

COMMERCIAL SPACEFLIGHT



stellartech.com

LORD SENSING

Stellar Technology

Pressure, Load/Force/Torque, Displacement, and Temperature Sensors

Commercial Spaceflight Solutions



Pressure Sensors

- Pressure Ranges from 1 to 100,000 PSI
- Absolute, Gage, True Gage, Differential, Vacuum, Barometric
- Accuracies to 0.05% FSO.
- High Frequency Response
- All Welded Stainless Steel (17-4, 15-5, Inconel, Monel, Hastelloy)
- mV/V, Analog or Digital Outputs (including RS232, RS485, CANbus)
- Internal Data Logger Versions
- Space-Rated Electronics (Grade 1 per EEE-INST-002)
- Replaceable and/or Cleanable Diaphragms
- Engineered-to-Order Custom Designs

Load Cells, Force Sensors, Reaction Torque Sensors

- Load Ranges from Grams to 2 Million lbf
- Tension, Compression, and Tension & Compression
- Complete Selection of Standard and Special Configurations
- Constructed of Stainless Steel, Carbon Steel, or Aluminum
- Miniature and Subminiature Versions
- mV/V, Analog or Digital Outputs (including RS232, RS485, CANbus)
- Multiple Bridge Configurations
- Internal Data Logger Versions
- Space-Rated Electronics (Grade 1 per EEE-INST-002)
- Engineered-to-Order Custom Designs



Our Specialty...
**CUSTOM
ENGINEERING**



Sensors for Commercial Space Applications

Whether developing platforms for space tourism or transporting crew or cargo to the International Space Station and beyond, innovative companies are developing propulsion systems, spacecraft, launch vehicles, flight control systems, ground support and recovery systems that will place a premium on safety, reliability, efficiency, and cost. In each case, Stellar Technology's proven track record in providing space-rated sensor solutions to the space industry will help ensure the success of these commercial space initiatives. From off-the-shelf standard products to custom-engineering sensor solutions, Stellar Technology's combination of experienced sales engineers, design expertise, manufacturing capability, and proven quality system ensure optimum value for our customers.

