

Model HP

High Pressure Transducer



DESCRIPTION

The high pressure transducer Model HP is designed to accept extreme pressure ranges of 50000 psi to 100,000 psi. Equipped with a special safety blow out plug in its outer case, this transducer will allow the excess pressure to gradually leak out should

the pressure element rupture. These transducers operate in a wide temperature range from -65 °F through 250 °F. Temperature effects on span and zero are 0.005 % each and a full scale accuracy of 0.5 % is achieved.

FEATURES

- 50000 psi to 100000 psi
- AE F-250-C port
- 0.5 % accuracy
- mV/V, 4 mA to 20 mA, 0 Vdc to 5 Vdc, or 0 Vdc to 10 Vdc output
- Intrinsically safe available (2N option only)¹⁰
- CE approved¹¹

Model HP

PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Accuracy ²	±0.50 % full scale
Resolution	Infinite
Calibration	5 point calibration: 0 %, 50 %, and 100 % of full scale
Output	1 mV/V

ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature compensated	15 °C to 71 °C [60 °F to 160 °F]
Temperature effect, zero	0.005 % full scale/°F
Temperature effect, span	0.005 % reading/°F
Temperature effect, sealing	Hermetically sealed IP68/NEMA 6P

ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Strained gage type	Bonded foil
Insulation resistance	5000 mOhm @ 50 Vdc
Bridge resistance	350 ohm
Shunt calibration data	Included
Electrical termination (std)	PTIH-10-6P or equivalent (Hermetic stainless)
Mating connector (not incl)	PT06A-10-6S or equiv. (AA111)

MECHANICAL SPECIFICATIONS

Characteristic	Measure
Media	All gases and liquids compatible with wetted parts
Wetted parts material	15-5 PH stainless steel
Weight	12 oz
Case material	304 Stainless steel
Marking	Permanent metal name plate MIL-STD130F 4.3; Individual sequential serial number per sensor; Country of origin and date of manufacture

WIRING CODES

Connector	Unamplified
A & B	(+) Excitation
C & D	(-) Excitation
E	(-) Output
F	(+) Output

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/TMsensorship for updated listings.	
Pressure ranges	50000, 75000, 100000 ¹⁶ 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	1e. -20 °F to 200 °F 1f. 70 °F to 250 °F 1g. 70 °F to 325 °F 1i. -65 °F to 250 °F
Internal amplifiers	2u. Unamp., mV/V output 2a. 0 Vdc to 5 Vdc (four wire) output ¹⁴ 2c. 0 Vdc to 5 Vdc output ¹⁴ 2j. 4 mA to 20 mA (three wire) output ¹⁴	2k. 4 mA to 20 mA (two wire) output ^{13,14} 2n. (2N) 4 mA to 20 mA (two-wire), intrinsically safe ^{13,14} 2t. 0 Vdc to 10 Vdc output ¹⁴
Internal amplifier enhancements	3a. Input/output isolation ¹² 3d. Remote buffered shunt calibration	
Pressure ports	5u. 9/16-18 UNF female per Autoclave F-250-C	
Electrical termination⁷	6a. Bendix PTIH-10-6P (or equivalent), 6 pin (max 250 °F) 6e. Integral cable: Teflon (-65 °F to 475 °F) 6f. Integral cable: PVC (-20 °F to 160 °F) 6g. Integral cable: Neoprene (0 °F to 185 °F) 6h. Integral cable: Silicone (-65 °F to 300 °F) 6i. Integral underwater cable (max 180 °F)	
Shunt calibration	8a. Precision internal resistor ⁸	
Special calibration	9a. 10 point (5 up/5 down) 20 % increments @ 60 °F	
Bridge type	11a. Square bridge ¹⁵ 11b. Symmetrical bridge ¹⁵ 11c. Square and symmetrical bridge ¹⁵	
Bridge resistance	12b. 5000 ohm (foil) (max 250 °F)	
Zero and span adjustment	14a. No access to pots 14b. Top access to pots	
Shock and vibration	44a. Shock and vibration resistance	
Interfaces	53e. Signature calibration ⁸ 53t. TEDS IEEE1451.4 module ⁹	

