Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

THINPOT TSP

ThinPot

SoftPot

Features

- Linear Position Sensor
- Half the width of the SoftPot
- IP64 Dust Proof, Splash Proof
- Polyester Substrate
- 3M Pressure Sensitive Adhesive (PSA)
- Upon Request
  - Male or Female Nicomatic or Berg Connectors
  - Wiper of 0.7-2.2 Newton Force to Actuate Part

Mechanical Specifications

-Life Cycle: >1 million
-Height: ≤0.51mm (0.020")
-Actuation Force (with a 6mm wide active cavity):
-40°C 0.9 to 2.2 N
-25°C 0.9 to 2.2 N
+23°C 0.7 to 1.8 N
+50°C 0.7 to 1.8 N

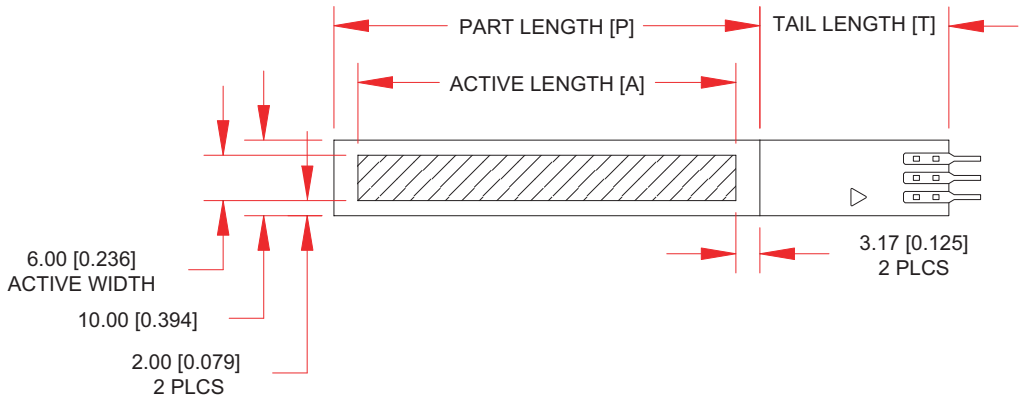
Environmental Specifications

-Operating Temperature: -40°C to +50°C
-Humidity: No affect @ 95% RH, 4hrs 50°C
-IP Rating of Active Area: IP64

Electrical Specifications

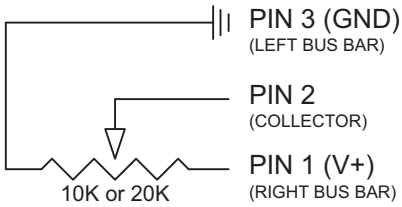
-Resistance - Standard: 10k Ohms (lengths >300mm = 20k Ohms)
-Resistance - Custom: 1k to 100k Ohms
-Resistance Tolerance: ±20%
-Effective Electrical Travel: 8 to 2000mm
-Linearity (Independent): Linear ±1% or ±3%
Rotary ±3% or ±5%
-Repeatability: No hysteresis, but with any wiper looseness some hysteresis will occur
-Power Rating (depending on size, varies with length and temperature): 1 Watt max. @ 25°C, ≤0.5 Watt recommended
-Resolution: Analog output theoretically infinite; affected by variation of contact wiper surface area.
-Dielectric Value: No affect @ 500VAC for 1 minute

Dimensional Diagram - Stock Linear ThinPot

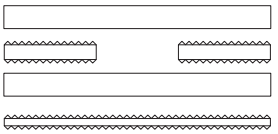


A	12.50mm 0.492"	25.00mm 0.984"	50.00mm 1.969"	100.00mm 3.937"	150.00mm 5.906"	170.00mm 6.693"	200.00mm 7.874"	300.00mm 11.811"	400.00mm 15.748"	500.00mm 19.685"	750.00mm 29.528"	1000.00mm 39.370"
P	18.85mm 0.742"	31.35mm 1.234"	56.35mm 2.219"	106.35mm 4.187"	156.35mm 6.156"	176.35mm 6.943"	206.35mm 8.124"	306.35mm 12.061"	406.35mm 15.998"	506.35mm 19.935"	756.35mm 29.778"	1006.35mm 39.620"
T	12.70mm 0.500"		25.00mm 0.984"									

