



MODEL 43 Low Pressure

PC Board Mountable Pressure Sensor

0-1 PSI

0-100 mV Output

Low Cost

Temperature Compensated

DESCRIPTION

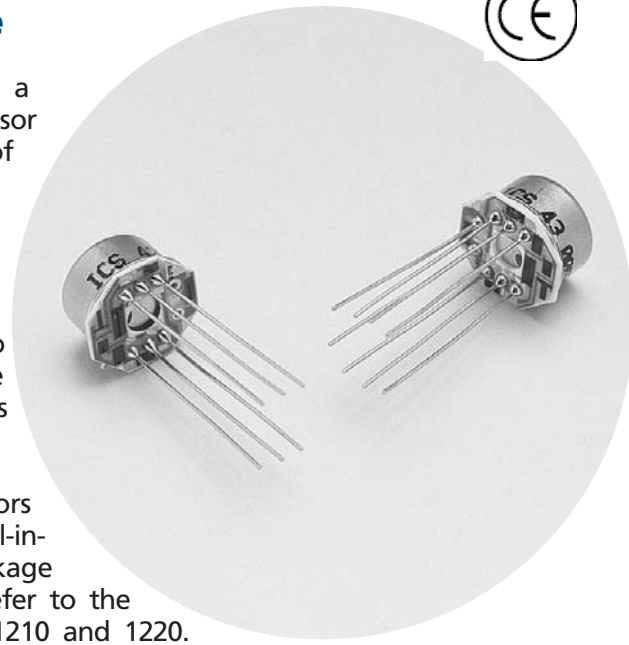
The Model 43 is a temperature compensated, piezoresistive silicon pressure sensor packaged in TO-8 configurations. It provides excellent performance and long-term stability.

Integral temperature compensation is provided over a range of 0-50°C using a laser-trimmed ceramic compensation board. An additional laser-trimmed resistor is included which can be used to adjust the gain of an external differential amplifier and provide sensitivity interchangeability of ±1%.

The sensing element used in low pressure Model 43 has a double bossed design that

produces a high sensor output of 100 mV (typical) at 1 PSI.

The Model 43 is also available in ranges up to 0-250 PSI. For sensors in a dual-in-line package please refer to the Models 1210 and 1220. For additional information regarding uncompensated sensors, please contact the factory.



FEATURES

- ◆ Solid State Reliability
- ◆ 100mV Output Span
- ◆ Interchangeable
- ◆ Temperature Compensated
- ◆ Low Power

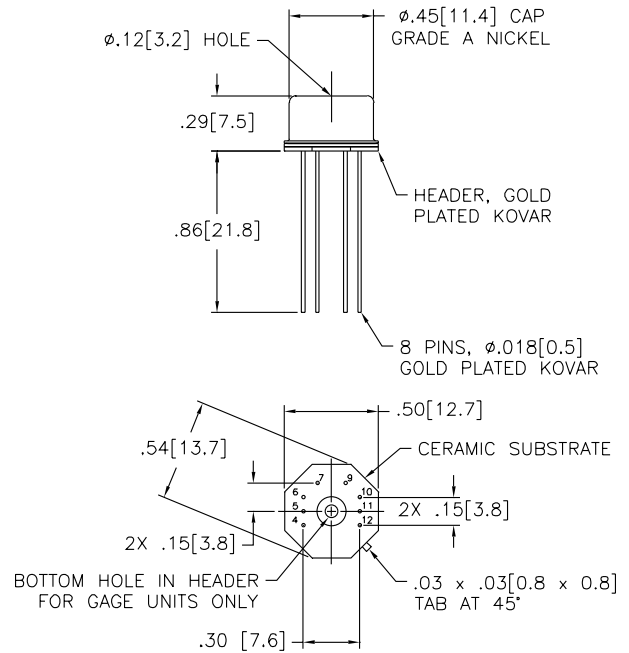
APPLICATIONS

- ◆ Medical Instruments
- ◆ HVAC
- ◆ Factory Automation
- ◆ Process Control
- ◆ Avionics
- ◆ Air Flow Management

