

# Series PT700

Pressure / Temperature Transducers

# PT700



## Description

The Series PT700 is a small, accurate, combination pressure-temperature transducer for measuring dynamic and static pressure-temperatures. Available in absolute, sealed gage, or true gage zero pressure reference and either an RTD or thermocouple for temperature measurement, the unit is entirely welded of stainless steel. Features of design include long term stability, low sensitivity to shock and vibration, wide compensated temperature range, excellent response to transient pressures and infinite resolution.

## Standard Features

- Stainless Steel Construction
- Probes from 3/8" to 4"
- Requires no thermowell
- Operates with fluids or gases
- NIST traceable

## Optional Features

- Probes from 4" to 24"
- Alternative pressure ports
- Remote electronics for higher temperature applications
- Alternative electrical terminations
- Alternative materials of construction

**Your "Application-Solution<sup>SM</sup>" Source**

# Series PT700 Specifications

Baseline Configuration Specs Represented.  
Modifications Encouraged - See Below

## Performance

### Static Accuracy

Linearity:  $\pm 0.35\%$  FSO for 200, 250 PSI  
 $\pm 0.25\%$  FSO for 300 PSI  
 $\pm 0.20\%$  FSO for 500 PSI & up

Hysteresis:  $\pm 0.15\%$  FSO.  
Repeatability:  $\pm 0.10\%$  FSO.

### Resolution

Infinite

### Thermal Zero Shift

Less than  $\pm 0.010\%$  FSO/ $^{\circ}$ F..

### Therm. Sens. Shift

Less than  $\pm 0.005\%$  FSO/ $^{\circ}$ F.

### Input / Output Resolution

$350 \pm 3.5$  ohms at  $70^{\circ}$ F.

### Insulation Resolution

$> 10K$  megohms at 50 Vdc at  $70^{\circ}$ F.

### Zero Balance

$\pm 1\%$  FSO at  $70^{\circ}$ F.

### Full Scale Output

$3mV/V \pm 0.05\%$  FSO at  $70^{\circ}$ F.

### Natural Frequency

3.5 kHz at 200 PSI to 50.0 kHz  
at 6000 PSI.

### Acceleration Response

Less than  $\pm 0.005\%$  FS/G.

## Mechanical Characteristics

### Standard Ranges

0 - 200, 250, 300, 500, 750, 1000, 1500,  
2000, 2500, 3000, 3500, 4000, 5000 and  
6000 PSIA / PSIG.

### Proof Pressure

1.5 times the FS pressure.

### Burst Pressure

Greater than 2.5 times FS pressure.

### Operating Media

Fluids and gases compatible with 17-4PH  
stainless steel.

### Pressure Fitting

7/16-20 per MS33656-4.

### Weight

6.0 ounces maximum.

## Electrical Characteristics

### Excitation

10 Vdc recommended, 15 Vdc max.

### Electrical Termination

PT1H-10-6P stainless steel connector or  
equivalent.

### Wiring

Excitation +A, -D; Signal +B, -C;  
RTD E, F.

## Environmental Characteristics

### Compensated Temperature Range

$-65^{\circ}$ F to  $+250^{\circ}$ F.  
( $-320^{\circ}$ F to  $+425^{\circ}$ F optional)

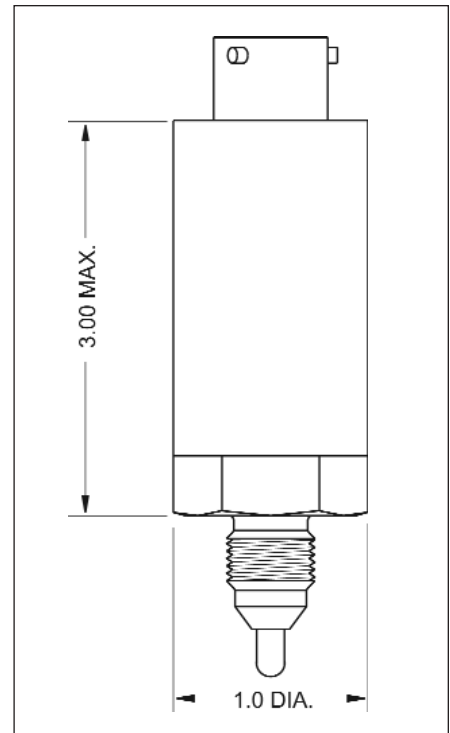
### Operating Temperature Range

$-100^{\circ}$ F to  $+300^{\circ}$ F.  
( $-320$  to  $+450^{\circ}$ F optional)

### Enclosure

Body and pressure cavity of stainless  
steel, hermetically sealed.

## Dimensions (inches)



## Modifications

We realize transducer applications vary greatly and as such our designs are flexible. Choice of pressure port, electrical termination, material compatibility and performance characteristics are a few of the many options available. Specifications on this datasheet represent the standard configuration only. Product and company names listed are trademarks of their respective companies. Specifications subject to change without notice. See accessory listing for additional choices.

## Warranty

Stellar Technology warrants that its product shall be free from defective workmanship and/or material for a twelve month period from the date of shipment, provided that Stellar Technology's obligation hereunder shall be limited to correcting any defective material FOB our factory. No allowance will be made for any expenses incurred for correcting any defective workmanship and/or material without written consent by Stellar Technology. This warranty is in lieu of all other warranties expressed or implied.

## Ordering Information

Contact the factory or your Authorized  
Stellar Technology, Inc. Representative.

## Represented By:

Stellar Technology Incorporated is an  
ISO 9001:2000  
Registered Company



Due to the nature of technology, changes are inevitable. For latest technical specifications, see our website.

