

**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

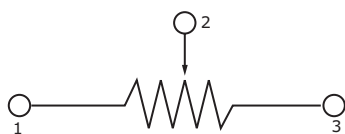
**Total Height (shaft + body):**  
15 = 15 mm  
20 = 20 mm  
25 = 25 mm  
30 = 30 mm

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

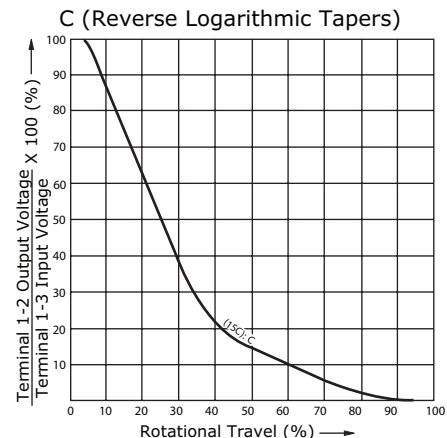
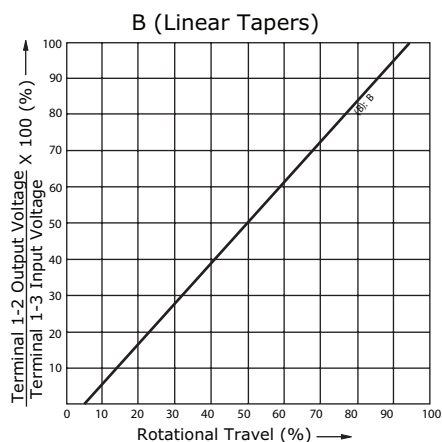
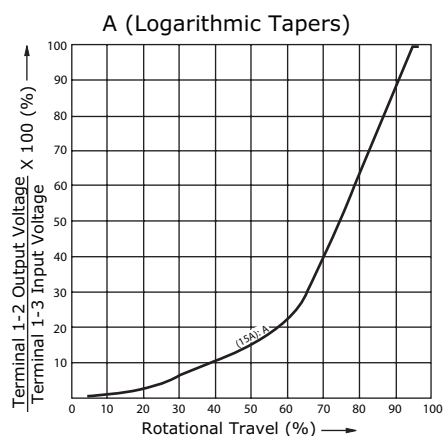
**Resistance Taper:**  
A = Logarithmic  
B = Linear  
C = Reverse Logarithmic

**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

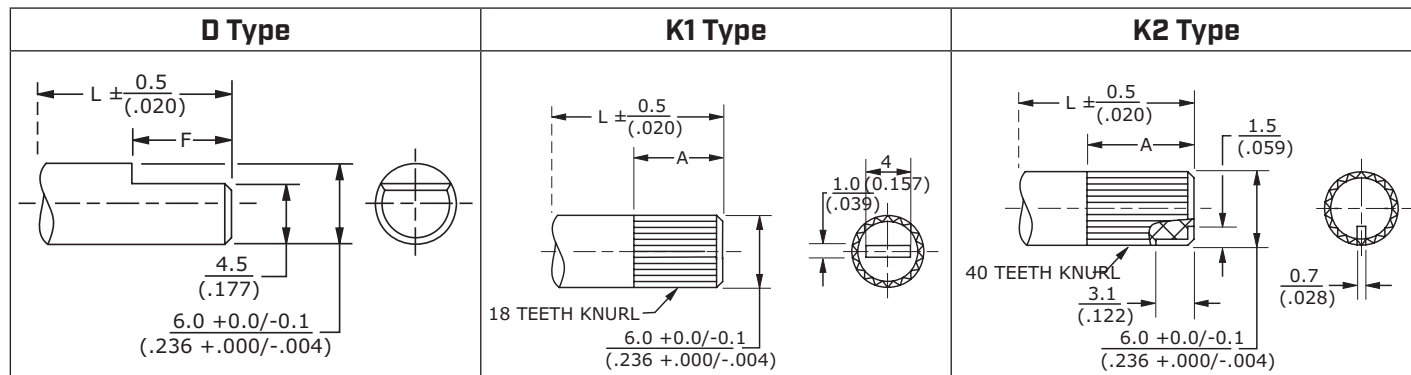


| Resistance Table |      |
|------------------|------|
| Resistance (Ω)   | Code |
| 1,000            | 102  |
| 2,000            | 202  |
| 5,000            | 502  |
| 10,000           | 103  |
| 20,000           | 203  |
| 50,000           | 503  |
| 100,000          | 104  |
| 200,000          | 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  |

