



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 Ω |
| standard resistance tolerance | | | ± 20 | | % |
| residual resistance | 50 Ω 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

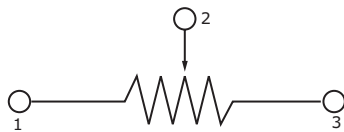
Shaft Length:
15 = 15 mm
20 = 20 mm
25 = 25 mm
30 = 30 mm

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

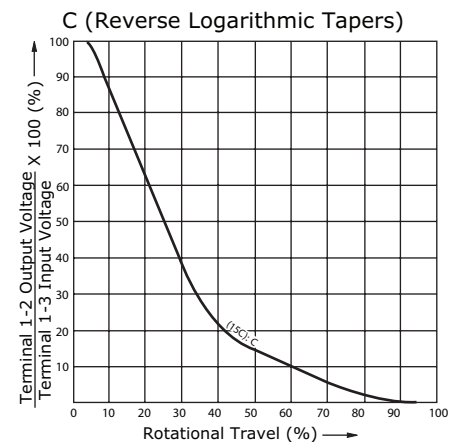
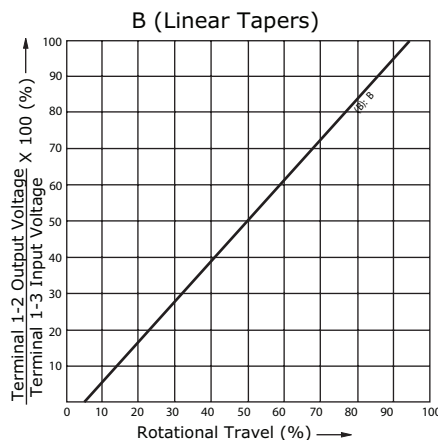
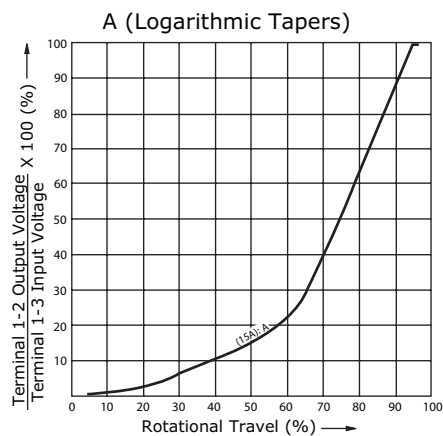
Resistance Taper:
A = Logarithmic
B = Linear
C = Reverse Logarithmic

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

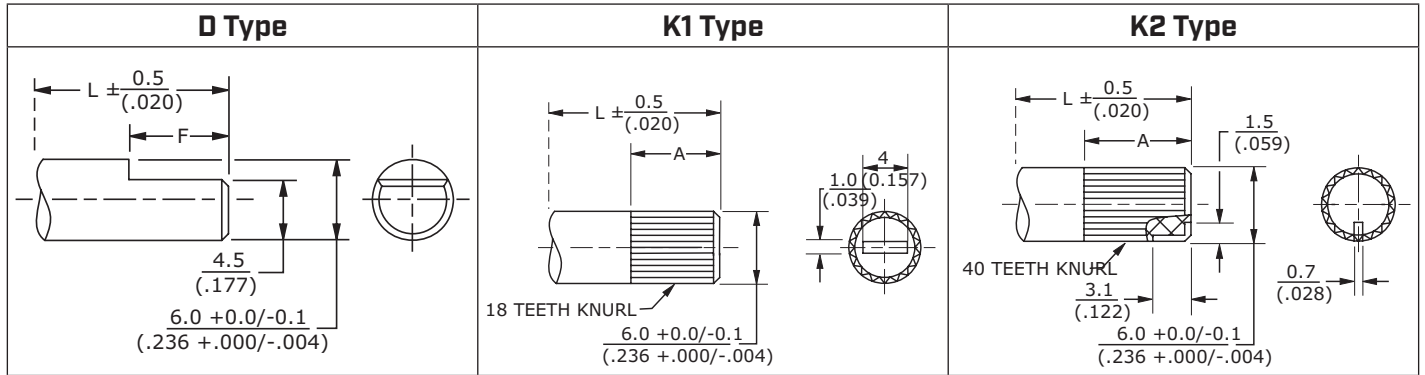


| Resistance Table | |
|------------------|------|
| Resistance (Ω) | Code |
| 1,000 | 102 |
| 2,000 | 202 |
| 5,000 | 502 |
| 10,000 | 103 |
| 20,000 | 203 |
| 50,000 | 503 |
| 100,000 | 104 |
| 200,000 | 204 |
| 500,000 | 504 |
| 1,000,000 | 105 |



