

LPPS-12 SERIES LINEAR POTENTIOMETER

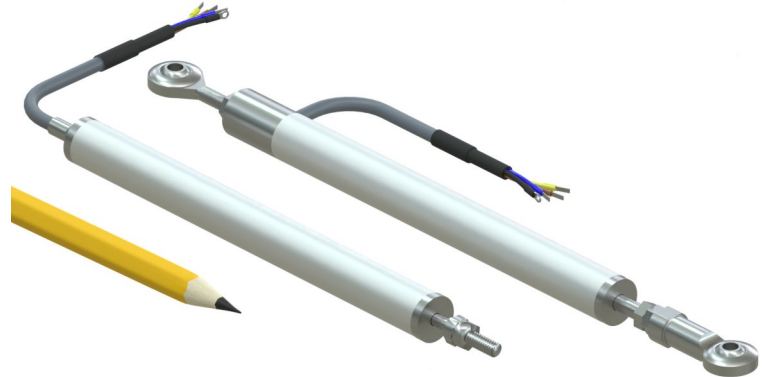
Economical Slim Body Position Sensor

FEATURES

- Compact lightweight design
- Cost-effective measuring system
- Stroke lengths from 10 to 300 mm (0.4 to 12 inches)
- Industrial duty, liquid and corrosion resistant
- Rod end joints for ease of mounting

APPLICATIONS

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



OVERVIEW

LPPS-12 series Linear Potentiometer Position Sensors 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 and laboratory applications including automotive R&D, motorsports, industrial, motion control, medical, military and aerospace.

Resistive potentiometric element is made from conductive plastic. The output is ratiometric; from 0% to 100% of excitation voltage. The sensor is provided with swivel rod ends for self-alignment and ease of mounting.

The LPPS-12 series sensor is made from industrial duty materials for resistance to dust, temperature, shock, and vibration.

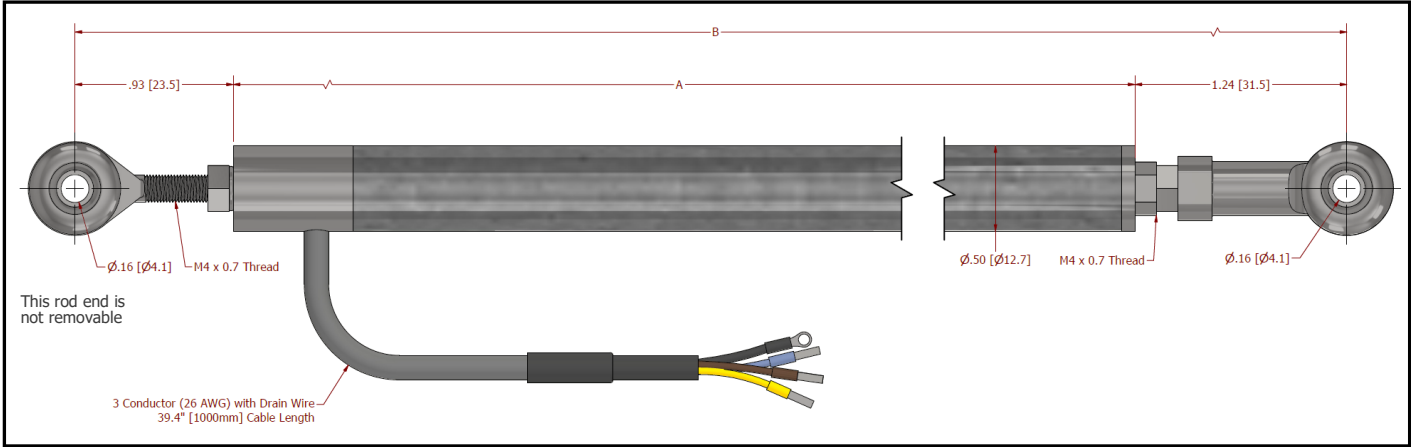
SPECIFICATIONS

Output:	0 to 100% of Input Voltage (potentiometer circuit)
Non-Linearity, Full Stroke: Best Fit Straight Line (BFSL)	$\leq \pm 2.5\%$ of FSO
Resolution:	Infinite
Repeatability:	0.01 mm (0.0004 inch)
Element Type:	Conductive Plastic
Max Operating Speed:	5 m/S (16 ft/S)
Operating Current:	Input Voltage / Potentiometer Resistance Value (refer to chart on Page 2 for Resistance Value)
Operating Temperature:	-40 to +95°C (-40 to +203°F)
Temperature Coefficient:	$\leq \pm 0.03\%$ of FS / °C
Shock Rating:	30g; 14mS half sine wave (single hit) / IEC60068-2-27
Vibration Rating:	10g; 5 to 200 Hz sine wave / IEC60068-2-6
IP Rating:	IP61

