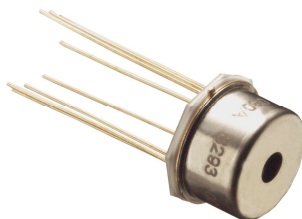


Model 13 and 43 Standard



Model 13



Model 43

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

DESCRIPTION

The Models 13 and 43 are temperature compensated, piezoresistive silicon pressure sensor packaged in 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 Models 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	•	•

Model 13 and 43 Standard

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				

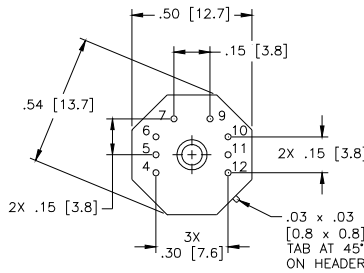
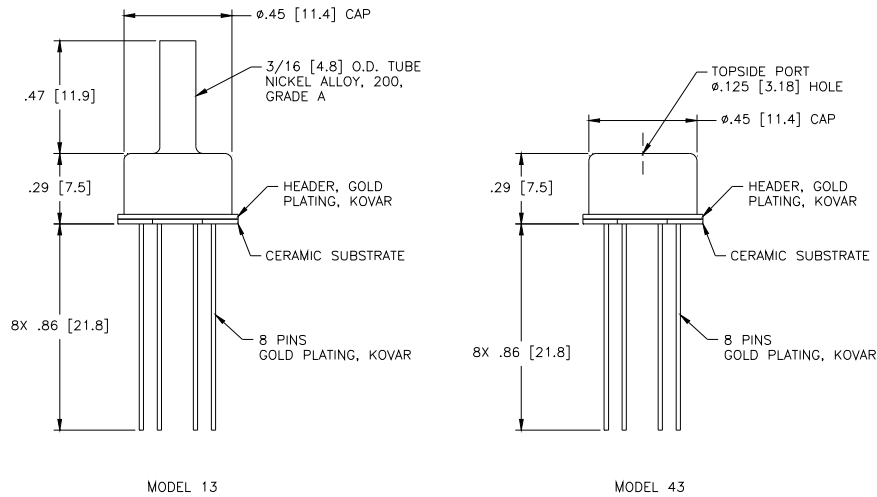
Notes

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.

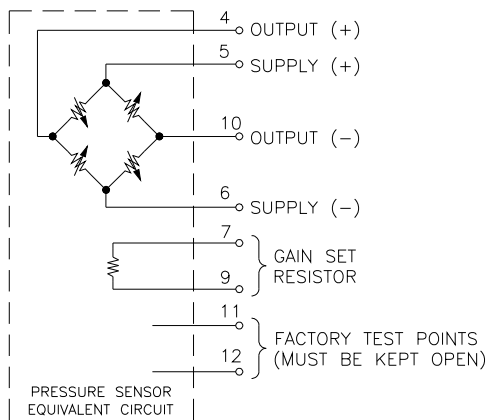
Model 13 and 43 Standard

DIMENSIONS

DIMENSIONS ARE IN INCHES [mm]

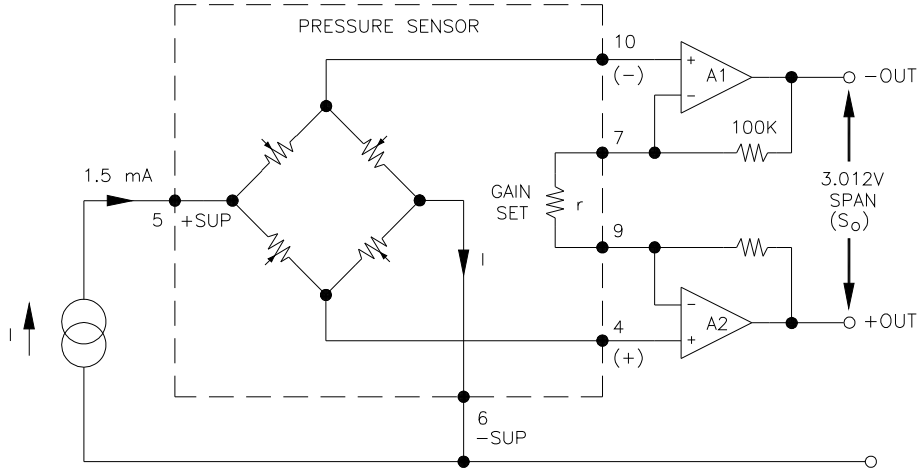


CONNECTIONS



Model 13 and 43 Standard

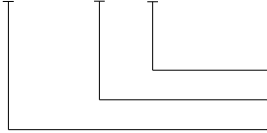
APPLICATION SCHEMATIC



APPLICATION SCHEMATIC

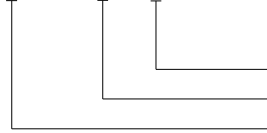
ORDERING INFORMATION

13A - 015 G



Type (G = Gage, A = Absolute)
 Pressure Range
 Model

43A - 015 G



Type (G = Gage, A = Absolute)
 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

Measurement Specialties
 (China), Ltd.
 F1.6-4D, Tian An Development
 Compound
 Shenzhen, China 518048
 Tel: +86 755 8330 1004
 Fax: +86 755 8330 6797
 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.

We are here for you. Addresses and Contacts

Sales Switzerland & Liechtenstein

Matthias Rüegg
Ruhbergstrasse 32
CH-9230 Flawil

Phone +41 44 877 35 18
Mobile+41 76 491 66 66
Fax +41 44 877 35 19

matthias.rueegg@pewatron.com

Sales International Key Accounts

Peter Felder
Thurgauerstrasse 66
CH-8052 Zürich

Phone +41 44 877 35 05
Mobile+41 79 406 49 83
Fax +41 44 877 35 25

peter.felder@pewatron.com

Sales Germany

Postcode 00000–59999
Postcode 80000–99999

Kurt Stritzelberger
Neumarkter Str. 86a
D-81673 Munich

Phone +49 89 260 38 47
Mobile+49 171 803 41 35
Fax +49 89 43 10 91 91

kurt.stritzelberger@pewatron.com

Postcode 60000–79999

Dieter Hirthe
Auf der Entenweide 4
69502 Hemsbach

Tel. +49 6201 508 9250
Mobil +49 1637 627 430
Fax +49 6201 508 9751

dieter.hirthe@pewatron.com

Sales Austria

Kurt Stritzelberger
Neumarkter Str. 86a
D-81673 Munich

Phone +49 89 260 38 47
Mobile+49 17 18 03 41 35
Fax +49 89 43 10 91 91

kurt.stritzelberger@pewatron.com

Sales Other Countries / Product Management

Sensors

Physical Sensors
Data Acquisition

Thomas Clausen
Phone +41 44 877 35 13
thomas.clausen@pewatron.com

Geometrical Sensors

Eric Letsch
Phone +41 44 877 35 14
eric.letsch@pewatron.com

Power Supplies

DC-DC Converters
Switching Power Supplies
DC-AC Inverters

Sebastiano Leggio
Phone +41 44 877 35 06
sebastiano.leggio@pewatron.com

E-Components

Current Sensors
Man Machine Interface
Measurement Probes

Sebastiano Leggio
Phone +41 44 877 35 06
sebastiano.leggio@pewatron.com

PEWATRON AG
Thurgauerstrasse 66
CH-8052 Zurich

Phone +41 44 877 35 00
Fax +41 44 877 35 25

www.pewatron.com
info@pewatron.com