

Model Super TJE Ultra Precision Pressure Transducer



- 10 psig to 7500 psig range
- Isolated double wall construction
- Enhanced temperature stability
- 0.05 % accuracy
- Intrinsically safe available (2N option only)¹²
- CE¹³

How to order: (Quick-ship range/option combinations available. See Web site.)

Combine the order code, range code, and options code. For example:

AP111 **AV** **1c, 2a**
Order code Range code Options code

Order codes

- AP111 Gage pressure
AP112 Absolute pressure

Range codes

Pressure range	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 mm [in] psia	NA	41 [1.63]															
D mm [in] psig	51 [2.0]		41 [1.63]														
L mm [in] psia	NA	66 [2.62]															
L* mm [in] psia	NA	92 [3.63]															
L mm [in] psig	64 [2.5]			66 [2.62]													
L* mm [in] psig	89 [3.5]			92 [3.63]													
Over pressure (test) (psi)	150 % FS																
Over pressure (burst) (psi)	100	200	400	800	2000	3000	3500	4000	8000	12 K	20 K	25 K					
Port volume cm ³ [in ³]	2.8[0.17]												3.1 [0.12]				
Natural frequency (Hz)	1.6 K	2.1 K	2.5 K	2.9 K	3.5 K	4.5 K	6 K	7 K	9 K	9.5 K	12 K	17 K	20 K	35 K	40 K	54 K	60 K

* Length with amplified option
** 10 psi not available with absolute pressure

Notes

1. Gage pressure units greater than 500 psi are sealed at atmospheric pressure.
2. Input power (voltage) for internal amplifier options 2j, 2k, 2n (2N) depends on load resistance.
3. 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. Shunt calibration comes standard with internal amplifier options 2a, 2b, 2c, 2t and 2j.
4. Not available with temperatures below -29 °C [-20 °F] or above 85 °C [185 °F].
5. Not available with option 1c, 1e, 1f, 1g, 1h or 1i.
6. Availability varies according to range.
7. Cannot be used with amplified option.
8. 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.
9. No mating connector necessary with cable option.
10. Accuracies stated are expected for best fit straight line for all errors including linearity, hysteresis & non-repeatability thru zero.
11. Consult factory for TEDS availability with amplified models.
12. Range dependent; consult factory. Termination dependent; consult factory.
13. Internal amp and termination dependent; consult factory.
14. Input/output isolation only available with voltage (2A, 2B, or 2C amplifiers).
15. 5000 ohm bridge required.

Specifications

Performance

Pressure ranges¹

10 psig; 15, 25, 50, 75, 100, 150, 200, 300, 500, 750, 1000, 1500, 2000, 3000, 5000, 7500 psig/a

Accuracy¹⁰

±0.05 % full scale

Resolution

Infinite

Calibration

5-point calibration: 0 %, 50 %, and 100 % of full scale

Environmental

Temperature compensated

15 °C to 71 °C [60 °F to 160 °F]

Temperature effect, zero

0.0015 % full scale/°F

Temperature effect, span

0.0015 % reading/°F

Temperature effect, sealing

Hermetically sealed IP68/NEMA 6P

Electrical

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 equiv. (Hermetic stainless)

Mating connector (not incl)

PT06A-10-6S or equiv. (AA111)

Mechanical

Media

All gases and liquids compatible with wetted parts

Wetted parts material

10 psi to 1500 psi

17-4 PH stainless steel

2000 psi to 7500 psi

15-5 PH stainless steel

Weight

12 oz

Case material

Stainless steel

Marking

Permanent metal name plate MIL-STD130F 4.3; Individual sequential serial number per sensor; Country of origin and date of manufacture

Option codes

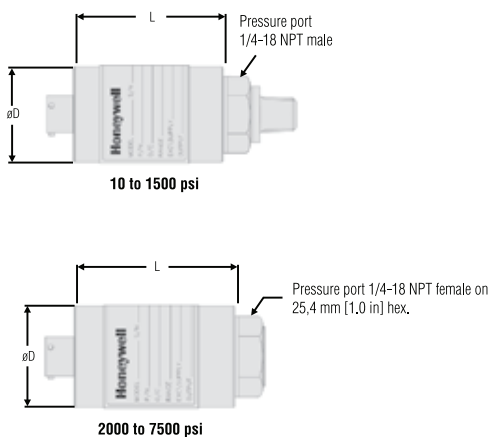
	Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see http://sensing.honeywell.com/TMsensor-ship for updated listings.	
Pressure ranges	10, 15, 25, 50, 75, 100, 150, 200, 300, 500, 750, 1000, 1500, 2000, 3000, 5000, 7500 psig/a	
Temperature compensation	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 ⁷ 1g. 70 °F to 325 °F ⁷
Internal amplifiers⁴	2a. 0 Vdc to 5 Vdc (4 wire) output ⁴ 2c. 0 Vdc to 5 Vdc output ⁴ 2j. 4 mA to 20 mA (3 wire) output ⁴ 2k. 4 mA to 20 mA (two wire) output ^{4, 15}	2n. 4 mA to 20 mA (two wire) intrinsically safe ^{4, 15} 2t. 0 Vdc to 10 Vdc output ⁴ 2u. Unamp., mV/V output
Internal amplifier enhancements	3a. Input/output isolation ¹⁴ 3d. Remote buffered shunt calibration	
Pressure ports⁶	5a. 1/4-18 NPT female (2000 psi to 7500 psi) 5b. 1/4-18 NPT male (10 psi to 1500 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 equiv), 6 pin (max 250 °F) 6e. Integral cable: Teflon (0 °F to 180 °F) 6f. Integral cable: PVC (-20 °F to 160 °F) 6g. Integral cable: Neoprene (0 °F to 180 °F) ⁵ 6h. Integral cable: Silicone (-65 °F to 300 °F) 6i. Integral underwater cable (max 180 °F) ⁵	6m. DIN 43650 6q. Molded integral cable: Polyurethane (max 180 °F) ⁵ 6t. Integral cable with Heyco spring strain relief (5 ft)
Shunt calibration	8a. Precision internal resistor ⁷	
Special calibration⁶	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	12b. 5000 ohm (foil) (max 400 °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 ⁷ 53t. TEDS IEEE1451.4 module ¹¹	

