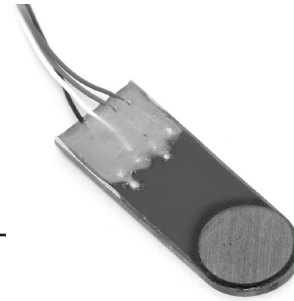


Model F

Subminiature, Low Profile Pressure Transducer³



DESCRIPTION

Honeywell includes a full line of subminiature pressure transducers to accurately measure pressure ranges from 10 psig to 3000 psig. These 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 leadwire (approximately 1 in x 0.087 in thick). This balance board does not have to be the same temperature as the transducer.

FEATURES

- 10 psig to 3000 psig range
- mV/V output
- Low profile design
- Subminiature footprint
- High frequency
- 1 % accuracy
- CE approved

All units 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.

Model F

PERFORMANCE SPECIFICATIONS

| Characteristic | Measure |
|---|---|
| Pressure ranges | 10, 15, 25, 30, 50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 750, 1000, 1500, 2000, 2500, 3000 psig ² |
| Accuracy ¹ | 1.0 % full scale |
| Linearity (10 psig to 100 psig) | ±0.5 mV |
| Linearity (150 psig to 3000 psig) | ±1.0 % full scale |
| Hysteresis (10 psig to 100 psig) | ±0.5 mV |
| Hysteresis (150 psig to 3000 psig) | ±1.0 % full scale |
| Non-repeatability (10 psig to 100 psig) | ±0.1 mV |
| Non-repeatability (150 to 3000 psig) | ±0.1 % full scale |
| Output (10 psig to 100 psig) | 2 mV/psi to 5 mV/psi (@ 5 Vdc) |
| Output (150 psig to 3000 psig) | 2 mV/V |
| Resolution | Infinite |

ENVIRONMENTAL SPECIFICATIONS

| Characteristic | Measure |
|--------------------------------------|---|
| Temperature, operating | -54 °C to 149 °C [-65 °F to 300 °F] (-29 °C to 121 °C [-20 °F to 250 °F] for semiconductor strain gage) |
| Temperature, compensated | 16 °C to 71 °C [60 °F to 160 °F] |
| Temp effect, zero (10 to 100 psig) | 0.02 mV/°F |
| Temp effect, zero (150 to 3000 psig) | 0.01 % full scale/°F |
| Temp effect, span (10 to 100 psig) | 0.03 mV/°F |
| Temp effect, span (150 to 3000 psig) | 0.02 % reading/°Ft |

ELECTRICAL SPECIFICATIONS

| Characteristic | Measure |
|---------------------------------------|--|
| Strained gage type (10 to 100 psig) | Bonded semiconductor |
| Strained gage type (150 to 3000 psig) | Bonded foil |
| Excitation (calibration) | 5 Vdc |
| Bridge resistance (10 to 100 psig) | 500 ohm |
| Bridge resistance (150 to 3000 psig) | 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 | Gas, liquid, not conductive |
| Overload, safe (10 psig to 100 psig) | 100 % over capacity |
| Overload, safe (150 psig to 3000 psig) | 50 % over capacity |
| Wetted parts material (10 to 100 psig) | 17-4 PH stainless steel or BeCu |
| Wetted parts matl (150 to 3000 psig) | 17-4 PH stainless steel |
| Case material | Stainless steel |

RANGE CODES

| Range Code | Available ranges | Range Code | Available ranges |
|------------|------------------|------------|------------------|
| AV | 10 psig | CP | 300 psig |
| BJ | 15 psig | CQ | 400 psig |
| BL | 25 psig | CR | 500 psig |
| BM | 30 psig | CS | 600 psig |
| BN | 50 psig | CT | 750 psig |
| BP | 75 psig | CV | 1000 psig |
| BR | 100 psig | DJ | 1500 psig |
| CJ | 150 psig | DL | 2000 psig |
| CL | 200 psig | DM | 2500 psig |
| CN | 250 psig | DN | 3000 psig |

