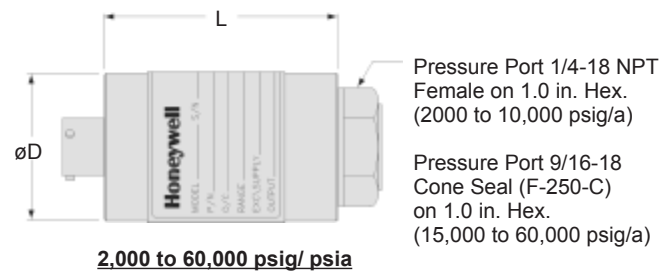
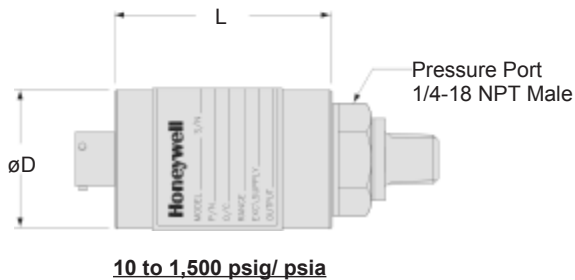
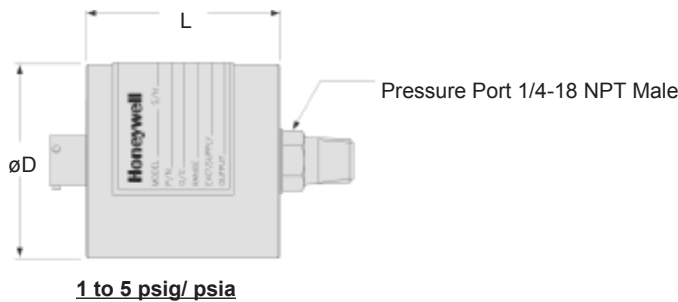


Model TJE Precision Gage/ Absolute Pressure Transducer

Order Code AP121 (gage) AP122 (absolute)

- 1 to 60,000 psig/a Range
- mV/V, 4-20 mA, 0-5 VDC or 0-10 VDC Output
- Stainless Steel, Hermetically Sealed
- 0.1% Accuracy



Dimensions

	Pressure Ranges (psi)																
	1	2	5	10	15	25	50	75	100	150	200	300	500	750	1,000	1,500	
Range Code	AP	AR	AT	AV	BJ	BL	BN	BP	BR	CJ	CL	CP	CR	CT	CV	DJ	
D (in./ mm) for psia	2.25/ 57			1.50/ 38													
D (in./ mm) for psig	2.25/ 57			1.75/ 45			1.50/ 38										
L (in./ mm) for psia	2.54/ 65			2.35/ 60													
L* (in./ mm) for psia	3.79/ 96			3.60/ 91													
L (in./ mm) for psig	1.81/ 46			2.00/ 51			2.02/ 51										
L* (in./ mm) for psig	3.06/ 78			3.25/ 83			3.27/ 83										
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. ³ / cm ³)	0.32/ 5.2			0.25/ 4.1			0.17/ 2.8										
Natural Frequency (Hz)	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. ³ / cm ³)	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 TJE

Performance

Accuracy (note 1).....+/-0.10% Full Scale
 Linearity.....+/-0.10% Full Scale
 Hysteresis.....+/-0.05% Full Scale
 Media.....All gases/ liquids compatible with wetted parts
 Resolution.....Infinite
 Calibration.....5 point calibration: 0%, 50% and 100% of Full Scale

Environmental

Temperature, Compensated.....60° to 160°F
 Temperature, Effect
 Zero.....0.0025% Full scale/ °F
 Span.....0.0025% Reading/ °F
 Sealing.....Hermetically sealed IP68/ Nema 6P

Electrical

Strain Gage Type.....Bonded foil
 Insulation Resistance.....5,000 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

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	Not Applicable	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 TJE

Options

	Same Day Ship	Fast Track Manufacture	Built to Order	Built from Scratch
Pressure Ranges	15; 25; 50; 100; 200 psig/a 500; 1000; 3000; 5000; 7500; 10,000 psig	75; 300; 750; 1500; 2000 psig/a 500; 1000; 3000; 5000; 7500; 10,000 psia		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 (note 11)	1g. 70° to 325° F (note 11) 1i. -65° to 250° F (note 11)	
Internal Amplifiers (note 10)	2u. Unamplified mV/V output 2c. 0-5 VDC output	2a. 0-5 VDC (4-wire) output 2j. 4-20 mA (3-wire) output 2t. 0-10 VDC output	2k. 4-20 mA (2-wire) output (note 8) 2N (2n). 4-20 mA (2-wire) Intrinsically safe (note 8)	
Internal Amplifier Enhancements			3a. Input/ Output Isolation (note 15) 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 equiv.) 6 pin (max. 400°F)		6b. MS type connector mates with MS3106-14S 6 pin (max. 160°F) (note 13) 6i. Submersible Cable (note 14) 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. 400°F)	
Potentiometers		14a. No access to pots 14b. Top access to pots		
Shock & Vibration			44a. Shock & vibration resistance	
Interfaces		53e. Signature Calibration (note 11) 53t. T.E.D.S. IEEE1451.4 Module (note 16)		