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 |

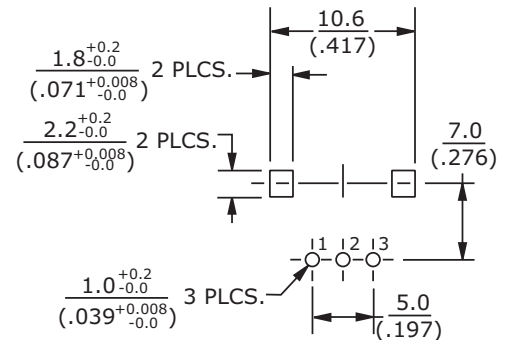
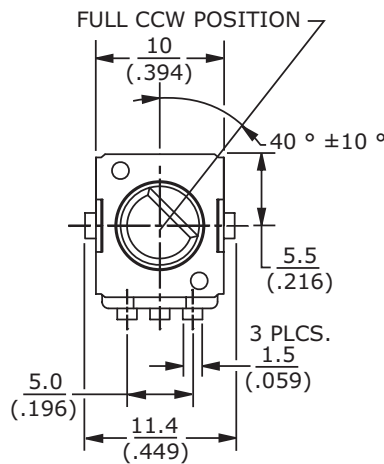
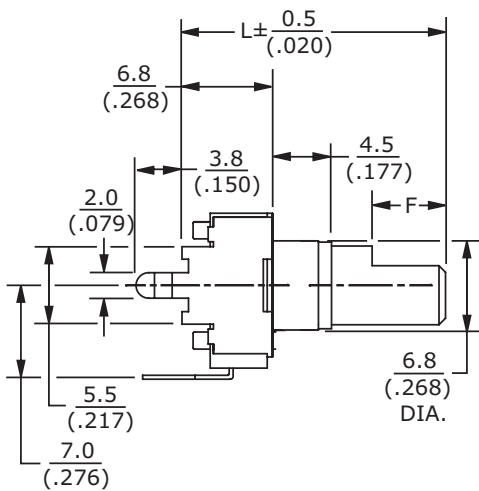
| | | | | |
|---|------|------|------|------|
| | 15K1 | 20K1 | 25K1 | 30K1 |
| L | 15 | 20 | 25 | 30 |
| A | 6 | 7 | 12 | 12 |

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

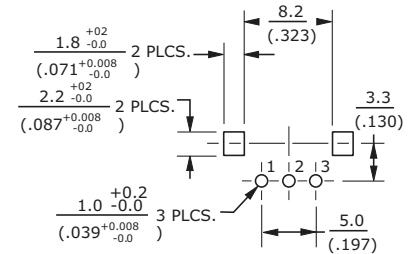
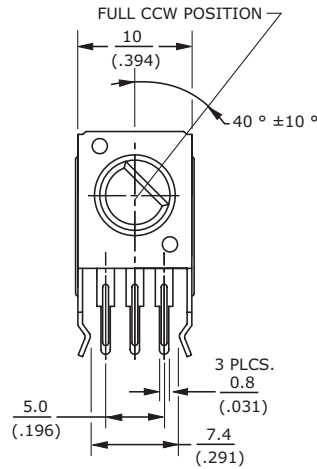
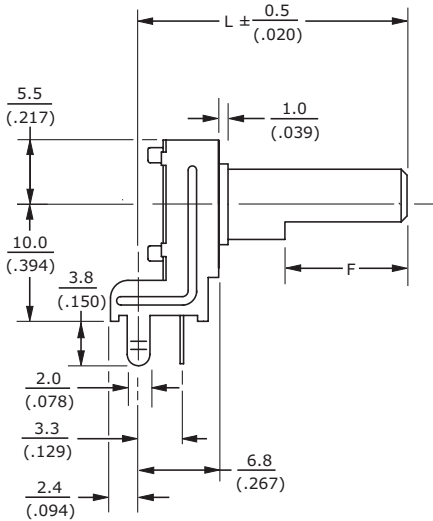


