

# Series ST500

Pressure Transducers

# ST500



## Description

The Series ST500 is a small, accurate, reliable pressure transducer for measuring dynamic and static pressures. Available in absolute, sealed gage, or true gage zero pressure reference, the unit is entirely welded of stainless steel. Features of design include long term stability, low sensitivity to shock and vibration, wide temperature range, excellent response to transient pressures, infinite resolution and built in over-pressure protection for ranges up to 2.5K PSI.

## Standard Features

- Stainless Steel construction
- Hermetically sealed
- High accuracy
- NACE traceable
- Zero span shift less than .005° FS/°F

## Optional Features

- Expanded temperature operating range
- Expanded compensated temperature range
- Alternative materials of construction
- Customer specified connector
- Alternative pressure ports

Your “Application-Solution<sup>SM</sup>” Source

# Series ST500 Specifications

Baseline Configuration Specs Represented.  
Modifications Encouraged - See Below

## Performance

### Static Accuracy

Linearity:  $\pm 0.20\%$  FS.  
Hysteresis:  $\pm 0.20\%$  FS.  
Repeatability:  $\pm 0.10\%$  FS.

### Resolution

Infinite

### Thermal Zero Shift

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

### Therm. Sens. Shift

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

### Input / Output Resistance

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

### Insulation Resistance

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

### Zero Balance

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

### Full Scale Output

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

### Natural Frequency

1.0 kHz at 15 PSI to 347 kHz at 30,000 PSI.

### Acceleration Response

Less than  $\pm 0.15\%$  FSO/G at 15 PSI to  $\pm 0.0015\%$  FS/G at 30,000 PSI.

## Mechanical Characteristics

### Standard Ranges

0 - 15, 25, 30, 50, 75, 100, 200, 500,  
750, 1000, 1500, 2000, 3000, 5000,  
7500, 10000, 15000, 20000, 25000  
and 30000 PSIA / PSIG.

### Proof Pressure

15 - 200 PSI ranges: 500 PSI.  
500 PSI range and up: 1.5 times range.

### Operating Media

Fluids and gases compatible with 316  
and 347 or 17-4PH stainless steel.

## 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.

## Mechanical Characteristics

### Pressure Fitting

7/16-20 per MS33656-4 for ranges up to and including 10,000 PSI.  
AE F250-C, 9/16-18 UNF for ranges 15,000 PSI and up.

### Weight

4.5 ounces maximum.

## Electrical Characteristics

### Excitation

10 Vdc recommended, 15 Vdc max.

### Electrical Termination

PT1H-106P stainless steel connector or equivalent.

### Wiring

Excitation +A, -D; Signal +B, -C;  
No connection E, F. (Shunt avail.)

## Environmental Characteristics

### Compensated Temperature Range

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

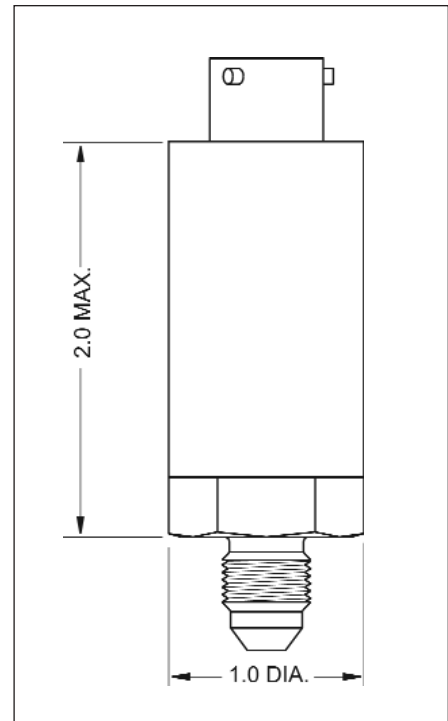
### Operating Temperature Range

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

### Enclosure

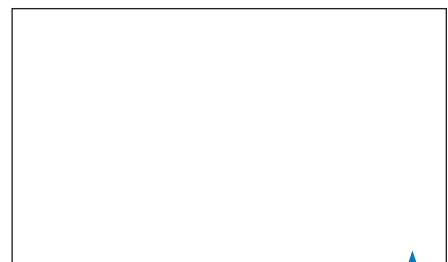
Body and pressure cavity of stainless steel, hermetically sealed.

## Dimensions (inches)



Stellar Technology Incorporated is an  
ISO 9001:2000  
Registered Company

## Represented By:



## 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.

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



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