

## KP94 SERIES KP94P MINIATURE LINEAR POSITION SENSOR



The KP94P miniature linear position sensors are designed to withstand the harsh environments within motorsport and on-vehicle automotive testing applications. By using a proven conductive plastic, track technology and multi-fingered contacts, the KP94P offers high performance and reliability under extreme temperature and vibration.

With standard measurement ranges from 0.5" to 7", the stainless steel shaft is fitted with sealing to IP65 as a standard but with an option of IP67 to protect against even the harshest conditions. A carbon sleeve option is available to protect the shaft against debris and other damage.

Industry standard mounting of quick-release pop joints, with a cable exit option of either forward or reverse, allow for easy integration into existing or new applications.

Other accessories including flange mount, return spring, etc. are available and detailed on a separate KP Series Accessory Data Sheet.

## Sensors For Motorsport

### Features

- 0.37" Diameter Body
- Ranges from 0.5" - 7"
- Carbon Sleeve
- Bearing Mounting
- $\pm 0.5\%$  Accuracy

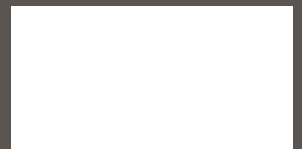
## TECHNICAL SPECIFICATIONS

<b>Ranges (Inches)</b>	0.5, 1, 2, 3, 4, 5, 6, 7
<b>Resolution</b>	Essentially Infinite
<b>Repeatability</b>	$\leq 0.0004"$
<b>Operational Speed</b>	10m/s Maximum
<b>Mechanical Life</b>	>25 Million Cycles
<b>Power Supply</b>	5V typical (40Vdc Maximum)
<b>Wiper Current</b>	<10 $\mu$ A
<b>Linearity</b>	$\leq 0.5\%$
<b>Electrical Connection</b>	20" 26AWG, 55spec + TPV Sleeve
<b>Track Technology</b>	Conductive Plastic
<b>Operating Temperature Range</b>	-40°F to 300°F (-40°C to +150°C)
<b>Construction</b>	Aluminum housing and stainless steel shaft
<b>Protection Class</b>	IP65 or IP67
<b>Options</b>	Please see our separate KP Series Accessories Datasheet

### Applications

- Damper Position
- Throttle Pedal
- Aero Surface
- Actuators

sales@pmc1.com  
www.kasensors.com  
Represented by:



# PART NUMBER CONFIGURATOR

## KP94P - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

### Range (Stroke)

0.5 inch A05  
 1 inch A01  
 2 inches A02  
 3 inches A03  
 4 inches A04  
 5 inches A05  
 6 inches A06  
 7 inches A07

### Seal Rating

IP65 65  
 IP67 (Spring Return N/A) 67

### Cable Exit

Forward F  
 Reverse R

### Spring Return (IP65 only)

No 0  
 Yes- 0.5 to 3 inch Range only 1

### Flange Mount

No 0  
 Yes 1

### Special Code

Sleeve with sensor 159

Sleeve separate from Sensor KP94P-Axx-cover

The KA configuration tool is used to specify a standard KA Sensor, other options are available.

*Sense  
 Analyze  
 Control*

### Sensors For:

- Temperature
- Acceleration
- Pressure
- Position
- Torque
- Speed
- Angle
- Force

### Services For:

- Data Logging
- Telemetry
- Controls
- Wiring

### Contact Us

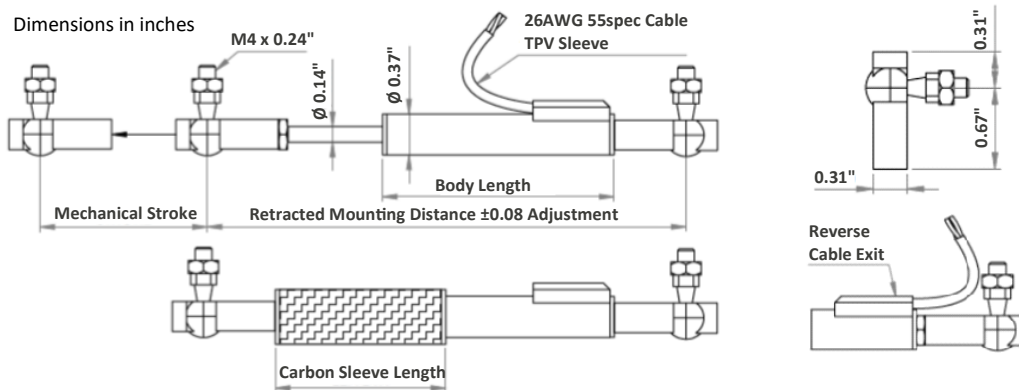
KA Sensors  
 Division of  
 PMC Engineering LLC  
 11 Old Sugar Hollow Rd  
 Danbury, CT 06810  
 USA

Tel: 203-792-8686  
 Fax: 203-743-2051

sales@pmc1.com  
 www.kasensors.com

## MECHANICAL DETAILS

Dimensions in inches



Active Electrical Stroke (inches)	0.50	1.00	2.00	3.00	4.00	5.00	6.00	7.00
Retracted Mounting Distance (inches)	3.86	4.33	5.31	6.30	7.52	8.50	9.49	10.47
Mechanical Stroke (inches)	0.57	1.06	2.05	3.03	4.02	5.00	5.98	6.97
Body Length (inches)	2.09	2.60	3.58	4.57	5.79	6.77	7.76	8.74
Weight Without Cable (oz)	0.67	0.74	0.88	1.02	1.16	1.31	1.45	1.59
Resistance (Kohms $\pm 20\%$ )	0.80	1.70	3.40	5.00	6.70	8.40	10.00	11.70
Carbon Sleeve Length (inches)	1	1.5	2.5	3.5	4.5	5.5	6.5	7.5

## ELECTRICAL DETAILS

+Ve Supply	0V Supply	Signal
Red	Black	Yellow

Output signal may be reversed by swapping connections to the Red and Black wires.  
**DO NOT** connect +Ve Supply to the Yellow wire as this will cause damage to the sensor element.