

# LINEAR POSITION SENSOR

## ILPS-9.5Z SERIES LINEAR VARIABLE INDUCTIVE POSITION SENSOR

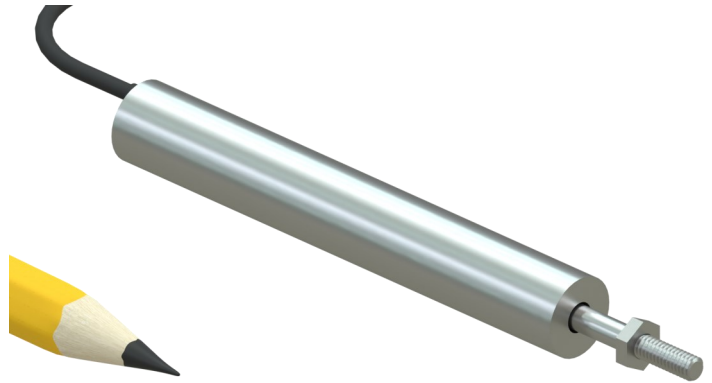
Miniature LVIT Linear Position Sensor

### 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

### APPLICATIONS

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



### OVERVIEW

Harold G. Schaevitz Industries (HGS) 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

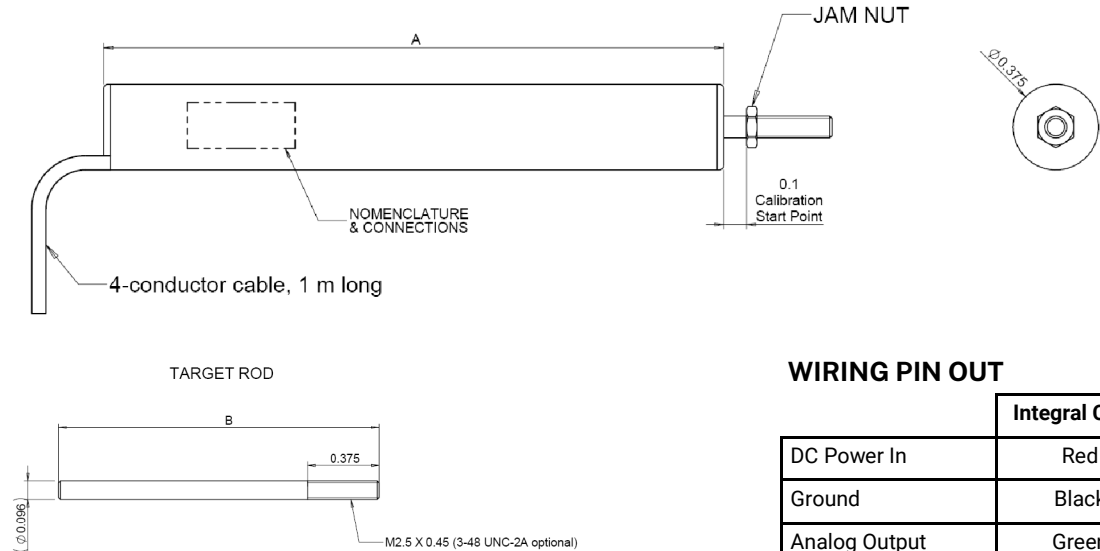
<b>Analog I/Os:</b>	0.5 to 4.5 VDC output (8 to 30 VDC power, $\leq 35$ mA)
	0 to 5 VDC output (8 to 30 VDC power, $\leq 35$ mA)
	0 to 10 VDC output (12 to 30 VDC power, $\leq 35$ mA)
<b>Linearity Error:</b>	$\pm 0.15\%$ of FSO, typical $\pm 0.25\%$
<b>Resolution:</b>	0.025% of FS
<b>Repeatability:</b>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



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LVIT Linear Position Sensor



### WIRING PIN OUT

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

### 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]

### ORDERING INFORMATION

Model	Range	Cable Position	Cable Length	Output	Housing
ILPS-9.5Z	- □□□	- A	- 00	- □□	- S
	<b>6.4</b> 0.25 inches <b>12.7</b> 0.50 inches <b>019</b> 0.75 inches <b>025</b> 1.0 inch <b>050</b> 2.0 inch <b>075</b> 3.0 inch <b>100</b> 4.0 inch <b>150</b> 6.0 inch	<b>A</b> Axial	<b>00</b> 1m cable	<b>05</b> 0.5-4.5 VDC <b>06</b> 4.5-0.5 VDC <b>10</b> 0-10 VDC <b>11</b> 10-0 VDC <b>50</b> 0-5 VDC <b>51</b> 5-0 VDC	<b>S</b> 300 Series SS

### ORDERING EXAMPLE

ILPS-9.5Z-050-A-00-10-S: 0 to 50 mm Range, 1 meter Axial Cable, 0 to 10 VDC Output, Stainless Steel



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