Commercial Spaceflight Solutions



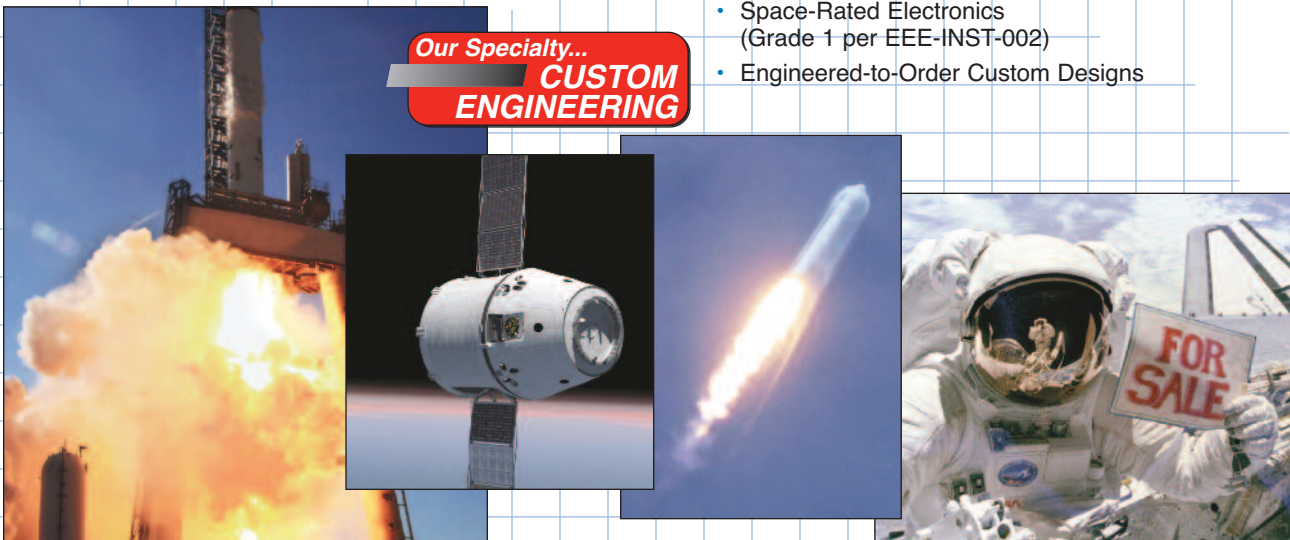
LVDT Displacement Sensors

- Stroke Ranges from ± 0.01 in. to ± 18.5 in.
- Linearities from 1% to 0.1%
- Spring Guided, Captive Guided, Free Unguided Armatures
- AC and DC Versions
- All Welded Stainless Steel
- Precision Gauging Units with Air Push Armatures
- Submersible Designs
- Engineered-to-Order Custom Designs

Temperature Transducers and Transmitters

- Temperature Ranges from -320°F to $+750^{\circ}\text{F}$
- No Thermowell Required
- Customer Specified Probe Lengths
- All Welded Stainless Steel Construction
- Hermetically Sealed
- Dual Temperature and Pressure Configurations
- Analog and Digital Outputs (Including RS232, RS485, CANbus)
- Space-Rated Electronics (Grade 1 per EEE-INST-002)
- Engineered-to-Order Custom Designs

Our Specialty...
**CUSTOM
ENGINEERING**



Commercial Space Applications Using Stellar Technology Sensors

- Solid Rocket/Hybrid Rocket Motor Thrust Testing
- Cryo/Non-Cryo Feed Line Pressure and Temperature
- Propellant Tank Level Measurement
- Rocket Motor Case Pressure
- Crew Life Support System Air Pressure
- Hypergolic Feed Line Pressure and Temperature
- Inert Gas Blow-Down System Pressure
- Turbine Inlet/Exhaust Pressure and Temperature
- Launch Abort System/Flight Termination System Pressure
- Landing Gear Hydraulic Pressure
- Cooling System Pump Delta Pressure
- Subscale Motor Chamber Pressure
- Zero Gravity Simulation Force
- Flight Surface Air Actuators
- Oxygen Pressure Monitoring
- Re-entry Vehicle Temperature and Pressure Monitoring
- Altitude Measurements
- Hydraulic Systems Testing and Monitoring
- Actuator Arm Control

Call: **716.250.1900**

Capabilities

Stellar Technology designs and manufactures a comprehensive offering of pressure transducers/transmitters, load cells, force sensors, torque transducers, temperature transmitters, and displacement sensors used in test and measurement applications across a wide range of industry sectors including aerospace, oil and gas, marine/oceanographic, automotive, medical, industrial automation, geophysical, power generation and many more.



Why Stellar Technology? Whether it's an engine test, component reliability test, production line test, or quality assurance evaluation, what causes automotive and transportation specialists to choose Stellar Technology sensors for their application solutions?

One word: Capabilities.

Stellar Technology combines sales capabilities, engineering capabilities, manufacturing capabilities, and service/support capabilities into one focused business objective:

Provide the customer with the optimum sensor solution.

Sales Capabilities:

- Experienced technical sales professional located in your area
- Direct link to Stellar Technology's design engineers
- Knowledgeable inside sales engineers
- Complete pre-sales application review process
- Facilitate technical Lunch & Learns at customer's site

Engineering Capabilities:

- Design engineers with years of practical sensor application experience
- Specialists in mechanical, electronic, and software design
- Innovative design and simulation tools
- ISO9001 registered documentation and control
- Work directly with customer's engineers
- Creative solution providers

Manufacturing Capabilities:

- Complete vertical integration (raw material through final calibration)
- 18 CNC machines (up to 8-axis)
- Wire and probe EDM machining
- Laser and TIG welding
- Ultrasonic cleaning
- Micro assembly
- Automated pressure compensation and calibration
- 5 load cell calibration systems (to 600,000 lbf)
- 1,000,000 inch-lbf reaction torque calibrator
- High-reliability/traceability assembly and test area
- Comprehensive inventory of raw materials
- Finished goods inventory programs (standard and customer-specific)

Service/Support Capabilities:

- Complete repair and recalibration (including other manufacturers)
- Rapid-response on-site technical field support
- Ready access to regional sales offices
- Order status and expediting
- Direct access to Stellar Technology's design engineers
- 24 hour web access to technical manuals

Your Application-Solution SourceSM