Electrical Schematic



Material Cross-Section



How to Order - Linear ThinPots

TSP — L — 0050 — 103 — 3% — ST

Series
TSP = ThinPot

Model
L = Linear

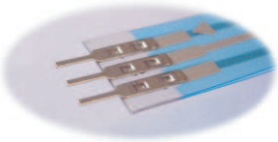
Active Length
0012 = 12,5mm
0025 = 25mm
0050 = 50mm
0100 = 100mm
0150 = 150mm
0170 = 170mm
0200 = 200mm
0300 = 300mm
0400 = 400mm
0500 = 500mm
0750 = 750mm
1000 = 1000mm

Resistance
Active Lengths ≤ 300mm
103 = 10 KOhm
Active Lengths > 300mm
203 = 20 KOhm

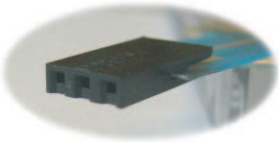
Ind. Linearity
1% = ±1%
3% = ±3%

Connectors
ST = Solder Tab
MP = Male Pins
RH = Receptacles w/Plain Housing
RL = Receptacles w/Latch Housing
RD = Receptacles w/Detent Housing
B = FCI/Berg Clincher

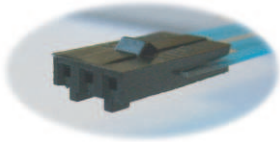
Standard Connector Options


Crimpflex Solder Tab (ST)


Crimpflex Short Male Pins (MP)


Crimpflex Female Receptacles with a Plain Housing (RH)


Crimpflex Female Receptacles with a Latch Housing (RL)


Crimpflex Female Receptacles with a Detent Housing (RD)


FCI/Berg Clincher (B)

Customization

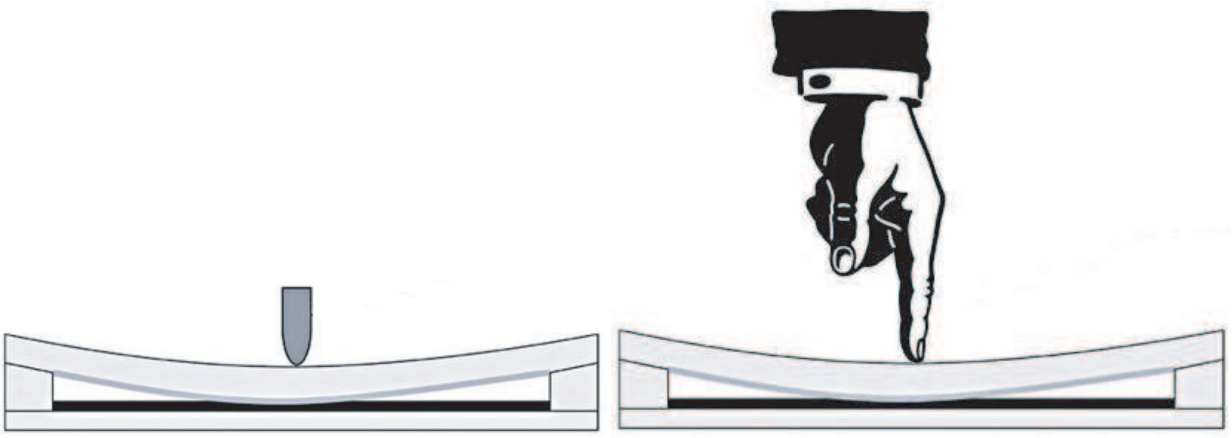
Customize the size, shape, and even the number of tracks. Such custom requests, for example, can be: multiple ganged sensors (up to 40 tracks); serpentine active area track; custom lengths 10mm-2000mm; custom rotary diameters, etc. Feel free to contact Spectra Symbol with your custom request at sales@spectrasymbol.com or (888)795-2283.

How It Works

In simple terms, the ThinPot membrane potentiometer is a resistive element, which comprises a conductive resistor, a sealed encasement and a simple wiper assembly. A membrane potentiometer can also function as a voltage divider.

