

# ILPS-27 Series Linear Variable Inductive Position Sensor

## Features

- Sensing element is wear-free
- Excellent stroke-to-length ratio
- Stroke lengths from 50 to 150 mm (2 to 8 inches)
- 27 mm (1.05 inch) diameter housing sealed to IP67
- A more robust alternative to Linear Potentiometers

## Applications

- Packaging Machinery
- Industrial Test Stands
- Mobile Hydraulics



## Overview

Harold G. Schaevitz Industries (HGS) ILPS-27 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 industrial applications including automotive R&D, motorsports, 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-27 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)

<b>Linearity Error:</b>	+/- 0.15% of FSO typical, +/- 0.25% FSO max
<b>Resolution:</b>	0.025% of FS
<b>Repeatability:</b>	0.025% of FS
<b>Bandwidth:</b>	300 Hz update rate (nominal)

<b>Pretravel:</b>	3 mm (0.120") (nominal)
<b>Overtravel:</b>	3 mm (0.120") (nominal)

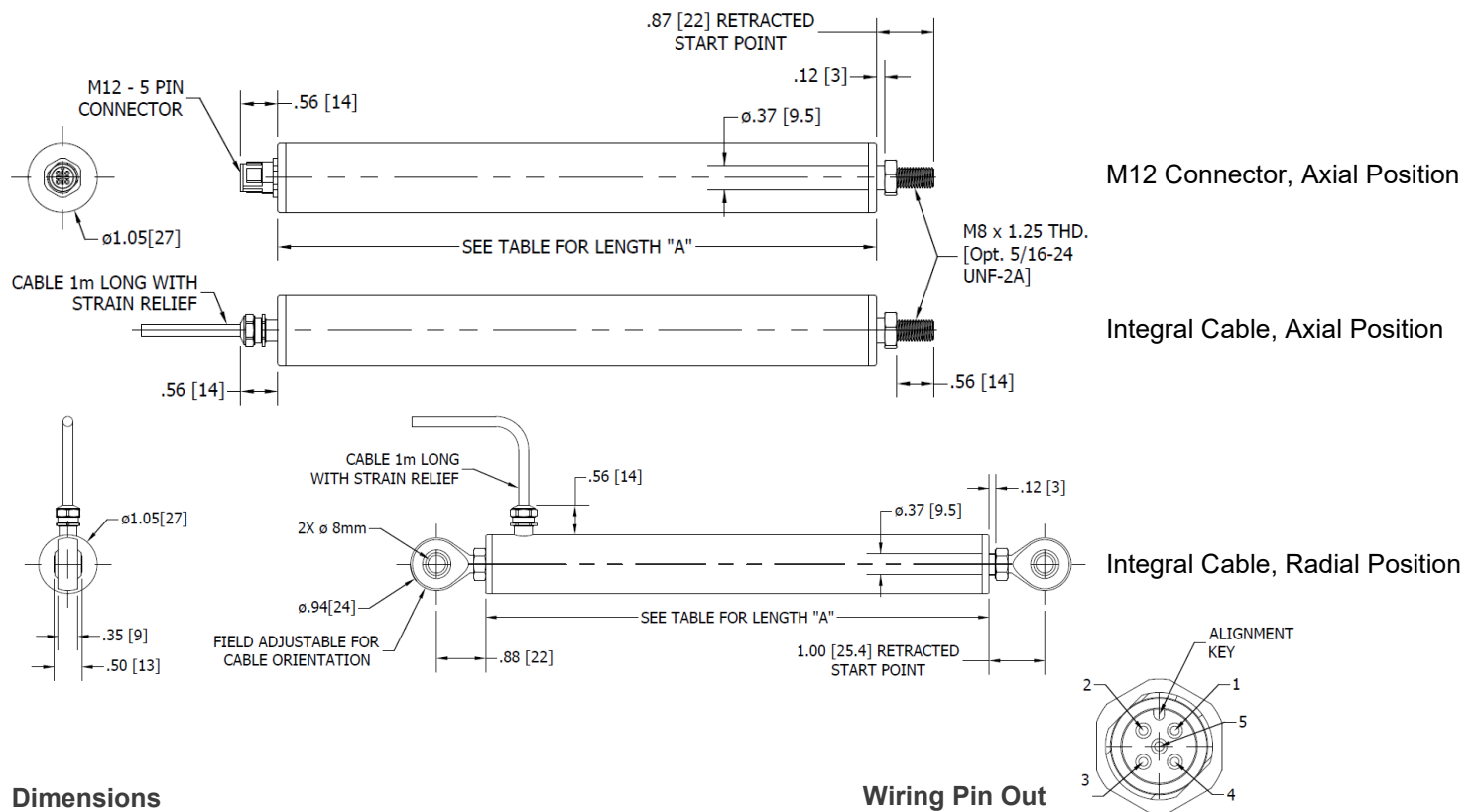
<b>Operating Temperature:</b>	Voltage Output: -40 to +105°C (-40 to +220°F) Current Output: -20 to +75°C (-5 to +167°F)
-------------------------------	--

<b>Temperature Coefficient:</b>	$\leq \pm 0.015\%$ of FS / °C
---------------------------------	-------------------------------

<b>Life Expectancy:</b>	> 100 million cycles
<b>Integral 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 200 Hz, 4.2 g p-p
<b>IP Rating:</b>	IEC IP67

<b>Country of Manufacture:</b>	Made in the USA
--------------------------------	-----------------

# ILPS-27 Series Linear Variable Inductive Position Sensor



## Dimensions

Measuring Range	Length 'A'	Housing O.D.
2.0 inches [50 mm]	5.50 inches [139.7 mm]	1.05 inches [27.0 mm]
3.0 inches [75 mm]	6.50 inches [165.1 mm]	1.05 inches [27.0 mm]
4.0 inches [100 mm]	7.50 inches [190.5 mm]	1.05 inches [27.0 mm]
6.0 inches [150 mm]	9.50 inches [241.3 mm]	1.05 inches [27.0 mm]

## Wiring Pin Out

	M12 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
<b>ILPS-27</b>	-□□□	- □	- □□	- □□	- □
	<b>050</b> 50 mm <b>075</b> 75 mm <b>100</b> 100 mm <b>150</b> 150 mm	<b>A</b> Axial <b>R</b> Radial	<b>00</b> Cable, 1 m <b>01</b> M12 Connector*  * Axial position only	<b>03</b> 0 to 3 VDC <b>05</b> 0.5 to 4.5 VDC <b>10</b> 0 to 10 VDC <b>20</b> 4 to 20 mA <b>50</b> 0 to 5 VDC	<b>A</b> Aluminum <b>S</b> Stainless Steel

## Ordering Example

**ILPS-27-050-A-00-50-A:** 0 to 50 mm Range, 1 m Axial Cable, 0 to 5 VDC Output, Aluminum Housing