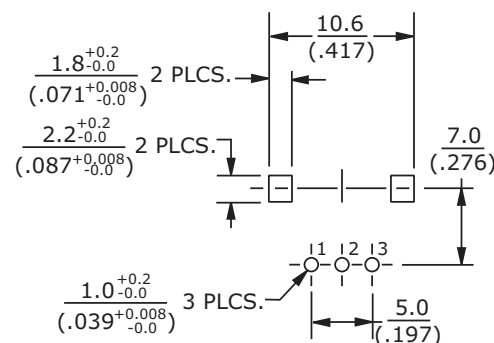
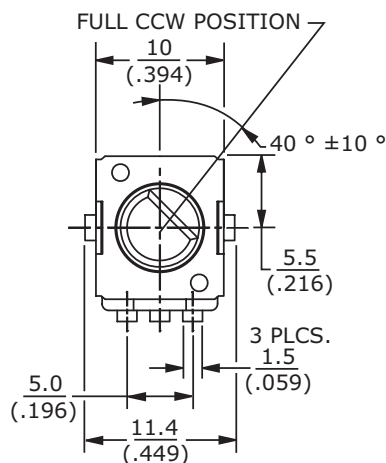
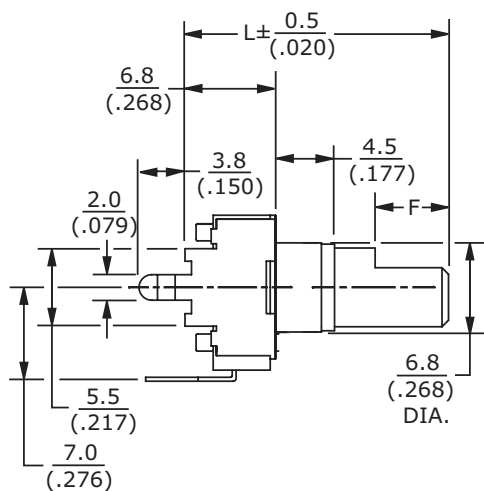
|   |      |      |      |      |
|---|------|------|------|------|
|   | 15K1 | 20K1 | 25K1 | 30K1 |
| L | 15   | 20   | 25   | 30   |
| A | 6    | 7    | 12   | 12   |

|   |      |      |      |      |
|---|------|------|------|------|
|   | 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      |

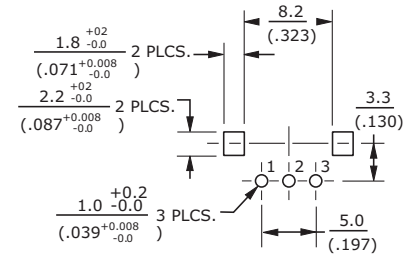
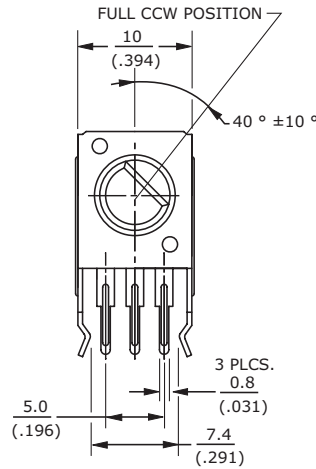
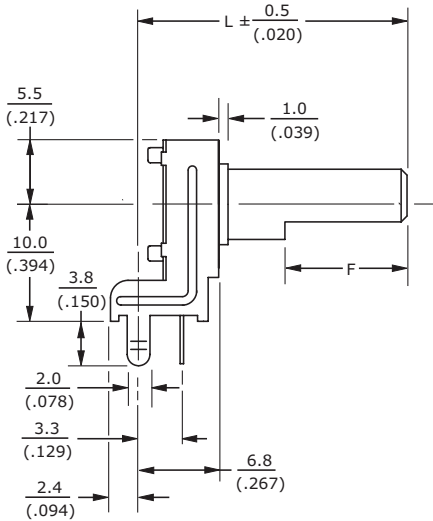


