

LINEAR POSITION SENSOR

T-375-A SERIES AC LVDT MINIATURE LINEAR POSITION SENSOR

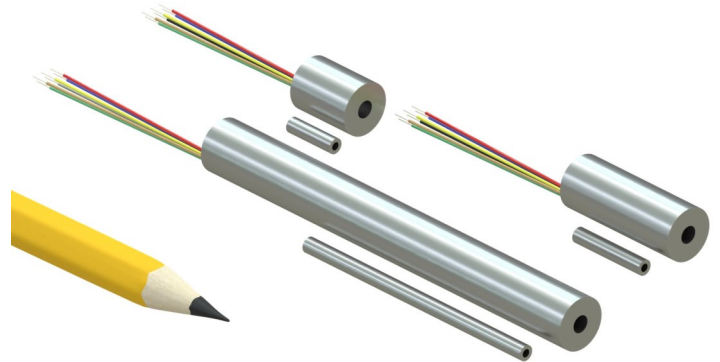
Miniature Free Core AC LVDT Sensor

FEATURES

- Free Core design
- AC LVDT
- Stroke lengths from ± 0.025 to ± 2 inches
- Non-Linearity better than $\pm 0.25\%$ of FS
- Stainless steel housing rated to IP61

APPLICATIONS

- Laboratory R&D Materials Testing
- Valve Position Sensing
- Factory Automation



OVERVIEW

The HGS I T-375-A series AC Linear Variable Differential Transformer (LVDT) Position Sensors are used to monitor and track the linear motion or position of a target. These miniature sensors are ideal for use in industrial and laboratory applications including automotive R&D, motorsports, industrial, motion control, medical, military and aerospace.

These swaged-end sensors are constructed entirely of stainless steel and are resistant to dust and temperature. The coil windings are sealed using an epoxy potting compound providing excellent protection against shock and vibration.

The T-375-A series will operate with most any conventional differential input AC LVDT signal conditioner, but operation with ratiometric signal conditioning is not recommended. HGS I offers a full line of compatible AC LVDT signal conditioners. Please contact us for a recommendation.

SPECIFICATIONS

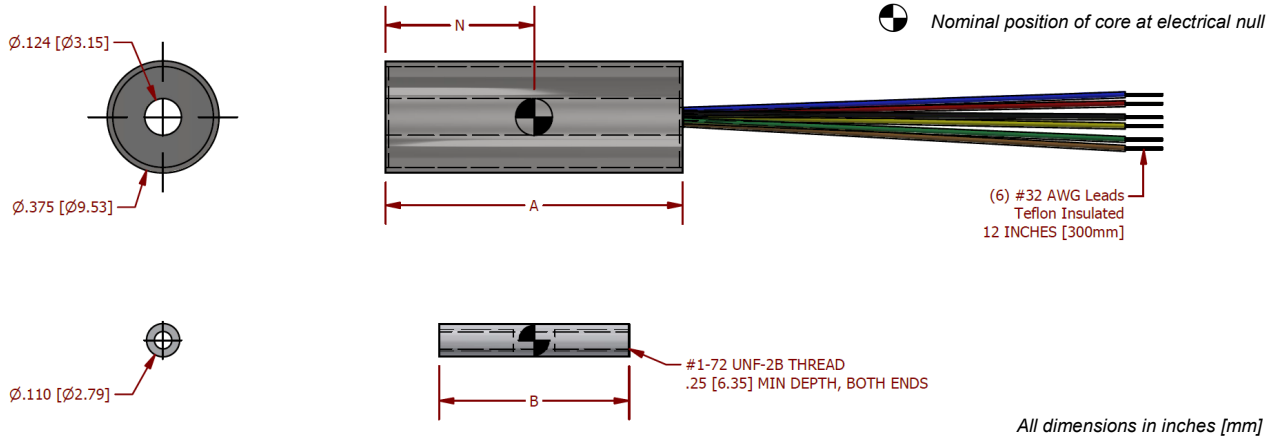
Input Voltage:	3 Vrms (nominal)
Input Frequency:	400 Hz to 10 kHz
Linearity Error:	$\leq \pm 0.15\%$ of FSO typical, $\pm 0.25\%$ maximum
Null Voltage:	0.5% of FS
Repeatability:	0.01% of FS
Hysteresis:	0.01% of FS
Operating Temperature:	-54 to +135°C (-65 to +275°F) - Standard Temperature Version -54 to +204°C (-65 to +400°F) - High Temperature Version
Thermal Coefficient:	$< -0.02\%/^{\circ}\text{C}$ of FS ($< -0.01\%/^{\circ}\text{F}$ of FS)
Humidity:	90% RH
Housing:	Stainless steel
Lead Wires:	32 AWG Teflon™ insulated, 12" length (305 mm)
Life Expectancy:	> 100 million cycles
Shock Rating:	1000g, 11 ms
Vibration Rating:	20 g to 2 kHz
IP Rating:	IEC IP61
Country of Manufacture:	Made in the USA



