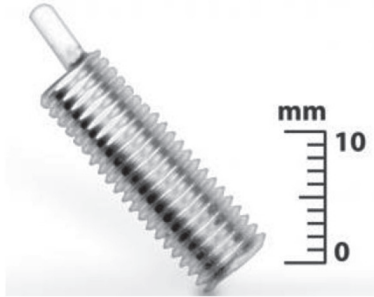


# MicroStrain Sensing Product Datasheet

## NC-LVDT

### Compact Linear Displacement Sensor



**NC-LVDT** Robust and highly accurate displacement sensor with sub-micron resolution and non-contact position measurement

The NC-LVDT is designed to measure the displacement and proximity of a metal target without physical contact and is ideal for difficult sensing applications. The measurement is unaffected by interposed nonmetallic, non-conductive materials, such as polymers and bio-materials. The stainless shell of the device houses two coils; one for sensing and the other for temperature compensation. The coils and Teflon cable are mounted on a stable PEEK substrate. This assembly is potted into the stainless housing using high-grade, vacuum-pumped epoxy and includes integral strain relief. This packaging allows the sensor to be used in applications requiring long-term immersion in water and saline solutions.

**NOTE:** This sensor is designed for use with LORD Sensing DEMOD signal conditioners.

#### PRODUCT HIGHLIGHTS

- For use with LORD DEMOD signal conditioners
- Easily customized to specific requirements
- Signal conditioning options for any application
- Non-contact position measurement
- Plug and play usability

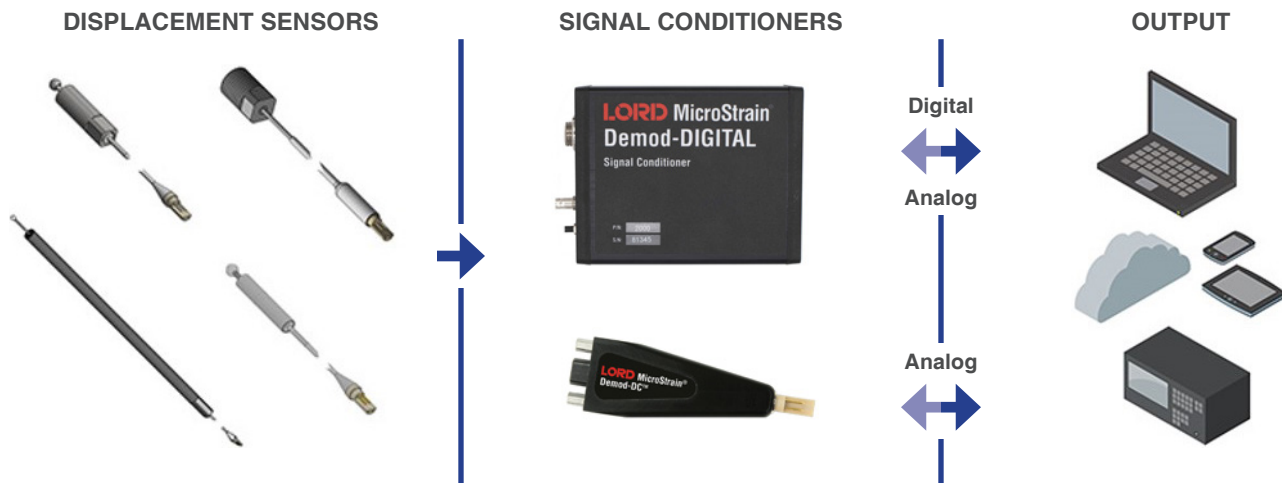
#### FEATURES AND BENEFITS

##### HIGH PERFORMANCE

- High dynamic range for difficult measurements
- Sub-micron resolution with large stroke/size ratio
- 1.0 mm and 2.5 mm displacement

##### APPLICATIONS

- Process control for production line monitoring
- Miniature position control elements
- Linear and angular motion control
- Dimensional gauging for quality control



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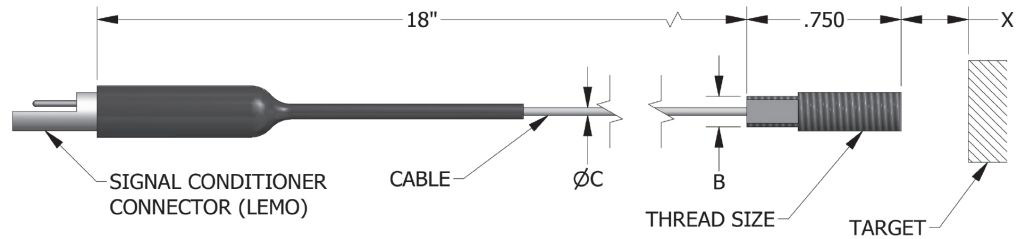
# Compact Linear Displacement Sensor

## Specifications

Mechanical Specifications	
Linear stroke lengths	1.0 mm, 2.5 mm
Temperature coefficients	Offset: 0.0039% FS/°C (typical)* Span: 0.016% FS/°C (typical)*
Housing material	300 series stainless steel (see drawing)
Core material	Customer-specified conductive material
Cable material	Teflon coated
Electrical connector	4 Pin PEEK LEMO connector
Operating Temperature range	-55 – 175°C

Performance Specifications		
	DEM0D-DC	DEM0D-DVRT-2
Resolution	0.1% FS typical	0.05% FS typical
Accuracy @25°	±0.2% to ±0.1% with polynomial calibration	
Frequency response	800 Hz standard, 10 Hz -20 kHz optional	

\*Dependent upon displacement area and target material. Target size must be at least the diameter of the sensor.



MODEL	X - SENSING DISTANCE	THREAD SIZE	B - WRENCH FLAT	C - CABLE DIA.	PART NUMBER
NC-LVDT-1.0	1.0 mm [.039 in]	10-32 UNF-2A	3.8 mm [.150 in]	1.0 mm [.039 in]	6127-0200
NC-LVDT-2.5	2.5 mm [.098 in]	1/2-20 UNF-2A	10.7 mm [.420 in]	1.8 mm [.070 in]	6127-0400

### NOTE:

For more information on mechanical dimension and threaded options, go to: [www.microstrain.com/displacement/nodes](http://www.microstrain.com/displacement/nodes)

Select the sensor > "Documentation" > "Mechanical Drawing".



Parker Hannifin Corporation  
**MicroStrain Sensing**  
 459 Hurricane Lane  
 Williston, VT 05495 · USA

phone: +1.802.862.6629  
 email: [microstrainsales@parker.com](mailto:microstrainsales@parker.com)  
[microstrainsupport@parker.com](mailto:microstrainsupport@parker.com)  
[www.microstrain.com](http://www.microstrain.com)  
[www.parker.com](http://www.parker.com)