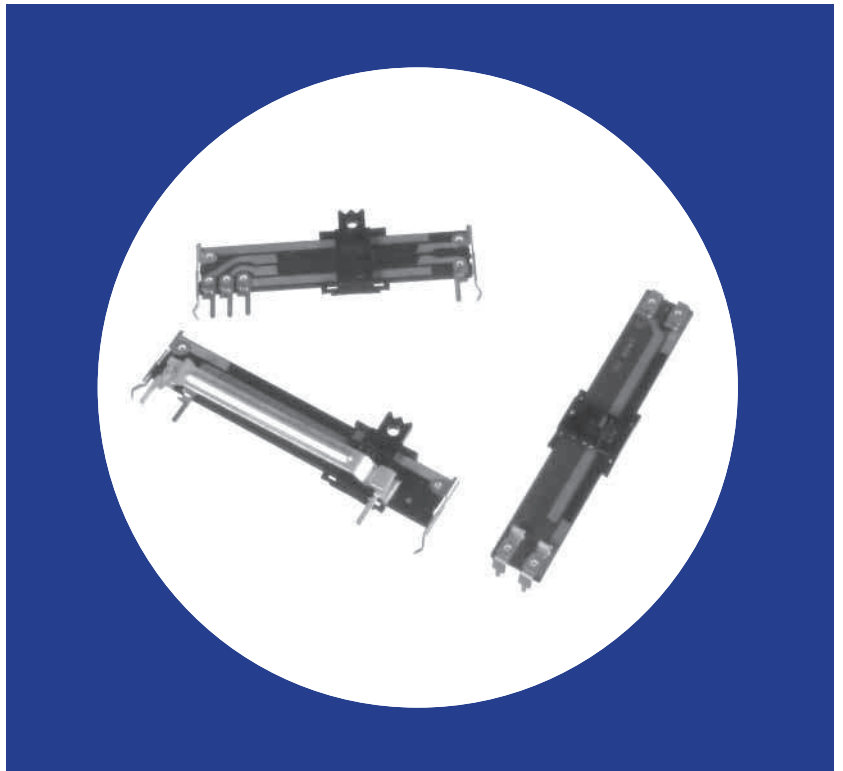


### Commercial Linear Motion Carbon Composition Slide Potentiometer

#### Features

- 10-60mm slider travel
- Innovative AC power switch (SPST, SPDT)
- Center detent available
- Single or dual element designs
- Economical
- Wide resistance range
- Slim construction
- RoHS Compliant



Patent No.: US: 5,959,525 , Taiwan: 204502.

### Electrical and Mechanical Specifications

#### Resistance Range

500 ohms through 1 megohms, linear  
Consult CTS for audio taper

#### Resistance Tolerance

±30%, ±20%, ±10%

#### Insulation Resistance

10 Megohms minimum at 250 VDC

#### Maximum Operating Voltage

Taper	10mm	15mm 20mm	30mm	45mm	60mm
Linear	100VDC	150VDC 200VDC	250VDC	300VDC	500VDC
Non-linear	50VDC	50VDC 150VDC	200VDC	250VDC	300VDC

#### Power Rating, watts

Taper	10mm	15mm 20mm	30mm	45mm	60mm
Linear	0.05w	0.1w	0.2w	0.25w	0.5w
Non-linear	0.025w	0.05w	0.1w	0.15w	0.25w

#### Power Switch (optional)

SPST - 10,000 cycles carrying 1,000 watts 120 VAC  
(Tungsten-filament)

SPDT - 10,000 cycles carrying 600 watts 120 VAC  
(Tungsten-filament)

#### Slide Travel

Potentiometer without switch:

X and U Style: 10, 15, 20, 30, 45, and 60mm

V Style: 10, 15, 25, 40, and 55mm

Potentiometer with switch:

30mm = 27mm electrical + 3mm switch (SPST only)  
20mm = 17mm electrical + 3mm switch