Recommended PCB Layout  
 Top View

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

units: mm [inch]  
 tolerance:  
 X<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      |

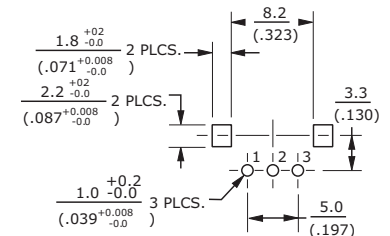
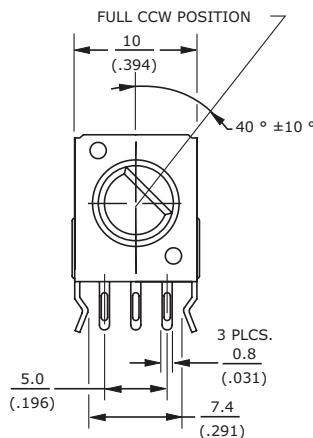
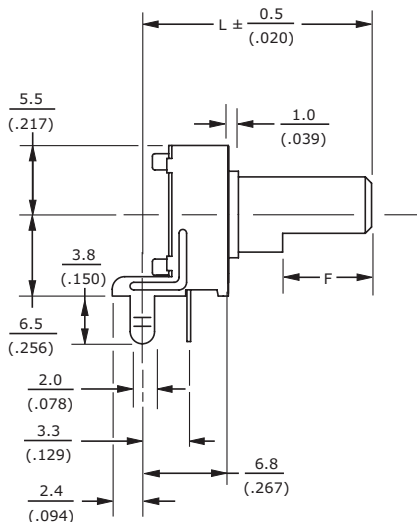


Recommended PCB Layout  
Top View

## MECHANICAL DRAWING (HORIZONTAL/SIDE MOUNT, BUSHINGLESS, 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

| 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      |

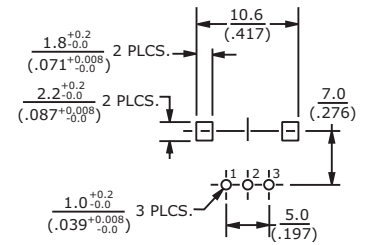
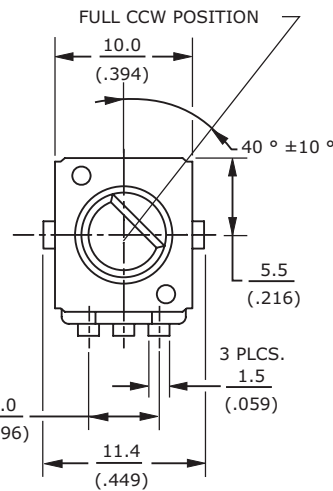
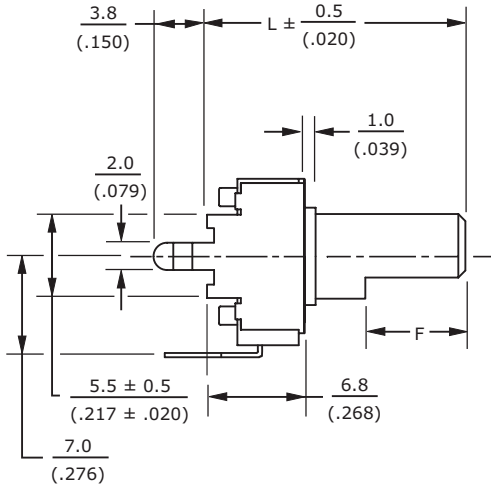


