

## Linear motion 0.2 watt composition slide control

### Features

- Innovative AC power switch, SPST or SPDT, available on mono element resistors
- 10-60mm slider travel
- 0.2 watt power rating (resistor)
- 1000 watt power rating (SPST switch)
- 600 watt power rating (SPDT switch)
- Detent at 50% travel available
- Multiple detents available
- Single or dual element designs
- Economical
- Wide resistance range
- Slim construction permits stacking many units in a small space



### Electrical and Mechanical Specifications

#### Resistance Range

500 ohms through 1 megohm

#### Resistance Tolerance

Standard  $\pm 20\%$   
Available  $\pm 10\%$

#### Resistance Tapers

Standard: Linear  
Special: Available upon request

#### Insulation Resistance

10 megohms at 250 VDC

#### Voltage Rating

Across end terminals  
Linear curves—300 VDC  
(Not to exceed wattage ratings)

#### Power Rating, watts

| Size<br>Taper | 10mm   | 15mm<br>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 1000 watts 120 VAC  
(Tungsten-filament)  
10,000 cycles switching 6A 120 VAC @ 0.75-0.80PF  
(Inductive load)
- SPDT - 10,000 cycles carrying 600 watts 120 VAC  
(Tungsten-filament)  
6,000 cycles switching 3A 120 VAC @ 0.75-0.80PF  
(Inductive load)

#### Slide Travel

X and U Style: 10, 15, 20, 30, 45, and 60mm  
V Style: 10, 15, 25, 40, and 55mm

Switch: 20mm = 17mm electrical + 3mm switch  
30mm = 27mm electrical + 3mm switch

#### Actuator Information

See Illustrations, page 4 (Actuator Styles)

#### Operating Force

Either direction 20-150 gf  
Switch OFF force: 100-500 gf  
Stop Strength: 3K gf maximum, measured at base of slider

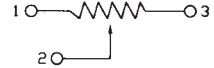
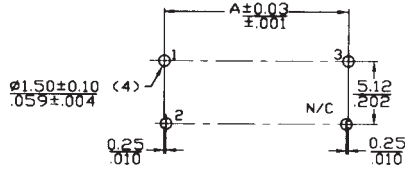
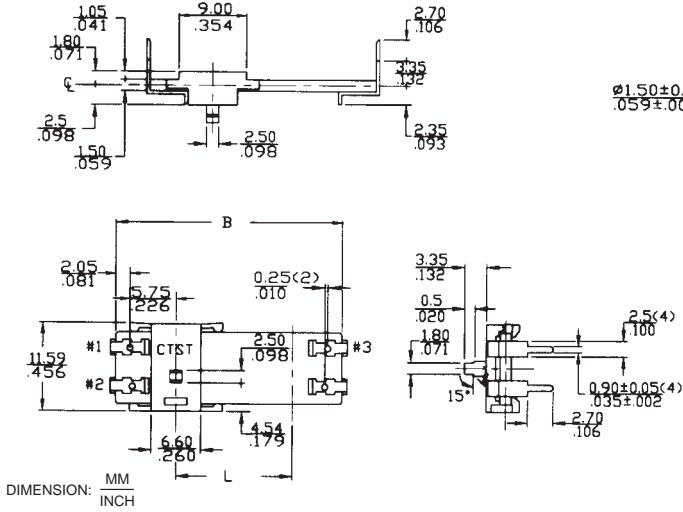
#### Detent Force (detent optional)