LINEAR POSITION SENSOR

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SPECIFICATIONS

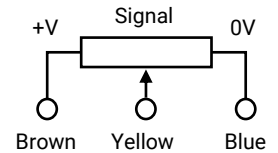
	LPPS-12-010-R	LPPS-12-025-R	LPPS-12-050-R	LPPS-12-075-R	LPPS-12-100-R	LPPS-12-125-R	LPPS-12-150-R	LPPS-12-175-R	LPPS-12-200-R	LPPS-12-250-R	LPPS-12-300-R
Mechanical Stroke Length (inch) [mm]	0.5 [13]	1.1 [28]	2.0 [53]	3.0 [78]	4.0 [103]	5.0 [128]	6.0 [153]	7.0 [178]	8.0 [203]	9.9 [253]	11.9 [303]
Electrical Measuring Range (inch) [mm]	0.4 [10]	0.9 [25]	1.9 [50]	2.9 [75]	3.9 [100]	4.9 [125]	5.9 [150]	6.8 [175]	7.8 [200]	9.8 [250]	11.8 [300]
Resistance ± 20% (Ω)	1.0K	2.0K	5.0K	5.0K	5.0K	5.0K	5.0K	5.0K	5.0K	5.0K	5.0K
Max Input Voltage (VDC)	12	12	24	24	24	24	24	24	24	24	24
Dimension 'A' (inch) [mm]	2.8 [72]	3.4 [87]	4.4 [112]	5.4 [137]	6.6 [162]	7.4 [187]	8.3 [212]	9.3 [237]	10.3 [262]	12.3 [312]	14.2 [362]
Dimension 'B' (inch) [mm] - Retracted Min	5.0 [127]	5.6 [142]	6.6 [167]	7.5 [192]	8.5 [217]	9.5 [242]	10.5 [267]	11.5 [292]	12.5 [317]	14.4 [367]	16.4 [417]
Dimension 'B' (inch) [mm] - Extended Max	6.0 [152]	6.6 [167]	8.5 [217]	10.5 [267]	12.5 [317]	14.4 [367]	16.4 [417]	18.4 [467]	20.4 [517]	24.3 [617]	28.2 [717]
Weight (grams)	65	70	75	80	85	95	100	105	110	115	120

ORDERING INFORMATION

Model	Measuring Range	
LPPS-12	- □□□	-R
010	10 mm [0.4 inch]	
025	25 mm [1 inch]	
050	50 mm [2 inch]	
075	75 mm [3 inch]	
100	100 mm [4 inch]	
125	125 mm [5 inch]	
150	150 mm [6 inch]	
175	175 mm [7 inch]	
200	200 mm [8 inch]	
250	250 mm [10 inch]	
300	300 mm [12 inch]	