Recommended PCB Layout  
Top View

## 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      |

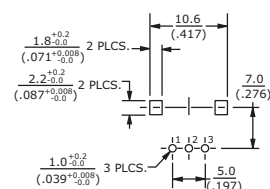
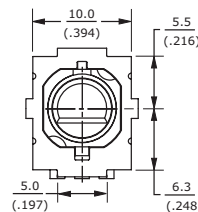
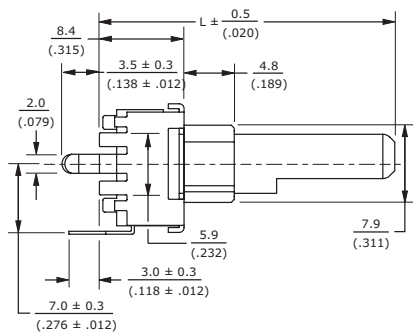


Recommended PCB Layout Top View

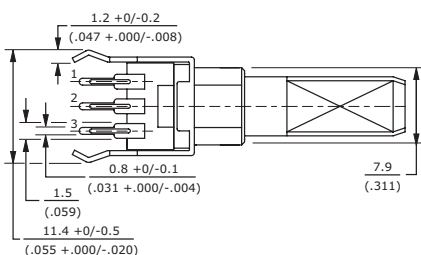
## MECHANICAL DRAWING (VERTICAL/REAR MOUNT W/PLASTIC PLAIN BUSHING)

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      |

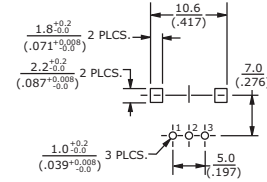
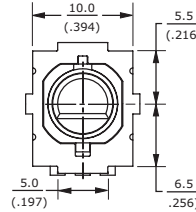
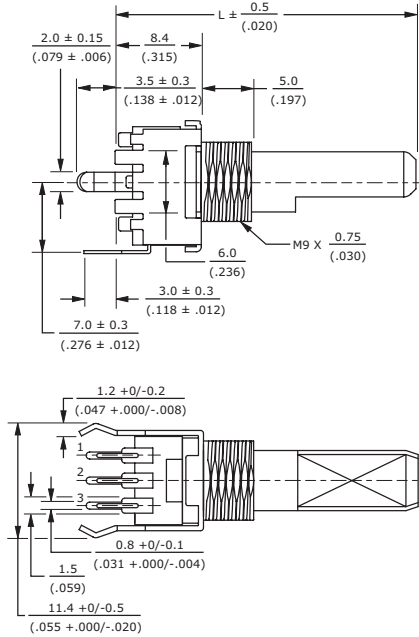


Recommended PCB Layout Top View



## 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

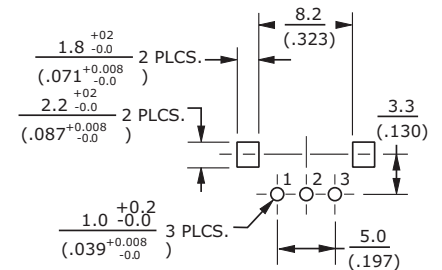
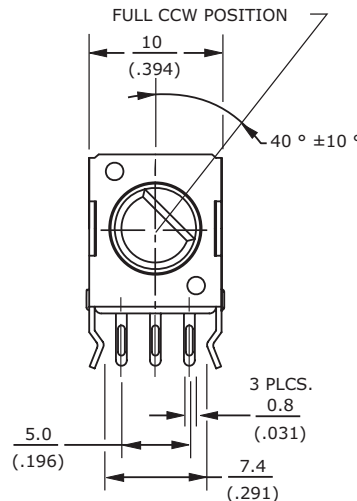
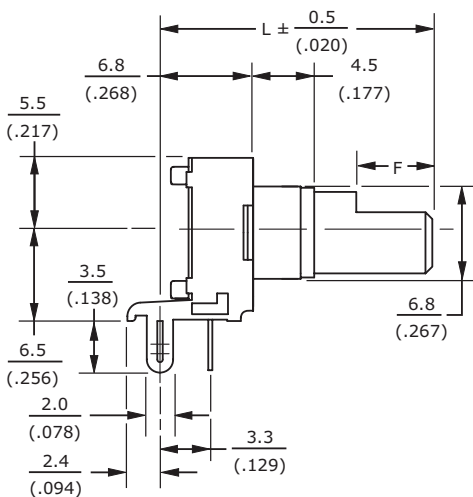


