

13 AND 43

Standard

SPECIFICATIONS

- ♦ PC Board Mountable Pressure Sensor
- ♦ 0-100 mV Output
- ♦ Current Excitation
- ♦ Gage and Absolute
- ♦ Temperature Compensated

The 13 and 43 are temperature compensated, piezoresistive silicon pressure sensors packaged in a TO-8 configuration. It provides excellent performance and long-term stability.

Gage and absolute pressure ranges from 0-2 to 0-250 psi are available. Integral temperature compensation is provided over a range of 0-50°C using laser-trimmed resistors. An additional laser-trimmed resistor is included to normalize pressure sensitivity variations by programming the gain of an external differential amplifier. This provides sensitivity interchangeability of $\pm 1\%$.

Please refer to the 13 and 43 1 psi datasheets for low pressure applications.

FEATURES

- ✦ TO-8 Package
- ✦ 0°C to 50°C Compensated
- ✦ Temperature Range
- ✦ $\pm 0.1\%$ Non Linearity
- ✦ 1.0% Interchangeable Span
- ✦ (provided by gain set resistor)
- ✦ Solid State Reliability

APPLICATIONS

- ✦ Medical Instruments
- ✦ Process Control
- ✦ Factory Automation
- ✦ Altitude Measurement
- ✦ Vacuum Measurement
- ✦ Handheld Calibrators

STANDARD RANGES

Range	psig	psia
0 to 2	✦	
0 to 5	✦	✦
0 to 10	✦	✦
0 to 15	✦	✦
0 to 30	✦	✦
0 to 50	✦	✦
0 to 100	✦	✦
0 to 250	✦	✦

PERFORMANCE SPECIFICATIONS

Supply Current: 1.5mA

Ambient Temperature: 25°C (unless otherwise specified)

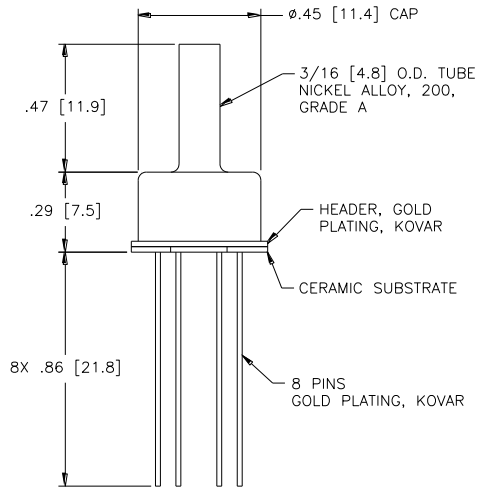
PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Span	75	100	150	mV	1
Span (2 psi version)	30		60	mV	1
Zero Pressure Output	-2		2	mV	
Pressure Non Linearity	-0.1	±0.05	0.1	%Span	2
Pressure Hysteresis	-0.05	±0.01	0.05	%Span	
Input & Output Resistance	2500	4400	6000	Ω	
Temperature Error – Span	-0.5	±0.3	0.5	%Span	3
Temperature Error – Zero	-0.5	±0.1	0.5	%Span	3
Thermal Hysteresis – Zero		±0.1		%Span	3
Supply Current		1.5	2.0	mA	
Response Time (10% to 90%)		1.0		mS	4
Output Noise (10Hz to 1kHz)		1.0		μV p-p	
Insulation Resistance (50 Vdc)	50			M Ω	5
Long Term Stability (Offset & Span)		±0.1		%Span	6
Pressure Overload			3X	Rated	7
Compensated Temperature	0		50	°C	
Operating Temperature	-40		+125	°C	
Storage Temperature	-50		+150	°C	
Weight			3	grams	
Solder Temperature	250°C Max 5 Sec.				
Media	Non-Corrosive Dry Gases Compatible with Silicon, Pyrex, RTV, Gold, Nickel, and Aluminum				

Notes

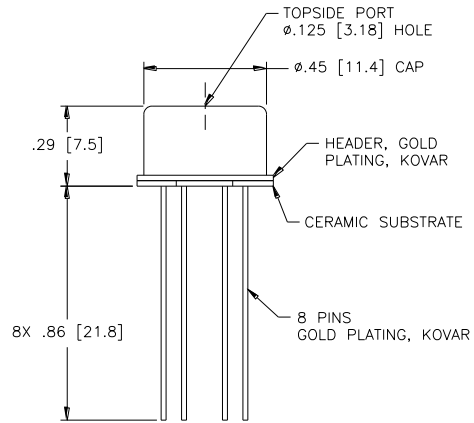
1. Ratiometric to supply current.
2. Best fit straight line.
3. Maximum temperature error between 0°C and 50°C with respect to 25°C. For 2psi devices, Temperature Error – Zero is ±1.25%.
4. For a zero-to-full scale pressure step change.
5. Minimum resistance between case and pins.
6. Long term stability over a one year period with constant current and temperature.
7. 2X maximum for 250 psi device. 20 psi maximum for 2 and 5 psi devices.

