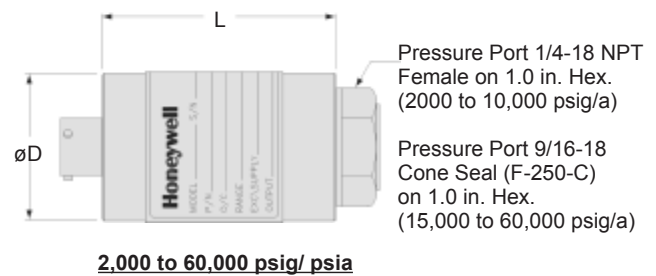
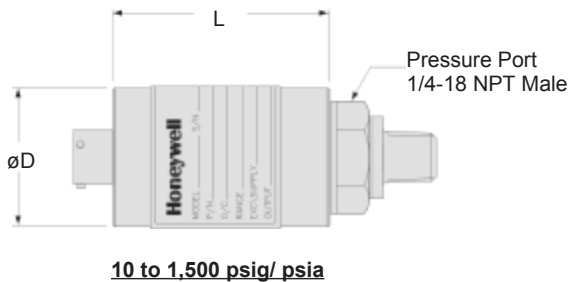
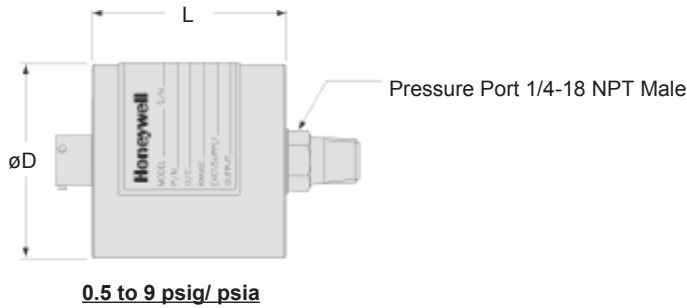


# Model A-5 General Purpose Gage/ Absolute Pressure Transducer

Order Code AP141 (gage) AP142 (absolute)

- 0.5 to 60,000 psig/a Range
- mV/V, 4-20 mA, 0-5 VDC or 0-10 VDC Output
- Stainless Steel, Hermetically Sealed
- 0.5% Accuracy



## Dimensions

		Pressure Ranges (psi)																				
		0.5**	1	2	5	10	15	25	50	75	100	150	200	300	500	750	1,000	1,500				
Range Code		AN	AP	AR	AT	AV	BJ	BL	BN	BP	BR	CJ	CL	CP	CR	CT	CV	DJ				
D (in./ mm) for psia/g		2.25/ 57					1.50/ 38															
L (in./ mm) for psia	N/A	2.54/ 65					2.35/ 60															
L* (in./ mm) for psia	N/A	3.79/ 96					3.60/ 91															
L (in./ mm) for psig		2.41/ 61					2.35/ 60										2.13/ 54					
L* (in./ mm) for psig		3.66/ 93					3.60/ 91										3.38/ 86					
Over Pressure (test) (psi)		150% Full Scale					150% Full Scale															
Over Pressure (burst) (psi)		50					100		200		400		800		2k		3k		3.5k		4k	
Port Volume (in. <sup>3</sup> / cm <sup>3</sup> )		0.32/ 5.2					0.25/ 4.1			0.17/ 2.8												
Natural Frequency (Hz)		500	500	550	1000	1.3k	2.1k	2.5k	2.9k	3.5k	4.6k	6k	7k	9k	9.5k	12k	17k	20k				

		Pressure Ranges (psi)									
		2,000	3,000	5,000	7,500	10,000	15,000	20,000	30,000	50,000	60,000
Range Code		DL	DN	DR	DT	DV	EJ	EL	EN	EP	ES
D (in./ mm)		1.50/ 38					1.50/ 38				
L (in./ mm)		1.90/ 48					2.21/ 56				
L* (in./ mm)		3.15/ 80					3.46/ 89				
Over Pressure (test) (psi)		150% Full Scale					Contact Factory				
Over Pressure (burst) (psi)		8k	12k	20k	25k	25k	40k	45k	60k	80k	80k
Port Volume (in. <sup>3</sup> / cm <sup>3</sup> )		0.12/ 3.1					0.06/ 1.5				
Natural Frequency (Hz)		35k	40k	54k	60k	80k	100k	>100k	>100k	>100k	>100k

\* Length of pressure transducer with amplified option (see options on third page)

\*\* 0.5 psi is available for gage only.

