Honeywell

Representative photograph, actual product appearance may vary.

Due to regional agency approval requirements, some products may not be available in your area. Please contact your regional Honeywell office regarding your product of choice.

24PCBFA6G

Pressure Sensors: Measurement Type: Gage, Vacuum Gage; Signal Conditioning: Unamplified; Pressure Range: ± 5.0 psi Port Style: Straight

Features

- Miniature package
- Variety of gage pressure port configurations - easily and quickly modified for special needs
- Operable after exposure to frozen conditions
- Choice of termination for gage sensors
- 2 mA constant current excitation significantly reduces sensitivity shift over temperature
- Can be used to measure vacuum or positive pressure

Typical Applications

Medical

- Oxygen and nitrogen gas distribution in hospitals
- Dental chairs

Environmental

- Water control valves
- Instrumentation
- Irrigation equipment
- Filter monitoring equipment

Industrial Instrumentation

- Robotics
- Pressure valves
- Leak detection
- Air compressors

Analytical Instrumentation

- Gas chromatography

Description

The 24PC Series miniature pressure sensors provide reliable gage pressure sensing performance in a compact package. The sensor features a proven sensing technology that utilizes a specialized piezoresistive micro-machined sensing element. The low power, non-amplified, non-compensated Wheatstone bridge circuit design provides inherently stable mV outputs over 0.5 psi through 250 psi sensing ranges.

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Product Specifications	
Measurement Type	Gage, Vacuum Gage
Signal Conditioning	Unamplified
Pressure Range	± 5.0 psi
Maximum Overpressure	20.0 psi
Supply Voltage	10.0 Vdc typ., 12.0 Vdc max.
Compensated	No
Output Calibration	No
Response Time	1 ms max.
Termination	PCB; 1 x 4; 0.600 in
Port Style	Straight
Package Style	Honeywell - 20PC
Linearity	± 0.25 % span typ., ± 1.0 % span max. (P2 > P1)
Typical Sensitivity	23 mV/psi
Full Scale Span	115 mVdc typ.
Null Offset	0 mV typ.
Null Shift over Temperature	± 1.0 mV typ.
Span Shift Over Temperature	± 5.0 % span typ.
Repeatability & Hysteresis Error	± 0.15 % span typ.
Input Resistance	4.0 kOhms min., 5.0 kOhms typ., 6.0 kOhms max.
Output Resistance	4.0 kOhms min., 5.0 kOhms typ., 6.0 kOhms max.
Shock	Qualification tested to 150 g
Vibration	MIL-STD-202 Method 213 (150 g half sine 11 ms)
Weight	2 g [0.07 oz]
Operating Temperature Range	-40 °C to 85 °C [-40 °F to 185 °F]
Storage Temperature Range	-55 °C to 100 °C [-67 °F to 212 °F]
Media Compatibility	Limited only to those media which will not attack polyetherimide, silicon, fluorosilicone, silicone, EPDM, and neoprene seals.
UNSPSC Code	411121
UNSPSC Commodity	411121 Transducers
Availability	Global
Series Name	24PC Series