DIMENSIONS

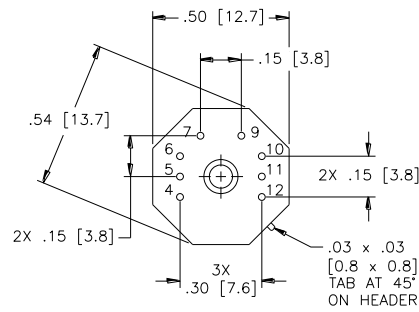
DIMENSIONS ARE IN INCHES [mm]



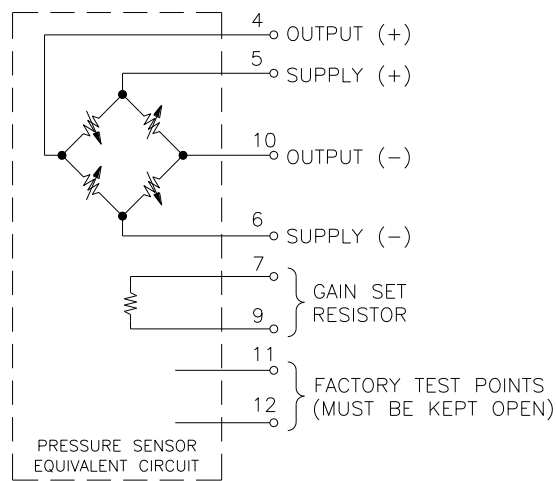
MODEL 13



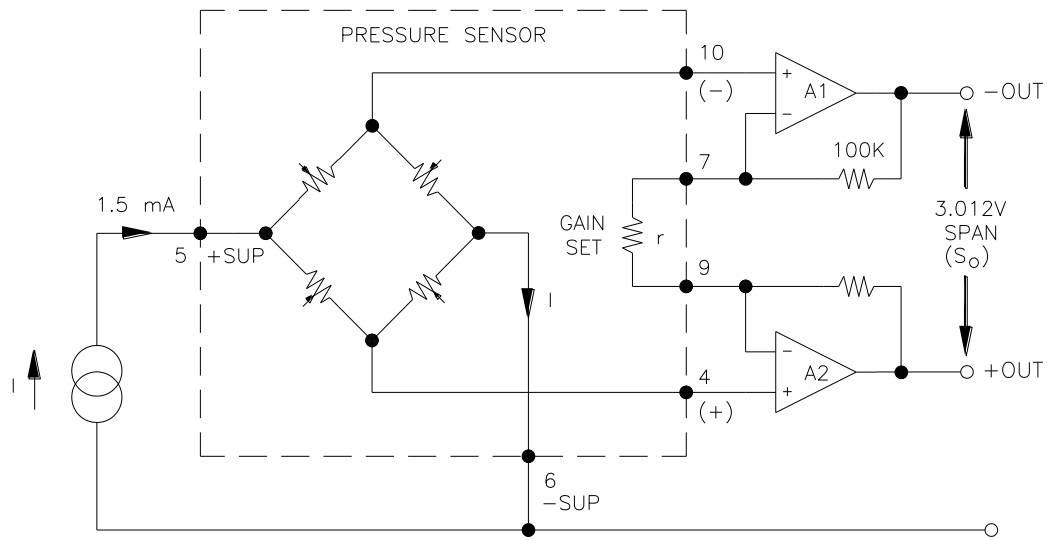
MODEL 43



CONNECTIONS



APPLICATION SCHEMATIC



APPLICATION SCHEMATIC

ORDERING INFORMATION

13A – 030 A

Pressure Range [psi]
002 (Gage Only)
005
010
015
030
050
100
250

Pressure Type
G Gage
A Absolute

43A – 030 A

Pressure Range [psi]
002 (Gage Only)
005
010
015
030
050
100
250

Pressure Type
G Gage
A Absolute

NORTH AMERICA

Measurement Specialties, Inc.,
a TE Connectivity Company
Tel: 800-522-6752
customercare_fmrl@te.com

TE.com/sensorsolutions

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2015 TE Connectivity Ltd. family of companies All Rights Reserved.

EUROPE

Measurement Specialties (Europe), Ltd.,
a TE Connectivity Company
Tel: 800-440-5100
customercare_bevx@te.com

ASIA

Measurement Specialties (China), Ltd.,
a TE Connectivity Company
Tel: 0400-820-6015
mailto:customercare.shzn@te.com