

Series ST300

Space Rated Pressure Sensors

ST300



Description

The ST300 series is intended for use in orbital environments when repair and replacement is difficult or impossible and the sensor is required to perform over the life of the mission.

High reliability space rated sensor designs require the highest standards and quality of workmanship. Stellar Technology Inc. maintains the required "as designed" reliability by having electrical assemblies manufactured to NASA 8739.3. The required levels of reliability assurance are achieved through our years of space flight manufacturing experience on various space programs.

The ST300 series offers rugged, reliable bonded foil strain gage technology and "state of the art" circuit design. The unit provides low sensitivity to shock and vibration, infinite resolution and high response rates.

The specifications listed on the back are a brief overview of the more important parameters of interest. Please contact the sales office closest to you for further information on the options available.

Standard Features

- Stainless Steel Construction
- Small Size
- Hermetically Sealed
- Grade 1 Electronics per EEE-INST-002
- Traceability to NIST

Optional Features

- Alternate Materials of Construction
- Alternative Pressure Ports

Your "Application-SolutionSM" Source

Series ST300 Specifications

Baseline Configuration Specs Represented.
Modifications Encouraged - See Below

Performance

Static Accuracy

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

Resolution

Infinite.

Thermal Zero Shift

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

Thermal Span Shift

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

Input/Output Resistance

350 \pm 3.5 ohms 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.

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.

Proof Pressure

1.5 times range or 500 PSI, whichever is greater.

Burst Pressure

3.0 times range or 1500 PSI,
whichever is greater.

Operating Media

Fluids and gases compatible with
stainless steel. Inconel and other
materials optional.

Enclosure

Body of stainless steel.

Pressure Fitting

Stainless Steel/Titanium weld tubes and
MS type ports available.

Vibration and Shock

Random > 25 Grms.
Pyroshock > 5000 G.

Weight

Approximately 4.0 oz.

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.

Electrical Characteristics

Excitation

10 Vdc regulated recommended,
15 Vdc maximum.

Electronics Reliability Classification (passives)

Class S / Grade 1 per MIL-STD-975
and GSFC INST-EEE-002.

MTBF (MIL-STD-217)

Greater than 3000 years in orbit.

Insulation Resistance

Greater than 100 megohms at 500 Vdc
at 70 $^{\circ}$ F.

Electrical Termination

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

Environmental Characteristics

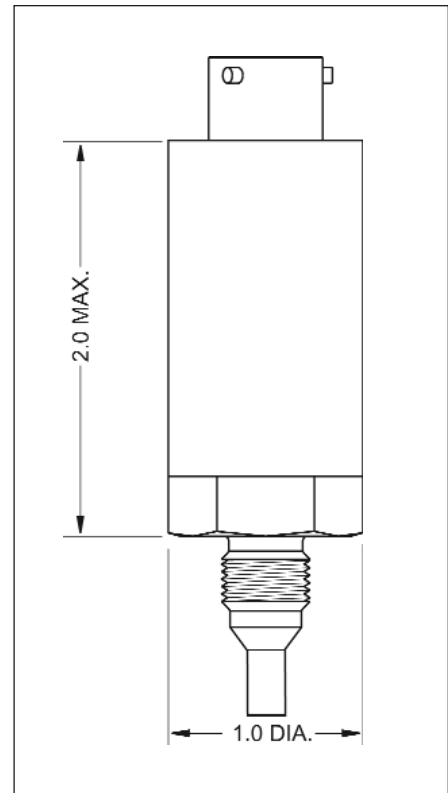
Compensated Temperature Range

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

Operating Temperature Range

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

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.



Copyright © 2004 Stellar Technology Incorporated • All Rights Reserved
Datasheet P/N: 227277-See New ST130

237 Commerce Drive • Amherst, NY 14228 • USA
Tel: 716.250.1900 • Fax: 716.250.1909
Email: info@stellartech.com

