

## ILPS-45 SERIES LINEAR VARIABLE INDUCTIVE POSITION SENSOR

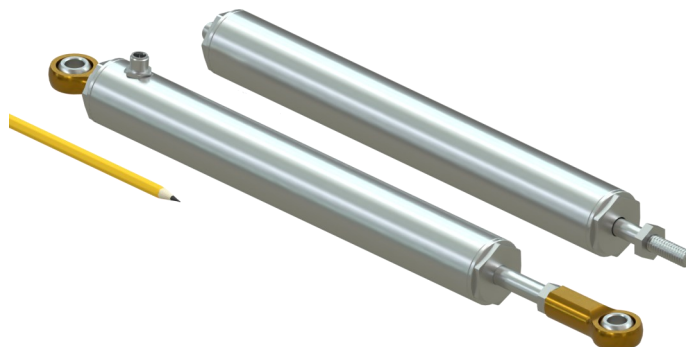
Rugged Frictionless LVIT Linear Position Sensor

### FEATURES

- Sensing element is wear-free
- Excellent stroke-to-length ratio
- Stroke lengths from 25 to 200 mm (1 to 8 inches)
- 19 mm (0.75 inch) diameter housing sealed to IP67
- A more robust alternative to Linear Potentiometers

### APPLICATIONS

- Civil Engineering: Bridge and Railway monitoring
- Military and Off Highway Vehicles
- Power Generation: Steam Valves



### OVERVIEW

Harold G. Schaevitz Industries (HGSi) ILPS-45 series Linear Variable Inductive Transducer (LVIT) Position Sensor with Rod End Joints are used to monitor and track the linear motion or position of a target. These ruggedized sensors are ideal for use in heavy industrial applications including automotive R&D, structural monitoring, factory automation, power generation, agricultural vehicles, 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-45 series sensor is made from industrial duty materials for resistance to dust, water, temperature, shock, and vibration.

The SenSet Field Programmability feature allows for quick and easy recalibration of the units' zero and full scale electrical output.

### SPECIFICATIONS

<b>Analog I/Os:</b>	0 to 3 VDC output	(5 to 30 VDC power, $\leq 35$ mA)
	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)
	4 to 20 mA output	(18 to 30 VDC power, $\leq 60$ mA)

**Linearity Error:**  $\pm 0.15\%$  of FSO typical,  $\pm 0.25\%$  FSO max

**Resolution:** 0.025% of FS

**Repeatability:** 0.025% of FS

**Bandwidth:** 300 Hz update rate (nominal)

**Pretravel:** 3mm (0.120") (nominal)

**Overtravel:** 3mm (0.120") (nominal)

**Operating Temperature:** Voltage Output:  $-40$  to  $+105^{\circ}\text{C}$  ( $-40$  to  $+220^{\circ}\text{F}$ )

Current Output:  $-20$  to  $+75^{\circ}\text{C}$  ( $-5$  to  $+167^{\circ}\text{F}$ )