WIRING PIN OUT

	Integral Cable
DC Power In	Brown
Signal Output	Yellow
Ground	Blue



IMPORTANT !
DO NOT CONNECT THE YELLOW WIRE TO POWER SUPPLY
THIS WILL CAUSE DAMAGE TO THE SENSOR

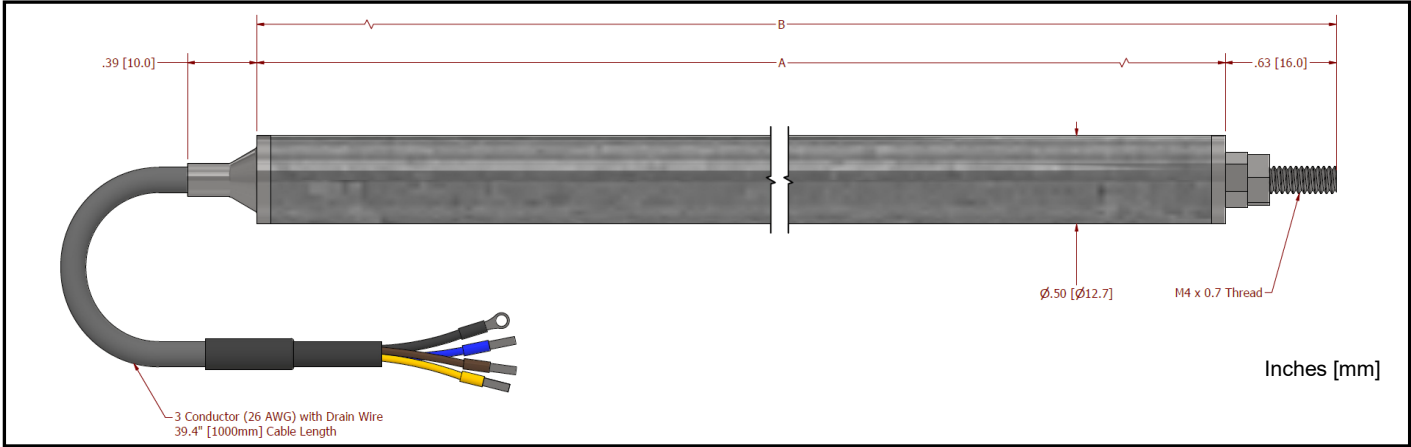
ORDERING EXAMPLE

LPPS-12-100-R: 0 to 100 mm [4 inch] measuring range, Radial cable exit with Rod Ends

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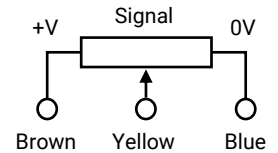
	LPPS-12-010-A	LPPS-12-025-A	LPPS-12-050-A	LPPS-12-075-A	LPPS-12-100-A	LPPS-12-125-A	LPPS-12-150-A	LPPS-12-175-A	LPPS-12-200-A	LPPS-12-250-A	LPPS-12-300-A
Mechanical Stroke Length (inch) [mm]	0.5 [13]	1.1 [28]	2.0 [53]	3.0 [78]	4.0 [103]	5.0 [128]	6.0 [153]	7.0 [178]	8.0 [203]	9.9 [253]	11.9 [303]
Electrical Measuring Range (inch) [mm]	0.4 [10]	0.9 [25]	1.9 [50]	2.9 [75]	3.9 [100]	4.9 [125]	5.9 [150]	6.8 [175]	7.8 [200]	9.8 [250]	11.8 [300]
Resistance \pm 20% (Ω)	1.0K	2.0K	5.0K	5.0K	5.0K	5.0K	5.0K	5.0K	5.0K	5.0K	5.0K
Max Input Voltage (VDC)	12	12	24	24	24	24	24	24	24	24	24
Dimension 'A' (inch) [mm]	2.6 [65]	3.2 [80]	4.1 [105]	5.1 [130]	6.1 [155]	7.1 [180]	8.1 [205]	9.1 [230]	10.0 [255]	12.0 [305]	14.0 [355]
Dimension 'B' (inch) [mm] - Retracted Min	3.2 [81]	3.8 [96]	4.8 [121]	5.8 [146]	6.7 [171]	7.7 [196]	8.7 [221]	9.7 [246]	10.7 [271]	12.6 [321]	14.6 [371]
Dimension 'B' (inch) [mm] - Extended Max	4.3 [109]	4.9 [124]	6.9 [174]	8.8 [224]	10.8 [274]	12.8 [324]	14.7 [374]	16.7 [424]	18.6 [474]	22.6 [574]	26.5 [674]
Weight (grams)	65	70	75	80	85	95	100	105	110	115	120

ORDERING INFORMATION

Model	Measuring Range	
LPPS-12	-□□□	-A
010	10 mm [0.4 inch]	
025	25 mm [1 inch]	
050	50 mm [2 inch]	
075	75 mm [3 inch]	
100	100 mm [4 inch]	
125	125 mm [5 inch]	
150	150 mm [6 inch]	
175	175 mm [7 inch]	
200	200 mm [8 inch]	
250	250 mm [10 inch]	
300	300 mm [12 inch]	

WIRING PIN OUT

	Integral Cable
DC Power In	Brown
Signal Output	Yellow
Ground	Blue



IMPORTANT !
DO NOT CONNECT THE YELLOW WIRE TO POWER SUPPLY
THIS WILL CAUSE DAMAGE TO THE SENSOR

ORDERING EXAMPLE

LPPS-12-100-A: 0 to 100 mm [4 inch] measuring range, Axial cable exit