

# M-12 Series LVDTs

The M-12 Series layer-wound LVDT offers premium LVDT performance at standard LVDT pricing.

The M-12 series LVDT is wound on a ribless bobbin providing the smooth transfer function required for the most demanding materials testing and position feedback applications.

Precision distribution, tapered layer windings provide excellent stroke to length ratio, without sacrificing sensor linearity.

A constant sum of the secondaries, throughout the linear range, insures compatibility with ratiometric temperature compensation signal conditioning schemes.

The new M-12 series coil design has been optimized to provide the best possible temperature coefficient of sensitivity, while maintaining suitability for operation with extended cable lengths.

An internal high-permeability shield provides protection in the noisiest electromagnetic environments. The AISI 304 Series stainless steel housing protects the LVDT from corrosion in aggressive environments.

Vacuum coil impregnation and encapsulation ensure long term stability in the most rigorous, high vibration applications.

*Available ranges are from  $\pm 5$  mm to  $\pm 150$  mm.*



## SPECIFICATIONS

Excitation	3.0 Volts RMS @ 2.5 kHz
Linearity	$\pm 0.25\%$ of Full Range (Max)
Null Voltage	0.5% of Full Range Output (Max)
Sensitivity	See table on next page
Sensitivity tolerance	$\pm 5\%$
Sensitivity TC	150 PPM per degree C (Typical)
Operating Temp.	$-55^{\circ}\text{C}$ to $150^{\circ}\text{C}$

## FEATURES

- 12mm Diameter Case
- Excellent Stroke to Length Ratio
- Smooth Transfer Function
- Constant Sum of Secondaries
- Electromagnetic Shielding
- AISI 304 Stainless Steel Case
- 26-AWG lead wires (1-Meter Long)

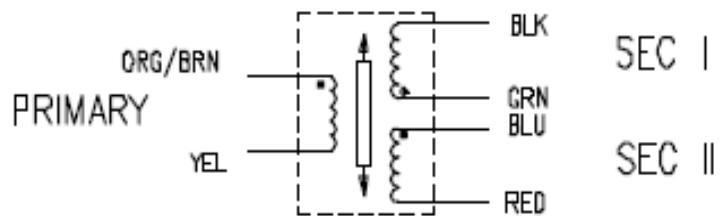
## APPLICATIONS

- Materials Testing Extensometers
- Cylinder Position Feedback
- Hydraulic Spool Valve Position Feedback
- Roller Gap Positioning
- Absolute X-Y Stage Position
- Automotive Suspension Testing
- Flight Simulators
- Aircraft Flight Control Feedback

## OPTIONS

- Metric Core Thread
- 5.0 kHz Calibration

## Wiring

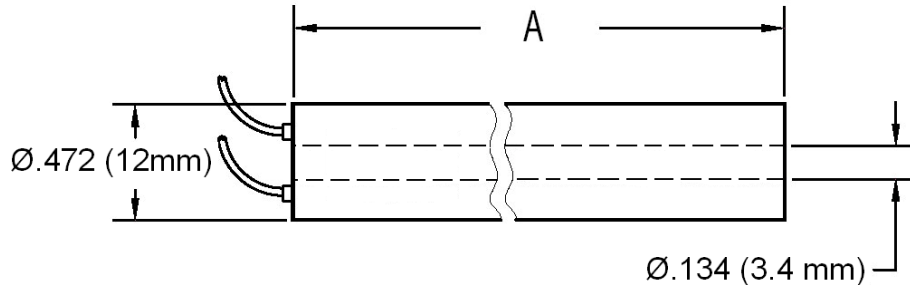


## WIRING SCHEMATIC

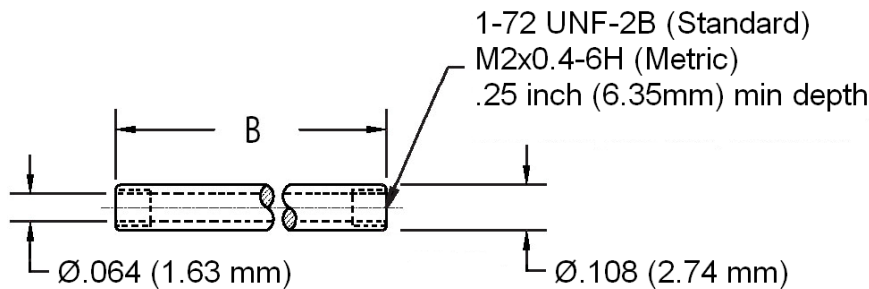
(CONNECT GRN TO BLU FOR DIFFERENTIAL OUTPUT)

# M-12 Series LVDTs

## Dimensions



Leads: #26-AWG, Teflon insulated, 3 feet (1 meter) long



## Electrical specifications

Part Number	Model No	Stroke mm	Sensitivity mV/V/mm	Phase Shift Degrees	Z-Input $\Omega \pm 20\%$	Z-Output $\Omega \pm 20\%$	Zero Phase Nominal F	A mm	B mm
02561036-000	M12-10	$\pm 10$	42.00	$+3 \pm 3$	570	540	3.9 KHZ	67.0	36.0
02561037-000	M12-20	$\pm 20$	21.20	$+2 \pm 3$	1100	400	3.9 KHZ	97.0	46.0
02561038-000	M12-30	$\pm 30$	10.00	$+2 \pm 3$	1540	600	3.8 KHZ	117.0	46.0
02561039-000	M12-50	$\pm 50$	9.90	$+3 \pm 3$	780	825	3.8 KHZ	155.0	46.0
02561040-000	M-12-100	$\pm 100$	7.10	$-3 \pm 3$	1000	1700	1.2 KHZ	285.0	75.0

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