#### Operating Force

Potentiometer : 20-150 g

Switch : 100-500 g

#### Stop Strength

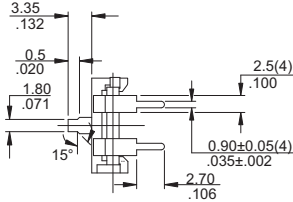
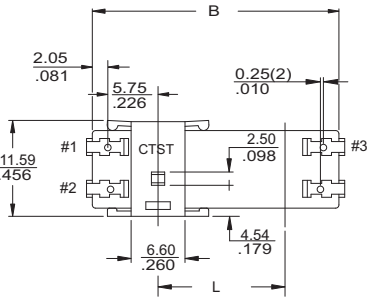
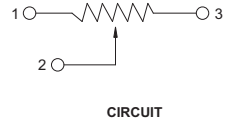
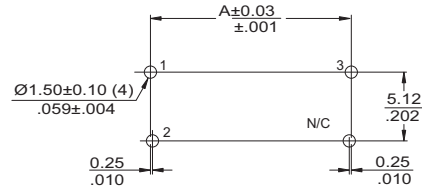
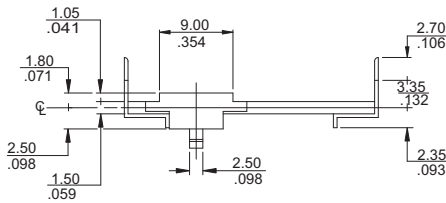
3K gf maximum, measured at base of slider

#### Operating Life

Standard : 10,000 cycles

Special : 100,000 , 250,000 cycles

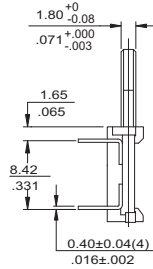
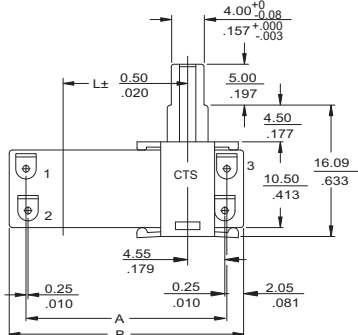
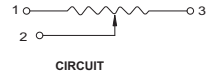
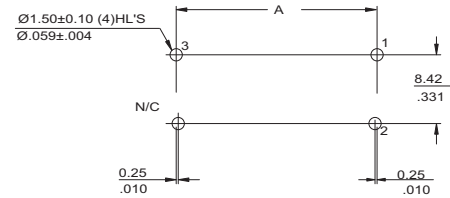
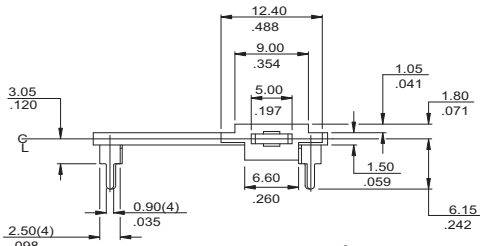
## TYPE 448V MONO



MODEL	DIMENSIONS		
	L (Travel)	A	B
448V-10M	10/ .394	30.20/1.189	28.70/1.130
448V-15M	15/ .591	35.20/1.387	33.70/1.372
448V-25M	25/ .984	45.20/1.180	43.70/1.721
448V-40M	40/ 1.575	60.20/2.370	58.70/2.311
448V-55M	55/ 2.166	75.20/2.961	73.70/2.902