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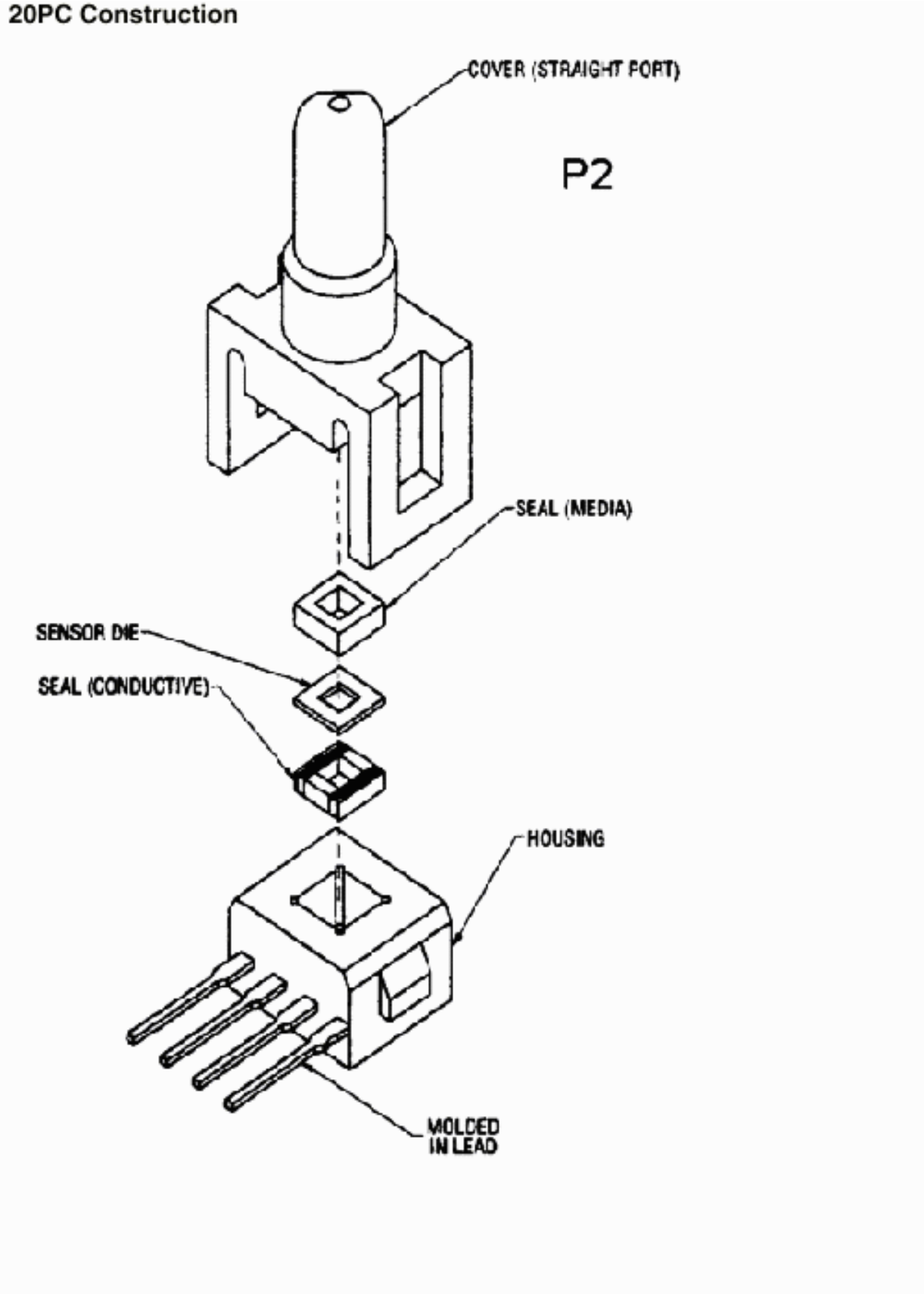

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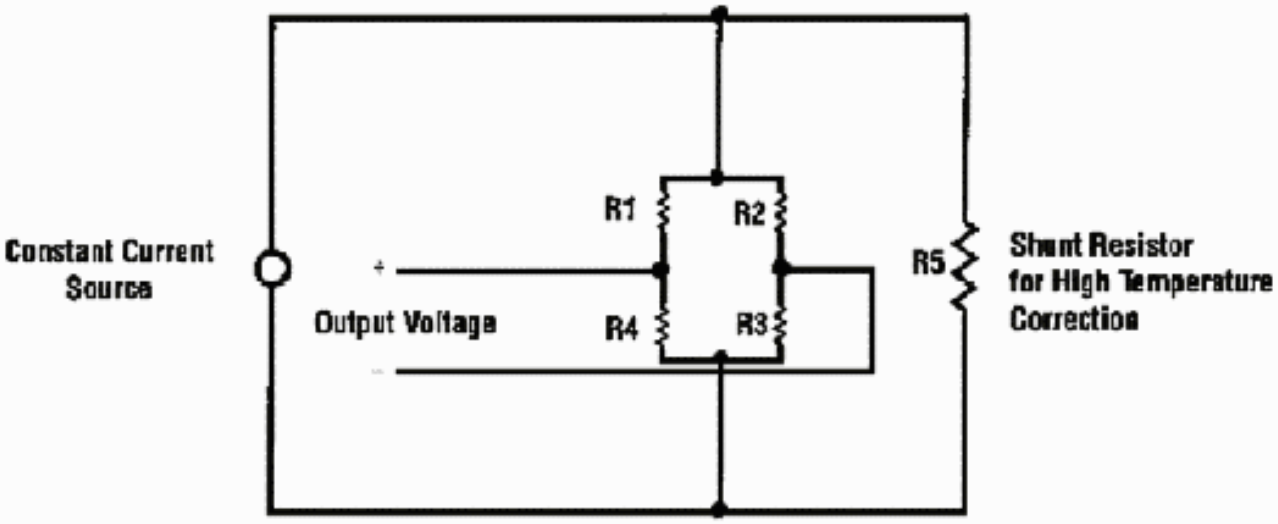
Constant Current Excitation Schematic



*Non-compensated pressure sensors, excited by constant current instead of voltage, exhibit temperature compensation of Span. Application Note #1 briefly discusses current excitation.

Constant current excitation has an additional benefit of temperature measurement. When driven by a constant current source, a silicon pressure sensor's terminal voltage will rise with increased temperature. The rise in voltage not only compensates the Span, but is also an indication of die temperature.

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⚠ WARNING

PERSONAL INJURY

DO NOT USE these products as safety or emergency stop devices, or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

⚠ WARNING

MISUSE OF DOCUMENTATION

- The information presented in this product sheet (or catalog) is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

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