# Model A-5

## Performance

Accuracy (note 1).....+/-0.5% Full Scale  
 Resolution.....Infinite  
 Calibration.....5 point calibration: 0%, 50% and 100% of Full Scale

## Environmental

Temperature, Compensated.....60° to 160°F  
 Temperature, Effect  
     Zero.....0.0075% Full scale/ °F  
     Span.....0.01% Reading/ °F  
 Sealing.....Hermetically sealed IP68/ Nema 6P (AP142)

## Electrical

Strain Gage Type.....Bonded foil  
 Insulation Resistance.....5000 Megohms @ 50VDC  
 Bridge Resistance.....350 Ohms  
 Shunt Calibration Data.....Included  
 Electrical Termination (std).....PTIH-10-6P or equiv. (Hermetic Stainless)  
 Mating Connector (not incl.).....PT06A-10-6S or equiv.

## Mechanical

Media.....All gases/ liquids compatible with wetted parts  
 Wetted Parts Material  
     Less than 2000 psig/a.....17-4 PH Stainless Steel  
     Greater than or equal to 2000 psig/a.....15-5 PH Stainless Steel  
     Weight.....10 oz.  
 Case Material.....304 Stainless Steel  
 Marking.....Permanent metal nameplate MIL-STD130F 4.3;  
     Individual sequential serial number per sensor;  
     Country of origin and date of manufacture

## Internal Amplifiers

Amplifier Specifications	mV/V Output Standard	Voltage Output Option 2a (note 4)	Vehicle Voltage Output Option 2c (note 4)	Vehicle Voltage Output Option 2t (note 4)	Current 3 Wire Option 2j (note 4)	Current 2 Wire Option 2k (note 4)	Intrinsically Safe Amp Option 2N (2n)
Output Signal	3 mV/V (note 2)	0-5VDC	0-5VDC or +/- 5VDC @ 5mA	0-10VDC or +/- 10VDC @ 5mA	4-20 mA	4-20 mA	4-20 mA
Input Power (Voltage)	10 VDC Regulated	+/-15VDC or 26-32VDC	11-28 VDC	15-28 VDC	22-32 VDC (note 3)	9-32 VDC (note 3)	9-28 VDC (note 3)
Input Power (Current)	28.5 mA @ 10 VDC	45 mA	40 mA	40 mA	65 mA	4-28 mA	4-24 mA
Frequency Response (amp)	Natural Frequency	2000 Hz	3000 Hz	3000 Hz	2500 Hz	300 Hz	2000 Hz
Power Supply Rejection	--	60 db	60 db	60 db	60 db	60 db	60 db
Operating Temperature	-100° to 250° F	-20° to 185° F	-40° to 200° F	-40° to 185° F	-40° to 185° F	-40° to 185° F	-20° to 185° F
Reverse Voltage Protection	Not Applicable	Yes	Yes	Yes	Yes	Yes	Yes
Short Circuit Protection	Not Applicable	Momentary	Momentary	Momentary	Yes	Yes	Yes
Wiring Code: Connector (Std.) (note 5)	A (+) Excitation B (+) Excitation C (-) Excitation D (-) Excitation E (-) Output F (+) Output	A (+) Supply B Output Common/ C Supply Return D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B** Output Common/ C** Supply Return D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B** Output Common/ C** Supply Return D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B** Output Common/ C** Supply Return D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B No Connection C No Connection D (+) Output E Case Ground F No Connection	A (+) Supply B No Connection C No Connection D (+) Output E Case Ground F No Connection
Wiring Code: Cable (note 5) (note 6) (note 7)	R (+) Excitation Bl (-) Excitation G (-) Output W (+) Output	R (+) Supply Bl Output Common/ G Supply Return W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply Bl* Output Common/ G* Supply Return W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply Bl* Output Common/ G* Supply Return W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply Bl* Output Common/ G* Supply Return W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply Bl (+) Output W Case Ground	R (+) Supply Bl (+) Output W Case Ground

\* Black and Green wires are internally connected.

