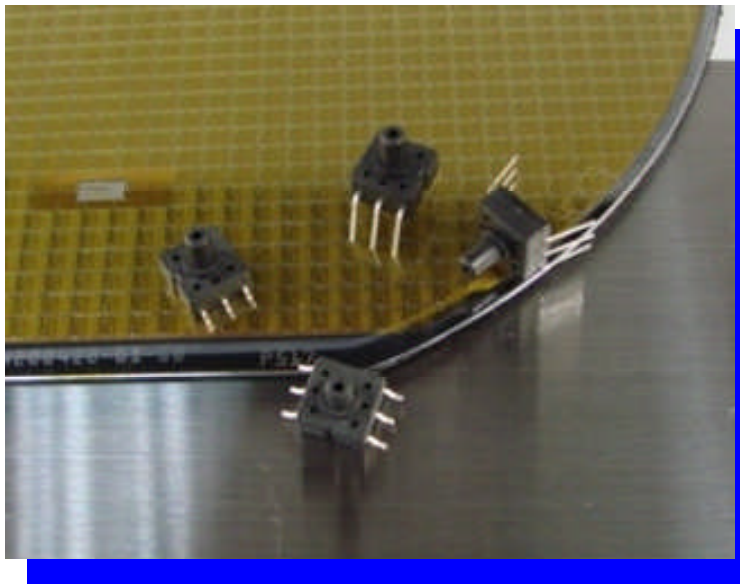
Solid State Pressure Sensor

SIP Series – Model 32

FEATURES

- Low Cost
- Miniature DIP
- Gage Pressure
- Small Foot Print
- Improved Linearity



APPLICATIONS

- Medical Equipment
- White Goods
- Industrial P/I
- Process Control

DESCRIPTION

The Model 32 SIP Series are uncompensated hi-performance pressure die in 6-pin plastic DIP package. It provides a highly linear output when pressure is applied to the molded pressure port.

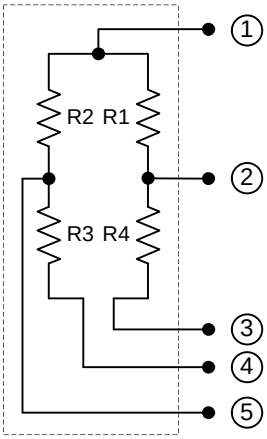
The sensor is optimized for use in the high volume applications, such as portable blood pressure monitors, electronically controlled air mattresses and a wide variety of pneumatic applications requiring a low cost sensor. A pressure port is provided for simple, convenient connection.

To furnish maximum flexibility, the sensor can be offered with custom features to obtain a direct replacement for existing applications. Please contact the factory for details.

Characteristics 5 psig Version

Unless otherwise specified, all parameters are measured at 25 °C and excitation of 5.0 Volts

Parameters	Min	Typ	Max	Unit
Excitation Voltage	0	5	10	V
Pressure Range		5		psi
Offset	-30	0	+30	mV
Span	40	60	80	mV
Bridge Impedance	4	5	6	kohm
Linearity NOTE1		±0.3		%FS
TC - Span NOTE2		-22±5		%FS/100°C
TC - Offset NOTE2		±7		%FS/100°C
TC - Resistance NOTE2		28±5		%FS/100°C
Temp - Operating	-20		+85	°C
Temp - Storage	-40		+125	°C
Over Pressure			3X	Rated FS

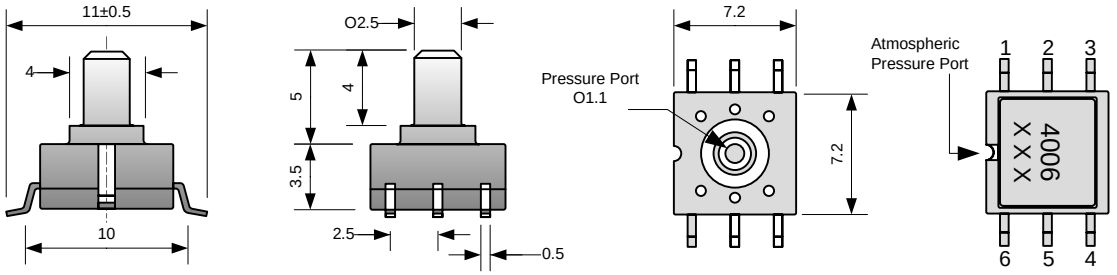


Equivalent Circuit

Notes:

1. Best Fit Straight Line
2. Temperature coefficient is measured from 0 °C to 50 °C
3. Wetted material contains RTV, PPA, glass and silicon

Dimension



Note:
Soldering of lead pins: 250 °C for 5 sec max.

Unit: mm

Ordering Information

Lead	Connection
3,4	INPUT -
1	INPUT +
2	OUTPUT +
5	OUTPUT -

3 2 – 0 0 5 3 1 0

- Series
- Range
  - 005 : 5 psi
- Lead Direction
  - 1: DIP Same as tube
  - 2: DIP Opposite to tube
  - 3: Surface Mount
- I.D. Code

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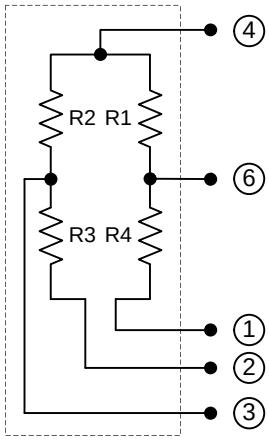
Characteristics 15 psig Version

Unless otherwise specified, all parameters are measured at 25 °C and excitation of 5.0 Volts

