



## 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 50	Vdc 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

**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)

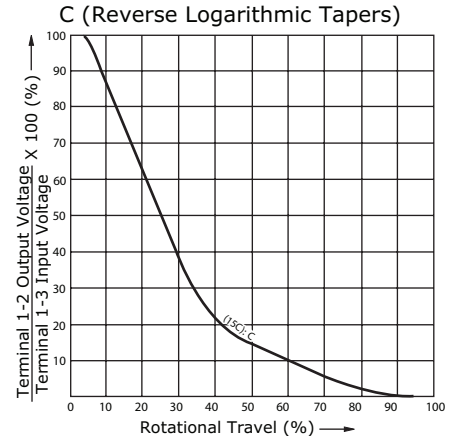
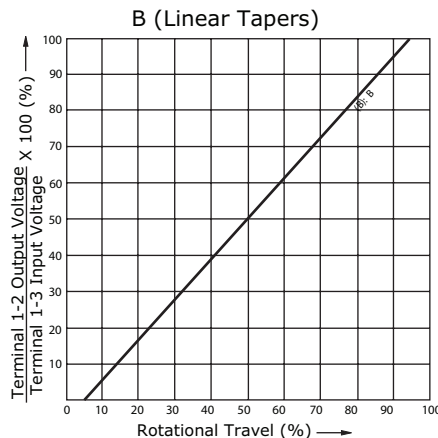
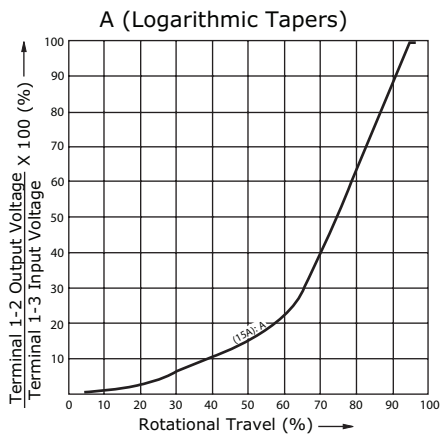
**Resistance Taper:**  
A = Logarithmic  
B = Linear  
C = Reverse Logarithmic

**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

## SCHEMATIC/TAPERS

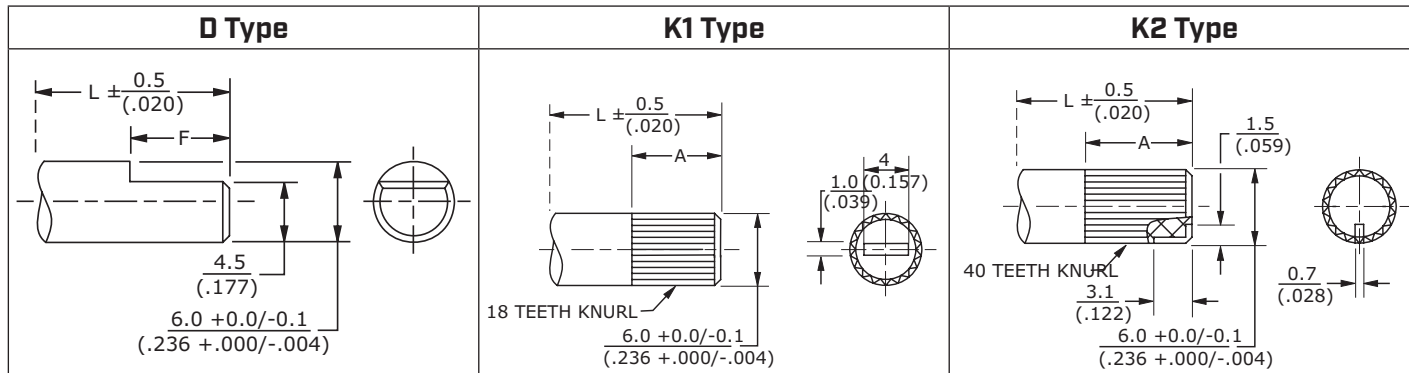


Resistance Table	
Resistance (Ω)	Code
1,000	102
2,000	202
5,000	502
10,000	103
20,000	203
50,000	503
100,000	104
200,000	204
500,000	504
1,000,000	105



