Honeywell

Model A-105

Flush Diaphragm Pressure Transducer



DESCRIPTION

Model A-105 gage pressure transducers 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 can be made thin enough to measure low pressures. Available pressure ranges span from 100 psig to 15,000 psig. These models can be used in corrosive fluid environments. Model A-105 has welded electrical connectors as an integral part of the transducer body and recommended for applications involving rough handling or where an all-welded stainless steel transducer is required.

All units have four (4) active bonded strain gages arranged in a Wheatstone-bridge configuration.

FEATURES

- 100 psig to 15000 psig range
- Flush mount design
- No dead volume
- Miniature footprint
- Stainless steel
- CE approved

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Model A-105

PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Pressure ranges	100, 150, 200, 300, 500, 750, 1000, 1500, 2000, 3000, 5000, 7500, 10000, 15000 psig
Accuracy6	0.5 % full scale
Non-linearity and hysteresis	±0.5 % full scale
Non-repeatability	±0.1 % full scale
Output	2 mV/V nominal
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
Excitation (acceptable)	Up to 5 Vdc or (Vac)
Insulation resistance	5000 mOhm @ 50 Vdc
Bridge resistance	350 ohm
Shunt calibration data	Included
Electrical termination (std)	PTIH-10-6P or equivalent (hermetic)
Mating connector (not incl.)	PT06A-10-6S or equiv. (AA111)

MECHANICAL SPECIFICATIONS

Characteristic	Measure
Media	Gases, liquids compatible with wetted parts
Overload, safe	50 % over capacity
Proof pressure	400 % (max. 25 k psi)
Dead volume	Flush diaphragm
Wetted parts material	17-4 PH stainless steel
Weight	2 oz
Case material	Stainless steel
Installation	See Model 355

RANGE CODES

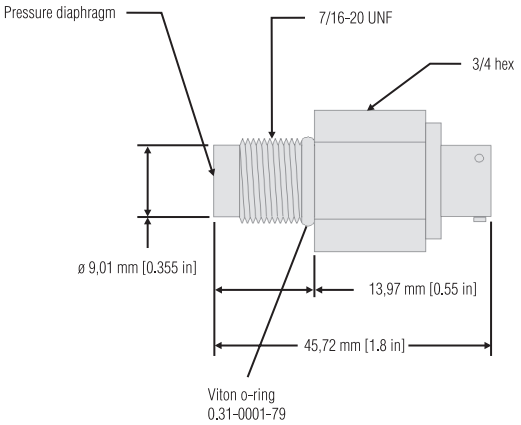
Range Code	Available ranges
BR	100 psi
CJ	150 psi
CL	200 psi
CP	300 psi
CR	500 psi
CT	750 psi
CV	1000 psi
DJ	1500 psi
DL	2000 psi
DN	3000 psi
DR	5000 psi
DT	7500 psi
DV	10000 psi
EJ	15000 psi

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	100, 150, 200, 300, 500, 750, 1000, 1500, 2000, 3000, 5000, 7500, 10000, 15000 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 1i. -65 °F to 250 °F 1g. 70 °F to 325 °F 1h. 70 °F to 400 °F
Internal amplifiers	2u. Unamplified, mV/V output
Pressure ports	5d. 7/16-20 UNF male 5p. M12 x 1.5 male
Electrical termination	6a. Bendix PTIH-10-6P (or equivalent) 6 pin (max 250 °F) 6e. Integral cable: Teflon (-65 °F to 475 °F) 6h. Integral cable: Silicone (-65 °F to 300 °F) 6i. Integral underwater cable: (max 180 °F)1 6v. Phoenix connector on end of cable
Special calibration[3]	9a. 10 point (5 up/5 down) 20 % increments @ 70 °F 3 9b. 20 point (10 up/10 down) 10 % increments @ 70 °F 3
Wetted diaphragm	10e. Iconel X-750
Shock and vibration	44a. Shock & vibration resistance

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MOUNTING DIMENSIONS AND CHARACTERISTICS

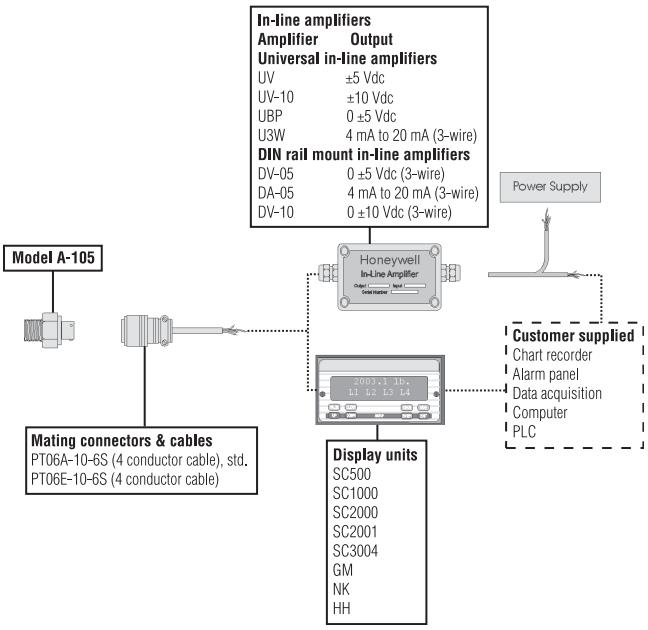


For reference only

WIRING CODES

Connector	Connector, unamplified
A	(+) excitation
B	(+) excitation
C	(-) excitation
D	(-) excitation
E	(-) output
F	(+) 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.

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NOTES

1. Not available with option 1c.
2. G=Green; B=Blue; W=White; Bl=Black; Br=Brown; Y=Yellow; R=Red; O=Orange. Color specifying cable and number or letter specifying connector.
3. Availability varies with range.
4. No mating connector necessary with cable option.
5. Not available with temperatures below -29 °C [-20 °F] or above 85 °C [185 °F].
6. Accuracies stated are expected for best-fit straight line for all errors, including linearity, hysteresis & non-repeatability thru zero.

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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