Honeywell

Model A-205a

Flush Diaphragm High Level Output Pressure Transducer

DESCRIPTION

The Model A-205a high level output, flush diaphragm pressure transducer features 4 mA to 20 mA, 1 Vdc to 5 Vdc or 1 Vdc to 10 Vdc (unipolar) output with an unregulated power supply.

Model A-205a 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 300 psig to 10000 psig. These models can be used in corrosive fluid environments. Model A-205a 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

- 300 psig to 10000 psig
- Flush diaphragm
- No dead volume
- Fully welded construction
- Stainless steel
- 1/4-18 NPT mounting threads

Model A-205a

PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Pressure ranges	300, 500, 750, 1000, 1500, 2000, 3000, 5000, 7500, 10000 psig
Accuracy	±0.5 % full scale
Output	4 mA to 20 mA @ 9 Vdc to 28 Vdc 1 Vdc to 5 Vdc or 1 Vdc to 10 Vdc @ 16 Vdc to 28 Vdc
Resolution	Infinite

ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating	-29 °C to 82 °C [-20 °F to 180 °F]
Temperature, compensated	-1 °C to 71 °C [30 °F to 160 °F]
Temperature effect, zero	0.015 % full scale/°F
Temperature effect, span	0.02 % reading/°F

ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Electrical termination (std)	PTIH-10-6P or equivalent
Mating connector (not incl.)	PT06A-10-6S (AA111)

MECHANICAL SPECIFICATIONS

Characteristic	Measure
Media	Gases, liquids compatible with wetted parts
Overload, safe	200 % over capacity
Overload, burst	500 % over capacity (max. 20000 psi)
Pressure port	1/4-18 NPT
Wetted parts material	17-4 PH welded stainless steel
Dead volume	Flush diaphragm (consult factory for charged volume)

RANGE CODES

Range Code	Available ranges
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

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	300, 500, 750, 1000, 1500, 2000, 3000, 5000, 7000, 10000 psi
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
Internal amplifiers[1]	2k. 4 mA to 20 mA, two-wire output 2c. 1 Vdc to 5 Vdc 2t. 1 Vdc to 10 Vdc output
Pressure ports	5b. 1/4-18 NPT male
Electrical termination	6a. Bendix PTIH-10-6P (or equivalent) 6 pin (max 120 °C) 6e. Integral cable: Teflon (-54 °C to 245 °C) 6f. Integral cable: PVC (-30 °C to 70 °C) 6h. Integral cable: Silicone (-54 °C to 150 °C) 6i. Integral underwater cable: (max 80 °C) 6v. Phoenix connector on end of cable
Special calibration	9a. 10 point (5 up/5 down) 20 % increments @ 20 °C 9b. 20 point (10 up/10 down) 10 % increments @ 20 °C

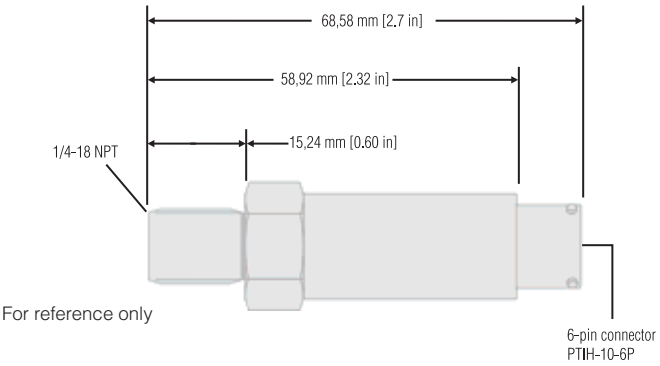
INTERNAL AMPLIFIERS

Amplifier specifications	Vehicle voltage output: Option 2c	Vehicle voltage output: Option 2t	Vehicle voltage output: Option 2k
Output signal	1 Vdc to 5 Vdc @ 10 mA	1 Vdc to 10 Vdc @ 10 mA	4 mA to 20 mA
Input power (voltage)	16 Vdc to 28 Vdc	16 Vdc to 28 Vdc	9 Vdc to 28 Vdc
Input power (current)	40 mA	40 mA	4 mA to 28 mA
Frequency response	200 Hz	200 Hz	300 Hz
Power supply rejection	60 db	60 db	60 db
Operating temperature	-20 °F to 185 °F	-20 °F to 185 °F	0 °F to 185 °F
Reverse voltage protection	Yes	Yes	Yes
Short circuit protection	Momentary	Momentary	Yes
Wiring code: connector	A (+) Supply B Output com.** C Supply ret.** D (+) Output E No connection F No connection	A (+) Supply B Output com.** C Supply ret.** D (+) Output E No connection F No connection	A (+) Supply B No connection C No connection D (+) Output E Case ground F No connection
Wiring code: cable	R (+) Supply Bl Output com* G Supply ret.* W (+) Output	R (+) Supply Bl Output com* G Supply ret.* W (+) Output	R (+) Supply Bl (+) Output W Case ground

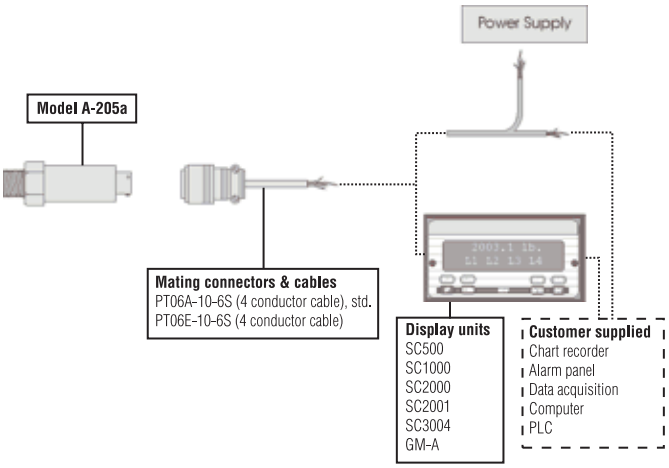
* Black and green wires are internally connected.

** Pins B and C are internally connected.

MOUNTING DIMENSIONS AND CHARACTERISTICS



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. Amplifier option code is not needed and included in the base order code. The base order code describes the output.

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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