THIN LINEAR SENSORS

SOFTPOT SP

- Life Cycle: >1,000,000
- Operating Temp.: -40°C to +50°C
- IP65 Dust Proof, Water Proof (Intense Spray)
-Height: ≤0.51mm (0.020")

HOTPOT HP

- High Life Cycle: >10,000,000 cycles
- Operating Temp.: -40°C to +85°C
- IP65 Dust Proof, Water Proof (Intense Spray)
- Height: ≤0.51mm (0.020")

THINPOT TSP

- Half the width of the SoftPot
- Life Cycle: >1,000,000
- Operating Temp.: -40°C to +50°C
- IP65 Dust Proof, Water Proof (Intense Spray)
-Height: ≤0.51mm (0.020")

MAGNETOPOT MP1

- Contactless Linear Sensor
- Life Cycle: >1,000,000
- Opertating Temp.: -40°C to +85°C
- IP64 Debris Proof, Splash Proof
- Height: ≤3.50mm (0.138")

General Electrical Specifications

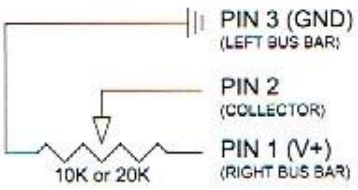
-Resistance - Standard: 10k to 20k Ohms
-Resistance Tolerance: ±20%
-Effective Electrical Travel (MP1 & HP): 8 to 1200mm
(SP & TSP): 8 to 2000mm
-Resolution: Analog output, affected by variation of contact wiper surface area.
-Power Rating: 0.50 Watt continuous, 1 Watt Peak
-Independant Linearity: ±1% to ±5% (varies by product)

General Mechanical Specifications

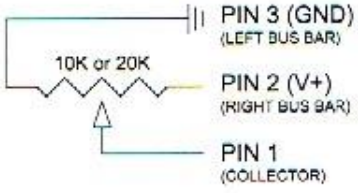
-Actuation Force (HP, SP, TSP): 0.6N to 5N
-Actuation Force (MP1): 18 grams pull force from exterior magnet or ferromagnet

Electrical Schematic

HP, SP, & TSP



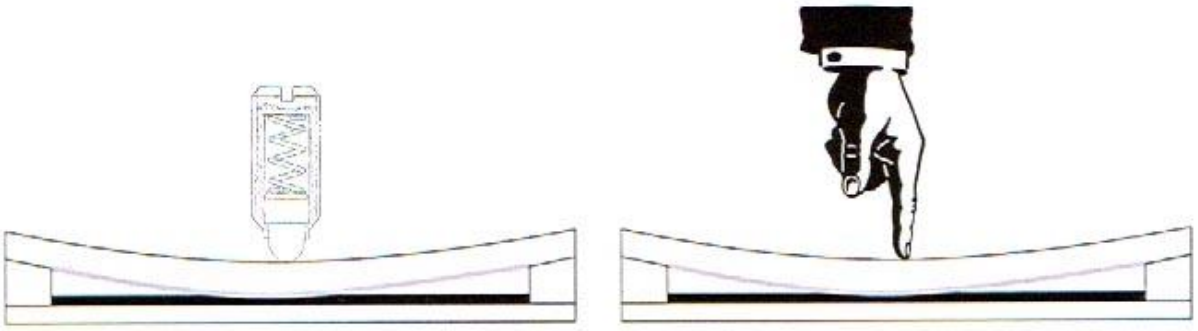
MP1



How It Works

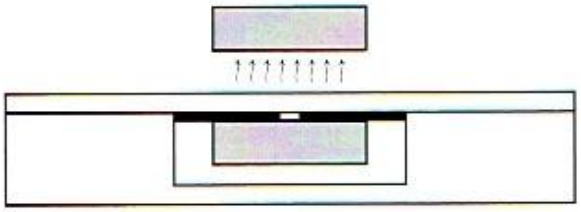
In simple terms, the membrane potentiometer is a resistive element, which comprises a conductive resistor, a sealed encasement and a simple wiper assembly. The HP, SP, and TSP models use a three-wire system with two resistive output channels and an electrical collector channel.

By pressing a wiper down onto the top circuit the potentiometer produces the desired electrical output. The "wiper" is a non-conductive mechanism that depresses the top circuit actuating the potentiometer from the outside of the element.



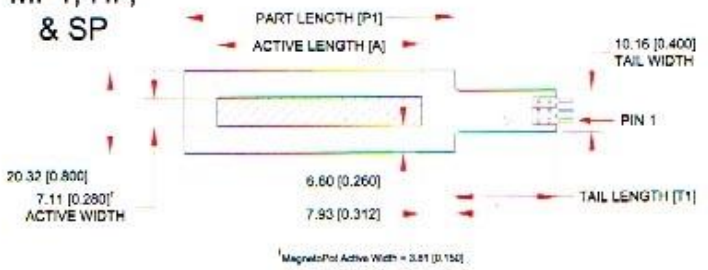
The MagnetoPot is a sealed potentiometer, in the membrane potentiometer tradition, yet it does not require a wiper/actuator to connect the collector and the resistor. Instead, the MagnetoPot is controlled by an outside magnet, which attracts the magnetic forces within the MagnetoPot to connect to the linear resistor and give linear potentiometer feedback.

The wiper inside the sealed pot is magnetic or ferromagnetic, and will only perform if connected with an exterior magnet for ferromagnetic material.

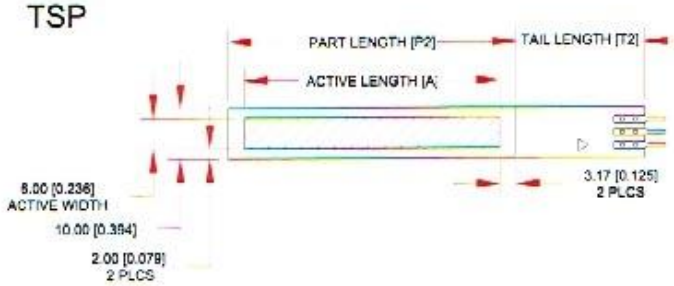


Dimensional Diagram - Stock Linear Potentiometers

MP1, HP, & SP



TSP



A	12.50mm 0.492"	25.00mm 0.984"	50.00mm 1.969"	100.00mm 3.937"	150.00mm 5.906"	171.69mm 6.768"	200.00mm 7.874"	300.00mm 11.811"	400.00mm 15.748"	500.00mm 19.685"	750.00mm 29.528"	1000.00mm 39.370"
P1	28.36mm 1.117"	40.86mm 1.609"	65.86mm 2.593"	115.86mm 4.562"	165.86mm 6.531"	186.86mm 7.318"	215.86mm 8.499"	315.86mm 12.436"	415.86mm 16.373"	515.86mm 20.310"	765.86mm 30.153"	1015.86mm 39.995"
T1	12.70mm 0.500"		24.89mm 0.980"									
P2	18.85mm 0.742"	31.35mm 1.234"	56.35mm 2.219"	106.35mm 4.187"	156.35mm 6.156"	176.35mm 6.943"	206.35mm 8.124"	306.35mm 12.061"	406.35mm 15.998"	506.35mm 19.935"	756.35mm 29.778"	1006.35mm 39.620"
T2	12.70mm 0.500"		25.00mm 0.984"									