DIMENSION:  $\frac{\text{mm}}{\text{INCH}}$

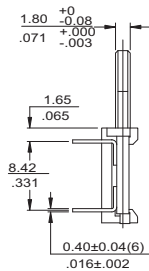
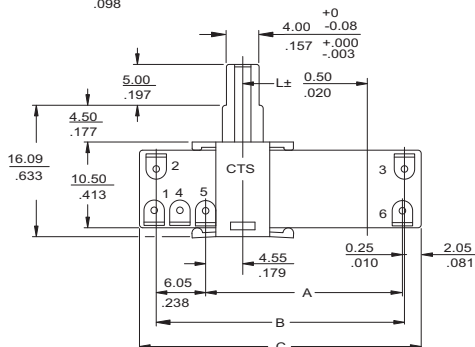
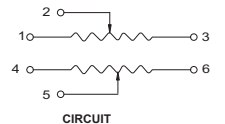
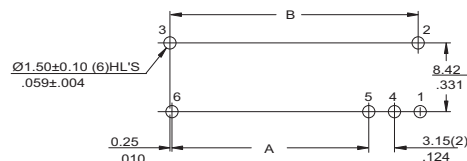
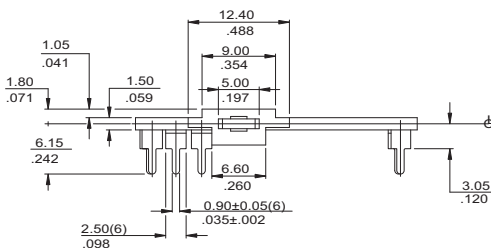
## TYPE 448U MONO



MODEL	DIMENSIONS		
	L(Travel)	A	B
448U-10M	10/ .394	19.60/ .772	23.70/ .933
448U-15M	15/ .591	24.60/ .969	28.70/1.130
448U-20M	20/ .787	29.60/1.165	33.70/1.327
448U-30M	30/ 1.181	39.60/1.559	43.70/1.720
448U-45M	45/ 1.772	54.60/2.149	58.70/2.311
448U-60M	60/ 2.362	69.60/2.740	73.70/2.902

