

T-750-I Series 4 to 20 mA LVDT Linear Position Sensor

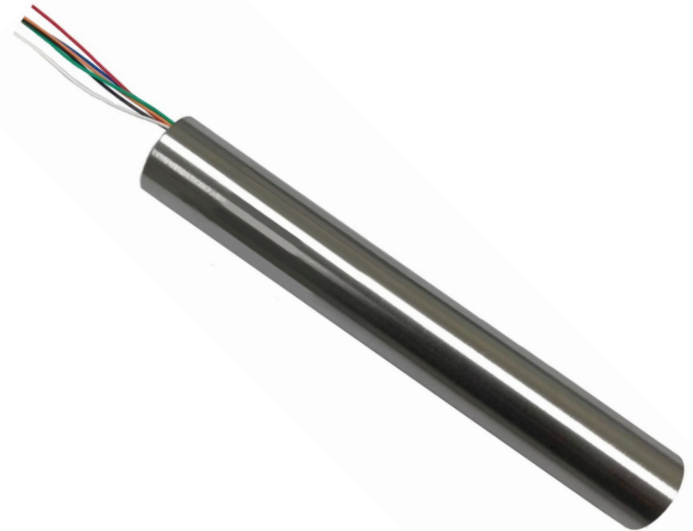
Features

- Free Core design
- 4 to 20 mA output, 2-wire loop powered
- Stroke lengths from 0.100 inches to 20 inches
- Non-Linearity better than $\pm 0.25\%$ of FS
- Stainless steel housing sealed to IP61

Applications

Laboratory R&D Materials Testing

- Valve Position Sensing
- Factory Automation



Overview

The HGSI T-750-I series DC Linear Variable Differential Transformer (LVDT) Position Sensors are used to monitor and track the linear motion or position of a target. These ruggedized sensors are ideal for use in industrial and laboratory applications including automotive R&D, motorsports, industrial, motion control, medical, military and aerospace.

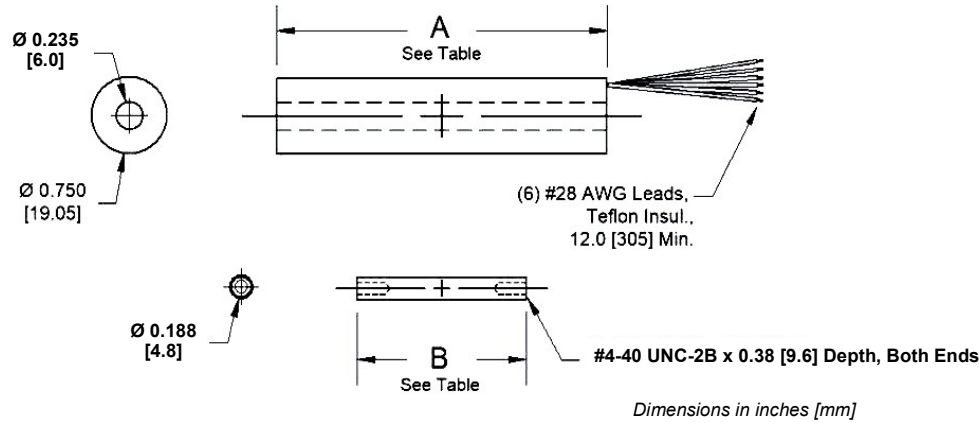
These swaged-end sensors are constructed entirely of stainless steel and are resistant to dust and temperature. The coil windings are sealed using an epoxy potting compound providing excellent protection against shock and vibration.

The amplifier electronics are contained within the housing, no need for an external signal conditioner. The 4 to 20 mA loop powered output is precalibrated at the factory.

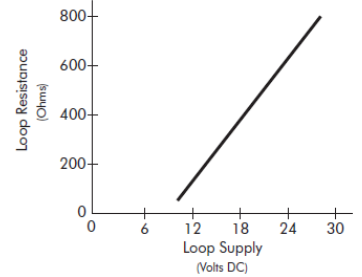
Specifications

Full Scale Output:	4 to 20 mA, 2-wire loop
Input Power:	24 VDC (from 11 to 28 VDC)
Linearity Error:	$\leq \pm 0.15\%$ of FSO typical, $\pm 0.25\%$ maximum
Resolution:	16 bit
Repeatability:	0.01% of FS
Hysteresis:	0.01% of FS
Bandwidth:	30 Hz update rate (analog signal output)
Operating Temperature:	-20 to +85°C (0 to +185°F)
Thermal Coefficient:	$< -0.025\%/^{\circ}\text{C}$ of FS ($< -0.014\%/^{\circ}\text{F}$ of FS)
Humidity:	90% RH
Housing:	Stainless steel
Lead Wires:	28 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

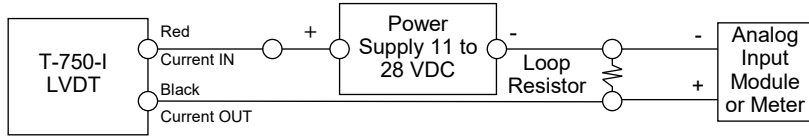
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Loop Resistance vs. Minimum Loop Supply Voltage



Minimum Loop Resistance 100Ω



Specifications

	T-750-I-100	T-750-I-250	T-750-I-500	T-750-I-1000	T-750-I-2000	T-750-I-4000
Measuring Range (in) [mm]	0.100 [2.5]	0.250 [6.3]	0.500 [12.7]	1.0 [25.4]	2.0 [50.8]	4.0 [102]
Scale Factor (mA/in) [mA/mm]	160 [6.4]	64 [2.6]	32 [1.28]	16 [0.64]	8 [0.32]	4 [0.16]
Dimension A (in) [mm]	2.86 [72.5]	3.48 [88.3]	4.24 [107]	6.74 [171]	8.24 [209]	11.21 [284]
Dimension B (in) [mm]	0.80 [20.3]	1.25 [31.7]	1.65 [41.9]	3.45 [87.6]	3.45 [87.6]	5.30 [134]

	T-750-I-6000	T-750-I-10000	T-750-I-20000
Measuring Range (in) [mm]	6.0 [152]	10.0 [254]	20.0 [508]
Scale Factor (V/in) [V/mm]	2.67 [0.1]	1.6 [0.06]	0.8 [0.03]
Dimension A (in) [mm]	14.49 [368]	19.49 [495]	32.38 [822]
Dimension B (in) [mm]	6.20 [157]	6.20 [157]	9.50 [241]

Ordering Information

Model	Measuring Range	Options
T-750-I	- □ □ □	- □
	100 0 to 0.100 inches 250 0 to 0.250 inches 500 0 to 0.500 inches 1000 0 to 1.0 inches 2000 0 to 2.0 inches 4000 0 to 4.0 inches 6000 0 to 6.0 inches 10000 0 to 10.0 inches 20000 0 to 20.0 inches	M Metric Core Threads (M3x0.5) T Teflon™ Boreliner

Wiring Out

	Color
Loop Positive	Red
Loop Negative	Black

CAUTION!
DO NOT CONNECT TO RED OR BLACK
THIS MAY CAUSE DAMAGE TO THE SENSOR ELECTRONICS

Ordering Example

T-750-I-1000: 4 to 20 mA, Output, 0 to 1.0 inch Measuring Range