**Temperature Coefficient:**  $\pm \pm 0.015\%$  of FS /  $^{\circ}\text{C}$

**Life Expectancy:**  $> 100$  million cycles

**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

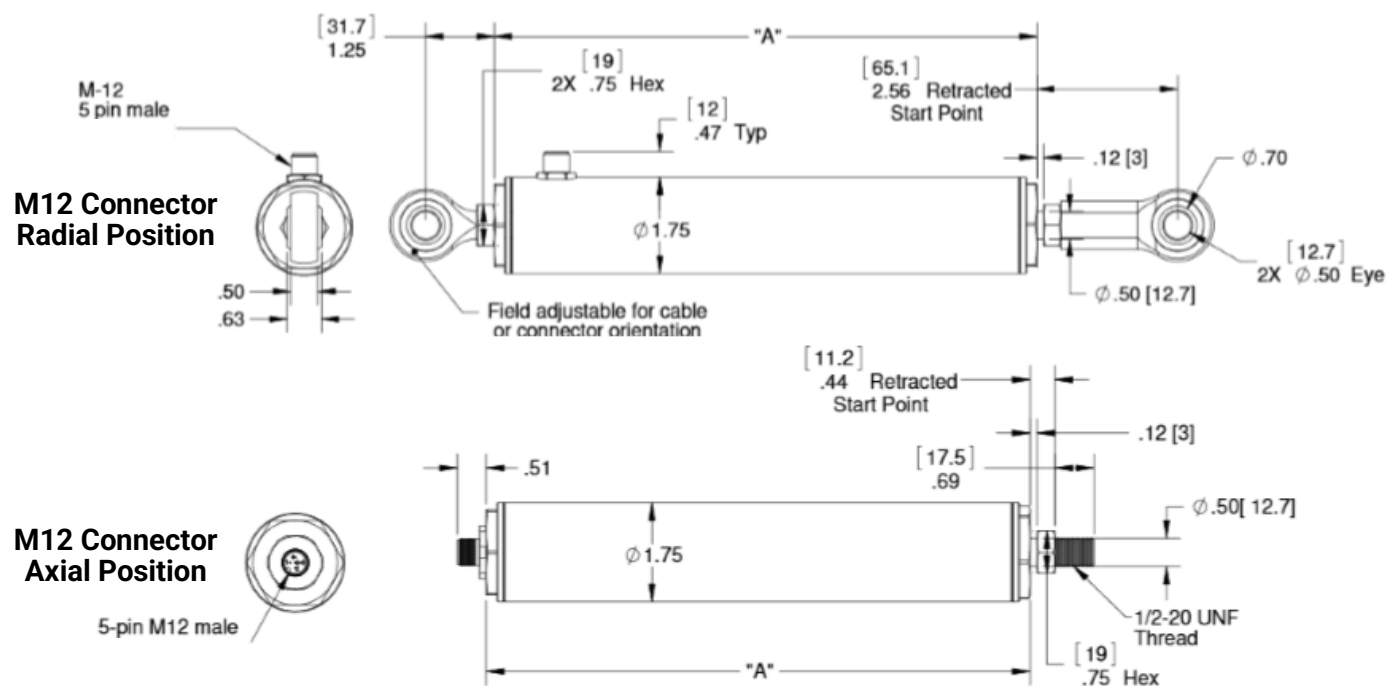
**IP Rating:** IEC IP67

**Country of Manufacture:** Made in the USA



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### DIMENSIONS

Measuring Range	Length 'A'	Housing O.D.
4.0 inches [100 mm]	9.88 inches [250.9 mm]	1.75 inches [45.0 mm]
6.0 inches [150 mm]	11.88 inches [301.7 mm]	1.75 inches [45.0 mm]
8.0 inches [200 mm]	13.88 inches [352.5 mm]	1.75 inches [45.0 mm]
10.0 inches [250 mm]	15.88 inches [403.3 mm]	1.75 inches [45.0 mm]
12.0 inches [300 mm]	17.88 inches [454.1 mm]	1.75 inches [45.0 mm]
15.0 inches [375 mm]	20.88 inches [530.4 mm]	1.75 inches [45.0 mm]
18.0 inches [450 mm]	23.88 inches [606.6 mm]	1.75 inches [45.0 mm]

### WIRING PIN OUT

	Connector	Integral Cable
DC Power In	Pin #1	Red
Ground	Pin #2	Black
Output (Voltage)	Pin #3	Green
Output (Current)	Pin #4	Green
SenSet (Calibration)	Pin #5	White

### ORDERING INFORMATION

Model	Range	Position	Termination	Output	Housing
ILPS-45	- □ □ □	- □	- □ □	- □ □	- S
	100 100 mm 150 150 mm 200 200 mm 250 250 mm 300 300 mm 375 375 mm 450 450 mm	A Axial R Radial	00 Cable, 1m 01 M12 Connector 03 Minifast Connector* * Axial position only	03 0 to 3 VDC 05 0.5 to 4.5 VDC 10 0 to 10 VDC 20 4 to 20 mA 50 0 to 5 VDC	S Stainless Steel

### ORDERING EXAMPLE

ILPS-45-100-R-01-05-S: 0 to 100 mm Range, M12 Connector, 0 to 5 VDC Output, Stainless Steel Housing