DIMENSION:  $\frac{\text{mm}}{\text{INCH}}$

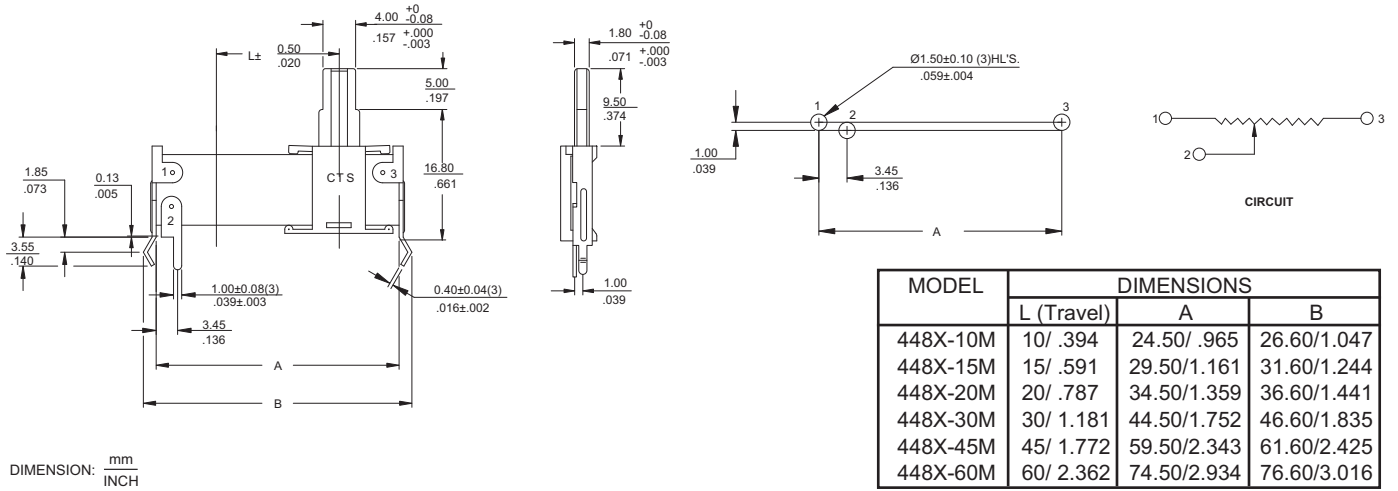
## TYPE 448U DUAL



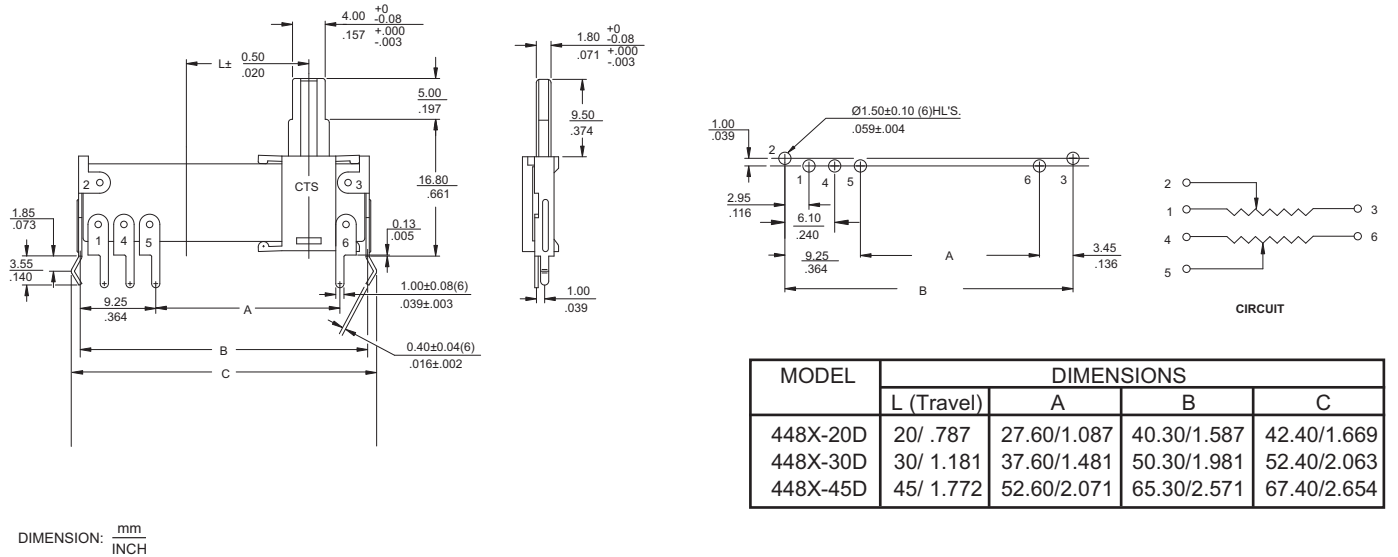
MODEL	DIMENSIONS			
	L(Travel)	A	B	C
448U-20D	20/ .787	29.10/1.146	35.40/1.394	39.50/1.555
448U-30D	30/ 1.181	39.10/1.539	45.40/1.787	49.50/1.949
448U-45D	45/ 1.772	54.10/2.130	60.40/2.378	64.50/2.539