Leaving detent: 20-200 gf over operating force

#### Operating Life

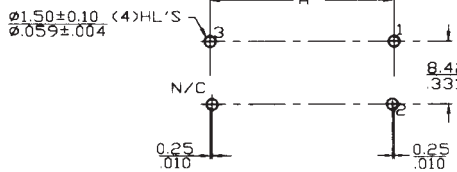
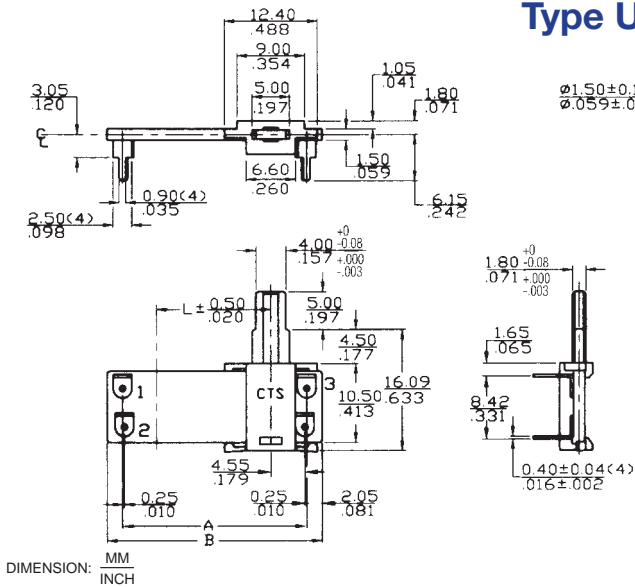
10,000 cycles

## Type V448 MONO



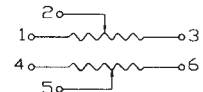
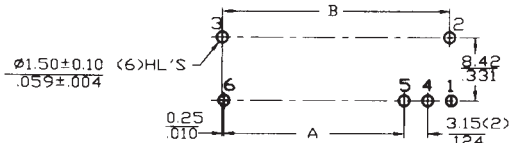
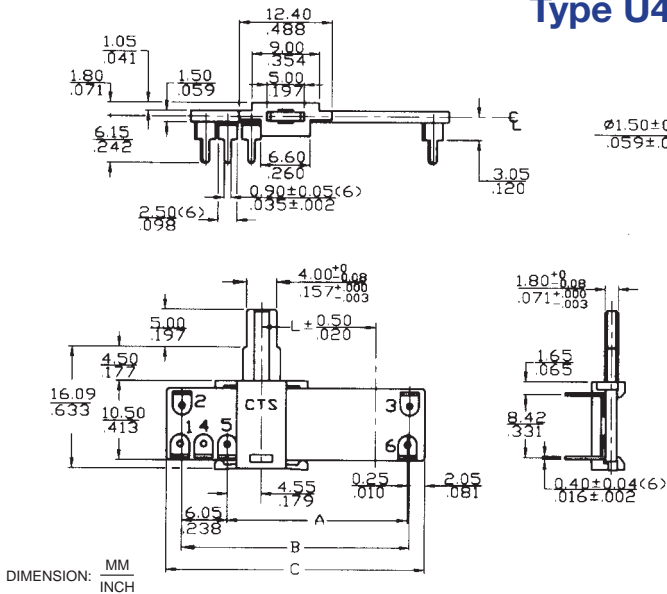
| MODEL    | DIMENSIONS |             |             |
|----------|------------|-------------|-------------|
|          | L (Travel) | A           | B           |
| V448-10M | 10/ .394   | 30.20/1.189 | 28.70/1.130 |
| V448-15M | 15/ .591   | 35.20/1.387 | 33.70/1.372 |
| V448-25M | 25/ .984   | 45.20/1.180 | 43.70/1.721 |
| V448-40M | 40/ 1.575  | 60.20/2.370 | 58.70/2.311 |
| V448-55M | 55/ 2.166  | 75.20/2.961 | 73.70/2.902 |

## Type U448 MONO



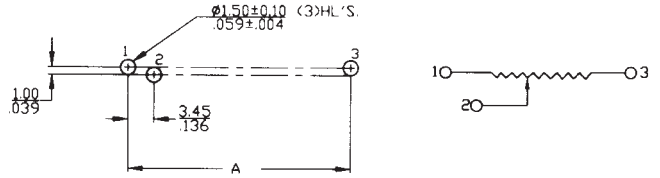
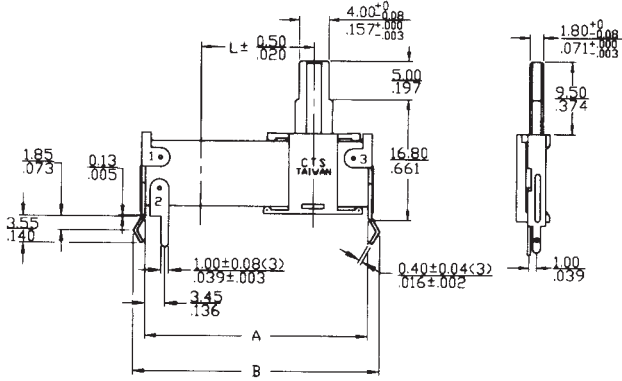
| MODEL    | DIMENSIONS |              |              |
|----------|------------|--------------|--------------|
|          | L (Travel) | A            | B            |
| U448-10M | 10/ .394   | 19.60/ .772  | 23.70/ .933  |
| U448-15M | 15/ .591   | 24.60/ .969  | 28.70/ 1.130 |
| U448-20M | 20/ .787   | 29.60/ 1.165 | 33.70/ 1.327 |
| U448-30M | 30/ 1.181  | 39.60/ 1.559 | 43.70/ 1.720 |
| U448-45M | 45/ 1.772  | 54.60/ 2.149 | 58.70/ 2.311 |
| U448-60M | 60/ 2.362  | 69.60/ 2.740 | 73.70/ 2.902 |

## Type U448 DUAL



| MODEL    | DIMENSIONS |              |              |              |
|----------|------------|--------------|--------------|--------------|
|          | L (Travel) | A            | B            | C            |
| U448-10D | 10/ .394   | 19.10/ .752  | 25.40/ 1.000 | 29.50/ 1.161 |
| U448-15D | 15/ .591   | 24.10/ .949  | 30.40/ 1.197 | 34.50/ 1.359 |
| U448-20D | 20/ .787   | 29.10/ 1.146 | 35.40/ 1.394 | 39.50/ 1.555 |
| U448-30D | 30/ 1.181  | 39.10/ 1.539 | 45.40/ 1.787 | 49.50/ 1.949 |
| U448-45D | 45/ 1.772  | 54.10/ 2.130 | 60.40/ 2.378 | 64.50/ 2.539 |
| U448-60D | 60/ 2.362  | 69.10/ 2.721 | 75.40/ 2.969 | 79.50/ 3.131 |

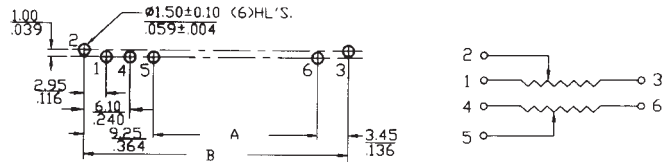
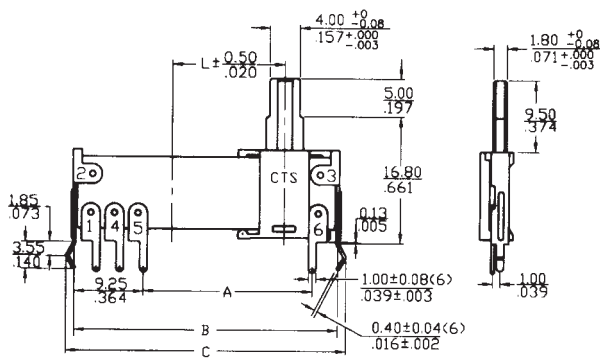
## Type X448 MONO



| MODEL    | DIMENSIONS |             |             |
|----------|------------|-------------|-------------|
|          | L (Travel) | A           | B           |
| X448-10M | 10/ .394   | 24.50/ .965 | 26.60/1.047 |
| X448-15M | 15/ .591   | 29.50/1.161 | 31.60/1.244 |
| X448-20M | 20/ .787   | 34.50/1.359 | 36.60/1.441 |
| X448-30M | 30/ 1.181  | 44.50/1.752 | 46.60/1.835 |
| X448-45M | 45/ 1.772  | 59.50/2.343 | 61.60/2.425 |
| X448-60M | 60/ 2.362  | 74.50/2.934 | 76.60/3.016 |

DIMENSION:  $\frac{MM}{INCH}$

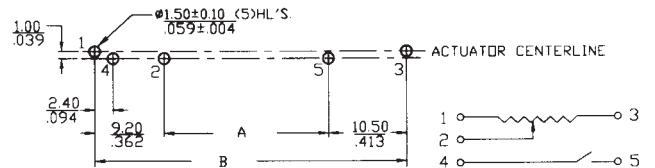
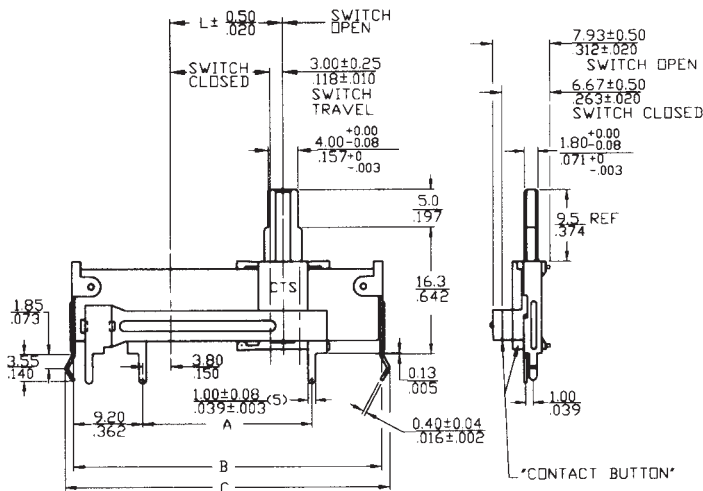
## Type X448 DUAL



| MODEL    | DIMENSIONS |             |             |             |
|----------|------------|-------------|-------------|-------------|
|          | L (Travel) | A           | B           | C           |
| X448-10D | 10/ .394   | 17.60/ .693 | 30.30/1.193 | 32.40/1.276 |
| X448-15D | 15/ .591   | 22.60/ .890 | 35.30/1.390 | 37.40/1.473 |
| X448-20D | 20/ .787   | 27.60/1.087 | 40.30/1.587 | 42.40/1.669 |
| X448-30D | 30/ 1.181  | 37.60/1.481 | 50.30/1.981 | 52.40/2.063 |
| X448-45D | 45/ 1.772  | 52.60/2.071 | 65.30/2.571 | 67.40/2.654 |
| X448-60D | 60/ 2.362  | 67.60/2.662 | 80.30/3.162 | 82.40/3.248 |

DIMENSION:  $\frac{MM}{INCH}$

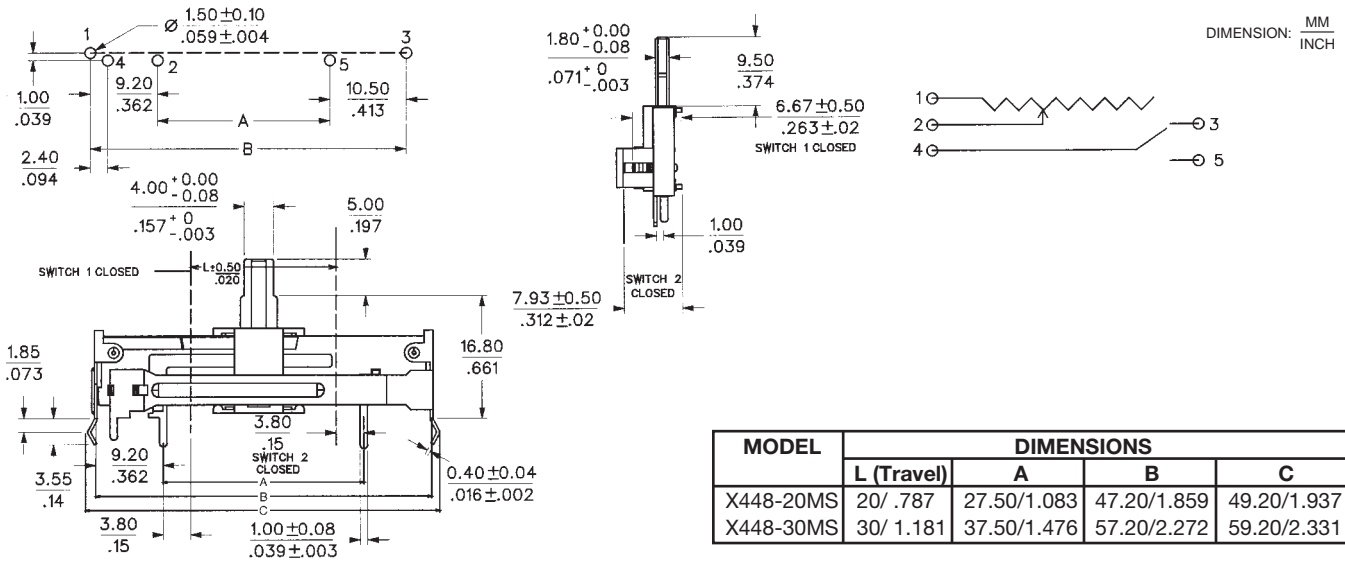
## Type X448 MONO W/SPST SWITCH



| MODEL     | DIMENSIONS |             |             |
|-----------|------------|-------------|-------------|
|           | L (Travel) | A           | C           |
| X448-20MS | 20/ .787   | 27.50/1.083 | 49.20/1.937 |
| X448-30MS | 30/ 1.181  | 37.50/1.476 | 59.20/2.331 |

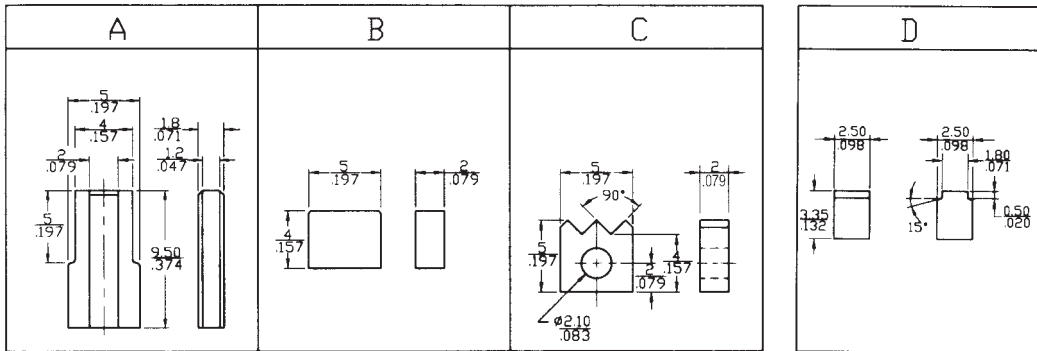
DIMENSION:  $\frac{MM}{INCH}$

# Type X448 MONO W/SPDT SWITCH



## Actuator Styles

Actuator Style "D"  
Available for "V" type only



## Ordering Information

**448** **U** **E** **2** **102** **B** **D** **N**

**MOUNTING STYLE**

**U** Actuator—parallel to PC Board

**X** Actuator—perpendicular to PC Board

**V** Actuator—low profile perpendicular to PCB

**TRAVEL**

**U & X Types**    **V-Type**

**A** 10mm    **A** 10mm

**B** 15mm    **B** 15mm

**C** 20mm    **C** 25mm

**D** 30mm    **D** 40mm

**E** 45mm    **E** 55mm

**F** 60mm

**RESISTANCE CODE (EXAMPLES)**

| Code | Resistance |
|------|------------|
| 501  | 500 ohms   |
| 102  | 1K         |
| 252  | 2.5K       |
| 502  | 5K         |
| 103  | 10K        |
| 253  | 25K        |
| 503  | 50K        |
| 104  | 100K       |

**TAPER**

**D** Linear

**A** CW 10% audio

**B** CCW 10% audio

**ACTUATOR STYLE**

**U & X Types**    **V-Type**

**2:** Style A: 9.5mm    **1:** Style D: 3.35mm

**3:** Style B: 4.0mm

**4:** Style C: 5.0mm

**RESISTANCE TOLERANCE**

**A** ±10%

**B** ±20%

**C** ±30%

**SPECIALS**

**N** No specials

**C** Center detent

**M** Multiple detent

**S** SPST Power Switch (20 & 30mm X type only)

**D** SPDT Power Switch (20 & 30mm X type only)

For dual elements: Consult factory

## Order From:

**CTS CORPORATION, ELECTROCOMPONENTS** / 1601 Mishawaka Street / Elkhart, Indiana 46514  
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