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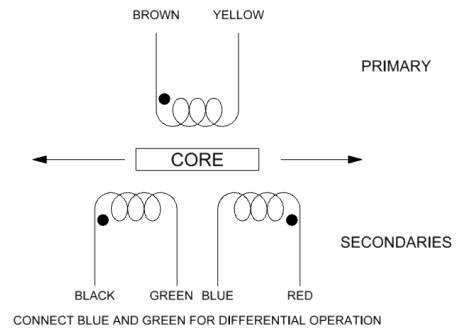
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SPECIFICATIONS

	T-375-A-025	T-375-A-050	T-375-A-100	T-375-A-250	T-375-A-500
Measuring Range (in) [mm]	± 0.025 [± 0.63]	± 0.05 [± 1.25]	± 0.100 [± 2.5]	± 0.250 [± 6.25]	± 0.50 [± 12.5]
Sensitivity (mV/V/0.001 in) [mm]	3.3 [130]	1.6 [63]	1.6 [63]	2.2 [87]	1.6 [63]
Dimension A (in) [mm] - Coil	0.50 [12.7]	0.75 [19.1]	1.0 [25.4]	1.75 [44.5]	3.3 [83.8]
Dimension B (in) [mm] - Core	0.40 [10.2]	0.63 [16]	0.64 [16.3]	1.13 [28.6]	2.0 [50.8]
Dimension N (in) [mm] - Null	0.25 [6.35]	0.38 [9.5]	0.50 [12.7]	0.88 [22.1]	1.65 [41.9]
Body Weight (oz) [gm]	0.10 [2.8]	0.2 [5.7]	0.21 [6.0]	0.4 [11.3]	0.63 [18]
Core Weight (oz) [gm]	0.01 [0.2]	0.02 [0.4]	0.02 [0.4]	0.03 [1]	0.06 [1.6]

	T-375-A-1000	T-375-A-2000
Measuring Range (in) [mm]	± 1.0 [± 25.4]	± 2.0 [± 50.8]
Sensitivity (mV/V/0.001 in) [mm]	0.7 [28]	0.50 [19.7]
Dimension A (in) [mm] - Coil	5.6 [142]	9.95 [253]
Dimension B (in) [mm] - Core	3.0 [76.2]	5.5 [140]
Dimension N (in) [mm] - Null	2.8 [71.1]	5.0 [127]
Body Weight (oz) [gm]	0.95 [27]	1.98 [56]
Core Weight (oz) [gm]	0.09 [2.5]	0.18 [5.2]



ORDERING INFORMATION

Model	Measuring Range	Options
T-375-A	- □ □ □	- □
	025 ± 0.025 inches 050 ± 0.050 inches 100 ± 0.100 inches 250 ± 0.250 inches 500 ± 0.500 inches 1000 ± 1.0 inches 2000 ± 2.0 inches	H High Temperature (400°F) M Metric Core Threads (M2x0.4) O Made with Low Outgassing Materials R Mild Radiation Resistance (30 MRads) T Teflon™ Boreliner V Vented Housing

ORDERING EXAMPLE

T-375-A-500: AC LVDT, ± 0.500 inch Measuring Range

