

4425 Pressure Sensor

PC Board Mountable Pressure Sensor
0-100 mV Output
Differential and Absolute Pressure
Temperature Compensated

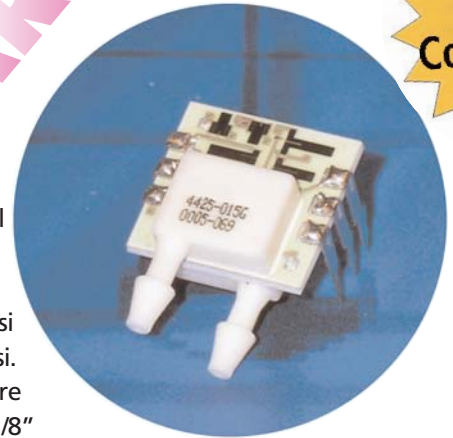
DESCRIPTION

The 4425 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 or

differential pressure ranges from 0-5 psi to 0-100 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 model 4426.



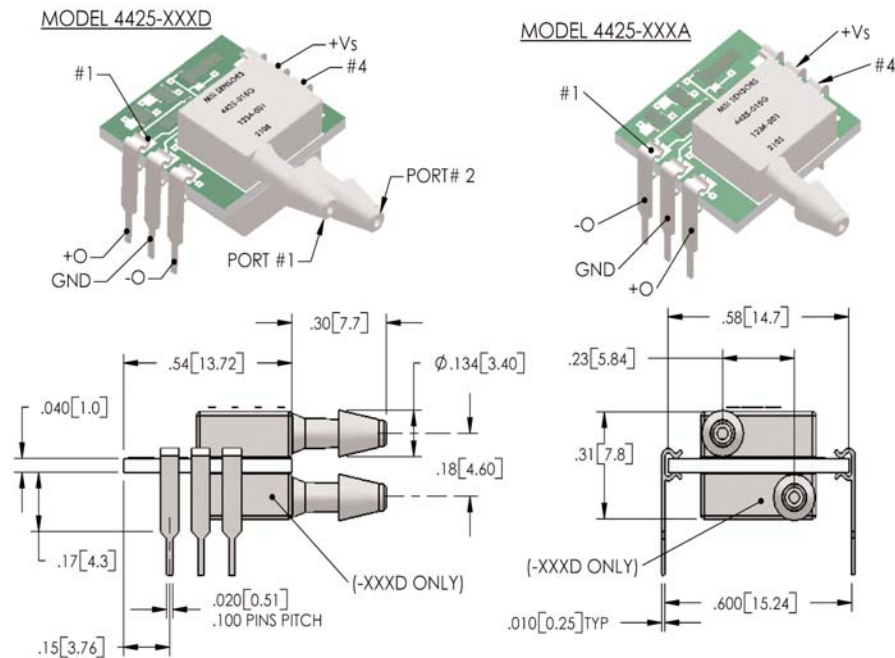
FEATURES

- ◆ Dual-in-line Package
- ◆ 0°C to +50°C Compensated Temperature Range
- ◆ ±0.25% Pressure Non-linearity
- ◆ Solid State Reliability

APPLICATIONS

- ◆ Medical Instruments
- ◆ Altitude/Airspeed Measurement
- ◆ Process Control
- ◆ Factory Automation
- ◆ Leak Detection

dimensions



(Dimensions in inches [mm])

standard ranges

Range	psid	psia
0 to 5	Contact Factory	
0 to 15	•	•
0 to 30	•	•
0 to 50	•	•
0 to 100	•	•

www.meas-spec.com
 Tel: 1-757-766-1500
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 Fax: 1-757-766-4297
 RevA 5/30/06



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performance specifications

All parameters measured at 12V and at 25°C after 10 second warm up unless otherwise specified.

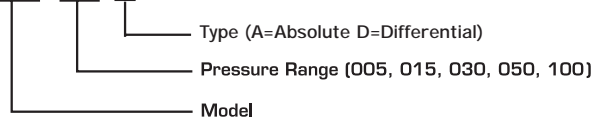
PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Full Scale Output (0-15 to 0-50 PSI)	88	90	92	mV	1
Full Scale Output (0-100 PSI)	98	100	102	mV	1
Zero Pressure Output	-1	±0.2	1	mV	1
Pressure Non Linearity	-0.25		0.25	% Span	2
Pressure Hysteresis		±0.2		% Span	
Input Resistance	6000	9000	12000	Ω	3
Output Resistance	4000	4500	6000	Ω	4
Temperature Error – Span (0 to +50°C)	-1		1	% Span	5
Temperature Error – Zero (0 to +50°C)	-0.75	±0.2	0.75	mV	5
Supply Voltage		12	20	V	
Long Term Stability (Offset & Span)		±0.1		mV	6
Pressure Overload			3X	Rated	7
Compensated Temperature Range	0°C to +50°C				
Operating Temperature Range	-25°C to +85°C				
Storage Temperature Range	-40°C to +125°C				
Solder Temperature	240°C Max				
Humidity	0 to 85% RH				
Media	Non-Corrosive Dry Gases Compatible with Silicon, Pyrex, RTV, Ceramic & Gold				
Weight	2 g				

Notes

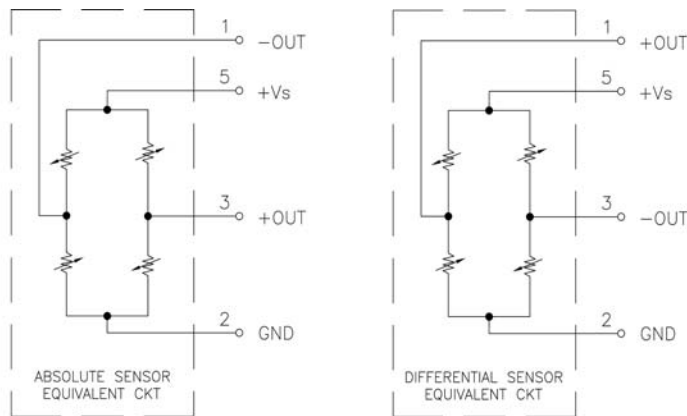
1. Ratiometric to supply voltage.
2. Best fit straight line.
3. Input resistance is between pins 2 and 5.
4. Output resistance is between pins 1 and 3.
5. Maximum temperature error between 0°C and 50°C with respect to 25°C.
6. Long term stability over a one year period.
7. 3X or 150 psi max, whichever is less
8. For more details refer to 4425/4426 Mounting Application Note.
9. For high humidity applications, contact factory

ordering information

4425 - 005 D



connections



PORT#1 (UPPER) IS POSITIVE PORT
 PORT#2 (LOWER) IS NOT USED

PORT#2 (LOWER) IS POSITIVE PORT
 PORT#1 (UPPER) IS NEGATIVE DIFFERENTIAL