

LS-LVDT

Compact Linear Displacement Sensor



LS-LVDT- robust and highly accurate displacement sensor with revolutionary stroke-body length ratios

Ideal for linear control and precision measurement applications, the miniature LS- LVDT provides fast response and rugged packaging. Configuration options can provide cutting-edge features, including micron resolution, linear analog output, flat dynamic response to kHz levels, and/or very low temperature coefficients. Its free sliding transducer core is lightweight, strong, and corrosion-resistant. The cores are precision ground to insure a close sliding fit within the open bore of the stainless steel lined LS-LVDT body. This precision allows the LS-LVDT to achieve extremely high repeatability. The sensing head is capable of total submersion in aqueous environments. **NOTE:** This sensor is designed for use with LORD Sensing DEMOD signal conditioners.

Product Highlights

- 50 mm, 100 mm, and 150 mm stroke lengths available
- Extremely compact packaging with sensor body only 25 mm longer than the stroke length
- Unguided armature
- For use with standard LORD DEMOD signal conditioners.
- $\pm 0.2\%$ to $\pm 2\%$ accuracy

Features and Benefits

High Performance

- High-resolution with large stroke/size ratio
- Frictionless design for robust use over millions of cycles
- Suitable for use in harsh fluids and environments
- High dynamic range for difficult measurements

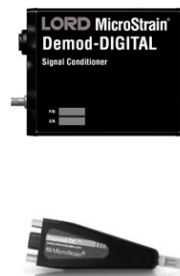
Applications

- Process control for production line monitoring
- Position control elements
- Measuring strain and deflection in materials and structures
- Dimensional gauging for quality control

DISPLACEMENT SENSORS



SIGNAL CONDITIONERS



Digital



Analog

Analog



OUTPUT

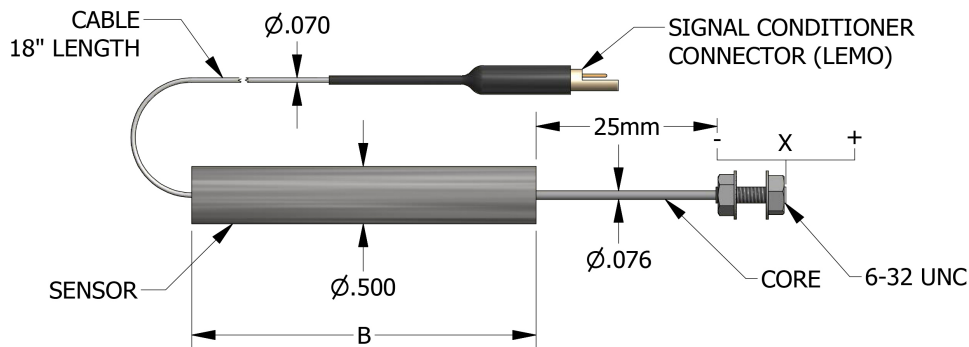


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Specifications

Mechanical Specifications	
Linear stroke lengths	±25 mm, ±50 mm, ±75 mm
Temperature coefficients	Offset: 0.002% FS/° C (typical) Span: 0.04% FS/° C (typical)
Housing material	316 Stainless steel (see drawing)
Core material	316 stainless steel shell with ferrous core
Cable material	Teflon coated
Electrical connector	4 Pin PEEK LEMO connector
Temperature range	-55 -150° C

Performance Specifications		
	DEM0D-DC	DEM0D-DVRT-2
Resolution (800 Hz Low Pass Filter)	0.2% FS typical	0.04% FS typical
Sensitivity	0-5 VDC FS	0-10 VDC FS
Accuracy	±1% Peak (typical), (±2% max) with straight line 0.2% RMS with multi-segment 0.1% RMS with polynomial	
Frequency response	800 Hz standard, 10 Hz -20 kHz optional	
Hysteresis	±1 Micron (typical)	
Repeatability	±1 Micron	



MODEL	X - STROKE	B - SENSOR LENGTH
LS-LVDT-50	+/- 25mm [.984 in]	75mm [2.935 in]
LS-LVDT-100	+/- 50mm [1.969 in]	125mm [4.921 in]
LS-LVDT-150	+/- 75mm [2.953 in]	175mm [6.890 in]

NOTE:

For more information on mechanical dimension and threaded options, go to: www.microstrain.com/displacement/nodes, select the sensor > "Documentation" > "Mechanical Drawing".

LORD SENSING

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