ILPS-13Z Series Linear Variable Inductive Position Sensor

Features

- **Sensing element is wear-free**
- **Excellent stroke-to-length ratio**
- **Stroke lengths from 2.5 to 200 mm (0.1 to 8 inches)**
- **13 mm (0.5 inch) diameter housing sealed to IP67**
- **Free core, through-bore design**

Applications

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

Overview

The HGSI ILPS-13Z series Linear Variable Inductive Transducer (LVIT) Position Sensors with free core, through-bore design 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.

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 through-bore design protects the sensor from potential damage in the event of mechanical over stroking.

The ILPS-13Z 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

Analog I/Os:	0 to 3 VDC output (5 to 30 VDC power, ≤20 mA) 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
Resolution:	0.025% of FS
Repeatability:	0.025% of FS
Bandwidth:	300 Hz update rate (nominal)
Operating Temperature:	Voltage Output: -20 to +105°C (-40 to +220°F)
Temperature Coefficient:	≤ +/- 0.015% of FS / °C
Life Expectancy:	> 100 million cycles
Integral Cable:	28 AWG, stranded, FEP insulated, foil shielded, with drain wire, PUR polyurethane outer jacket
Integral 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
Country of Manufacture:	Made in the USA

HGSI HAROLD G. SCHAEVITZ INDUSTRIES
The Sensor Connection

42690 Woodward Avenue, Suite 200 • Bloomfield Hills, MI 48304 USA
Phone: 248-636-1515 • Fax: 248-636-4969
Email: Sales@HGSIND.com • Web: www.HGSIND.com

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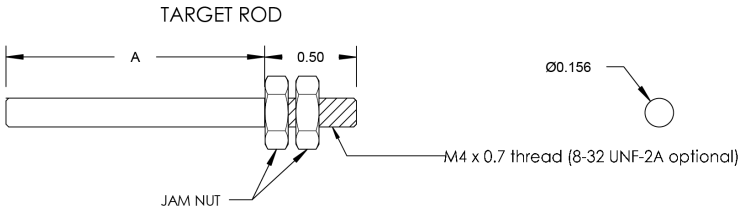

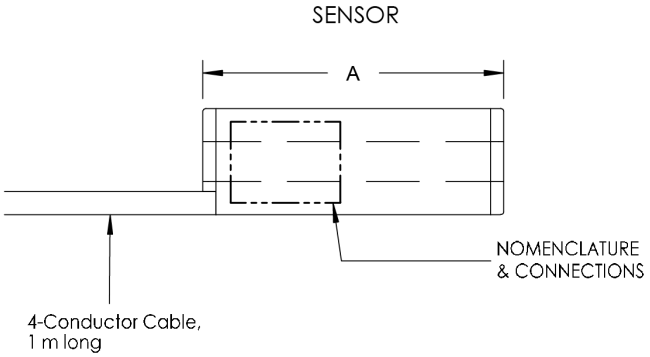

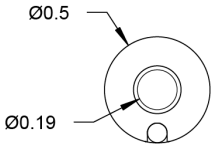

Wiring Pin Out

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

Dimensions

Measuring Range	Length 'A'
0.10 inch [2.5 mm]	1.41 inches [35.8 mm]
0.25 inch [6.4 mm]	1.41 inches [35.8 mm]
0.50 inch [12.7 mm]	1.41 inches [35.8 mm]
0.75 inch [19 mm]	1.41 inches [35.8 mm]
1.0 inch [25 mm]	1.41 inches [35.8 mm]

Measuring Range	Length 'A'
2.0 inches [50 mm]	2.41 inches [61.2 mm]
3.0 inches [75 mm]	3.41 inches [86.6 mm]
4.0 inches [100 mm]	4.41 inches [112 mm]
6.0 inches [150 mm]	6.50 inches [165.1 mm]
8.0 inches [200 mm]	8.50 inches [215.9 mm]

Ordering Information

Model	Range	Cable Position	Cable Length	Output	Housing
ILPS-13Z	- □ □ □	- □	- □ □	- □ □	- □
	2.5 2.5 mm [0.10 inch] **6.4** 6.4 mm [0.25 inch] **12.7** 12.7 mm [0.50 inch] **019** 19 mm [0.75 inch] **025** 25 mm [1.0 inch] **050** 50 mm [2.0 inches] **075** 75 mm **100** 100 mm **150** 150 mm **200** 200 mm	**A** Axial	**00** Cable, 1 m	**03** 0 to 3 VDC **05** 0.5 to 4.5 VDC **10** 0 to 10 VDC **50** 0 to 5 VDC	**S** Stainless Steel

Ordering Example

ILPS-13Z-050-A-00-10-S: 0 to 50 mm Range, 1 meter Axial Cable, 0 to 10 VDC Output, Stainless Steel Housing

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