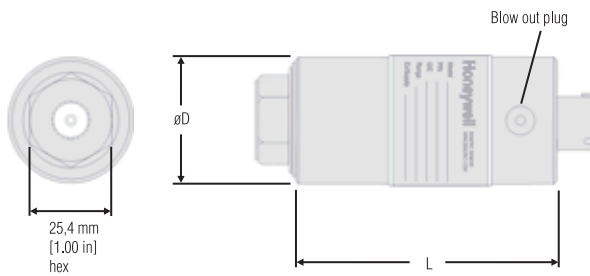
High Pressure Transducer

Range CODES

Pressure range (psi)	50000	75000	100000¹
Range code	EP	ER	ET
D mm [in]	38,1 [1.50]		
L mm [in]	74,17 [2.92]		
L* mm [in]	110,49 [4.35]		
Over pressure (test) psi	75000	100000	100000
Over pressure (burst) psi	100000	125000	140000
Port volume in³	0.015		
Natural frequency (Hz)	Greater than 100 kHz		
Installation torque (ft-lb/N-m)	25/34	30/41	35/47

¹Length of pressure transducer with amplified option (see option codes)

MOUNTING DIMENSIONS AND CHARACTERISTICS



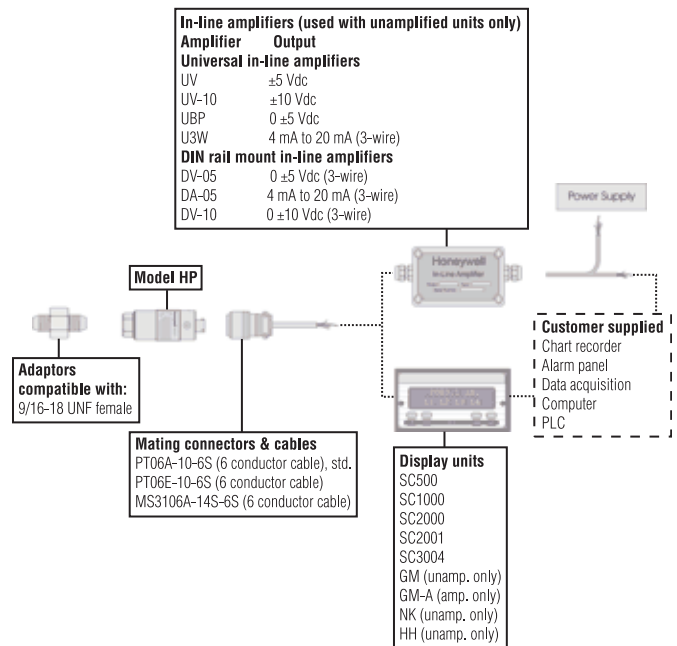
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SPECIAL REQUIREMENTS (CONSULT FACTORY)

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.

TYPICAL SYSTEM DIAGRAM



NOTES

1. For pressure ranges 75000 psi or above, consult factory for pressure port information.
2. Accuracies stated are expected for best-fit straight line for all errors, including linearity, hysteresis & non-repeatability thru zero.
3. Input power (voltage) for internal amplifier options 2j, 2k, 2n (2N) depends on load resistance.
4. CE mark requires options 6a & 3d.
5. Interconnecting shunt cal. 1 with shunt cal. 2 terminal provides 50 % (unamplified units), 75 % (4 mA to 20 mA three-wire units), or 80 % (voltage amp. units) of full scale output for quick calibration.
6. 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.
7. No mating connector necessary with cable option.
8. Cannot be used with amplified option.
9. Consult factory for TEDS availability with amplified models.
10. Range dependent; consult factory.
11. Termination dependent; consult factory.
12. Input/output isolation only available with voltage output (2A or 2C amplifiers).
13. 5000 ohm bridge required.
14. Not available with temperature below -29 °C [-20 °F] or above 85 °C [185 °F].
15. Not available with amplified options.
16. Not available with 2n(2N) option.

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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.