Standard Ranges

Range	psig
0 to 1	•

Dimensions



DIMENSIONS ARE IN INCHES [mm]



MODEL 43 Low Pressure

performance specifications

Supply Current: 1.5 mA

Ambient Temperature: 25°C (Unless otherwise specified)

PRESSURE RANGE 0 -1 psi

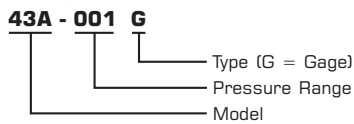
PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Full Scale Output Span	65	100	150	mV	1
Zero Pressure Output			2	±mV	2
Pressure Non-linearity		0.2	0.3	±%Span	3
Pressure Hysteresis		0.01	0.05	±%Span	
Input & Output Resistance	2500	4400	6000	□	
Temperature Error - Span		0.5	1.0	±%Span	4,5
Temperature Error - Zero		0.5	1.0	±%Span	4,5
Thermal Hysteresis - Zero		0.1		±%Span	4
Supply Current		1.5	2.0	mA	
Response Time (10% to 90%)		1.0		mS	5
Output Noise		1.0		µV p-p	6
Output Load Resistance	2			M□	
Insulation Resistance (50 VDC)	50			M□	7
Long Term Stability		0.2		±%Span/yr	
Pressure Overload			10	psi	
Operating Temperature	-40°C to +125°C				
Storage Temperature	-50°C to +150°C				
Media	Non-Corrosive Gases Compatible with Wetted Materials				8
Weight	3 Grams				

Notes

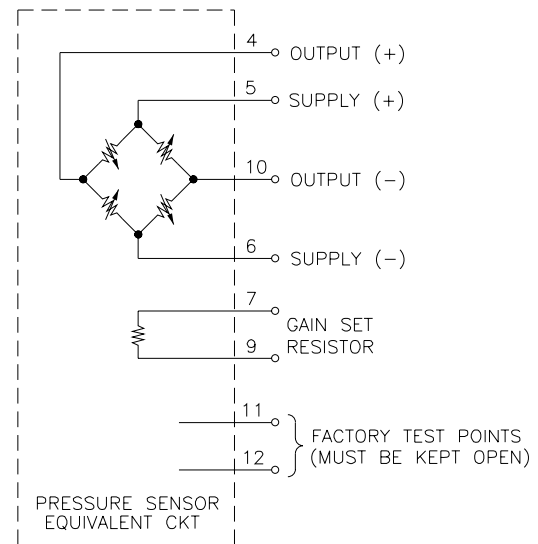
1. Output span of unamplified sensor.
2. For most models, compensation resistors are an integral part of the sensor package; no additional external resistors are required. Test pins must be kept open.
3. Best Fit Straight Line.

4. Temperature range: 0-50°C in reference to 25°C.
5. For a zero-to-full scale pressure step change.
6. 10 Hz to 1kHz.
7. Between case and sensing element.
8. Wetted materials are glass, ceramic, silicon, RTV, nickel, gold, and aluminum.

Ordering Information



Connections



Application Schematic

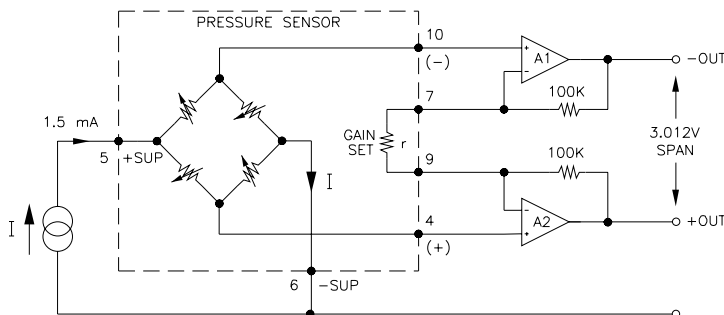


FIGURE 1: TOP ENTRY FOR GAGE UNIT

Nov 2002