



*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.*

## 24PCFA6G

**Pressure Sensors: Measurement Type: Gage, Vacuum Gage; Signal Conditioning: Unamplified; Pressure Range:  $\pm 1.0$  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.

## 24PCAFA6G

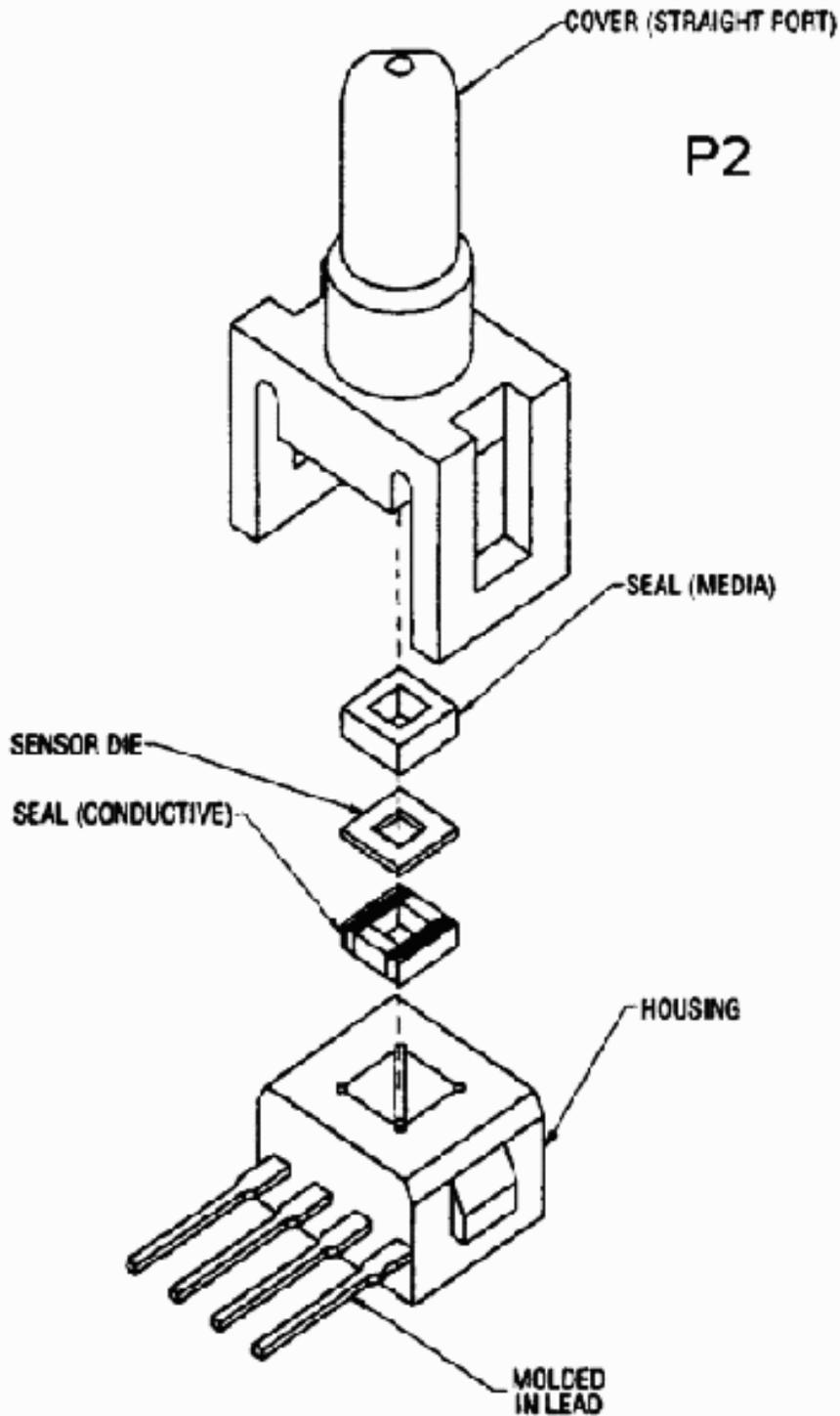
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Product Specifications	
<b>Measurement Type</b>	Gage, Vacuum Gage
<b>Signal Conditioning</b>	Unamplified
<b>Pressure Range</b>	$\pm 1.0$ psi
<b>Maximum Overpressure</b>	20.0 psi
<b>Supply Voltage</b>	10.0 Vdc typ., 12.0 Vdc max.
<b>Compensated</b>	No
<b>Output Calibration</b>	No
<b>Response Time</b>	1 ms max.
<b>Termination</b>	PCB; 1 x 4; 0.600 in
<b>Port Style</b>	Straight
<b>Package Style</b>	Honeywell - 20PC
<b>Linearity</b>	$\pm 0.25$ % span typ., $\pm 1.0$ % span max. (P2 > P1)
<b>Typical Sensitivity</b>	45 mV/psi
<b>Full Scale Span</b>	45 mVdc typ.
<b>Null Offset</b>	0 mV typ.
<b>Null Shift over Temperature</b>	$\pm 1.0$ mV typ.
<b>Span Shift Over Temperature</b>	$\pm 5.0$ % span typ.
<b>Repeatability &amp; Hysteresis Error</b>	$\pm 0.15$ % span typ.
<b>Input Resistance</b>	4.0 kOhms min., 5.0 kOhms typ., 6.0 kOhms max.
<b>Output Resistance</b>	4.0 kOhms min., 5.0 kOhms typ., 6.0 kOhms max.
<b>Shock</b>	Qualification tested to 150 g
<b>Vibration</b>	MIL-STD-202 Method 213 (150 g half sine 11 ms)
<b>Weight</b>	2 g [0.07 oz]
<b>Operating Temperature Range</b>	-40 °C to 85 °C [-40 °F to 185 °F]
<b>Storage Temperature Range</b>	-55 °C to 100 °C [-67 °F to 212 °F]
<b>Media Compatibility</b>	Limited only to those media which will not attack polyetherimide, silicon, fluorosilicone, silicone, EPDM, and neoprene seals.
<b>UNSPSC Code</b>	411121
<b>UNSPSC Commodity</b>	411121 Transducers
<b>Availability</b>	Global
<b>Series Name</b>	24PC Series