OPTION CODES

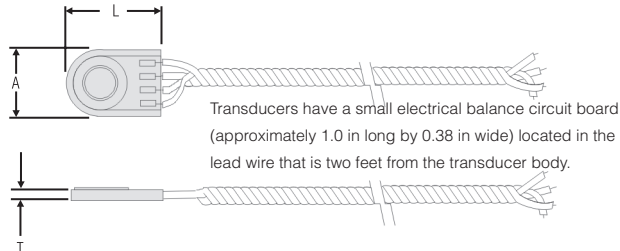
| Range Code | Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see http://sensing.honeywell.com/TMsensor-ship for updated listings. |
|--------------------------|--|
| Pressure ranges | 10, 15, 25, 30, 50, 75, 100, 150, 200, 250, 300, 400, 500, 600, 750, 1000, 1500, 2000, 2500, 3000 psig |
| Temperature compensation | 1a. 60 °F to 160 °F 1b. 30 °F to 130 °F 1c. 0 °F to 185 °F 1f. 70 °F to 250 °F 1d. -20 °F to 130 °F 1e. -20 °F to 200 °F 1g. 70 °F to 325 °F 1i. -65 °F to 250 °F |
| Internal amplifiers | 2u. Unamplified, mV/V output |
| Electrical termination | Four twisted leads 1.83 m [5 ft] |

Subminiature, Low Profile Pressure Transducer³

MOUNTING DIMENSIONS AND CHARACTERISTICS

| Order code | Foil/Semi-conductor | Range | A | T | L |
|--------------|---------------------|-----------------------|--------------------|------------------|--------------------|
| BP340 | Foil | 150 psig to 500 psig | 6,96 mm [0.275 in] | 1,07 mm [0.042]* | 12,7 mm [0.50 in] |
| BP341 | Foil | 150 psig to 3000 psig | 8,13 mm [0.320 in] | 1,07 mm [0.042]* | 12,7 mm [0.50 in] |
| BP342 | Foil | 150 psig to 3000 psig | 10,8 mm [0.425 in] | 1,52 mm [0.060] | 14,22 mm [0.56 in] |
| BP343 | Semiconductor | 15 psig to 500 psig | 3,81 mm [0.150 in] | 1,07 mm [0.042] | 12,7 mm [0.50 in] |
| BP344 | Semiconductor | 10 psig to 500 psig | 6,96 mm [0.275 in] | 1,07 mm [0.042] | 12,7 mm [0.50 in] |
| BP345 | Semiconductor | 10 psig to 3000 psig | 8,13 mm [0.320 in] | 1,07 mm [0.042] | 12,7 mm [0.50 in] |
| BP346 | Semiconductor | 10 psig to 3000 psig | 10,8 mm [0.425 in] | 1,52 mm [0.060] | 14,22 mm [0.56 in] |

* Nominal

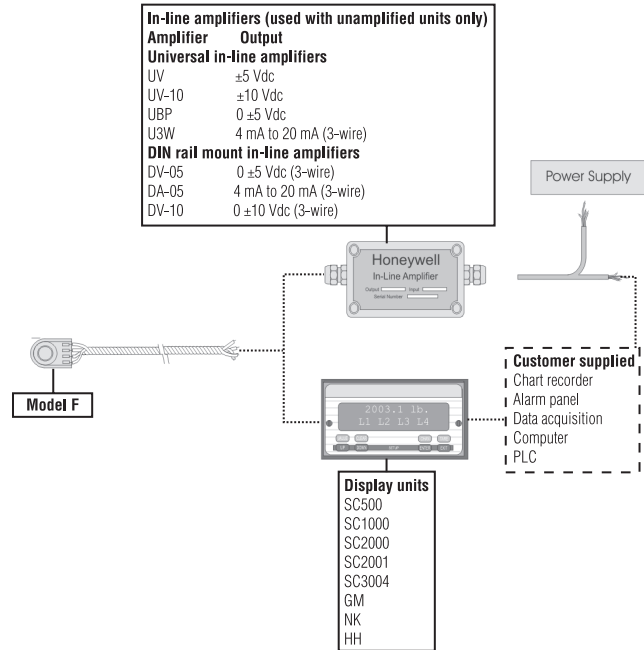


For reference only

WIRING CODES

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

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.

Model F

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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. Low pressure ranges (10 psig to 100 psig) - semiconductor gage (500 ohm); high pressure ranges (150 psig to 3000 psig) - Foil gages (350 ohm).
3. All model Fs have a cemented diaphragm.
4. Only available with foil strain gage.

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 or call +1-815-235-6847

Email inquiries to 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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008602-1-EN IL50 GLO
May 2008
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