DIMENSION:  $\frac{\text{mm}}{\text{INCH}}$

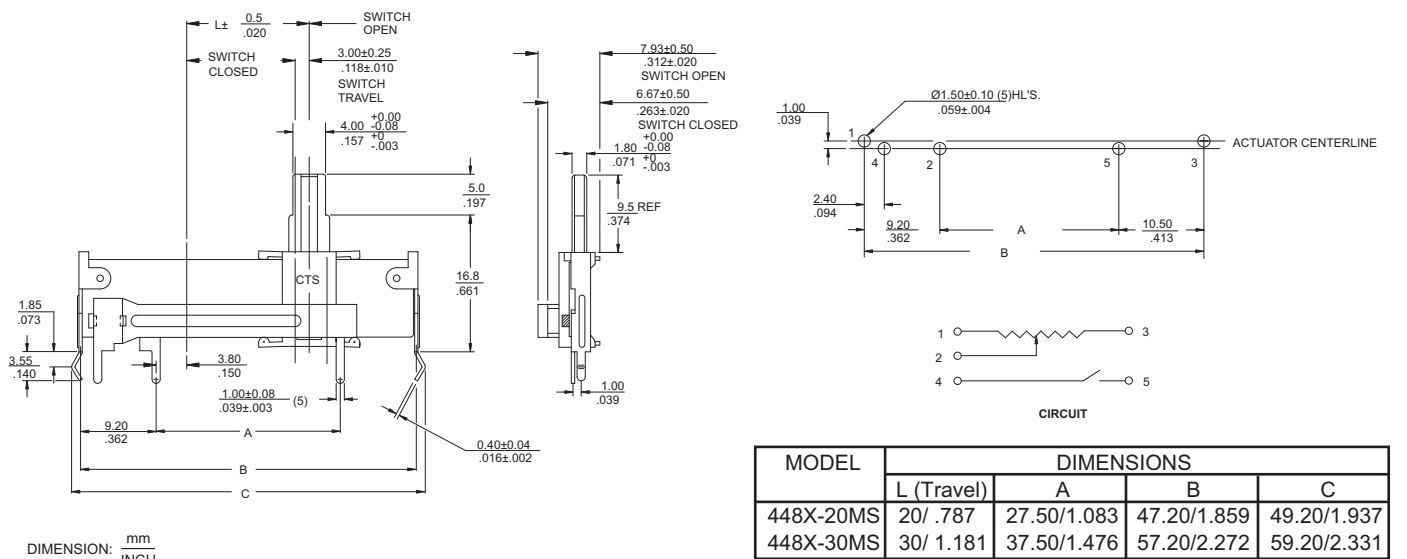
## TYPE 448X MONO



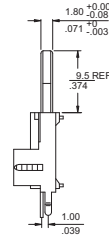
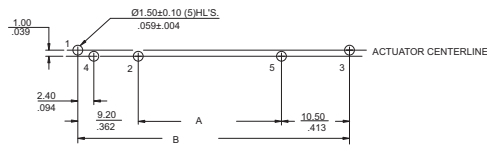
## TYPE 448X DUAL



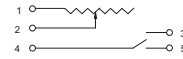
## TYPE 448X MONO W/SPST SWITCH



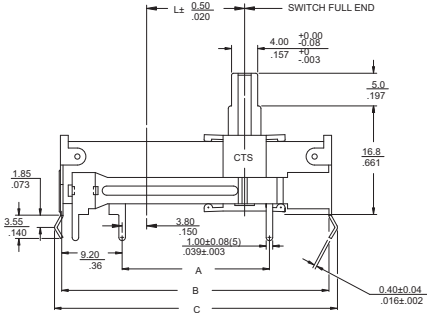
# TYPE 448X MONO W/SPDT SWITCH (with style A actuator only)