Internal amplifiers

Amplifier Specifications	mV/V output standard	Voltage output: Option 2a ⁴	Vehicle voltage output: Option 2c ⁴	Vehicle voltage output: Option 2t ⁴	Current three-wire: Option 2j ⁴	Current two-wire: Option 2k ⁴	Intrinsically safe amp: Option 2n ^{4, 15}
Output signal	2 mV/V	0 Vdc to 5 Vdc	0-5 Vdc or ±5 Vdc @ 5 mA	0-10 Vdc or ±10 Vdc @ 5 mA	4 mA to 20 mA	4 mA to 20 mA	4 mA to 20 mA
Input power (voltage)	10 Vdc regulated	±15 Vdc or 26-32 Vdc	11 Vdc to 28 Vdc	15 Vdc to 28 Vdc	22 Vdc to 32 Vdc ²	9 Vdc to 32 Vdc ²	9 Vdc to 28 Vdc ²
Input power (current)	28.5 mA @ 10 Vdc	45 mA	40 mA	40 mA	65 mA	4 mA to 28 mA	4 mA to 24 mA
Freq. resp. (amp)	Natural frequency	2000 Hz	3000 Hz	3000 Hz	2500 Hz	2500 Hz	2000 Hz
Power supply rej.	NA	60 db	60 db	60 db	60 db	60 db	60 db
Operating temp.	-100 °F to 250 °F	-20 °F to 185 °F	-40 °F to 200 °F	-40 °F to 185 °F	-40 °F to 185 °F	-40 °F to 185 °F	-20 °F to 185 °F
Reverse voltage protection	NA	Yes	Yes	Yes	Yes	Yes	Yes
Short cir. protection	NA	Momentary	Momentary	Momentary	Yes	Yes	Yes
Wiring code: connector (std)³	A (+) Excitation B (+) Excitation C (+) Excitation D (+) Excitation E (+) Output F (+) Output	A (+) Supply B Output com. C Supply ret. D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B Output com. C Supply ret. D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B Output com. C Supply ret. D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B Output com. C Supply ret. D (+) Output E Shunt Cal 1 F Shunt Cal 2	A (+) Supply B No conn. C No conn. D (+) Output E Case ground F No conn.	A (+) Supply B No conn. C No conn. D (+) Output E Case ground F No conn.
Wiring code: cable^{3, 8, 9}	R (+) Excitation BI (-) Excitation G (-) Output W (+) Output	R (+) Supply BI Output com. G Supply ret. W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply BI Output com. G Supply ret. W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply BI Output com. G Supply ret. W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply BI Output com. G Supply ret. W (+) Output B Shunt Cal 1 Br Shunt Cal 2	R (+) Supply BI (+) Output W Case ground	R (+) Supply BI (+) Output W Case ground

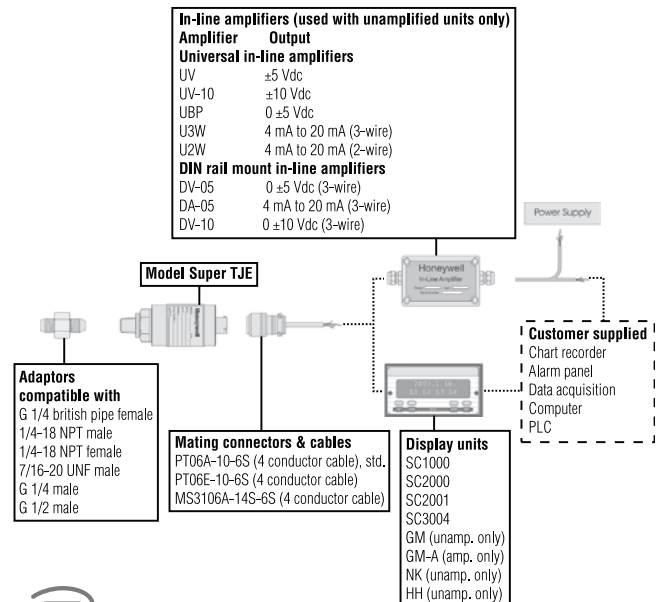
* Black and green wires are internally connected.
** Pins B and C are internally connected.
*** See Honeywell's Web site for the most up-to-date information regarding intrinsically safe approvals, ref. #008-0547-00.

Mounting diagram and characteristics



For reference only

Typical system diagram



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.

Specifications subject to change.

Questions? Contact us at either 1-800-848-6564, +1 614-850-5000, or our Web site for customized options: (<http://sensing.honeywell.com/TMsensor-help>).