Why measure displacement?

- Detects strain & deflection in materials/structures
- Adds process control for production-line monitoring
- Ensures linear & angular motion control
- Provides dimensional gauging for quality control
- Serves as reliable indicator of system degradation

LORD MicroStrain LVDTs:

- offer excellent length-to-sensing stroke ratio
- have frictionless design for use over millions of cycles
- are designed for use in harsh fluids and environments
- offer simple integration with plug-and-play usability
- are easily customized to your specific requirements

Microminiature LVDTs

M-LVDT® Linear Displacement Sensor

- Outside Diameter:
  - 1.5 mm (standard version)
  - 1.8 mm (high resolution)
- Linear Stroke Length:
  - 3, 6, 9 mm (standard)
  - 1.5 mm (high resolution)
- Approx. Body Length:
  - 4mm + 2.5x stroke length

MG-LVDT® Linear Displacement Gauge Sensor

- Outside Diameter:
  - 1.8 mm (smooth body)
- Linear Stroke Length:
  - 3, 6, 9 mm (standard)
  - 1.5 mm (high resolution)
- Approx. Body Length:
  - 4mm + 6x stroke length

Subminiature LVDTs

S-LVDT® Linear Displacement Sensor

- Outside Diameter:
  - 4.76 mm (3/16 inch)
- Linear Stroke Length:
  - 4, 8, 24, 38 mm (standard)
  - 6 mm (high resolution)
  - 500 µm or less (nano)
- Approx. Body Length:
  - 10mm + 3x stroke length

SG-LVDT® Linear Displacement Gauge Sensor

- Outside Diameter:
  - 6.0 mm (smooth body)
  - 8.0 mm for 38 mm stroke
- Linear Stroke Length:
  - 4, 8, 24, 38 mm (standard)
  - 6 mm (high resolution)
  - 500 µm or less (nano)
- Approx. Body Length:
  - 10mm + 5x stroke length
LORD Sensing-MicroStrain LVDTs

- Microminiature LVDT resolution: 300nm to 4.5 µm
- Subminiature LVDT resolution: 125nm to 9.5 µm
- Stainless steel housing for long-lasting performance
- Low Signal to Noise ratio (M/MG-LVDT - 2000:1, S/SG-LVDT - 4200:1)
- Engineered for operation in temperatures from -55° to 170° C
- Keyed 4-pin Lemo connector compatible with LORD MicroStrain DEMOD signal conditioners

REAL-WORLD APPLICATIONS:

Assembly Verification
Employing a LVDT provides verification of proper assembly dimensions, especially when it is used in differential mode (when one sensor finds a reference surface, the other locates the part in question).

Precise Feedback For Motion Control
LORD Sensing-MicroStrain LVDTs are ideal for motion control applications, particularly ones requiring secondary confirmation of motion, or for other applications that cannot use standard encoders. Examples: robotics, semiconductor material handling, aperture control, valve position on vehicles, electronic cam motion loop

Aerospace Fuel Tank Monitoring
Using an SG-LVDT with a custom-designed hermetic housing and an integrated connector allowed customers to monitor the deflection of a rocket fuel tank, which in turn enabled researchers to monitor the amount of fuel expended.

Condition Monitoring
A multiple-MG-LVDT setup allowed aircraft OEM customers to determine motion in 6DoF, which successfully monitored degradation in elastomeric bearing stiffness.

All solutions are backed by LORD Sensing-MicroStrain's world-recognized Support Staff. For pricing and ordering information, contact us: 802.862.6629 or sensing_sales@lord.com