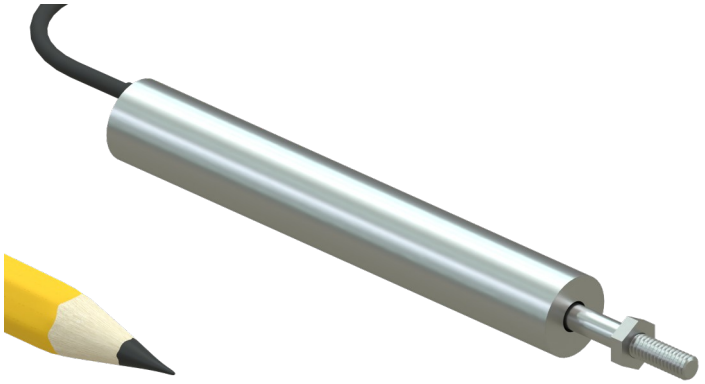
LINEAR POSITION SENSOR

ILPS-9.5Z SERIES LINEAR VARIABLE INDUCTIVE POSITION SENSOR

Miniature LVIT Linear Position Sensor



FEATURES

Sensing element is wear-free
Excellent stroke-to-length ratio
Stroke lengths from 6.4 to 150 mm (0.25 to 6 inches)
DC in / DC out operation with built-in electronics
Proprietary SenSet™ field adjustable range scaling

APPLICATONS

Motorsport and Automotive R&D Testing
Industrial Test Stands
Factory Automation

OVERVIEW

Harold G. Schaevitz Industries (HGSI) ILPS-9.5 series miniature Linear Variable Inductive Transducer (LVIT) Position Sensors are used to monitor and track the linear motion or position of a target. These miniature ruggedized sensors are ideal for use in industrial and laboratory applications including automotive R&D, motorsports, industrial, motion control, medical, military and aerospace.

The inductive coil and spoiler combination is a contactless solution, eliminating the wear and dithering issues commonly experienced with Potentiometer type sensors. The amplifier electronics are contained within the housing, no need for an external signal conditioner.

The ILPS-9.5 series sensor is made from industrial duty materials for resistance to dust, water, temperature, shock, and vibration.

SPECIFICATIONS

Analog I/Os:	0.5 to 4.5 VDC output	(8 to 30 VDC power, ≤35 mA)
	0 to 5 VDC output	(8 to 30 VDC power, ≤35 mA)
	0 to 10 VDC output	(12 to 30 VDC power, ≤35 mA)
Linearity Error:	± 0.15% of FSO, typical ± 0.25%	
Resolution:	0.025% of FS	
Repeatability:	0.025% of FS	
Update Rate:	300 Hz update rate (nominal)	
Operating Temperature:	-20 to +105°C (-4 to +220°F)	
Temperature Coefficient:	≤ +/- 0.015% of FS / °C	
Life Expectancy:	> 100 million cycles	
Integral Cable:	4 individual wires, 26 AWG, stranded, FEP insulated, 0.3 meters (12 inches) long	
Cable Temp Rating:	-40 to +85°C (-40 to +185°F)	
Shock Rating:	1000g, 11 mS	
Vibration Rating:	5 to 20 Hz, 0.5 inch p-p; 20 to 2000 Hz, 4.2 g p-p	
IP Rating:	IEC IP67	
Humidity:	95% RH, non-condensing	
Country of Manufacture:	Made in the USA	

