

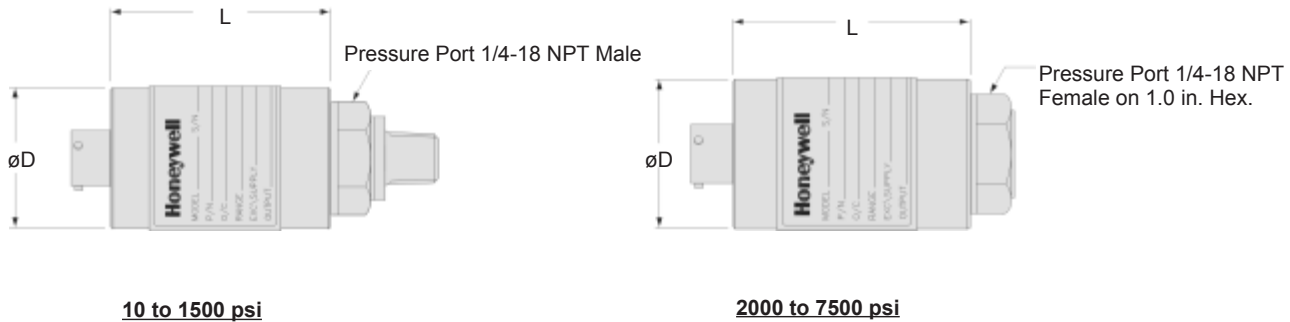
Model Super TJE Ultra Precision Pressure Transducer

Order Code AP111 (gage); AP112 (absolute)

- 10 to 7500 psig Range
- Isolated Double Wall Construction
- Enhanced Temperature Stability
- 0.05% Accuracy



Dimensions



Pressure Ranges (psi)	10**	15	25	50	75	100	150	200	300	500	750	1000	1500	2000	3000	5000	7500
Range Code	AV	BJ	BL	BN	BP	BR	CJ	CL	CP	CR	CT	CV	DJ	DL	DN	DR	DT
D (in./mm) for psia	N/A	1.63/41															
D (in./mm) for psig	2.0/51		1.63/41														
L (in./mm) for psia	N/A	2.62/66															
L* (in./mm) for psia	N/A	3.63/92															
L (in./mm) for psig	2.5/64		2.62/66														
L* (in./mm) for psig	3.5/89		3.63/92														
Over Pressure (test) (psi)	150% F.S.																
Over Pressure (burst) (psi)	100	200	400	800	2000	3000	3500	4000	8000	12k	20k	25k					
Port Volume (in. ³ / cm ³)	0.17/2.8												0.12/3.1				
Natural Frequency (Hz)	1.3k	2.1k	2.5k	2.9k	3.5k	4.5k	6k	7k	9k	9.5k	12k	17k	20k	35k	40k	54k	60k

*Length with amplified option.

**10 psi not available with absolute pressure

Performance

Pressure Ranges (note 1).....10 psig; 15; 25; 50; 75; 100; 150; 200; 300; 500; 750;
1000; 1500; 2000; 3000; 5000; 7500 psig/a
 Accuracy (note 10).....+/-0.05% 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.....0.0015% Full scale/ °F
 Span.....0.0015% Reading/ °F
 Sealing.....Hermetically Sealed IP68/ NEMA 6P