Parameters	Min	Typ	Max	Unit
Excitation Voltage	0	5	10	V
Pressure Range		15		psi
Offset	-50	0	+50	mV
Span	115	145	175	mV
Bridge Impedance	2.7	3.3	4.0	kohm
Linearity NOTE1		±0.1		%FS
TC - Span NOTE2		-22±5		%FS/100°C
TC - Offset NOTE2		±7		%FS/100°C
TC - Resistance NOTE2		28±5		%FS/100°C
Temp - Operating	-20		+85	°C
Temp - Storage	-40		+125	°C
Over Pressure			3X	Rated FS

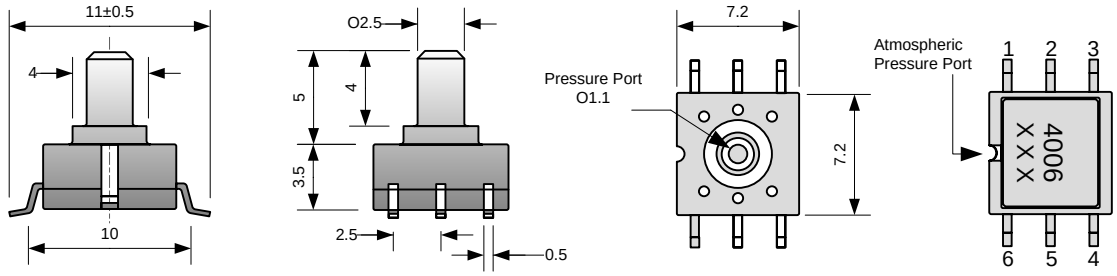


Equivalent Circuit

Notes:

1. Best Fit Straight Line
2. Temperature coefficient is measured from 0 °C to 50 °C
3. Wetted material contains RTV, PPA, glass and silicon

Dimension

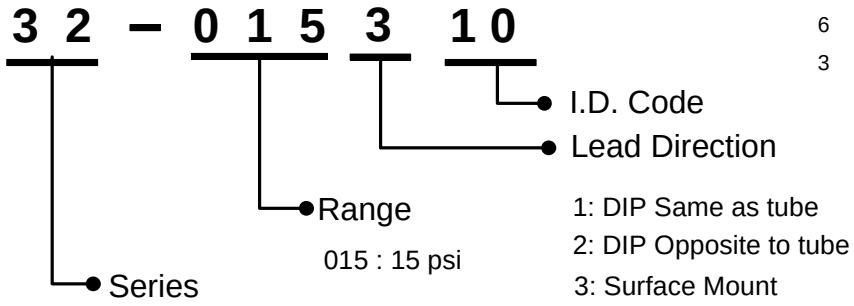


Note:
Soldering of lead pins: 250 °C for 5 sec max.

Unit: mm

Lead	Connection
1,2	INPUT -
4	INPUT +
6	OUTPUT +
3	OUTPUT -

Ordering Information



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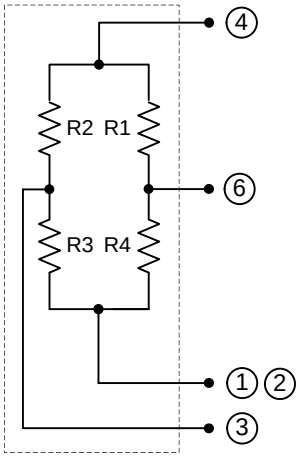
Characteristics 100 psig Version

Unless otherwise specified, all parameters are measured at 25 °C and excitation of 5.0 Volts

Parameters	Min	Typ	Max	Unit
Excitation Voltage	0	5	10	V
Pressure Range		100		psi
Offset	-35	0	+35	mV
Span	70	100	130	mV
Bridge Impedance	4	5	6	kohm
Linearity NOTE1		±0.3		%FS
TC - Span NOTE2		-22±5		%FS/100°C
TC - Offset NOTE2		±7		%FS/100°C
TC - Resistance NOTE2		28±5		%FS/100°C
Temp - Operating	-20		+85	°C
Temp - Storage	-40		+125	°C
Over Pressure			1.5x	Rated FS

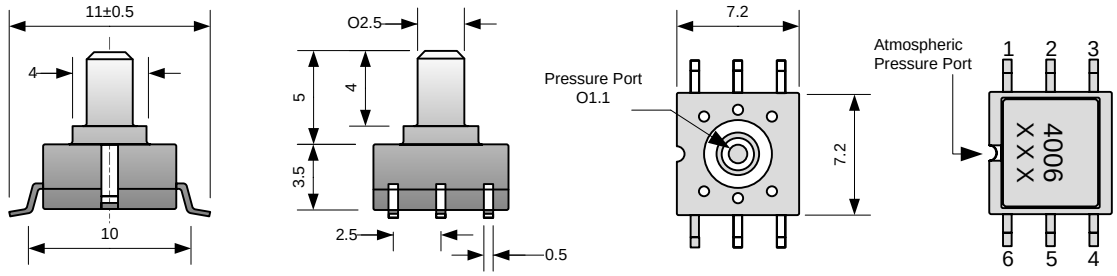


Equivalent Circuit

Notes:

1. Best Fit Straight Line
2. Temperature coefficient is measured from 0 °C to 50 °C
3. Wetted material contains RTV, PPA, glass and silicon

Dimension



Note:
Soldering of lead pins: 250 °C for 5 sec max.

Unit: mm

Lead	Connection
1,2	INPUT -
4	INPUT +
6	OUTPUT +
3	OUTPUT -

Ordering Information

3 2 – 1 0 0 3 1 0

- 32 – Series
- 100 – Range: 100 : 100 psi
- 3 – Lead Direction
  - 1: DIP Same as tube
  - 2: DIP Opposite to tube
  - 3: Surface Mount
- 10 – I.D. Code

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