\*\* Pins B and C are internally connected.

### Notes:

1. Accuracies stated are expected for Best Fit Straight Line for all errors including linearity, hysteresis & non-repeatability thru zero.
2. Output for 0.5, 1, 2 psig/a units is 1-2mV/V.
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% (4-20 mA 3 wire units), or 80% (voltage amp. units) of full scale output for quick calibration. Shunt Calibration comes standard with internal amplifier options 2a, 2b, 2c, 2t and 2j.
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.

# Model A-5

## Options

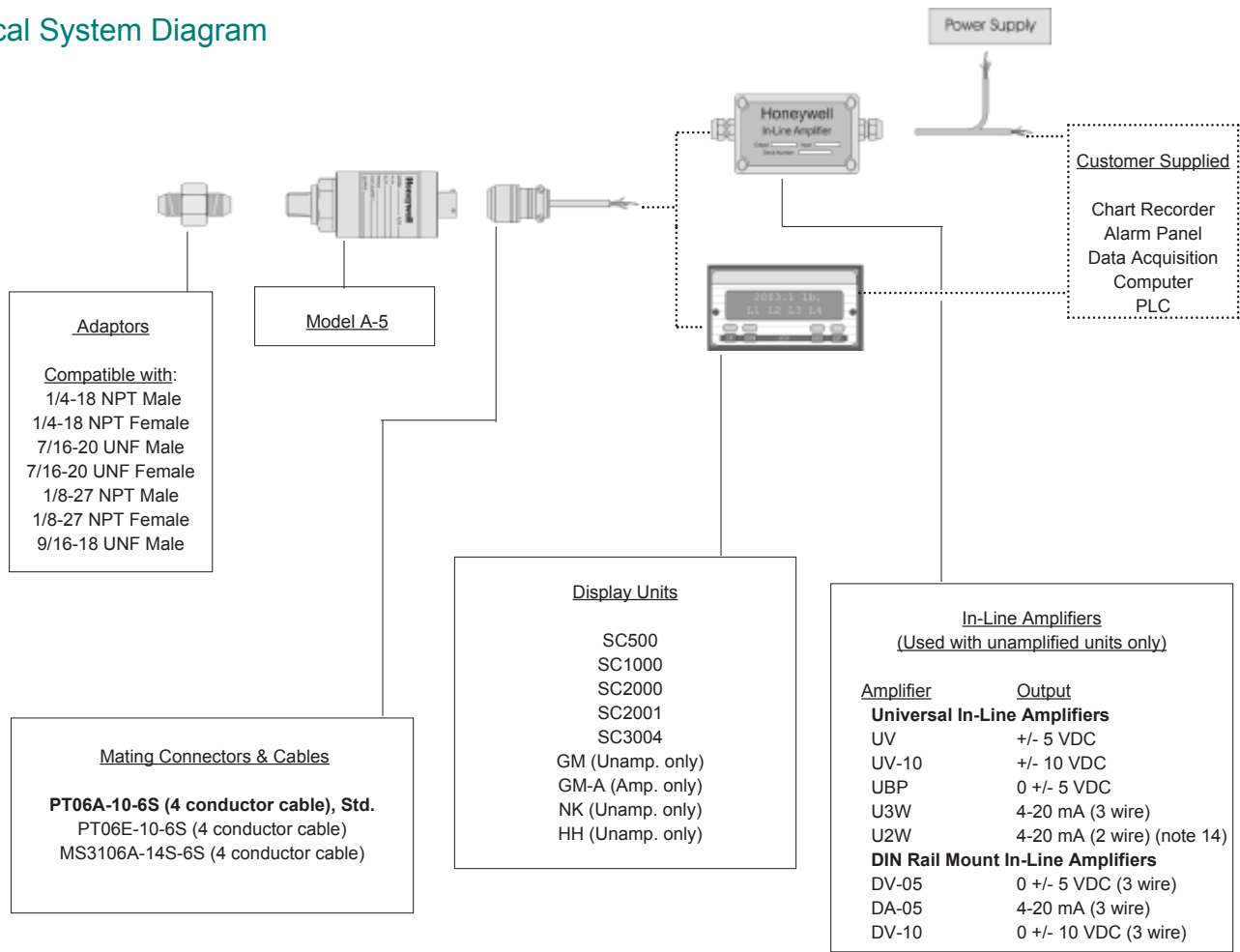
	Fast Track Manufacture	Built to Order	Built from Scratch
Pressure Ranges	15; 25; 50; 75; 100; 200; 300; 500; 750; 1000; 1500; 2000; 3000; 5000; 7500; 10,000 psig/a		0.5 psig 1; 2; 5; 10; 15,000; 20,000; 30,000; 50,000; 60,000 psig/a
Temperature Compensation	1a. 60° to 160° F 1b. 30° to 130° F 1c. 0° to 185° F 1d. -20° to 130° F 1e. -20° to 200° F 1f. 70° to 250° F	1g. 70° to 325° F (note 9) 1i. -65° to 250° F (note 9)	
Internal Amplifiers (note 10)	2u. Unamplified, mV/V Output 2c. 0-5 VDC output 2j. 4-20 mA (3-wire) output 2t. 0-10 VDC output	2a. 0-5 VDC (4-wire) output 2k. 4-20 mA (2-wire) output 2N (2n).4-20 mA (2-wire) Intrinsically safe	
Internal Amplifier Enhancements		3a. Input/ Output Isolation 3d. Remote Buffered Shunt Cal.	
Pressure Ports (note 9)	5a. 1/4-18 NPT Female 5b. 1/4-18 NPT Male 5d. 7/16-20 UNF Male 5g. G 1/4 Male	5c. 7/16-20 UNF Female (per MS33649-4)	
Electrical Termination	6a. Bendix PTIH-10-6P (or equivalent) 6 pin (max. 250° F)	6b. MS type connector mates with MS3106-14S 6 pin (max. 160°F) 6j. 1/2-14 conduit fitting with 5 ft. of 4 conductor PVC cable	
