resistors. The pressure sensor is available in absolute, gage or differential pressure ranges from 0-1 to 0-300 psi. 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 or absolute pressure, refer to the MS4426.

FEATURES

- Dual-in-Line Package
- 0°C to 50°C Compensated Temperature Range
- ±0.15% Pressure Non Linearity
- Solid State Reliability

APPLICATIONS

- Medical Instruments
- Altitude and Airspeed Measurements
- Process Control
- Factory Automation
- Leak Detection

STANDARD RANGES

Range	psid	psig	psia
0 to 1	•	•	
0 to 5	•	•	
0 to 15	•	•	•
0 to 30	•	•	•
0 to 50	•	•	•
0 to 100	•	•	•
0 to 150	•	•	•
0 to 300	•	•	•



PERFORMANCE SPECIFICATIONS

Supply Voltage: 12V

Ambient Temperature: 25°C (unless otherwise specified)

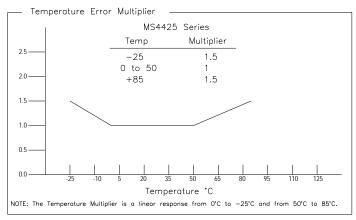
Pressure applied to Port 2

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES	
Span (0-1 psi)	17.6	18	18.4	mV	1	
Span (0-5 psi)	58	60	62	mV	1	
Span (0-15 to 0-50 psi)	88	90	92	mV	1	
Span (0-100 & 0-300 psi)	98	100	102	mV	1	
Span (0-150 psi)	148	150	152	mV	1	
Zero Pressure Output	-1	±0.2	1	mV	1	
Pressure Non Linearity (Gage & Absolute)	-0.15		0.15	% Span	2	
Pressure Non Linearity (Differential)	-0.25		0.25	% Span	2	
Pressure Hysteresis	-0.20	±0.05	0.20	% Span		
Input Resistance	5	15	25	ΚΩ		
Output Resistance	3500	5000	6500	Ω		
Temperature Error – Span	-1	0.3	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)			3X	Rated	5	
Common Mode Pressure			400	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 S	ec.			6	
Media	Non-Corrosive Dry Gases Compatible with Silicon, Pyrex,					

RTV, Ceramic & Gold

Notes

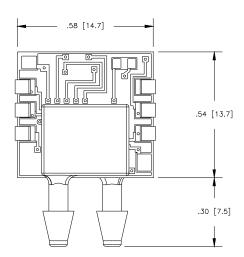
- 1. Ratiometric to supply voltage.
- Best fit straight line. Non linearity for 5 psi Differential devices is 0.75%.
- Maximum temperature error between 0°C and 50°C with respect to 25°C. For errors beyond the compensated temperature, see Temperature Error Multiplier Chart below.
- 4. Long term stability over a one year period with constant voltage and temperature.
- 3X or 400 psi max, whichever is less. 5.
- For more details refer to 4425/4426 Mounting Application Note.

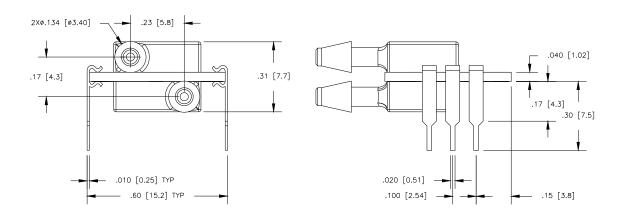




DIMENSION

DIMENSIONS ARE IN INCHES [mm]

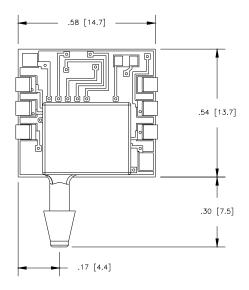


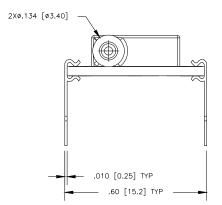


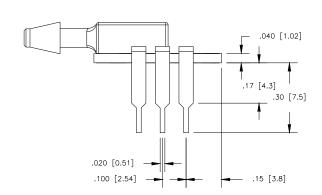
MS4425-xxxDy



DIMENSIONS ARE IN INCHES [mm]



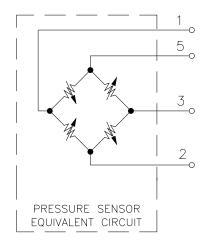




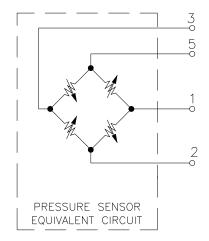
MS4425-xxxA/Gy



CONNECTIONS

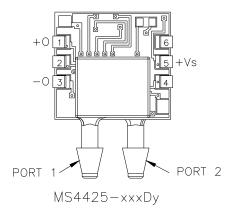


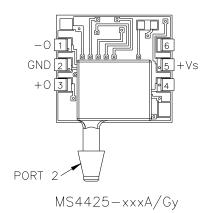
MS4425-XXXD



MS4425-XXXA/G

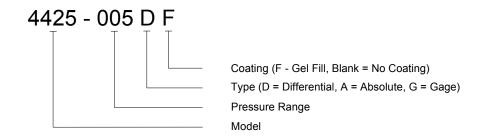
PACKAGE STYLE, PINOUT, AND PORT DESIGNATION







ORDERING INFORMATION



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 F78340 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

Measurement Specialties (China), Ltd. No. 26 Langshan Road Shenzhen High-Tech Park (North) Nanshan District, Shenzhen 518057 China

Tel: +86 755 3330 5088 Fax: +86 755 3330 5099

Sales: pfg.cs.asia@meas-spec.com

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

TE Connectivity:

<u>4425-5A</u> <u>4425-15A</u> <u>4425-1D</u> <u>4425-1A</u> <u>4425-5D</u> <u>4425-30D</u> <u>4425-30A</u> <u>4425-5DD</u> <u>4425-5DD</u> <u>4425-5DA</u> <u>442</u>