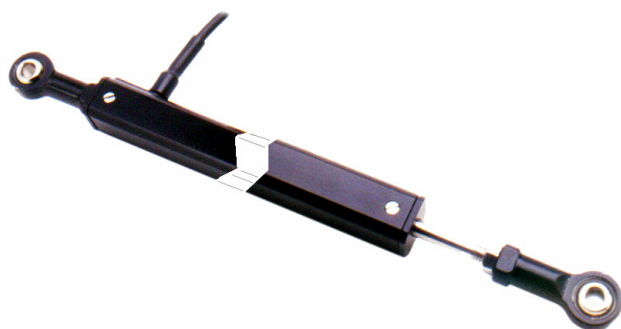


LINEAR POT

15mm square



The output of a linear potentiometer is a voltage which changes in direct proportion to the shaft extension. A constant voltage is required across the supply and ground wires of the sensor. Various lengths of electrically active track are available, up to a maximum of 252mm. The sensing elements are made from conductive plastic with a precious metal wiper. The units are sealed to keep out dirt and dust.

Please request our installation datasheet for further details.

Electrical

- Electrical stroke is shown in the order details
- Nominal track resistance
 - 2.5kohm $\pm 20\%$ (electrical stroke below 52mm)
 - 5kohm $\pm 20\%$ (electrical stroke 52 to 102mm)
 - 10kohm $\pm 20\%$ (electrical stroke above 102mm)
- Nominal resistance temp. coeff. 5ppm/ $^{\circ}\text{C}$
- Wiper current $< 0.1\mu\text{A}$ (recommended), 10mA (max)
- Maximum applied voltage
 - 20V (electrical stroke below 52mm)
 - 25V (electrical stroke 52 to 102mm)
 - 30V (electrical stroke above 102mm)
- Independent non-linearity
 - 0.2%FS (electrical stroke below 102mm)
 - 0.1%FS (electrical stroke above 102mm)
- Insulation resistance $> 100\text{Mohm}$ at 500Vdc

Cable and Connection Definition

- 19strand/0.127mm screened cable
- Cable length is shown on the order details but any length up to 500mm is available on request
- Various automotive and military standard connectors are available
- Connection

Red wire	Pin A	Pin 1	Supply
Black wire	Pin B	Pin 2	Ground
Yellow wire	Pin C	Pin 3	Signal
Screen	Pin D	Pin 4	Screen

Extending the shaft increases the resistance between supply and signal. The screen is not connected to the sensor body and may be connected to the control unit, if required.

Application

- Measurement of suspension travel

Mechanical

- Aluminium alloy body, anodised and dyed black, stainless steel shaft
- Mechanical stroke 1.5 $\pm 0.5\text{m}$ longer than the electrical stroke
- Stroke adjustment $\pm 2\text{mm}$
- Life expectancy 10 million cycles (wiper speed 0.75m/s)
- Weight (including cable) is shown in the order details
- Flame retardant ABS boss for strain relief to the sensor body

No engineering charges are made for simple modifications such as customer specific connectors, cable protection and cable lengths. This sensor can be provided with dual sensing tracks with no increase in size. Please contact our technical consultancy service who will be pleased to help.

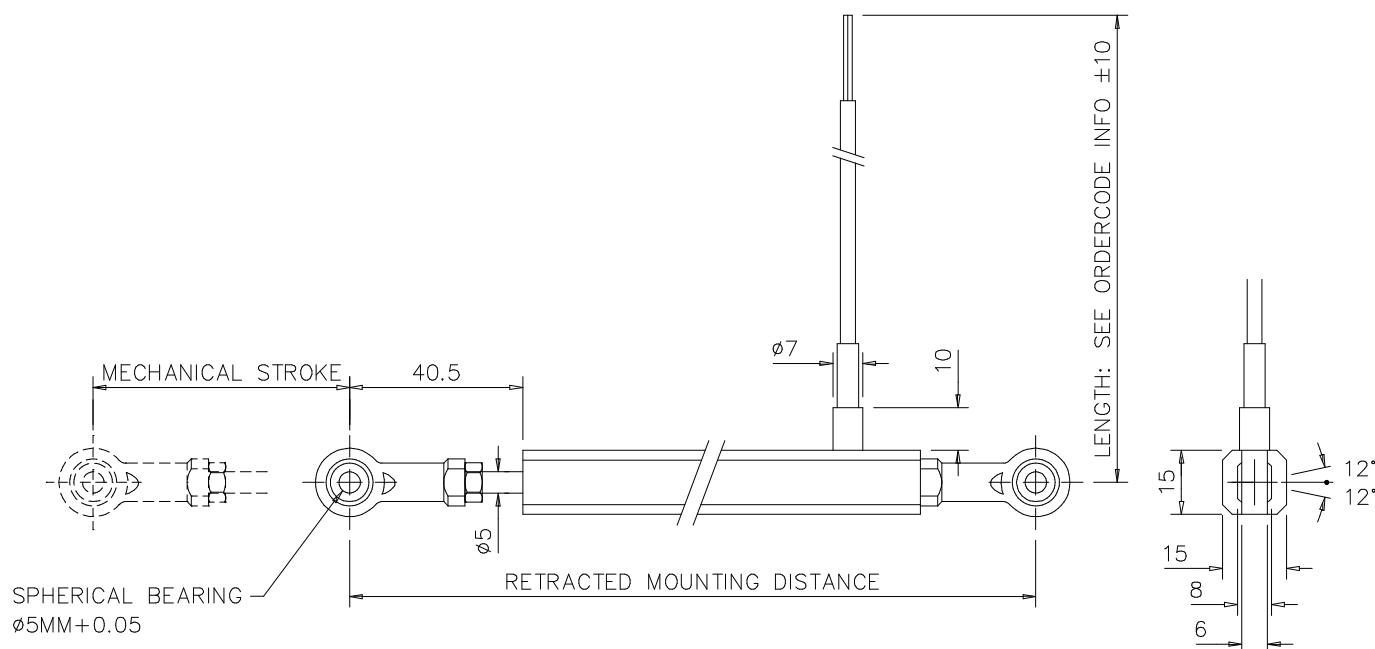
Environmental

- O ring and felt shaft seals
- Resistant to standard motorsport fluids
- Maximum humidity 100%
- Operating temperature -40 to $+100^{\circ}\text{C}$
- DR25 jacketed cable
- Vibration 50 to 2500Hz @ 40g 8hrs per axis

16/01/07

LINEAR POT

15mm square



Cable Length	Electrical Stroke	Retracted Mounting Distance	Weight	Order Code
500mm	27mm	173mm	87g	O 030 320 008 000
500mm	52mm	198mm	97g	O 030 320 008 001
500mm	77mm	223mm	108g	O 030 320 008 002
500mm	102mm	248mm	117g	O 030 320 008 003
500mm	152mm	298mm	138g	O 030 320 008 004
500mm	202mm	351mm	157g	O 030 320 008 005
500mm	252mm	401mm	177g	O 030 320 008 006

16/01/07