

## Model HP

### High Pressure Transducer

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#### 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)<sup>10</sup>
- CE approved<sup>11</sup>

# Model HP

## PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Accuracy <sup>2</sup>	±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

<b>Range Code</b>	Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see <a href="http://sensing.honeywell.com/TMsensorship">http://sensing.honeywell.com/TMsensorship</a> for updated listings.	
<b>Pressure ranges</b>	50000, 75000, 100000 <sup>16</sup> psi	
<b>Temperature compensation</b>	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
<b>Internal amplifiers</b>	2u. Unamp., mV/V output 2a. 0 Vdc to 5 Vdc (four wire) output <sup>14</sup> 2c. 0 Vdc to 5 Vdc output <sup>14</sup> 2j. 4 mA to 20 mA (three wire) output <sup>14</sup>	2k. 4 mA to 20 mA (two wire) output <sup>13,14</sup> 2n. (2N) 4 mA to 20 mA (two-wire), intrinsically safe <sup>13,14</sup> 2t. 0 Vdc to 10 Vdc output <sup>14</sup>
<b>Internal amplifier enhancements</b>	3a. Input/output isolation <sup>12</sup> 3d. Remote buffered shunt calibration	
<b>Pressure ports</b>	5u. 9/16-18 UNF female per Autoclave F-250-C	
<b>Electrical termination<sup>7</sup></b>	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)	
<b>Shunt calibration</b>	8a. Precision internal resistor <sup>8</sup>	
<b>Special calibration</b>	9a. 10 point (5 up/5 down) 20 % increments @ 60 °F	
<b>Bridge type</b>	11a. Square bridge <sup>15</sup> 11b. Symmetrical bridge <sup>15</sup> 11c. Square and symmetrical bridge <sup>15</sup>	
<b>Bridge resistance</b>	12b. 5000 ohm (foil) (max 250 °F)	
<b>Zero and span adjustment</b>	14a. No access to pots 14b. Top access to pots	
<b>Shock and vibration</b>	44a. Shock and vibration resistance	
<b>Interfaces</b>	53e. Signature calibration <sup>8</sup> 53t. TEDS IEEE1451.4 module <sup>9</sup>	

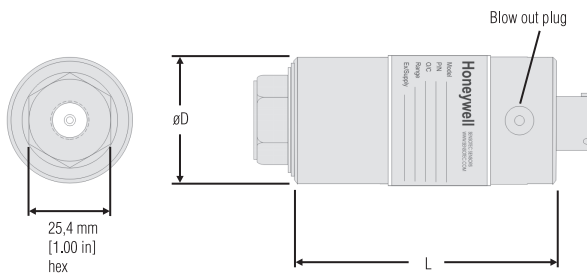
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## Range CODES

<b>Pressure range (psi)</b>	<b>50000</b>	<b>75000</b>	<b>100000<sup>1</sup></b>
<b>Range code</b>	<b>EP</b>	<b>ER</b>	<b>ET</b>
<b>D mm [in]</b>	38,1 [1.50]		
<b>L mm [in]</b>	74,17 [2.92]		
<b>L* mm [in]</b>	110,49 [4.35]		
<b>Over pressure (test) psi</b>	75000	100000	100000
<b>Over pressure (burst) psi</b>	100000	125000	140000
<b>Port volume in<sup>3</sup></b>	0.015		
<b>Natural frequency (Hz)</b>	Greater than 100 kHz		
<b>Installation torque (ft-lb/N-m)</b>	25/34	30/41	35/47

<sup>1</sup>Length of pressure transducer with amplified option (see option codes)

## MOUNTING DIMENSIONS AND CHARACTERISTICS

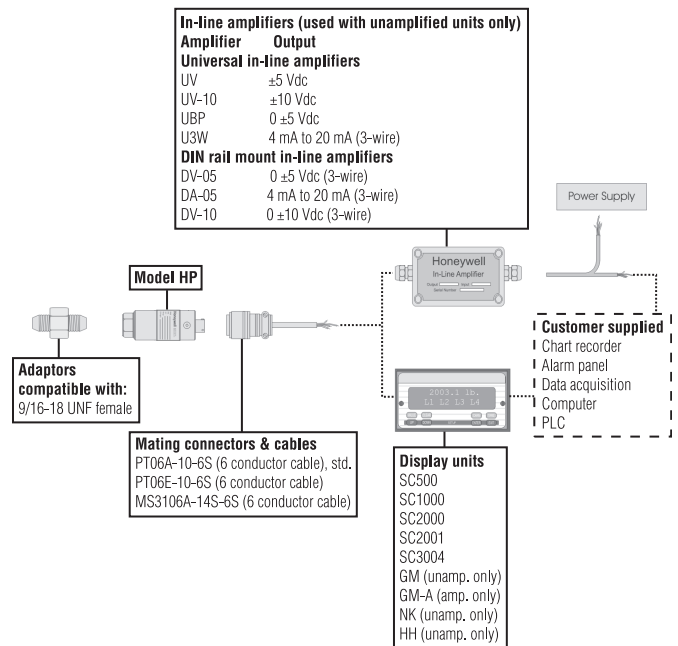


For reference only

## 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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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.**