## 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

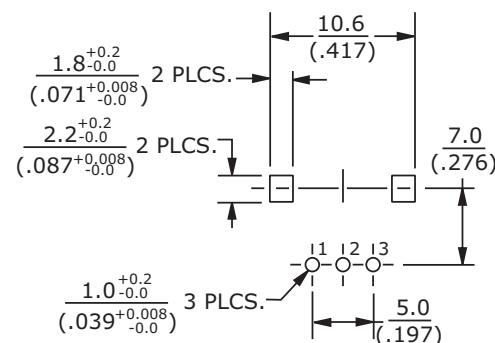
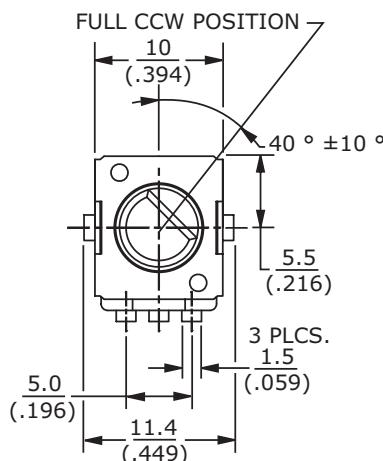
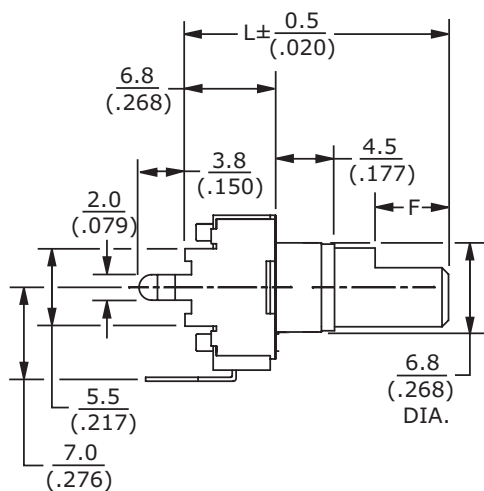
	15K1	20K1	25K1	30K1
L	15	20	25	30
A	6	7	12	12

	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

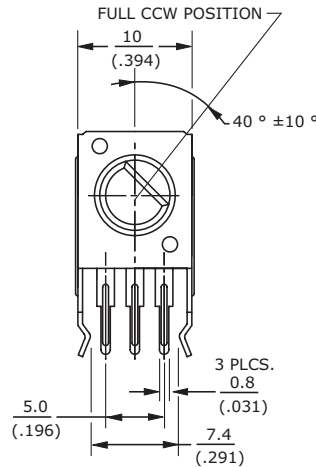


Recommended PCB Layout  
 Top View

## 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

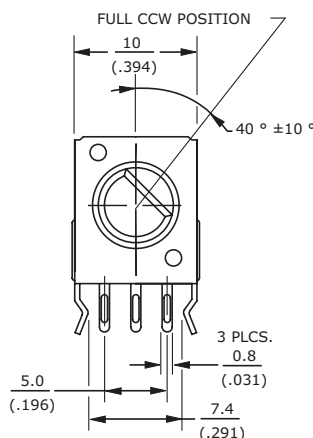
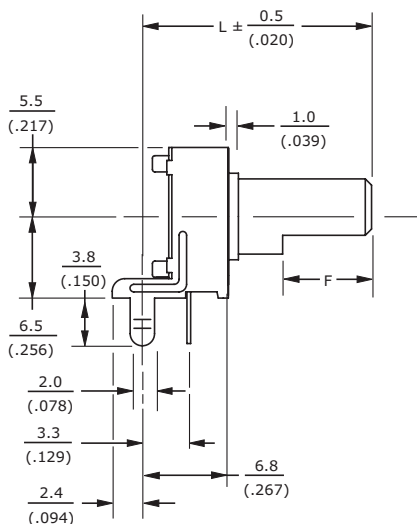


Recommended PCB Layout  
Top View

## 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

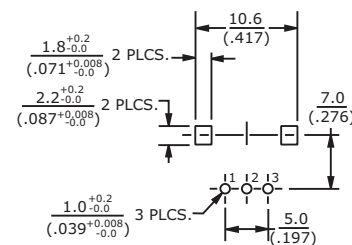


Recommended PCB Layout  
Top View

## MECHANICAL DRAWING (VERTICAL/REAR MOUNT, BUSHINGLESS)

units: mm [inch]  
 tolerance:  
 $X \leq 10$ :  $\pm 0.3$  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

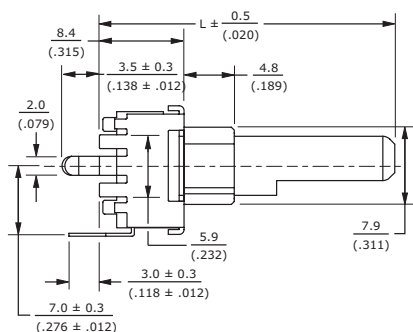


Recommended PCB Layout Top View

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

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

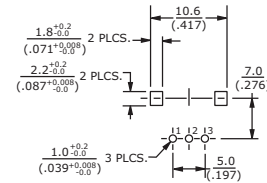
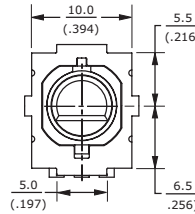
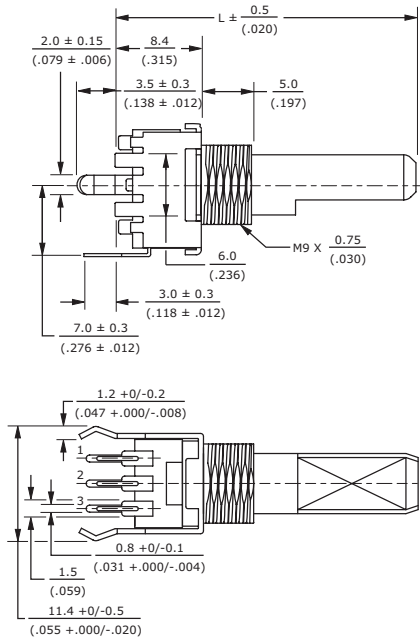


