GT100 Series

Aerospace Pressure Transducers

Request a Quote

Description

GT100 Series aerospace pressure transducer is a reliable and rugged mV/V pressure sensor. These pressure transducers are used for applications involving dynamic and static pressures measurements requiring high frequency response and are industry standards for rocket engine testing and jet engine testing. The major design feature is a fully cleanable pressure cavity with replaceable stainless steel diaphragms. The removable pressure caps incorporate metal-to-metal seals eliminating the use of O-rings. GT100 Series is designed with a unique sensing element which is isolated from the diaphragm thus providing improved thermal stability during the initial phases of testing. Other design features include long term stability, low sensitivity to both mechanical shock and vibration and thermal shock, excellent response to transient pressures, infinite resolution and built in over pressure protection. Each GT100 pressure transducer is shipped with a 19 point calibration record traceable to NIST as standard.

Standard Features

- Fully Cleanable Pressure Cavity
- Replaceable Stainless Steel Diaphragms
- Thermal Stability
- 316 SS Wetted Material (Hydrogen Compatible)
- Removable Pressure Caps with Metal-To-Metal Seals
- High Frequency Response
- Built In Over Pressure Protection
- 3 mV/V Output
- Low Sensitivity to Shock and Vibration
- Pressure Ranges to 20,000 PSIG
- All Stainless Steel Construction
- 19 Point Calibration Record Traceable to NIST

Optional Features

- Improved Thermal Coefficients
- Customer Specified Pressure Ports
- Customer Specified Electrical Connections
- Extended Temperature Compensation Ranges
- Alternate Materials for Media Compatibility
- Special Calibrations

LORD SENSING
Stellar Technology

LORD DATA SHEET

PERFORMANCE

Static Accuracy
Linearity: ± 0.25% FSO
Hysteresis: ± 0.25% FSO
Repeatability: ± 0.10% FSO

Resolution
Infinite

Thermal Zero Shift
< ± 0.010% FSO/°F
(< ± 0.005% FSO/°F optional)

Thermal Span Shift
< ± 0.005% FSO/°F

Input / Output Resistance
350 ±3.5 ohms at 70°F

Insulation Resistance
> 10K megohms at 50 Vdc at 70°F

Zero Balance
± 1% FSO at 70°F

Full Scale Output
3.0 ± 0.015 mV/V FSO at 70°F

Natural Frequency
3.0 kHz at 150 psi to 150 kHz at 20000 psi

Acceleration Response
< ± 0.01% FSO/G

MECHANICAL CHARACTERISTICS

Standard Ranges
0 - 150, 200, 300, 500, 750, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 5000, 6000, 7500, 10000, 15000, 20000 psig

Proof Pressure
150 - 750 psi ranges: 3.0 X range
1K - 2K psi ranges: 2.5 X range
2.5K - 3.5K psi ranges: 2.0 X range
4.0K psi range and up: 1.5 X range

Operating Media
Fluids and gases compatible with 316 stainless steel. Removable pressure cap & replaceable isolation diaphragms. (Inconel, Monel, Hastalloy are available options.)

Pressure Fitting
For ranges up to & including 10000 psi:
7/16"-20 per AS5202E4 / MS33649-4 (Female)
For ranges 15K psi and 20K psi:
AE F250-C, 9/16"-18 UNF
Note: Pressure cap is removable.

Enclosure
Body and pressure cavity of stainless steel, environmentally sealed

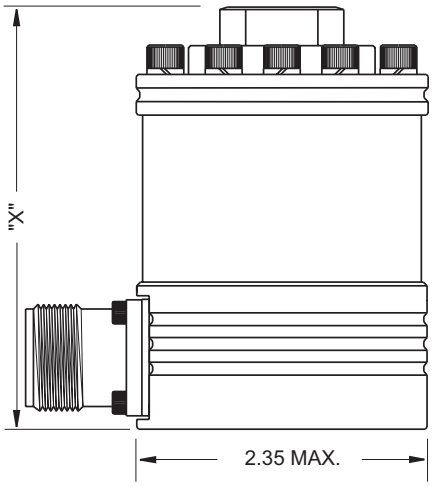
Weight
55 oz. maximum

ELECTRICAL CHARACTERISTICS

Excitation
10 Vdc recommended, 15 Vdc max.

Electrical Termination
MS3102-14S-2P stainless steel connector or equivalent.
Optional electrical terminations available.

Wiring
PIN A (+) Excitation
PIN B (+) Signal
PIN C (-) Signal
PIN D (-) Excitation
Standard configuration shown.
Options available.



Range Dependent
To 6000 psi, X=3.5"
7500 psi and Up, X=3.15"

ENVIRONMENTAL CHARACTERISTICS

Compensated Temperature Range
-30°F to +170°F
(-65°F to +250°F optional)

Operating Temperature Range
-100°F to +300°F

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