

# Series ST150

Aerospace Pressure Transducers



## Description

The Series ST150 pressure transducers are designed to meet the rigorous requirements of the aerospace industry. These pressure sensors incorporate 316 stainless steel wetted parts to meet the hydrogen compatibility requirements needed for many aerospace sensor applications. The ST150 pressure transducer combines compact size, rugged construction, and a unique isolation diaphragm design to give highly accurate dynamic and static pressure measurements. Additional design features include a wide compensated temperature range, all welded stainless steel construction, long term stability, low sensitivity to shock and vibration, infinite resolution, and built-in over-pressure protection for ranges up to 2000 psi. Series ST150 pressure transducers are available in absolute, gage, and sealed pressure references. Each unit is shipped with a 19 point calibration record traceable to NIST as standard.

## Standard Features

- 316 SS Wetted Material (Hydrogen compatible)
- Lightweight/Compact size
- Low Thermal Error
- 3 mV/V output
- Wide Compensated Temperature Range
- Built-in Over Pressure Protection
- All Stainless Steel Construction
- Shock and Vibration Resistant
- 19 Point Calibration Record Traceable to NIST

## Optional Features

- Customer Specified Electrical Termination
- Special Calibrations

**ST150**

# Series ST150 Specifications

Baseline Configuration Specs Represented.  
Modifications Encouraged - See Below  
Custom Designs Available

## 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.

### Thermal Span Shift

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

### Zero Balance

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

### Full Scale Output

$3.0 \pm 0.015$  mV/V at  $70^{\circ}$ F.

### Acceleration Response

$< \pm 0.15\%$  FSO/G at 15 psi to  
 $\pm 0.0015\%$  FS/G at 2000 psi.

## Mechanical Characteristics

### Standard Ranges

0 - 15, 25, 30, 50, 75, 100, 200, 500,  
750, 1000, 1500, 2000 PSIA / PSIS.

### Proof Pressure

15 to 200 PSI range: 500 PSI  
500 to 2000 PSI range: 1.5 X range.

### Burst Pressure

3.0 X range or 1500 PSI  
whichever is greater.

### Operating Media

Fluids and gases compatible with  
316 stainless steel.

### Natural Frequency

1.0 kHz at 15 PSI to 3 kHz at  
2000 psi.

### Pressure Fitting

7/16"-20 per AS4395E4 / MS33656-4  
(Male) - (Standard).

7/16"-20 per AS5202E4 / MS33649-4  
(Female) - (No charge option).

For additional pressure fittings please  
consult factory.

### Enclosure

Body and pressure cavity of stainless  
steel, hermetically sealed.

### Weight

3.0 oz. maximum.

## Electrical Characteristics

### Excitation

10 Vdc recommended, 15 Vdc max.

### Input / Output Resistance

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

### Insulation Resistance

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

### Electrical Termination

MIL-C-26482 Class

No. 3143H-10-6P.

Optional electrical terminations available.

### Wiring

PIN A	(+) Excitation
PIN B	(+) Signal
PIN C	(-) Signal
PIN D	(-) Excitation
PIN E, F	No Connection Shunt Available

Standard configuration shown.  
Options available.

## Environmental Characteristics

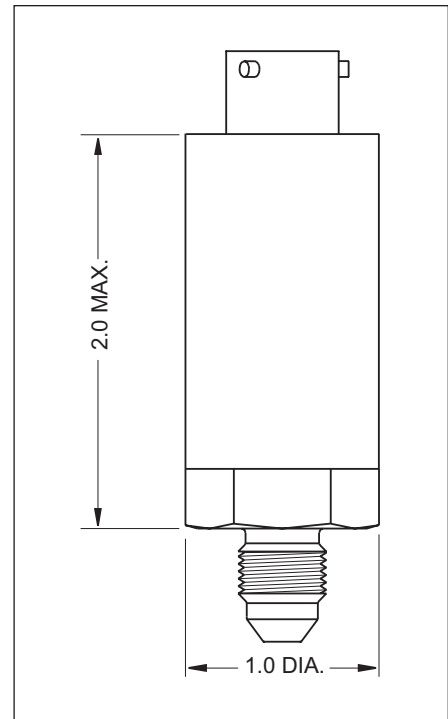
### Compensated Temperature Range

$-65^{\circ}$ F to  $+250^{\circ}$ F.

### Operating Temperature Range

$-100^{\circ}$ F to  $+300^{\circ}$ F.

## Dimensions (inches)



CE  
0539

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.

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.

Find More Information at:  
[stellartech.com](http://stellartech.com)

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

Copyright © 2004 Stellar Technology Incorporated • All Rights Reserved  
Datasheet P/N: 227514C

237 Commerce Drive • Amherst, NY 14228 • USA

Tel: 716.250.1900 • Fax: 716.250.1909

Email: [info@stellartech.com](mailto:info@stellartech.com)

ISO 9001:2000

**STI**  
STELLAR TECHNOLOGY  
INCORPORATED