

T-65-13

**OEM Pressure Sensor
Differential
Temperature Compensated
Serialized**

Features

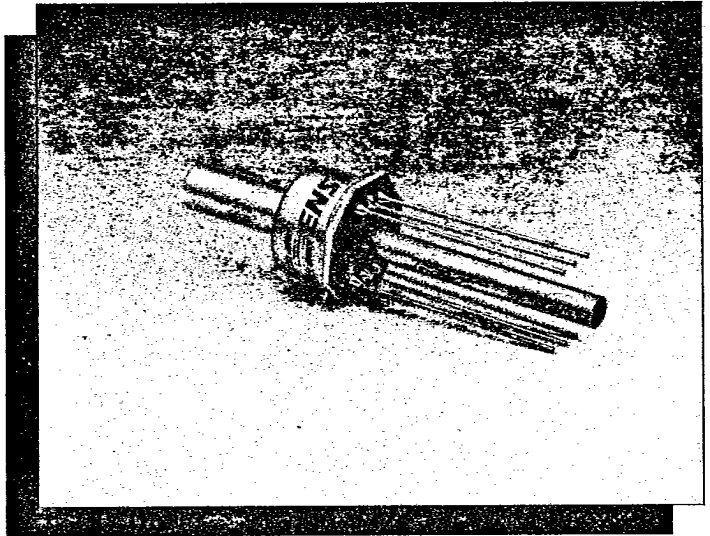
- Solid State Reliability
- ±1mV Zero Output
- Infinite Resolution
- 100 mV Output Span
- Ratiometric
- ±0.1% Accuracy
- Low Noise
- Humidity Resistant
- Low Power
- Performance Graded

Typical Applications

- Medical
- Process Control
- Airspeed
- Flow Measurement
- Environmental Control
- Robotics
- Refrigeration
- Industrial Controls
- Water Pressure
- Pollution Control

Standard Ranges

- 0 to 5 psid
- 0 to 10 psid
- 0 to 15 psid
- 0 to 30 psid
- 0 to 50 psid
- 0 to 100 psid
- 0 to 250 psid



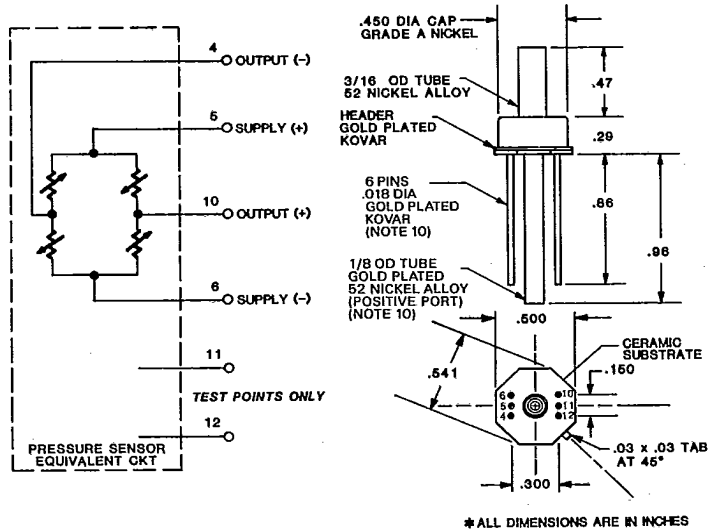
Description

The Model 32 is a bi-directional, solid state, piezoresistive pressure sensor that is packaged in a TO-8 configuration and is intended for use with corrosive or non-corrosive media on the bottom port and non-corrosive media on the top port where excellent long-term stability is also required. Each sensor is individually serialized.

Integral temperature compensation is provided along with zero balancing over 0-50°C with laser trimmed resistors. No external resistors are required.

Three performance grades are available in differential pressure from 0-5 psi to 0-250 psi for the Model 32 and 0-5 psi to 0-15 psi for the Model 32N.

Connections/Dimensions



Model 32

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Performance Specifications

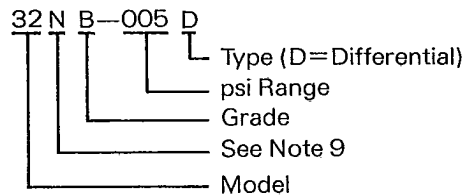
Supply Current = 1.5 mA & Ambient Temperature = 25°C (Unless otherwise specified)

PARAMETER	GRADE									UNITS	NOTES
	A			B			C				
	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX		
Full-Scale Output Span	75	100	150	75	100	150	50			mV	
Zero Pressure Output			1			2			5	mV	2
Linearity		0.05	0.10			0.25			0.50	% Span	3
Pressure Hysteresis		0.01	0.05			0.10			0.15	% Span	
Input & Output Resistance	2500	4400	6000		4400	6000		4400		Ω	
Temperature Coefficient-Span		0.3	0.5			1.0			2.0	% Span	1, 2
Temperature Coefficient-Zero		0.1	0.5			1.0			2.0	% Span	1, 2
Temperature Coefficient-Resistance		.22			.22			.22		%/°C	1
Thermal Hysteresis-Span		0.1			0.2			0.3		% Span	1
Thermal Hysteresis-Zero		0.1			0.2			0.3		% Span	1
Supply Current		1.5	2.0		1.5	2.0		1.5	2.0	mA	4
Response Time (10% to 90%)		1.0			1.0			1.0		mS	5
Output Noise		1.0			2.0			5.0		μV p-p	6
Output Load Resistance	2			2			2			MΩ	7
Insulation Resistance (50VDC)	50			50			50			MΩ	
Long Term Stability		0.2			0.5			1.0		% Span/year	
Pressure Overload			3X			3X			3X	Rated	8
Operating Temperature	-40°C to +125°C										
Storage Temperature	-55°C to +150°C										
Acceleration	50g Max										
Shock	1000g Peak for 0.5 mS										
Vibration	20g Peak at 10 to 2000 Hz										
Media	Liquids and Gases compatible with wetted materials										9
Weight	3 grams										

Notes

- Temperature range: 0-50°C in reference to 25°C.
- Compensation resistors are an integral part of the sensor package; no additional external resistors are required. Pins 11 and 12 must be kept open. For interchangeable part see Model 33 Data Sheet and Application Note TN-003.
- Best fit straight line.
- Guarantees output/input ratiometricity.
- For a zero-to-full scale pressure step change.
- 10Hz to 1kHz.
- Prevents increase of TC-Span due to output loading.
- 3X or 500 psi maximum, whichever is less.
- Wetted materials are gold, RTV (32N only), silicon and glass on the bottom port (corrosive or non-corrosive media) and nickel and silicone gel on the top port (non-corrosive media). The Model 32N is available in 5, 10 and 15 psi ranges only.
- Soldering of lead pins and bottom tube: 250°C for 5 seconds maximum. Heat-sink tube while soldering.

Ordering Information



Represented By

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