

## Model G

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### Subminiature, Flush Diaphragm Pressure Transducer



#### DESCRIPTION

Honeywell's full line of subminiature pressure transducers accurately measure pressure ranges from 150 psi to 20000 psi. These gage-only subminiature pressure transducers have a high natural frequency and utilize a flush diaphragm.

Temperature compensation is accomplished by using temperature-sensitive components located inside the transducers. These transducers have a small electrical zero balance circuit board which is in the lead wire (approximately 1 in x 0.087 in thick). This balance board does not have to be in

the same temperature as the transducers. All transducers have four (4) active bonded strain gages arranged in a Wheatstone-bridge configuration.

Most are manufactured with a unitized stainless steel diaphragm. The advantage of this type of design is that a thin diaphragm and heavy sidewalls are made from one piece of stainless steel. This unitized diaphragm is rugged, but at the same time it is thin enough to measure low pressures.

#### FEATURES

- 150 psi to 20000 psi range
- Flush mount design
- High frequency
- No internal dead volume
- mV/V output
- Subminiature footprint
- 1 % accuracy
- CE approved

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## PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Pressure ranges	150, 200, 250, 300, 400, 500, 600, 750, 1000, 1500, 2000, 2500, 3000, 4000, 5000, 6000, 7500, 10000, 15000, 20000 psig
Accuracy <sup>1</sup>	1.0 % full scale
Linearity	±1.0 % full scale
Hysteresis	±1.0 % full scale
Non-repeatability	±0.1 % full scale
Output	2 mV/V
Resolution	Infinite

## ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating	-54 °C to 149 °C [-65 °F to 300 °F]
Temperature, compensated	16 °C to 71 °C [60 °F to 160 °F]
Temperature effect, zero	0.01 % full scale/°F
Temperature effect, span	0.02 % reading/°F

## ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Strained gage type	Bonded foil
Excitation (calibration)	5 Vdc
Bridge resistance	350 ohm
Shunt calibration data	Included
Electrical termination (std)	Four twisted leads (1.83 m [5 ft]) with external balance board

## MECHANICAL SPECIFICATIONS

Characteristic	Measure
Media	Gases, liquids compatible with wetted material
Overload, safe	50 % over capacity
Wetted parts material	17-4 PH stainless steel
Case material	Stainless steel

## RANGE CODES

Range Code	Available ranges
CJ	150 psig
CL	200 psig
CN	250 psig
CP	300 psig
CQ	400 psig
CR	500 psig
CS	600 psig
CT	750 psig
CV	1000 psig
DJ	1500 psig
DL	2000 psig
DM	2500 psig
DN	3000 psig
DR	5000 psig
DS	6000 psig
DT	7500 psig
DV	10000 psig
EJ	15000 psig
EL	20000 psig

## OPTION CODES

Range Code	Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see <a href="http://sensing.honeywell.com/TMsensor-ship">http://sensing.honeywell.com/TMsensor-ship</a> for updated listings.
Pressure ranges	150, 200, 250, 300, 400, 500, 600, 750, 1000, 1500, 2000, 2500, 3000, 4000, 5000, 6000, 7500, 10000, 15000, 20000 psig
Temperature compensation	1a. 60 °F to 160 °F 1b. 30 °F to 130 °F 1c. 0 °F to 185 °F 1d. -20 °F to 130 °F 1e. -20 °F to 200 °F 1f. 70 °F to 250 °F 1g. 70 °F to 325 °F 1h. 70 °F to 400 °F 1i. -65 °F to 250 °F
Internal amplifiers	2u. Unamp., mV/V output
Electrical termination	Four twisted leads 1.83 m [5 ft] 6d. Microtec DR-4S-4H 4-pin (max 250 °F) <sup>2</sup>

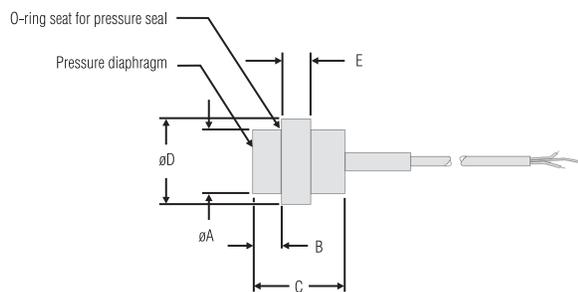
## WIRING CODES

Wire	Cable/unamplified
Red	(+) excitation
Black	(-) excitation
Green	(-) output
White	(+) output

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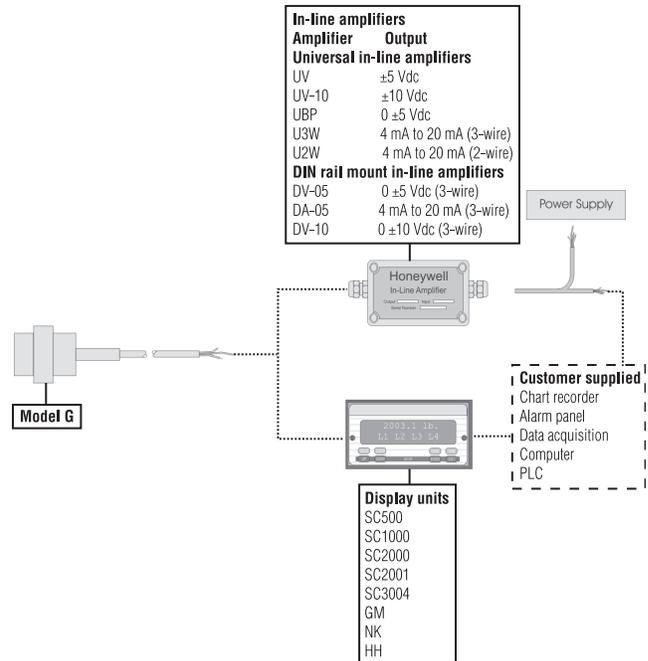
## MOUNTING DIMENSIONS AND CHARACTERISTICS

Order code	Range (psig)	Ø A	B	C	D Ø	E	Dia-phragm
BP386	150 psig to 15000 psig	7,87 mm [0.310 in]	3,81 mm [0.15 in]	11,94 mm [0.47 in]	11,18 mm [0.44 in]	3,81 mm [0.15 in]	Welded
BP387	150 psig to 20000 psig	9,53 mm [0.375 in]	3,81 mm [0.15 in]	11,94 mm [0.47 in]	12,7 mm [0.50 in]	3,81 mm [0.15 in]	Welded



For reference only Transducers have a small electrical balance circuit board (approximately 1.0 in long by 0.38 in wide) located in the lead wire that is two feet from the transducer body.

## TYPICAL SYSTEM DIAGRAM



## SPECIAL REQUIREMENTS (CONSULT FACTORY)

Have a special requirement? New case pressure, different cable lengths, electrical connectors, or materials? Consult our factory by calling +1 614-850-5000 (800-848-6564). Customization is key to our test and measurement business. Special outputs, wiring codes, and calibrations are all standard to us.

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### NOTES

1. Accuracies stated are expected for best-fit straight line for all errors, including linearity, hysteresis & non-repeatability thru zero.
2. Only available on certain models, consult factory.

**Warranty.** Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

For more information about Sensing and Control products, visit [www.honeywell.com/sensing](http://www.honeywell.com/sensing) or call +1-815-235-6847

Email inquiries to [info.sc@honeywell.com](mailto:info.sc@honeywell.com)

### **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 catalogue 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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