

AVAILABLE  
with Signature  
Calibration  
SEE PG. IN-5

# Precision Gage/Absolute Pressure Transducers

## Model TJE



**CENELEC**  
APPROVED



APPROVED  
INTRINSICALLY  
SAFE AMP



**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**

SENSOTEC's 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 SENSOTEC's 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)	1.93 (4.9 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)	2.00 (5.08 cm)
750; <b>1000;</b> 1500 psig	1.5 (3.81 cm)	2.13 (5.41 cm)
2000; <b>3000; 5000;</b> <b>7500; 10,000</b> psig	1.50 (3.81 cm)	1.90 (4.83 cm)
15,000; 20,000; 30,000; 50,000; 60,000 psig	1.50(3.81 cm)	**

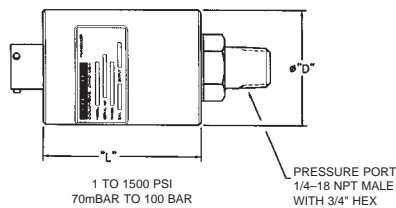
\*Stocked ranges (bold face print) are available with 0-5 VDC (vehicle) or mV/V output.

\*\*Consult Sensotec

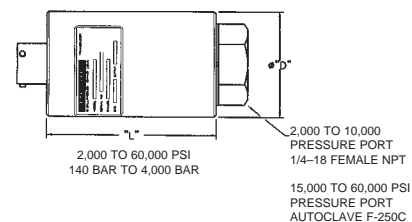
### Model TJE Absolute (Order Code AP122)

Available Ranges*	D"	L"
5 psia	2.25 (5.72 cm)	2.54 (6.45 cm)
10; <b>15; 25; 50; 75; 100;</b> 150; <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)	1.90 (4.83 cm)
15,000; 20,000; 30,000; 50,000; 60,000 psia	1.5 (3.81 cm)	**

**1 to 1500 psi**  
**7 mbar to 100 bar**



**2000 to 60000 psi**  
**140 bar to 4000 bar**



## Options (See Appendix)

Temperature compensated 1b, 1c, 1d, 1e, 1f; Internal amps 2a, 2c, 2j, 2k, 2n, 2t; Amp enhancement 3b, 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.
	Output (standard) .....	3mV/V*
	Resolution .....	Infinite

<b>ENVIRONMENTAL</b>	Temperature, Operating .....	-100° F to 325° F (-73° to 162° C)
	Temperature, Compensated .....	60° F to 160° F (15° C 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 .....	17-4 PH Stainless	

<b>INTERNALLY AMPLIFIED UNITS (Optional)</b>	Outputs Available .....	0-5VDC, 4-20mA	4-20mA Intrinsically safe
	Additional Length.....	1.12" (2.84 cm)	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)

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