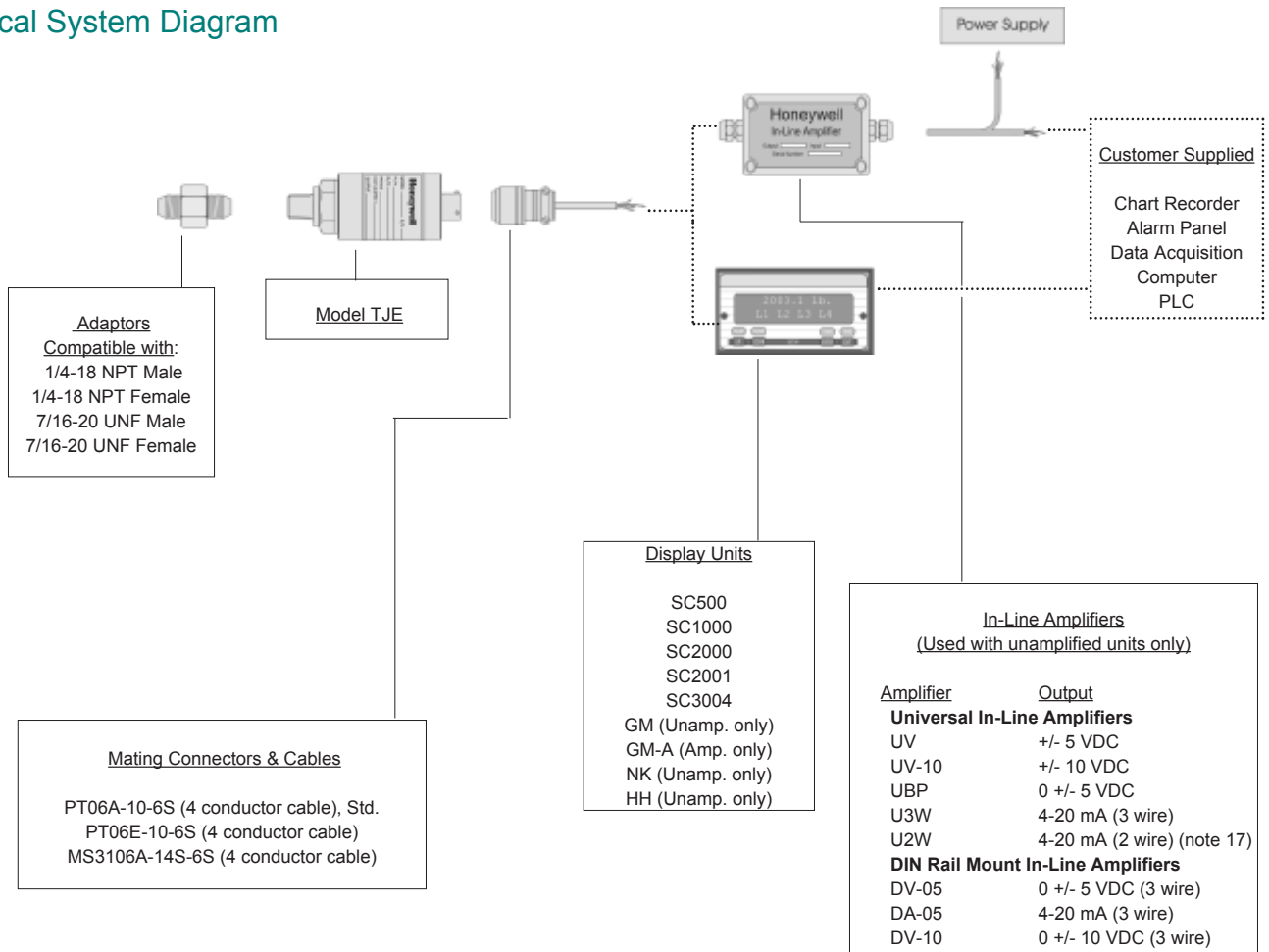
Supplied as standard

Notes:

8. Options 2k, 2n(2N) only available with option 12b.
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. No pot access available with MS type connector.
14. Temp 180° F max, nonshielded standard, shielded available.
15. Input/Output Isolation only available with Voltage output (options 2a, 2b, 2c).
16. Consult factory for TEDS availability with amplified models.

Model TJE

Typical System Diagram



Special Customer Requirements (Consult Factory)

- Case pressure
- Different cable lengths
- Different materials
- ESD
- Fatigue rating
- Lightning protection
- O₂ Clean
- OEM labels
- Overload stops
- Radiation proof
- Sig Cal
- Special electrical O/P
- Special temp comp
- Special wiring codes
- Temperature & pressure calibration

Notes:

17. 5,000 Ohm bridge required



How to Order

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

Sample Code: **AP121** **AT** **1c,2a**
Order Code Range Code Options Code