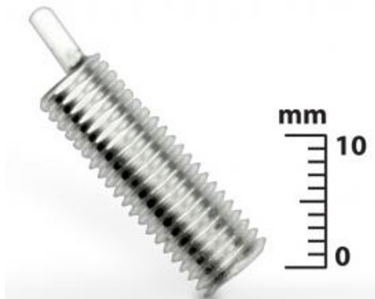


## NC-LVDT

### Compact Linear Displacement Sensor



*NC-LVDT- robust and highly accurate displacement sensor with submicron resolution and non-contact position measurement*

Ideal for difficult sensing applications, the NC-LVDT is designed to measure the displacement and proximity of a metal target without physical contact. 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.

#### Product Highlights

- Plug and play usability
- Easily customized to suit specific requirements
- Signal conditioning options for any application
- Non-contact position measurement

#### Features and Benefits

##### High Performance

- High dynamic range for difficult measurements
- Sub-micron resolution with large stroke/size ratio
- Non-contact position measurement

#### Applications

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

#### DISPLACEMENT SENSORS



#### SIGNAL CONDITIONERS



Digital



Analog

Analog



#### OUTPUT

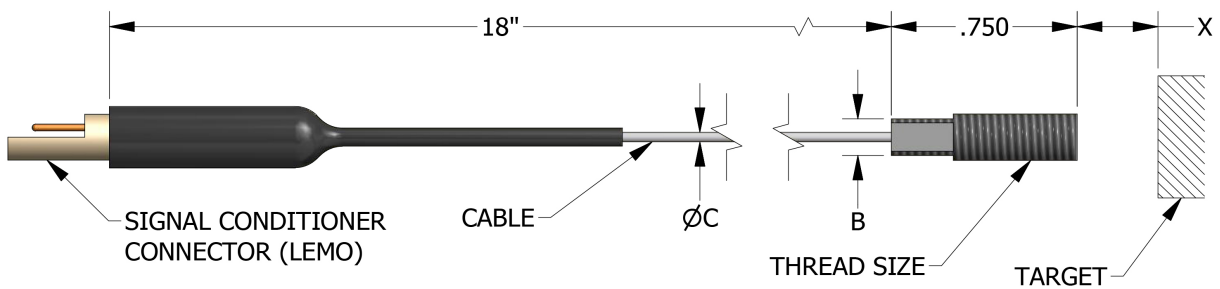


## Specifications

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)
Target material	Customer-specified conductive material
Cable material	Teflon coated
Electrical connector	4 Pin PEEK LEMO connector
Temperature range	-55 -175° C

Performance Specifications		
	DEMOD-DC	DEMOD-DVRT-2
Resolution	0.1% FS typical	0.5% FS typical
Accuracy	±0.2 to ±1% with polynomial calibration	
Frequency response	800 Hz standard, 10 Hz -20 kHz optional	
Hysteresis	±2 Microns (typical)	
Repeatability	±2 µm (typical) at constant temperature	

\*Dependent upon displacement area and target material.



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

### 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".