

AVAILABLE
with Signature
Calibration
SEE PG. IN-5

Precision Gage/Absolute Pressure Transducers

Model TJE



0.1% ACCURACY

1 to 60,000 psi, 70 mbar to 4000 bar

TRUE GAGE DESIGN

AMPLIFIED OUTPUT AVAILABLE

1 to 1500 psi
70 mbar to 100 bar

2000 to 60000 psi
140 bar to 4000 bar

Model TJE pressure transducers are all-welded stainless steel sensors built for rugged industrial applications that require high accuracy and measurement stability. The Model TJE is a strain gage based sensor and features a unique "True Gage" design which utilizes a second welded stainless steel diaphragm that hermetically seals the strain gage circuitry from atmospheric contamination. This design references the primary pressure sensing diaphragm to the atmosphere, and provides a stable zero regardless of the transducer environment.

The Absolute Model TJE has an all welded vacuum reference chamber assuring long term stability. The Model TJE is available with a variety of options for extended temperature operation, electrical terminations and high level outputs including 5 or 10 Vdc and 4-20 mA. All high level output models have internal shunt calibration circuits as a standard feature to allow easy set up of the sensor to your data system. An optional internal *Signature Calibration* chip provides calibration information for automatic set up with the Model SC four-or twelve-channel digital indicators.

Dimensions

Model TJE True Gage (Order Code AP121)

Available Ranges*	D"	L"
1; 2; 5 psig	2.25 (5.72 cm)	1.81 (4.59 cm)
10; 15 psig	1.75 (4.45 cm)	2.00 (5.08 cm)
25; 50; 75; 100; 150; 200; 300; 500 psig	1.5 (3.81 cm)	2.01 (5.10 cm)
750; 1000; 1500 psig	1.5 (3.81 cm)	2.35 (5.97 cm)
2000; 3000; 5000; 7500; 10,000 psig	1.50 (3.81 cm)	2.39 (6.07 cm)
15,000; 20,000; 30,000; 50,000; 60,000 psig	1.50 (3.81 cm)	2.21 (5.61 cm)

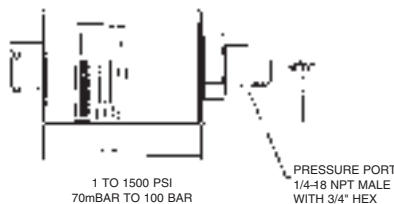
*Stocked ranges (bold face print) are available with 0-5 VDC (vehicle) or mV/V output.

**Consult Sensotec

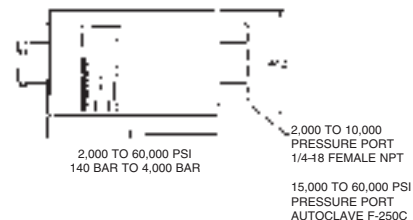
Model TJE Absolute (Order Code AP122)

Available Ranges*	D"	L"
5 psia	2.25 (5.72 cm)	2.09 (5.31 cm)
10; 15; 25; 50; 75; 100; 150; 200; 300; 500; 750; 1000; 1500 psia	1.5 (3.81 cm)	2.35 (5.97 cm)
2000; 3000; 5000; 7500; 10,000 psia	1.5 (3.81 cm)	2.39 (6.07 cm)
15,000; 20,000; 30,000; 50,000; 60,000 psia	1.5 (3.81 cm)	2.21 (5.61 cm)

1 to 1500 psi
7 mbar to 100 bar



2000 to 60000 psi
140 bar to 4000 bar



Options (See Appendix)

Temperature compensation: 1b, 1c, 1d, 1e, 1f; Internal amps: 2a, 2c, 2j, 2k, 2n or 2N intrinsically safe amp, See page AP-6; 2t;

Amp enhancement: 3d; Pressure ports: 5a, 5b, 5c, 5d (<=15,000 psi); Electrical termination 6e, 6f, 6g, 6h, 6i; Int. shunt cal 8a; Signature Calibration 53e

Premium Options: 1g (>=15 psi); 1i (>=15 psi); 2q; 3c; 6b, 6c, 6j; Special calibration 9a; 10a (absolute only); 12a (>=10 psi only); 12b (>=10 psi only) (See Appendix)

Accessories: Mating connectors and connector/cable assemblies; Pressure port adapters

Model TJE

True Gage: Order Code AP121
Absolute: Order Code AP122

PERFORMANCE	Pressure Ranges.....	1 to 60,000 psi (70 mbar to 4000 bar)	
	Accuracy (min)	+ /-0.1% F.S. (BFSL)	
	Output (standard)	3mV/V*	
	Resolution	Infinite	
ENVIRONMENTAL	Temperature, Operating		
	1 to 1,000 psi	-100° to 325° F (-73° to 162° C)	
	1,500 to 60000 psi	-100° to 250° F (-73° to 95° C)	
	Temperature, Compensated	60° to 160° F (15° to 71° C)	
	Temperature Effect		
	-Zero (max).....	0.0025% F.S./° F (0.0045% FS./° C)	
-Span (max).....	0.0025% Rdg./° F (0.0045% Rdg./° C)		
ELECTRICAL	Strain Gage Type	Bonded foil	
	Excitation (calibration)	10VDC	
	Excitation (acceptable)	Up to 12VDC or AC	
	Insulation Resistance	5000 megohm @ 50VDC	
	Bridge Resistance	350 ohms	
	Shunt Calibration Data	Included	
	Wiring Code (std)	#2 (See Pg. AP-8)	
	Electrical Termination (std)	PTIH-10-6P or equiv. (Hermetic stainless)	
	Mating Connector (not incl.).....	PT06A-10-6S or equiv.	
	MECHANICAL	Media.....	Gas Liquid
Overload-Safe			
1 to 15000 psi		50% over capacity	
20000 to 60000 psi		25% over capacity	
Overload-Burst			
1 to 5000 psi		300% over capacity	
7500 to 10,000 psi		200% over capacity	
15,000 to 60,000 psi		70% over capacity	
Pressure Port			
1 to 1500 psi		1/4-18 NPT male	
2000 to 10,000 psi		1/4-18 NPT female	
15,000 to 60,000 psi		Autoclave AE F250-C	
Dead Volume.....			
1 to 5 psi		0.32 cu. in.	
10 to 15 psi		0.25 cu. in.	
25 to 1500 psi		0.17 cu. in.	
2000 to 15,000 psi		0.12 cu. in.	
Wetted Parts Material.....		17-4 PH Stainless/15-5 PH Stainless	
Type		Absolute or True Gage**	
Weight		10 oz. (283 gm) (Nominal)	
Case Material	Stainless Steel		
INTERNALLY AMPLIFIED UNITS (Optional)	Outputs Available	0-5VDC, 4-20mA	4-20mA Intrinsically safe
	Additional Length.....	1.12" (2.84 cm)	2n or 2N See page AP-6 2.0" (5.08 cm)

NOTES * Output for 1 and 2 psi units is 1mV/V/psi minimum.
 ** Gage pressure units greater than 500 psi (35 bar) are sealed at atmospheric pressure.

General Information

How to order (See Pg. AP-19)
 Gage/Absolute pressure selection flow chart (See Pg. PR-1)