Recommended PCB Layout
 Top View

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

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

| ITEM | DESCRIPTION | MATERIAL | PLATING/COLOR |
|------|-------------|-------------------|---------------|
| A | base | PBT (UL94V-0) | black |
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| D | bracket | iron | bright tin |
| E | terminals | cold rolled steel | dark tin |

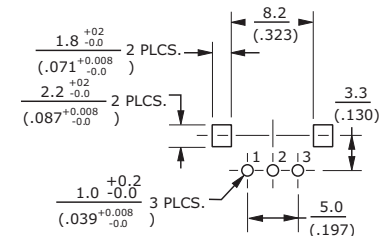
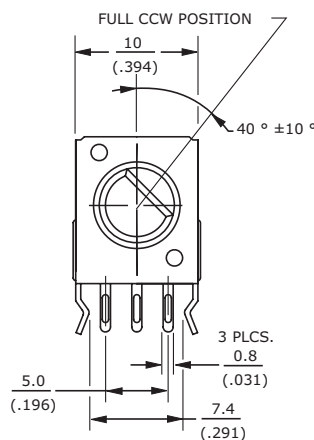
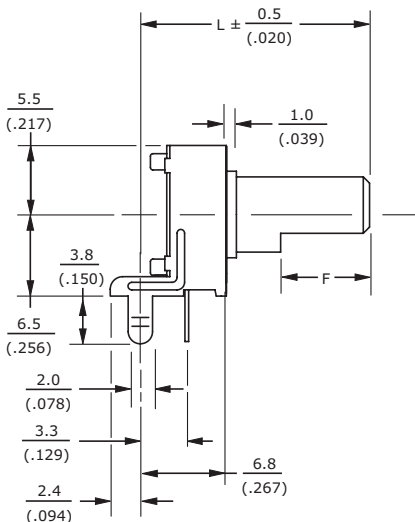


Recommended PCB Layout
Top View

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

units: mm [inch]
 tolerance:
 $X \leq 10$: ± 0.3 mm
 $10 < X \leq 30$: ± 0.5 mm
 $30 < X \leq 100$: ± 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 |

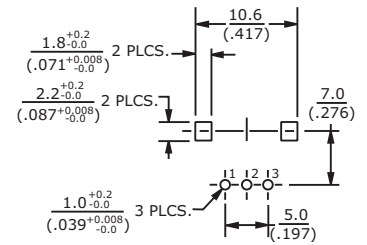
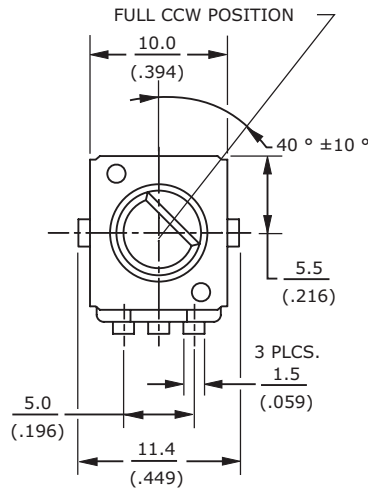
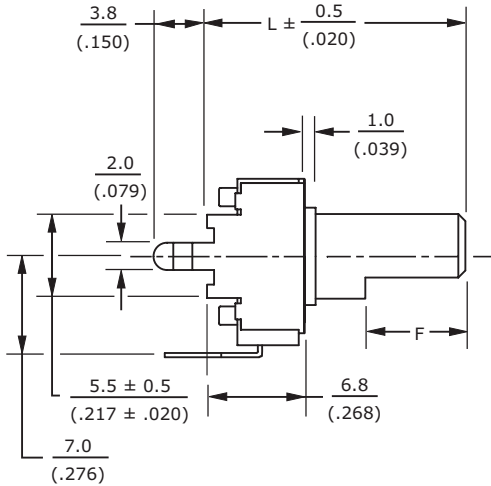


Recommended PCB Layout
Top View

MECHANICAL DRAWING (VERTICAL/REAR MOUNT, BUSHINGLESS)

units: mm [inch]
 tolerance:
 $X \leq 10$: ± 0.3 mm
 $10 < X \leq 30$: ± 0.5 mm
 $30 < X \leq 100$: ± 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 |