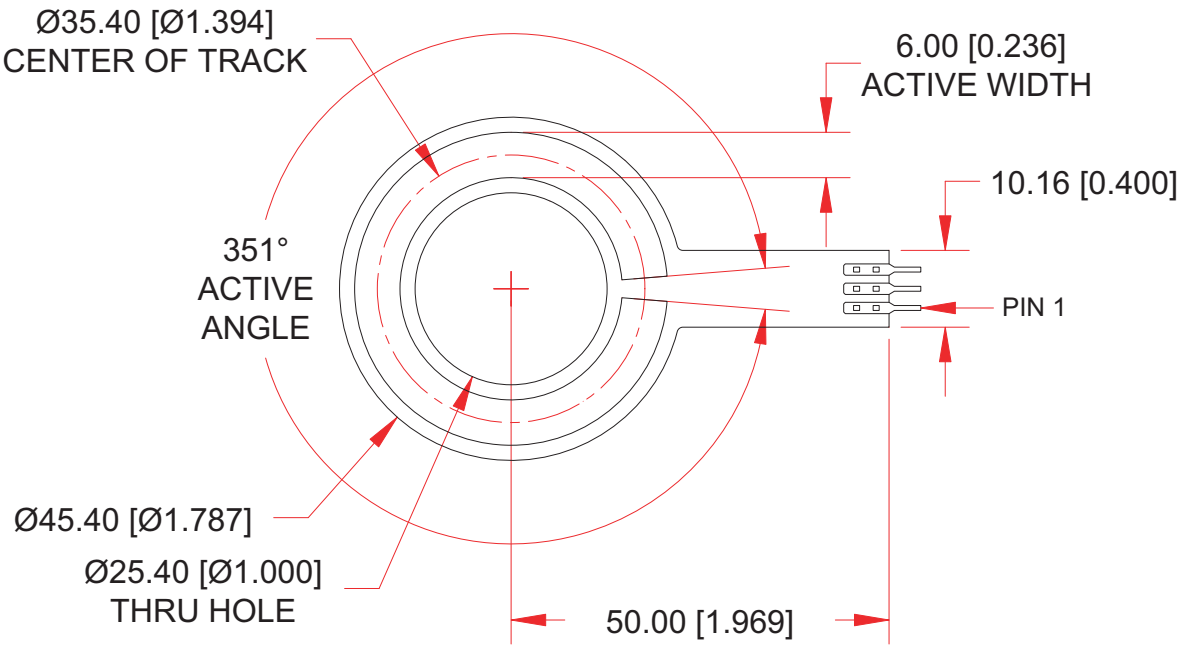
The ThinPot is a three-wire system with two resistive output channels and an electrical collector channel.

By pressing a wiper down onto the top circuit the SoftPot 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 top and bottom circuits are separated by 0.15mm (0.006") of spacer adhesive build-up and contact between the circuit occurs by pressure (usually 0.7-1.8 Newtons) from the wiper on the top circuit, pushing down until the top circuit connects with the bottom circuit to create a potentiometric output.

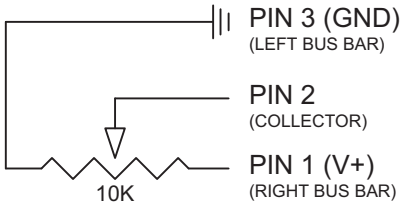


The construction of the wiper design can adapt to any application because most materials can serve as the wiper: plastics, metals, sliders, rollers, wheels, etc. Also, the ThinPot can also be manually (hand) actuated.

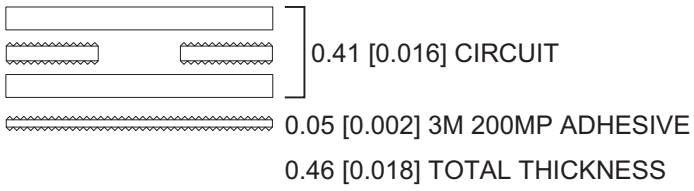
Diagram - Stock Rotary ThinPot



Electrical Schematic



Material Cross-Section



How to Order - Rotary ThinPot

TSP	—	R	—	0036	/	0351	—	103	—	5%	—	ST

Series
TSP = ThinPot

Model
R = Rotary

Center of Active Track
0036 = 35.40mm

Active Angle
0351 = 351°

Resistance
103 = 10 KOhm

Ind. Linearity
3% = ±3%
5% = ±5%

Connectors
ST = Soldertab
MP = Male Pins
RH = Receptacles w/Plain Housing
RL = Receptacles w/Latch Housing
RD = Receptacles w/Detent Housing
B = FCI/Berg Clincher