Recommended PCB Layout Top View



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

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

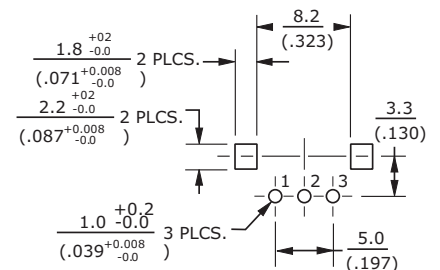
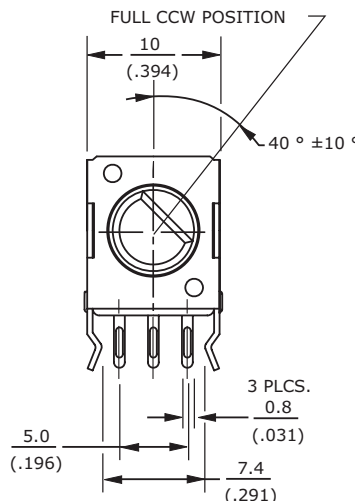


Recommended PCB Layout Top View

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 (HORIZ/SIDE MNT W/SLEEVE BUSHING, 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



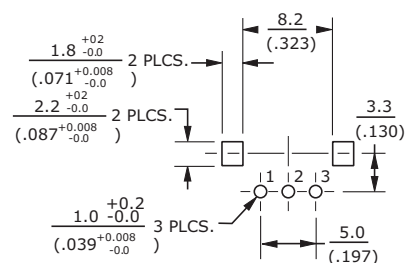
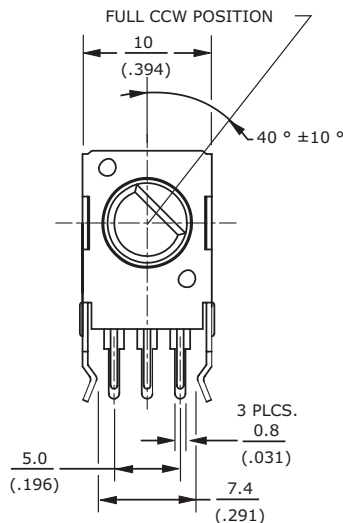
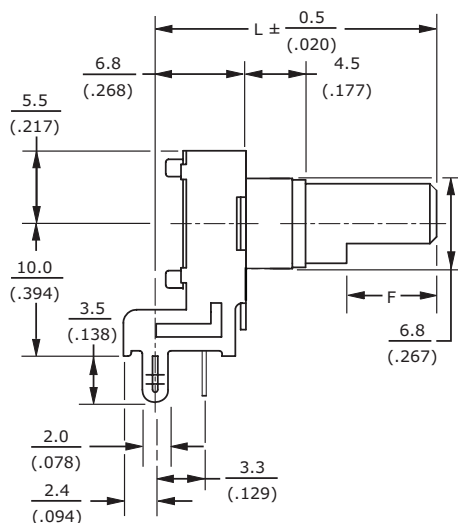
Recommended PCB Layout Top View

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 (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

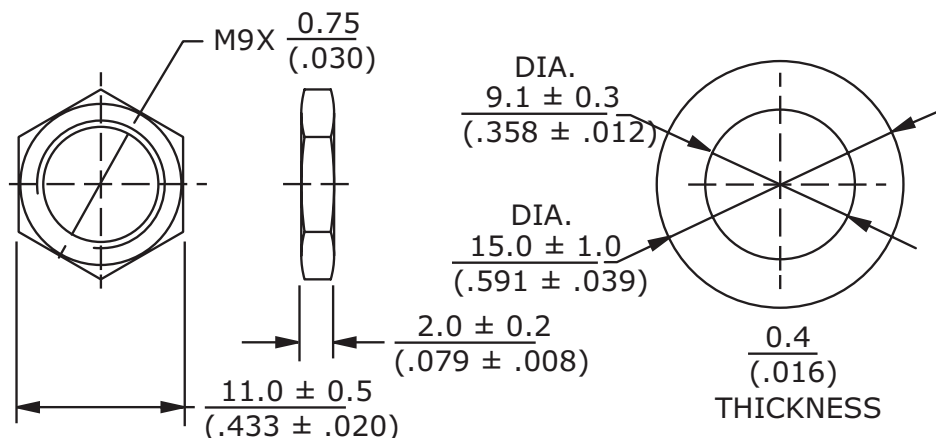
ITEM	DESCRIPTION	MATERIAL	PLATING/COLOR
A	base	PBT [UL94V-0]	black
B	shaft	PC [UL94V-0]	black
C	reed	nickel-zinc alloy	
D	bracket	iron	bright tin
E	terminals	cold rolled steel	dark tin



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.

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