

ST150 Series

Aerospace Pressure Transducers

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Description

ST150 Series 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. ST150 Series pressure transducers combine 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 overpressure protection for ranges up to 2000 psi. ST150 Series 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 (1 in. O.D.)
- Low Thermal Error
- 3 mV/V Output
- Wide Compensated Temperature Range
- Built-in Overpressure Protection
- All Stainless Steel Construction
- Shock and Vibration Resistant
- 19 Point Calibration Record Traceable to NIST

Optional Features

- Customer Specified Electrical Termination
- Special Calibrations

LORD DATA SHEET

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

$\pm 1\%$ FSO at 70° F

Full Scale Output

3.0 ± 0.015 mV/V at 70° 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

4.0 oz.

ELECTRICAL CHARACTERISTICS

Excitation

10 Vdc recommended, 15 Vdc max.

Input / Output Resistance

350 ± 3.5 ohms at 70° F

Insulation Resistance

$> 10K$ megohms at 50 Vdc at 70° F

Electrical Termination

MIL-C-26482 Class No. 3113H-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

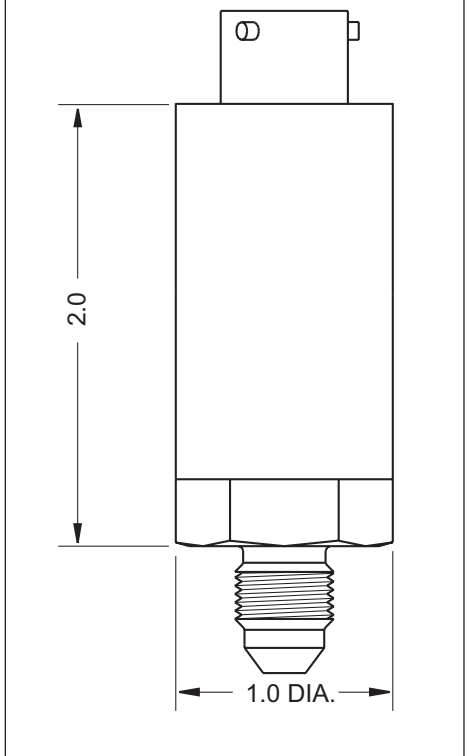
Compensated Temperature Range

-65° F to $+250^{\circ}$ F

Operating Temperature Range

-100° F to $+300^{\circ}$ F

DIMENSIONS (inches)



Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. For formalized product specifications for specific product end uses, contact the Customer Support Center.

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