



# 940 LPS Linear Position Sensor

## The Gemco LPS Linear Position Sensor

940

The non-contact Gemco LPS Linear Position Sensor uses field proven and reliable magnetostrictive technology to deliver accurate, absolute and continuous machine positioning.

Available in pre-engineered sensor lengths or custom lengths to fit your application with standard analog outputs, this sensor is a durable, value-packed linear position device that is easy to use. It not only replaces discrete position sensors, but outperforms them at roughly the same cost.

We designed the Gemco LPS to connect directly to conventional programmable controllers or analog input modules, and made it work without the need for programming, adjustments or initialization. Then we employed our 50 years of experience in packaging control products for harsh industrial environments and made the Gemco LPS a rugged and reliable sensor that performs on the plant floor.

Limit switches are contact devices that have wear problems. The Gemco LPS is non-contact. Limit and proximity switches can only give discrete position information. The Gemco LPS gives continuous position information. Incremental shaft encoders require gear trains and position information is lost with a power failure. The Gemco LPS doesn't use gear trains and position data is never lost because the sensor is absolute.

The Gemco LPS offers 0.1% accuracy of positioning (0.012" on a 1 foot sensor). The sensor comes in an IP65 enclosure. Standard lengths of 6", 12", 18", 24", 36" and 72" are in stock. Other lengths are also available.



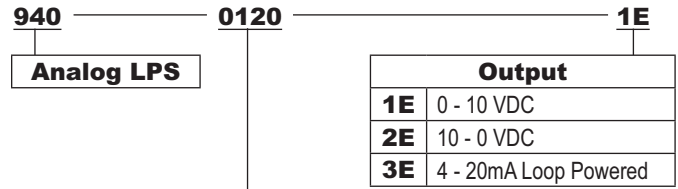
Specifications	
Input Voltage	15 to 26 VDC
Current Draw Voltage Current	50mA Max N/A
Output	0 to 10 VDC or 10 to 0 VDC 4 to 20mA
Position Accuracy	0.1% of Full Stroke
Linearity	+/- 0.05% of Full Stroke
Repeatability	0.01% of Full Stroke
Operating Temperature Head Electronics Guide Tube	-4° to 158° F (-20° to 70° C) -40° to 185° F (-40° to 85° C)
Operating Pressure	3000 psi Operational, 8000 psi Spike
Span Length	1" to 96"
Null Zone	2"
Dead Band	5"
Connectors	12mm 4 Pin Micro
Enclosure	IP65
Specifications are subject to change without notice.	



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Standard Configurations		
Output	Sensor Length in Inches	Part Number
0 to 10 VDC 3 Wire	6	940-0060-1E
	12	940-0120-1E
	18	940-0180-1E
	24	940-0240-1E
	36	940-0360-1E
	48	940-0480-1E
	72	940-0720-1E
	96	940-0960-1E
10 to 0 VDC 3 Wire	6	940-0060-2E
	12	940-0120-2E
	18	940-0180-2E
	24	940-0240-2E
	36	940-0360-2E
	48	940-0480-2E
	72	940-0720-2E
	96	940-0960-2E
4 to 20mA 2 Wire Loop Powered	6	940-0060-3E
	12	940-0120-3E
	18	940-0180-3E
	24	940-0240-3E
	36	940-0360-3E
	48	940-0480-3E
	72	940-0720-3E
	96	940-0960-3E

## Non-Standard Part Numbering



**Stroke Length**

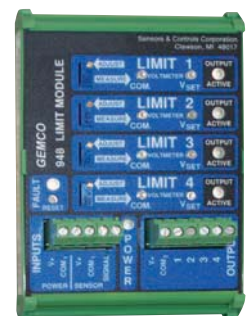
Insert stroke length to 0.1 inch. Enter as a four-place number. Example: A 12.0" stroke enters as 0120. To convert metric strokes, multiply millimeter value by 0.03937 for inch value.

Configured Lengths	
Length in Inches	
6.1 - 11.9	
12.1 - 17.9	
18.1 - 23.9	
24.1 - 35.9	
36.1 - 47.9	
48.1 - 71.9	
72.1 - 95.9	

\*Standard lengths of 6, 12, 18, 24, 36, 48, 72 and 96 inches are available on the chart to the right at reduced pricing.

The 948 Limit Module supplies four adjustable setpoint limits within the operating range of a continuous linear position sensor or other analog output device. It provides a convenient and cost effective way to transform any 0-10 volt DC analog signal into four setpoint outputs, and is an alternative to an analog input or for use on simple control systems where no programmable controller analog inputs are available. Features include surface mounted electronics for high reliability and compact size, and accurate settings with multi-turn potentiometers. Output active LEDs and voltmeter connection posts aid in initial settings. Sourcing models have short circuit and overload protection with fault LED and Reset push buttons. The unit also mounts on a DIN rail in or outside of a control panel. Optional hysteresis and filtering on outputs is available from the factory. When used with the 940 LPS Linear Position Sensors, up to three 948 Limit Modules may be driven from a single input to provide up to 12 setpoint outputs.

948 Limit Module List Price	
Part Number	
948001	(Sinking 0 - 10 VDC)
948002	(Sourcing 0 - 10 VDC)



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## Dimensions & Wiring Diagram

### Wiring Diagram

Use Euro Connector (micro 12 mm single keyway) cordsets, available from most connector manufacturers or purchased from Ametek. Install according to the following diagrams:

