

**SERIES:** PT01 | **DESCRIPTION:** ROTARY POTENTIOMETER**FEATURES**

- carbon element
- wide variety of mounting styles
- multiple shaft options
- available with center detent
- linear, logarithmic, and reverse logarithmic tapers

**SPECIFICATIONS**

| parameter                     | conditions/description         | min | typ      | max      | units              |
|-------------------------------|--------------------------------|-----|----------|----------|--------------------|
| maximum operating voltage     | linear and logarithmic (audio) |     |          | 20<br>50 | Vdc<br>Vac         |
| power rating                  | linear and logarithmic (audio) |     |          | 0.05     | W                  |
| taper                         | linear and logarithmic (audio) |     |          |          |                    |
| standard resistance range     | see Resistance Table           | 1.0 |          | 1,000    | k $\Omega$         |
| standard resistance tolerance |                                |     | $\pm 20$ |          | %                  |
| residual resistance           | 50 $\Omega$ or $\pm 1\%$ max   |     |          |          |                    |
| sliding noise                 |                                |     |          | 68       | mV                 |
| operating temperature         |                                | -10 |          | 60       | $^{\circ}\text{C}$ |
| hand soldering                | for 3 seconds max              |     |          | 300      | $^{\circ}\text{C}$ |
| RoHS                          | yes                            |     |          |          |                    |

**MECHANICAL**

| parameter         | conditions/description | min | typ    | max | units      |
|-------------------|------------------------|-----|--------|-----|------------|
| mechanical angle  |                        | 275 | 280    | 285 | $^{\circ}$ |
| rotational torque |                        | 10  |        | 150 | gf-cm      |
| detent torque     |                        | 20  |        | 200 | gf-cm      |
| stop strength     |                        | 2   |        |     | kg-cm      |
| rotational life   |                        |     | 10,000 |     | cycles     |
| weight            |                        |     | 2.5    |     | g          |

PART NUMBER KEY

**PT01 - X X XX X - X XXX**

Base Number

Terminal Configuration:  
A = Vertical/Rear Mount w/Sleeve Bushing  
B = Horizontal/Side Mount, Bushingless, 10 mm Height  
C = Horizontal/Side Mount, Bushingless, 6.5 mm Height  
D = Vertical/Rear Mount, Bushingless  
E = Vertical/Rear Mount w/Plastic Plain Bushing  
F = Vertical/Rear Mount w/Metal Threaded Bushing  
G = Horizontal/Side Mount w/Sleeve Bushing, 6.5 mm Height  
H = Horizontal/Side Mount w/Sleeve Bushing, 10 mm Height

Detent:  
1 = No Detent  
2 = Center Detent

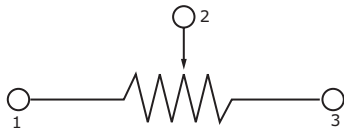
Resistance Taper:  
A = Logarithmic  
B = Linear  
C = Reverse Logarithmic

Resistance (Ω):  
102 = 1,000  
202 = 2,000  
502 = 5,000  
103 = 10,000  
203 = 20,000  
503 = 50,000  
104 = 100,000  
204 = 200,000  
504 = 500,000  
105 = 1,000,000

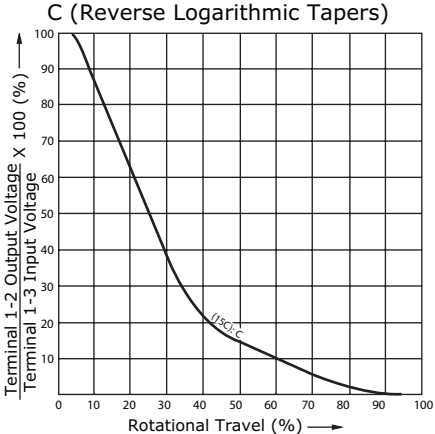
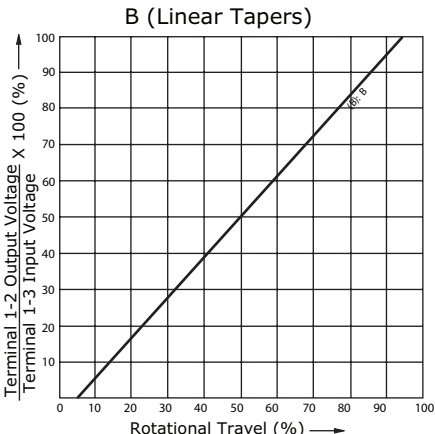
Shaft Length:  
15 = 15 mm  
20 = 20 mm  
25 = 25 mm  
30 = 30 mm

Shaft Style:  
D = D-cut  
K1 = Knurled (18 teeth)  
K2 = Knurled (40 teeth)

SCHEMATIC/TAPERS



| Resistance Table |      |
|------------------|------|
| Resistance [Ω]   | Code |
| 1,000            | 102  |
| 2,000            | 202  |
| 5,000            | 502  |
| 10,000           | 103  |
| 20,000           | 203  |
| 50,000           | 503  |
| 100,000          | 104  |
| 200,000          | 204  |
| 500,000          | 504  |
| 1,000,000        | 105  |



SHAFT TYPES

units: mm [inch]  
tolerance: ±0.3 mm  
unless otherwise noted



|   |     |     |     |     |
|---|-----|-----|-----|-----|
|   | 15D | 20D | 25D | 30D |
| L | 15  | 20  | 25  | 30  |
| F | 6   | 7   | 12  | 12  |

|   |      |      |      |      |
|---|------|------|------|------|
|   | 15K1 | 20K1 | 25K1 | 30K1 |
| L | 15   | 20   | 25   | 30   |
| A | 6    | 7    | 12   | 12   |

|   |      |      |      |      |
|---|------|------|------|------|
|   | 15K2 | 20K2 | 25K2 | 30K2 |
| L | 15   | 20   | 25   | 30   |
| A | 6    | 7    | 12   | 12   |

MECHANICAL DRAWING (VERTICAL/REAR MOUNT W/SLEEVE BUSHING)

units: mm [inch]  
tolerance:  
X≤10: ±0.3 mm  
10<X≤30: ±0.5 mm  
30<X≤100: ±1.0 mm  
unless otherwise noted

| ITEM | DESCRIPTION | MATERIAL          | PLATING/COLOR |
|------|-------------|-------------------|---------------|
| A    | base        | PBT [UL94V-0]     | black         |
| B    | shaft       | PC [UL94V-0]      | black         |
| C    | reed        | nickel-zinc alloy |               |
| D    | bracket     | iron              | bright tin    |
| E    | terminals   | cold rolled steel | dark tin      |



## MECHANICAL DRAWING (HORIZONTAL/SIDE MOUNT, BUSHINGLESS, 10 MM HEIGHT)

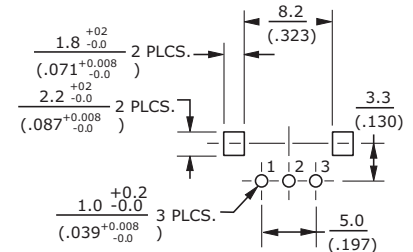
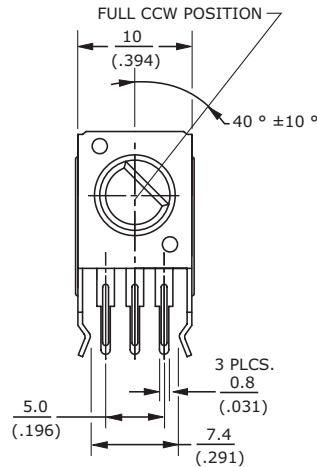
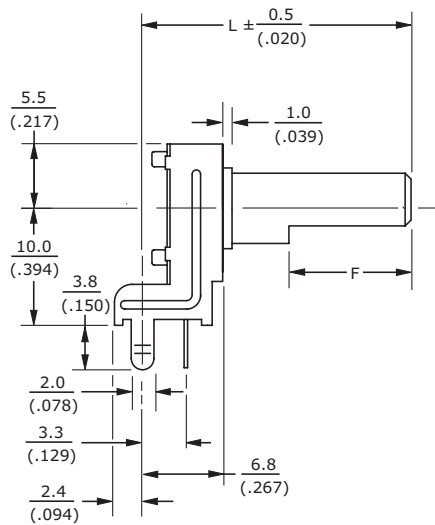
units: mm [inch]

tolerance:

 $X \leq 10$ :  $\pm 0.3$  mm $10 < X \leq 30$ :  $\pm 0.5$  mm $30 < X \leq 100$ :  $\pm 1.0$  mm

unless otherwise noted

| ITEM | DESCRIPTION | MATERIAL          | PLATING/COLOR |
|------|-------------|-------------------|---------------|
| A    | base        | PBT [UL94V-0]     | black         |
| B    | shaft       | PC [UL94V-0]      | black         |
| C    | reed        | nickel-zinc alloy |               |
| D    | bracket     | iron              | bright tin    |
| E    | terminals   | cold rolled steel | dark tin      |

Recommended PCB Layout  
Top View

## MECHANICAL DRAWING (HORIZONTAL/SIDE MOUNT, BUSHINGLESS, 6.5 MM HEIGHT)

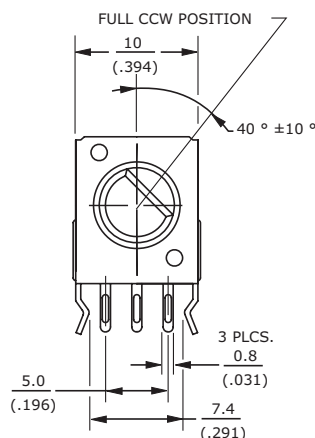
units: mm [inch]

tolerance:

 $X \leq 10$ :  $\pm 0.3$  mm $10 < X \leq 30$ :  $\pm 0.5$  mm $30 < X \leq 100$ :  $\pm 1.0$  mm

unless otherwise noted

| ITEM | DESCRIPTION | MATERIAL          | PLATING/COLOR |
|------|-------------|-------------------|---------------|
| A    | base        | PBT [UL94V-0]     | black         |
| B    | shaft       | PC [UL94V-0]      | black         |
| C    | reed        | nickel-zinc alloy |               |
| D    | bracket     | iron              | bright tin    |
| E    | terminals   | cold rolled steel | dark tin      |

Recommended PCB Layout  
Top View

MECHANICAL DRAWING (VERTICAL/REAR MOUNT, BUSHINGLESS)

units: mm [inch]  
tolerance:  
X≤10: ±0.3 mm  
10<X≤30: ±0.5 mm  
30<X≤100: ±1.0 mm  
unless otherwise noted

| ITEM | DESCRIPTION | MATERIAL          | PLATING/COLOR |
|------|-------------|-------------------|---------------|
| A    | base        | PBT (UL94V-0)     | black         |
| B    | shaft       | PC (UL94V-0)      | black         |
| C    | reed        | nickel-zinc alloy |               |
| D    | bracket     | iron              | bright tin    |
| E    | terminals   | cold rolled steel | dark tin      |



MECHANICAL DRAWING (VERTICAL/REAR MOUNT W/PLASTIC PLAIN BUSHING)

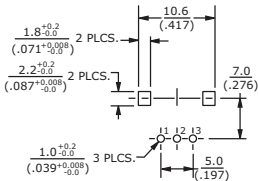
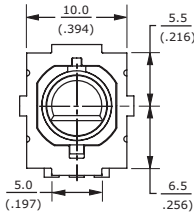
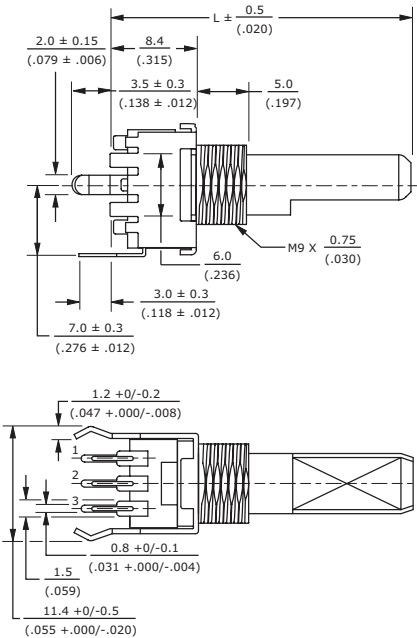
units: mm [inch]  
tolerance:  
X≤10: ±0.3 mm  
10<X≤30: ±0.5 mm  
30<X≤100: ±1.0 mm  
unless otherwise noted

| ITEM | DESCRIPTION | MATERIAL          | PLATING/COLOR |
|------|-------------|-------------------|---------------|
| A    | base        | PBT (UL94V-0)     | black         |
| B    | shaft       | PC (UL94V-0)      | black         |
| C    | reed        | nickel-zinc alloy |               |
| D    | bracket     | iron              | bright tin    |
| E    | terminals   | cold rolled steel | dark tin      |



MECHANICAL DRAWING (VERTICAL/REAR MOUNT W/METAL THREADED BUSHING)

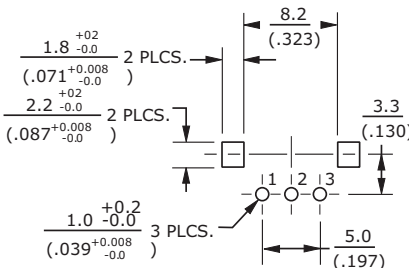
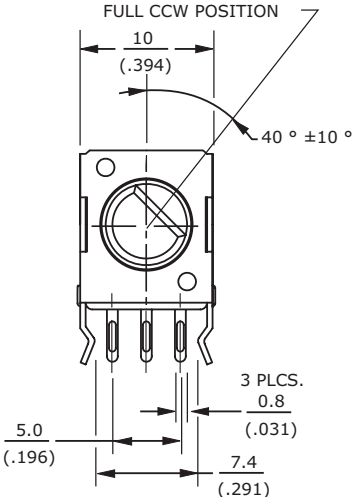
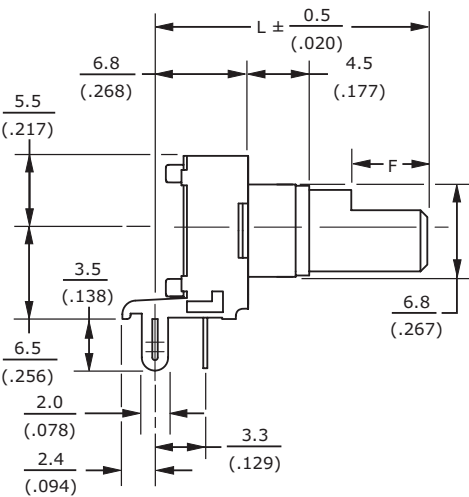
units: mm [inch]  
tolerance:  
X≤10: ±0.3 mm  
10<X≤30: ±0.5 mm  
30<X≤100: ±1.0 mm  
unless otherwise noted



Recommended PCB Layout  
Top View

MECHANICAL DRAWING (HORIZ/SIDE MNT W/SLEEVE BUSHING, 6.5 MM HEIGHT)

units: mm [inch]  
tolerance:  
X≤10: ±0.3 mm  
10<X≤30: ±0.5 mm  
30<X≤100: ±1.0 mm  
unless otherwise noted



Recommended PCB Layout  
Top View

## MECHANICAL DRAWING (HORIZ/SIDE MNT W/SLEEVE BUSHING, 10 MM HEIGHT)

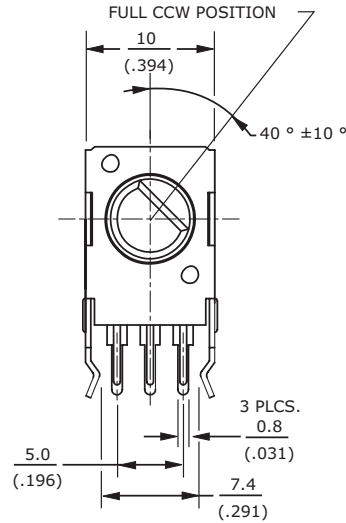
units: mm [inch]

tolerance:

 $X \leq 10$ :  $\pm 0.3$  mm $10 < X \leq 30$ :  $\pm 0.5$  mm $30 < X \leq 100$ :  $\pm 1.0$  mm

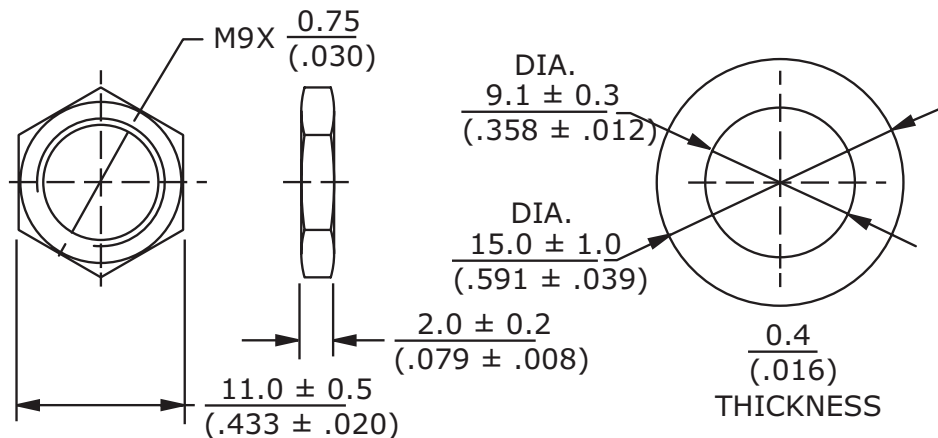
unless otherwise noted

| ITEM | DESCRIPTION | MATERIAL          | PLATING/COLOR |
|------|-------------|-------------------|---------------|
| A    | base        | PBT [UL94V-0]     | black         |
| B    | shaft       | PC [UL94V-0]      | black         |
| C    | reed        | nickel-zinc alloy |               |
| D    | bracket     | iron              | bright tin    |
| E    | terminals   | cold rolled steel | dark tin      |

Recommended PCB Layout  
Top View

## MOUNTING HARDWARE

units: mm [inch]



Note: Hex nut and washer supplied with threaded bushing version.

REVISION HISTORY

| rev. | description                       | date       |
|------|-----------------------------------|------------|
| 1.0  | initial release                   | 12/15/2021 |
| 1.01 | logo, datasheet style update      | 08/05/2022 |
| 1.02 | updated taper detail              | 01/15/2024 |
| 1.03 | updated datasheet                 | 04/18/2024 |
| 1.04 | CUI Devices rebranded to Same Sky | 09/12/2024 |

The revision history provided is for informational purposes only and is believed to be accurate.



Same Sky offers a one (1) year limited warranty. Complete warranty information is listed on our website.

Same Sky reserves the right to make changes to the product at any time without notice. Information provided by Same Sky is believed to be accurate and reliable. However, no responsibility is assumed by Same Sky for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

Same Sky products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

[sameskydevices.com](https://www.sameskydevices.com)