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20PC Construction

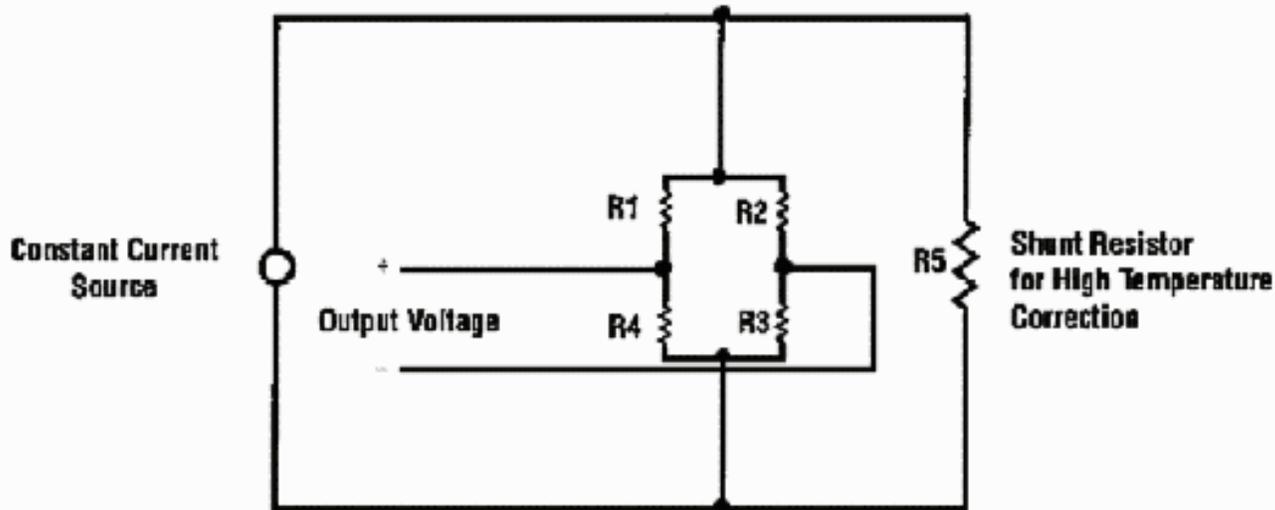


# Honeywell

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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.**