Recommended PCB Layout Top View

| 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<10: ±0.3 mm  
 10≤X<30: ±0.5 mm  
 30≤X≤100: ±1.0 mm  
 unless otherwise noted



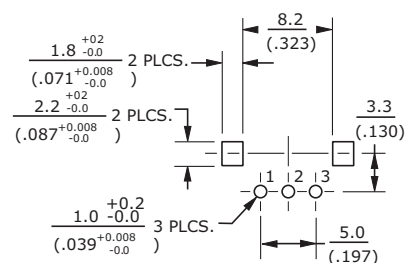
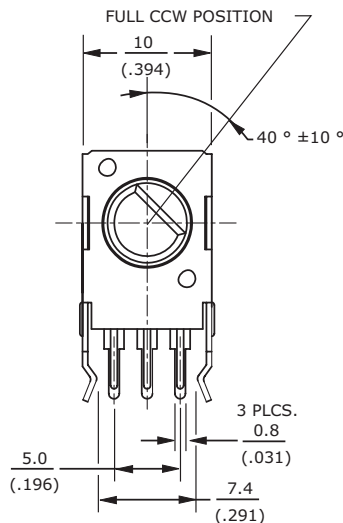
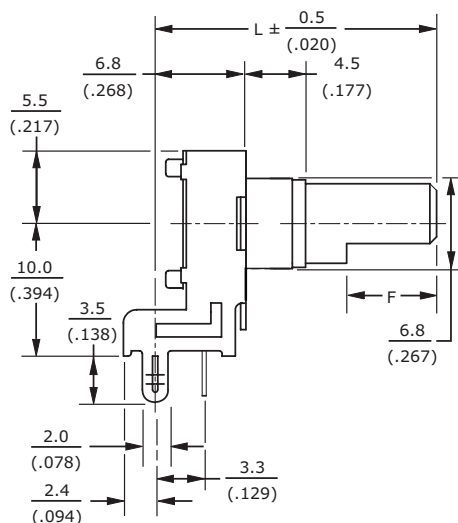
Recommended PCB Layout Top View

| 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<10: ±0.3 mm  
 10≤X<30: ±0.5 mm  
 30≤X<100: ±1.0 mm  
 unless otherwise noted

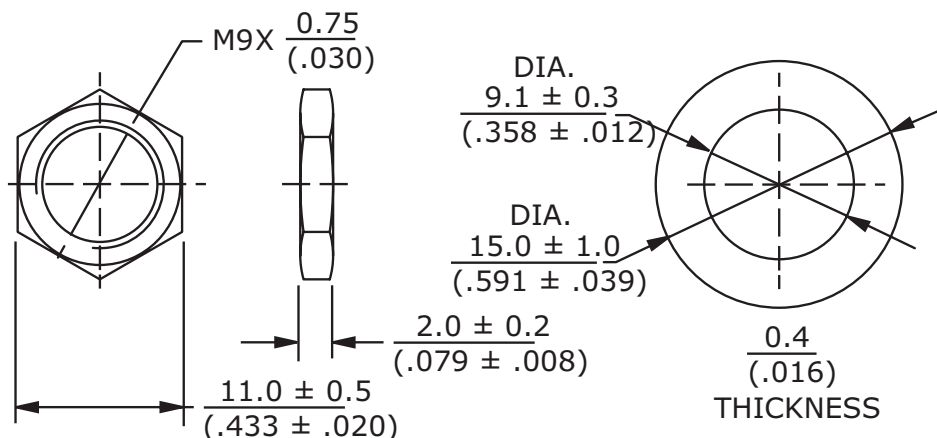
| ITEM | DESCRIPTION | MATERIAL          | PLATING/COLOR |
|------|-------------|-------------------|---------------|
| A    | base        | PBT [UL94V-0]     | black         |
| B    | shaft       | PC [UL94V-0]      | black         |
| C    | reed        | nickel-zinc alloy |               |
| D  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



Recommended PCB Layout  
Top View

## 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 |
| 1.05 | updated tolerance detail          | 04/29/2026 |

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.

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