

## KP94 SERIES KP94B MINIATURE LINEAR POSITION SENSOR



The KP94 Series of KP94B Miniature Linear Position Sensors are designed to withstand the harsh environments within motorsport and automotive testing applications. By using a proven conductive plastic, track technology and multi-fingered contacts, the KP94B offers high performance and reliability under extreme temperature and vibration.

With standard measurement ranges from 12.5mm to 175mm, the Stainless Steel Shaft is fitted with IP67 rated seals which helps protect against the harshest conditions. With regards to operational temperature range, the KP94B offers high performance and reliability at temperatures up to +150°C. Alternatively, it is capable of operational excellence in cold environments down to -40°C.

A Carbon Sleeve option is also available to protect the shaft against debris and other damage. Industry Standard 3mm bearing mountings, with a cable exit option of either Forwards or Backwards allows for easy integration into existing or new applications.

## TECHNICAL SPECIFICATIONS

<b>Ranges (Zero mm to:)</b>	12.5, 25, 50, 75, 100, 125, 150, 175
<b>Resolution</b>	Essentially Infinite
<b>Repeatability</b>	≤0.01mm
<b>Operational Speed</b>	10m/s Maximum
<b>Mechanical Life</b>	>25 Million Cycles
<b>Supply</b>	5V Typical (40Vdc Maximum)
<b>Wiper Current</b>	<10µA
<b>Linearity</b>	≤0.5%
<b>Electrical Connection</b>	50cm 26AWG, 55Spec + FDR Sleeve
<b>Track Technology</b>	Conductive Plastic
<b>Operating Temperature Range</b>	-40°C to +150°C
<b>Construction</b>	Aluminium Housing and Stainless Steel Shaft
<b>Protection Class</b>	IP67
<b>Options</b>	Please see our separate KP Series Accessories Datasheet

KA Sensors adopts a continuous development program which sometimes necessitates specification changes without notice.

## Sensors For Motorsport

### Features

- 9.4mm Ø Body
- IP67 Standard Sealed
- Bearing Mounting
- 12.5mm to 175mm
- ±0.5% Linearity
- Long Life

### Applications

- Damper Position
- Throttle Pedal
- Aero Surface
- Actuators

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# PART NUMBER CONFIGURATOR

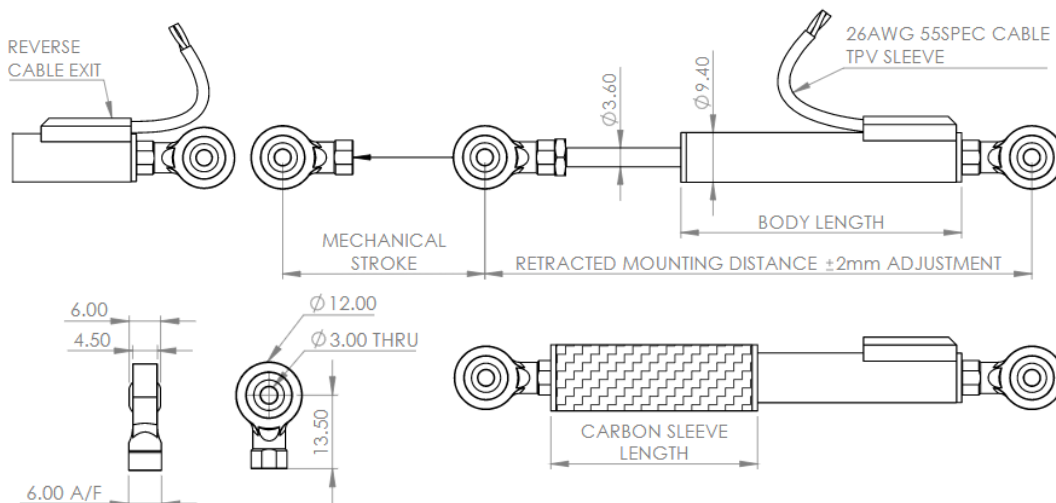
	<b>KP94B</b>	-	[ ]	-	[ ]	-	[ ]	-	[ ]
<b>Range (Stroke)</b>	12.5 mm		012						
	25 mm		025						
	50 mm		050						
	75 mm		075						
	100 mm		100						
	125 mm		125						
	150 mm		150						
	175 mm		175						
<b>Cable Exit</b>	Forward				F				
	Reverse				R				
<b>Flange Mount</b>	No						0		
	Yes - Not with Carbon Fibre Sleeve Option						1		
<b>Special Code</b>	None								000
	Carbon Fibre Sleeve								159

*Sense  
Analyse  
Control*

## Services for:

- Data Logging
- Telemetry
- Controls
- Wiring

## MECHANICAL DETAILS



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<b>Active Electrical Stroke (mm)</b>	12.5	25	50	75	100	125	150	175
<b>Retracted Mounting Distance (mm)</b>	86	98	123	148	179	204	229	254
<b>Mechanical Stroke (mm)</b>	14.5	27	52	77	102	127	152	177
<b>Body Length (mm)</b>	53	66	91	116	147	172	197	222
<b>Weight Without Cable (g)</b>	15	17	21	25	29	33	37	41
<b>Resistance (KOhms±20%)</b>	0.8	1.7	3.4	5	6.7	8.4	10	11.7
<b>Carbon Sleeve Length (mm)</b>	24.5	37	62	87	112	137	162	187

## CONNECTION DETAILS

<b>+Ve Supply</b>	<b>0V Supply</b>	<b>Signal</b>
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.