CE RoHS COMPLIANT Made in USA

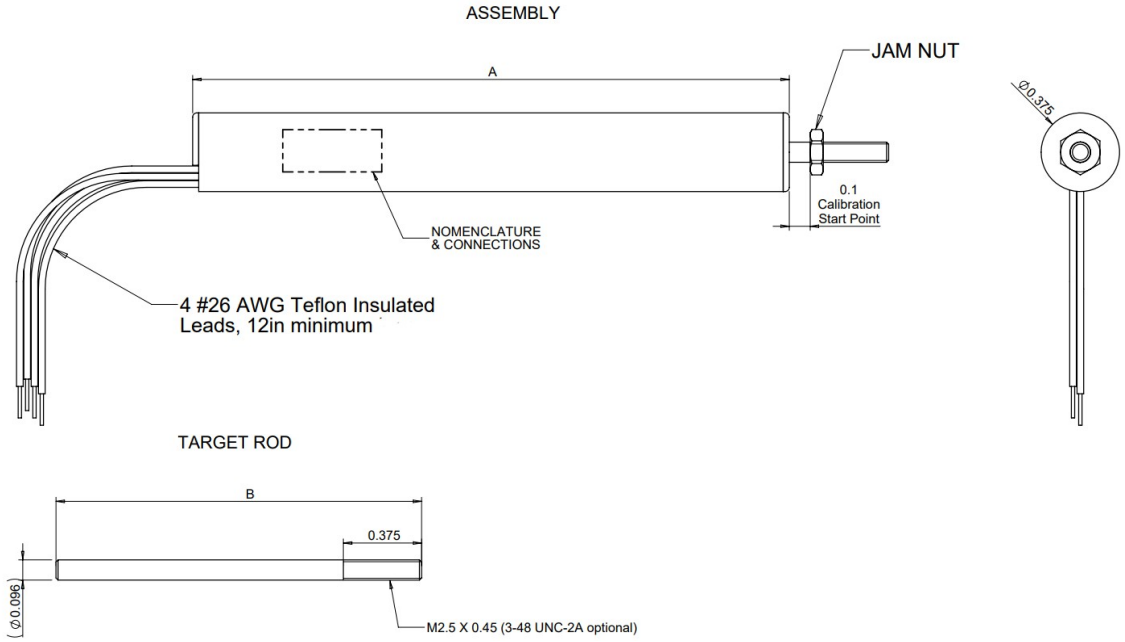
HGSI HAROLD G. SCHAEVITZ INDUSTRIES THE SENSOR CONNECTION

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LINEAR POSITION

ILPS-9.5Z SERIES LINEAR VARIABLE INDUCTIVE POSITION SENSOR

LVIT Linear Position Sensor



DIMENSIONS

Nominal Range	Length 'A'	Length 'B'
0.25 inch [6.4 mm]	2.85 inches [72.4 mm]	1.75 inches [44.5 mm]
0.50 inch [12.7 mm]	2.85 inches [72.4 mm]	1.75 inches [44.5 mm]
0.75 inch [19 mm]	2.85 inches [72.4 mm]	1.75 inches [44.5 mm]
1.0 inch [25 mm]	2.85 inches [72.4 mm]	1.75 inches [44.5 mm]
2.0 inch [50 mm]	3.72 inches [94.5 mm]	2.68 inches [68.1 mm]
3.0 inch [75 mm]	4.72 inches [119.9 mm]	3.68 inches [93.5 mm]
4.0 inch [100 mm]	5.72 inches [145.3 mm]	4.68 inches [118.9 mm]
6.0 inch [150 mm]	7.72 inches [196.1 mm]	6.68 inches [169.7 mm]

WIRING PIN OUT

	Integral Cable
DC Power In	Red
Ground	Black
Analog Output	Green
SenSet (Calibration)	White

ORDERING INFORMATION

Model	Range	Cable Position	Cable Length	Output	Housing
ILPS-9.5Z	**- □□□**	**- A**	**- 00**	**- □□**	**- S**
	6.4 0.25 inches **12.7** 0.50 inches **019** 0.75 inches **025** 1.0 inch **050** 2.0 inch **075** 3.0 inch **100** 4.0 inch **150** 6.0 inch	**A** Axial	**00** 0.3 m cable (special cable lengths available on request)	**05** 0.5-4.5 VDC **06** 4.5-0.5 VDC **10** 0-10 VDC **11** 10-0 VDC **50** 0-5 VDC **51** 5-0 VDC	**S** 300 Series SS

ORDERING EXAMPLE

ILPS-9.5Z-050-A-00-10-S: 0 to 50 mm Range, 12 inch Axial Cable, 0 to 10VDC Output, Stainless Steel Housing

Made in USA

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THE SENSOR CONNECTION

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