Electrical

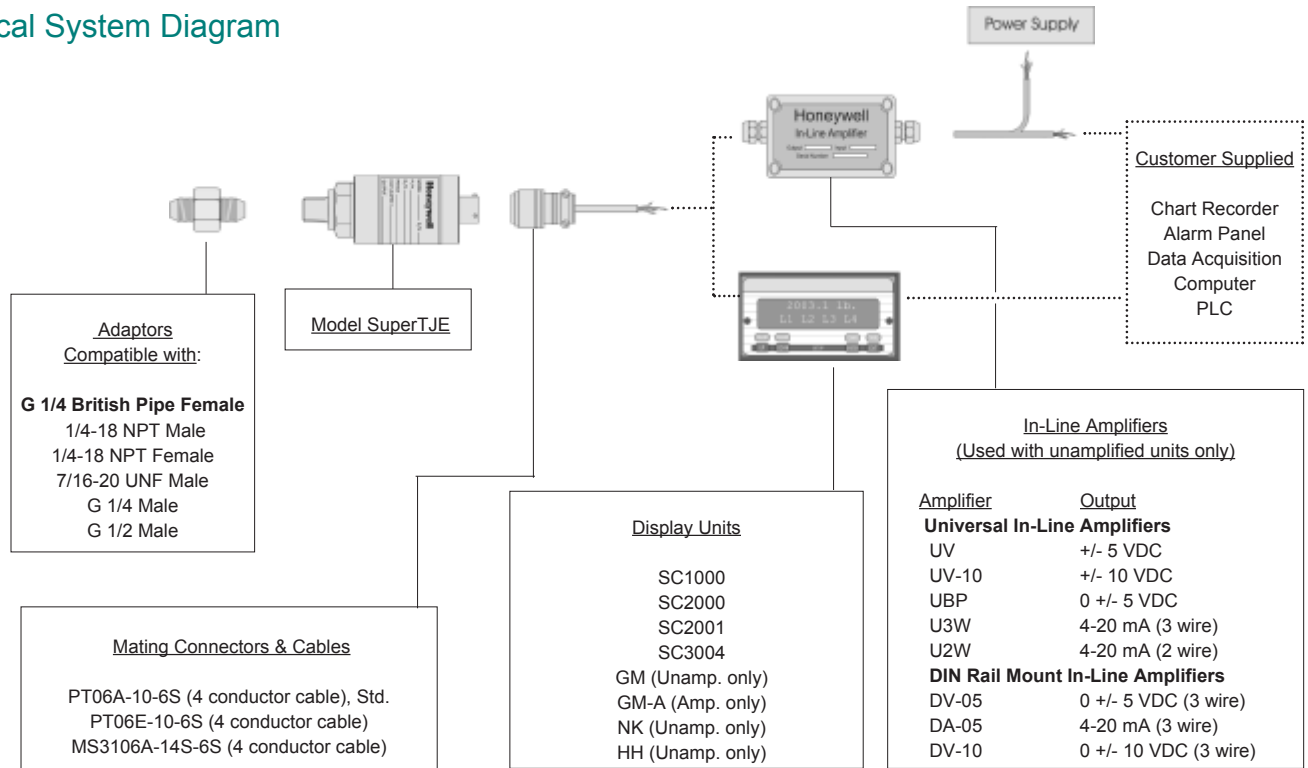
Strain Gage Type.....Bonded foil
 Insulation Resistance.....5000 Megohms @ 50VDC
 Bridge Resistance.....350 Ohms
 Shunt Calibration Data.....Included
 Electrical Termination (std.).....PTIH-10-6P or equiv. (Hermetic Stainless)
 Mating Connector (not incl.).....PT06A-10-6S or equiv.

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Mechanical

Media.....All gases and liquids compatible with wetted parts
 Wetted Parts Material
 10-1500 psi.....17-4 PH Stainless Steel
 2000-7500 psi.....15-5 PH Stainless Steel
 Weight.....12 oz.
 Case Material.....Stainless Steel
 Marking.....Permanent metal nameplate MIL-STD130F 4.3;
 Individual sequential serial number per sensor;
 Country of origin and date of manufacture

Typical System Diagram



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	2 mV/V	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 3)	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 3) (note 8) (note 9)	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.

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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 psig/a		10 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 (note 6) 1f. 70° to 250° F (note 6)	1g. 70° to 325° F (note 6)	
Internal Amplifiers (note 4)	2u. Unamplified, mV/V Output 2a. 0-5 VDC (4-wire) output 2c. 0-5 VDC output 2j. 4-20 mA (3-wire) output 2t. 0-10 VDC 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 6)	5b. 1/4-18 NPT Male (10 to 1500 psi) 5a. 1/4-18 NPT Female (2000 to 7500 psi) 5d. 7/16-20 UNF Male 5g. G 1/4 Male	5t. G 1/2 Male	
Electrical Termination	6a. Bendix PTIH-10-6P (or equivalent) 6 pin (max. 250° F) 6f. Integral cable: PVC (-20° to 160°F) 6i. Integral underwater cable (max. 180°F) (note 5) 6e. Integral cable: Teflon (0° top 180°F)	6g. Integral cable: Neoprene (0° to 180°F) (note 5) 6h. Integral cable: Silicone (-65° to 300°F) 6m. DIN 43650 6q. Molded integral cable: Polyurethane (max. 180°F) (note 5) 6t. Integral cable with Heyco Spring Strain relief (5ft.)	
Shunt Calibration	8a. Precision Internal Resistor (note 7)		
Special Calibration (note 6)	9a. 10 point (5 up/5 down) 20% increments @ 70°F (gage) 9b. 20 point (10 up/10 down) 10% increments @ 70°F (gage)		
Bridge Resistance (note 6)		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 6) 53t. T.E.D.S. IEEE1451.4 Module (note 11)		

■ Supplied as standard

Special Customer Requirements (Consult Factory)

Case pressure
Different cable lengths
Different electrical connectors
Different materials
Electro-static discharge immunity
Fatigue rating
Lightning protection
O₂ Clean
OEM labels
Special electrical output
Special ports
Special wiring codes
Temperature & pressure calibration

Notes

- Gage pressure units greater than 500 psi are sealed at atmospheric pressure
- Input power (voltage) for internal amplifier options 2j, 2k, 2n (2N) depends on load resistance.
- 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.
- Not available with temperatures below -20°F or above 185°F.
- Not available with option 1c, 1e, 1f, 1g, 1h or 1i.
- Availability varies according to range.
- Cannot be used with amplified option.
- 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.
- No mating connector necessary with cable option.
- Accuracies stated are expected for Best Fit Straight Line for all errors including linearity, hysteresis & non-repeatability thru zero.
- Consult factory for TEDS availability with amplified models.

How to Order

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

Sample Code: **AP111** **AV** **1c,2a**
Order Code Range Code Options Code