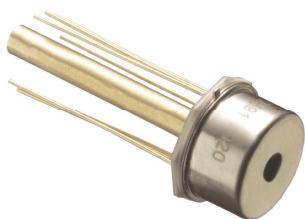
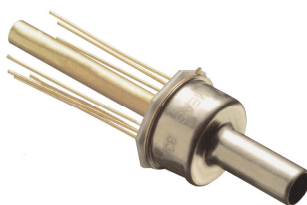


Model 23 and 33 Standard



Model 23



Model 33

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

DESCRIPTION

The Models 23 and 33 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 23 and 33 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
- Handheld Calibrators
- Airspeed Measurement

STANDARD RANGES

Range	Model 23 psig	Model 33 psid
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 23 and 33 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 (2psi 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)		±0.2		%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				

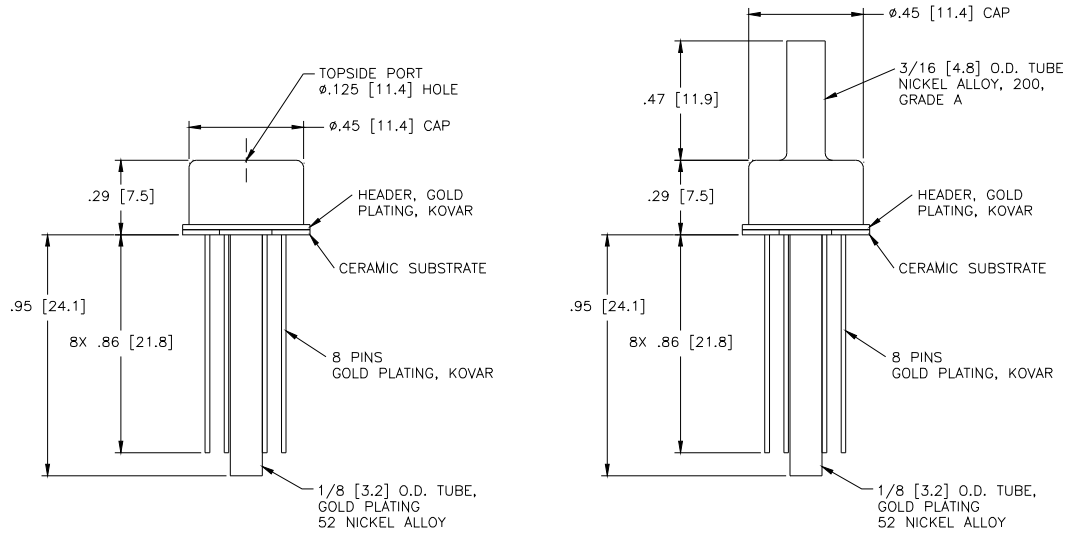
Notes

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 2 psi 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. For topside applications, 2X maximum for 250 psi device, 20 psi maximum for 2 and 5 psi devices. For backside applications, 3X not to exceed 100 psi on all ranges.

Model 23 and 33 Standard

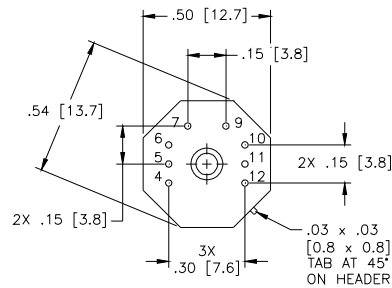
DIMENSIONS

DIMENSIONS ARE IN INCHES [mm]

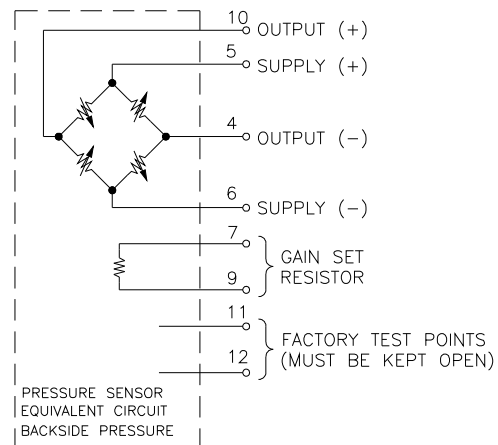
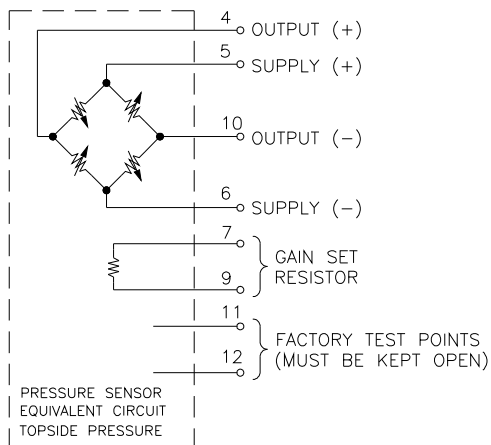


MODEL 23

MODEL 33

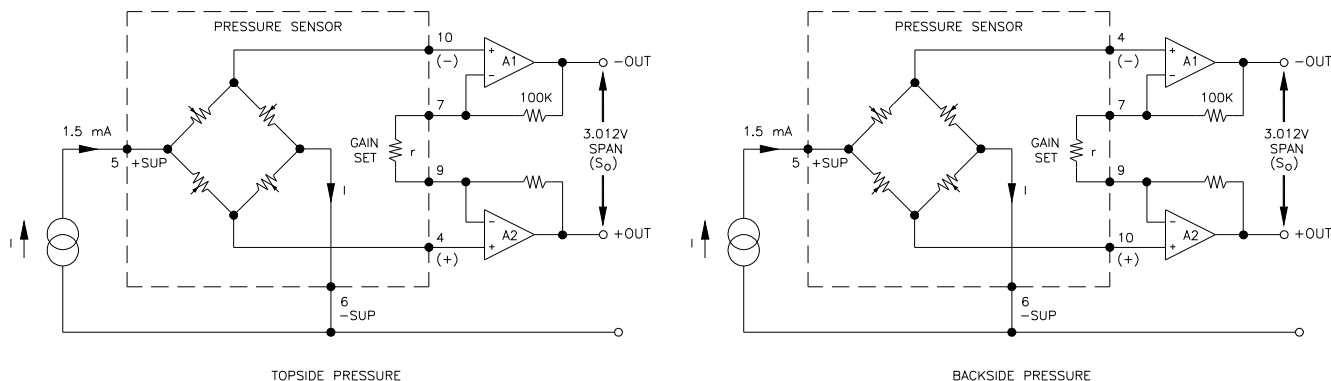


CONNECTIONS



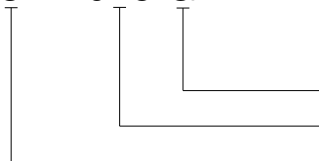
Model 23 and 33 Standard

APPLICATION SCHEMATIC



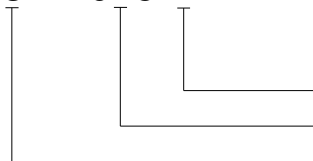
ORDERING INFORMATION

23A - 015 G



Type (G = Gage)
Pressure Range
Model

33A - 015 D



Type (D = Differential)
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.