

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; <b>15</b> psig	1.75 (4.45 cm)	2.00 (5.08 cm)
<b>25; 50; 75; 100; 150; 200;</b> 300; <b>500</b> psig	1.5 (3.81 cm)	2.01 (5.10 cm)
750; <b>1000;</b> 1500 psig	1.5 (3.81 cm)	2.35 (5.97 cm)
2000; <b>3000; 5000;</b> <b>7500; 10,000</b> 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)

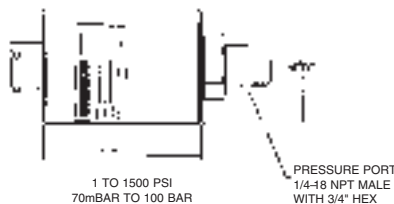
\*Stocked ranges (bold face print) are available with 0-5 VDC (vehicle) or mV/V output.

\*\*Consult Sensotec

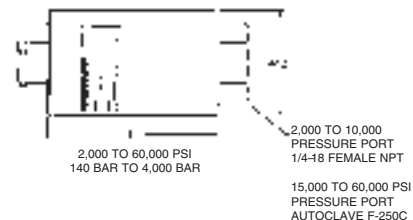
### Model TJE Absolute (Order Code AP122)

Available Ranges*	D"	L"
5 psia	2.25 (5.72 cm)	2.09 (5.31 cm)
10; <b>15; 25; 50; 75; 100; 150;</b> <b>200; 300; 500; 750;</b> <b>1000;</b> 1500 psia	1.5 (3.81 cm)	2.35 (5.97 cm)
2000; <b>3000; 5000;</b> 7500; <b>10,000</b> 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

<b>PERFORMANCE</b>	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	
<b>ENVIRONMENTAL</b>	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)		
<b>ELECTRICAL</b>	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.	
	<b>MECHANICAL</b>	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		
<b>INTERNALLY AMPLIFIED UNITS (Optional)</b>	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)