DIMENSION:  $\frac{\text{mm}}{\text{INCH}}$

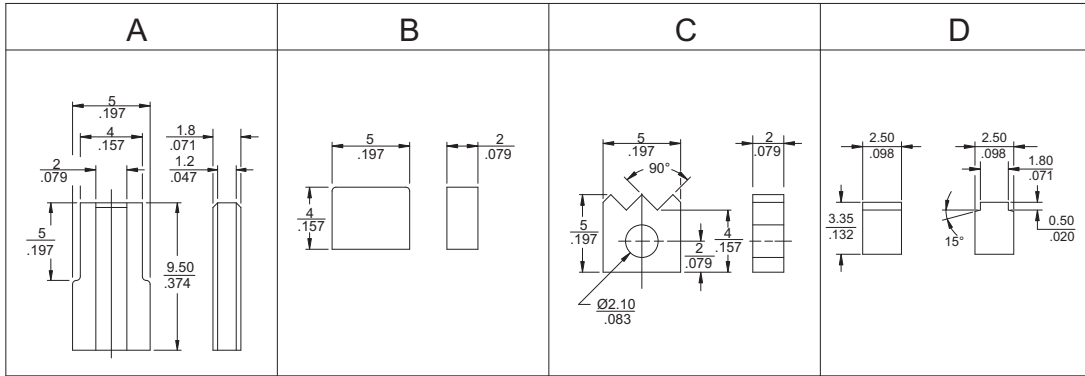


CIRCUIT



MODEL	DIMENSIONS			
	L (Travel)	A	B	C
448X-20MS	20/ .787	27.50/1.083	47.20/1.859	49.20/1.937

## 448 Series Actuator Styles



## Ordering Information

<p><b>448</b></p> <p><b>U</b></p> <p><b>MOUNTING STYLE</b></p> <p>U- ACTUATOR PARALLEL TO PC BOARD X- ACTUATOR PERPENDICULAR TO PC BOARD V- ACTUATOR (Low Profile) PERPENDICULAR TO PCB (mono only)</p>	<p><b>E</b></p> <p><b>TRAVEL</b></p> <table border="1"> <tr> <th>U &amp; X TYPES</th> <th>V-TYPE</th> </tr> <tr> <td>A- 10mm B- 15mm C- 20mm D- 30mm E- 45mm F- 60mm</td> <td>A- 10mm B- 15mm C- 25mm D- 40mm E- 55mm</td> </tr> </table>	U & X TYPES	V-TYPE	A- 10mm B- 15mm C- 20mm D- 30mm E- 45mm F- 60mm	A- 10mm B- 15mm C- 25mm D- 40mm E- 55mm	<p><b>2</b></p> <p><b>RESISTANCE CODE (EXAMPLES)</b></p> <table border="1"> <thead> <tr> <th>CODE</th> <th>RESISTANCE</th> </tr> </thead> <tbody> <tr><td>501</td><td>500 ohms</td></tr> <tr><td>102</td><td>1K</td></tr> <tr><td>252</td><td>2.5K</td></tr> <tr><td>502</td><td>5K</td></tr> <tr><td>103</td><td>10K</td></tr> <tr><td>253</td><td>25K</td></tr> <tr><td>503</td><td>50K</td></tr> <tr><td>104</td><td>100K</td></tr> </tbody> </table>	CODE	RESISTANCE	501	500 ohms	102	1K	252	2.5K	502	5K	103	10K	253	25K	503	50K	104	100K	<p><b>102</b></p> <p><b>RESISTANCE CODE (EXAMPLES)</b></p> <table border="1"> <thead> <tr> <th>CODE</th> <th>RESISTANCE</th> </tr> </thead> <tbody> <tr><td>501</td><td>500 ohms</td></tr> <tr><td>102</td><td>1K</td></tr> <tr><td>252</td><td>2.5K</td></tr> <tr><td>502</td><td>5K</td></tr> <tr><td>103</td><td>10K</td></tr> <tr><td>253</td><td>25K</td></tr> <tr><td>503</td><td>50K</td></tr> <tr><td>104</td><td>100K</td></tr> </tbody> </table>	CODE	RESISTANCE	501	500 ohms	102	1K	252	2.5K	502	5K	103	10K	253	25K	503	50K	104	100K	<p><b>B</b></p> <p><b>RESISTANCE TOLERANCE</b></p> <p>A- ±10% B- ±20% C- ±30%</p>	<p><b>D</b></p> <p><b>TAPER</b></p> <p>D- LINEAR A- CW 10% AUDIO B- CCW 10% AUDIO</p>	<p><b>N</b></p> <p><b>SPECIALS</b></p> <p>N- NO SPECIALS C- CENTER DETENT S- SPST POWER SWITCH (20 &amp; 30mm, X type only) D- SPDT POWER SWITCH (20 mm, X type and 9.5mm actuator only)</p>
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Consult CTS for dual resistance element, customized, or not listed features.