Shunt Calibration	8a. Precision Internal Resistor (note 11)		
Special Calibration (note 9)	9a. 10 point (5 up/5 down) 20% increments @ 70°F (gage) 9b. 20 point (10 up/10 down) 10% increments @ 70°F (gage)		
Wetted Diaphragm (note 9)			10a. 316 Stainless steel (note 9) 10b. Crucible A-286 10c. Hastelloy-C 10d. Monel K-500
Bridge Resistance (note 9)		12a. 1,000 Ohms (foil) (max. 400°F) 12b. 5,000 Ohms (foil) (max. 250°F)	
Potentiometers	14a. No access to pots 14b. Top access to pots		
Shock & Vibration		44a. Shock & vibration resistance	
Interfaces	53e. Signature Calibration (note 9) 53t. T.E.D.S. IEEE1451.4 Module (note 13)		

■ Supplied as standard

### Notes:

9. Availability varies according to range.
10. Not available with temperatures below -20°F or above 185°F.
11. Cannot be used with amplified option.
12. Gage pressure units greater than 200 psi are sealed at atmospheric pressure.
13. Consult factory for TEDS availability with amplified models.

Typical System Diagram



Special Customer Requirements  
 (Consult Factory)

- Case pressure
- Different cable lengths
- Different materials
- ESD
- Fatigue rating
- Lightning protection
- O<sub>2</sub> Clean
- OEM labels
- Overload stops
- Radiation proof
- Sig Cal
- Special electrical O/P
- Special temp comp
- Special wiring codes
- Temperature & pressure calibration

Notes:  
 14. 5,000 Ohm bridge required



How to Order

Combine the order code, the range code and the options code.

Sample Code: **AP141** **AT** **1c,2a**  
 Order Code      Range Code      Options Code