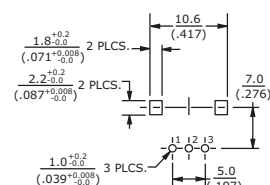
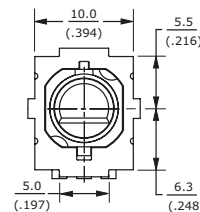
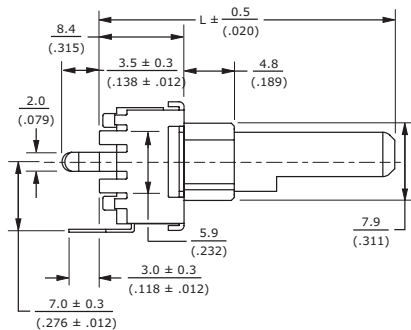


Recommended PCB Layout Top View

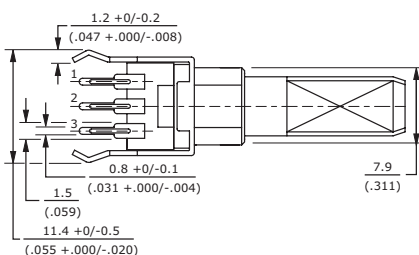
MECHANICAL DRAWING (VERTICAL/REAR MOUNT W/PLASTIC PLAIN BUSHING)

units: mm [inch]
 tolerance:
 $X \leq 10$: ± 0.3 mm
 $10 < X \leq 30$: ± 0.5 mm
 $30 < X \leq 100$: ± 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 |

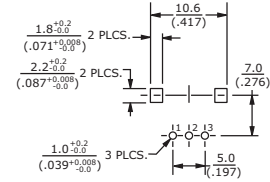
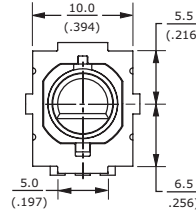
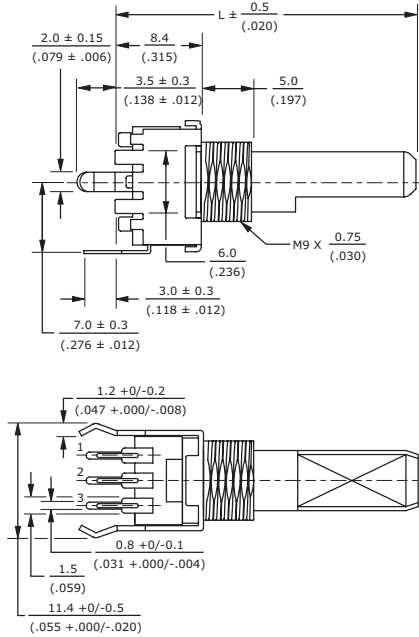


Recommended PCB Layout Top View



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

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

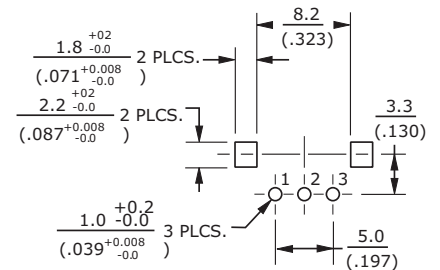
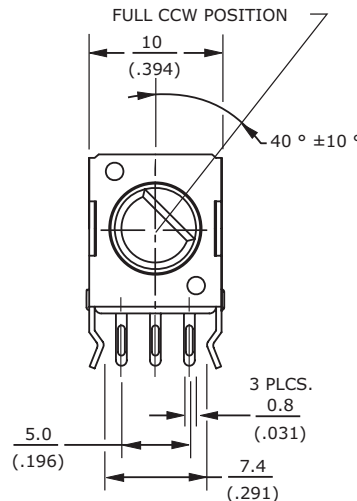
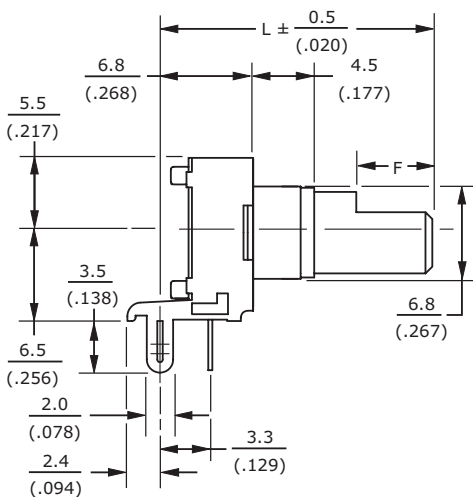


Recommended PCB Layout
Top View

| 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:
 $X \leq 10$: ± 0.3 mm
 $10 < X \leq 30$: ± 0.5 mm
 $30 < X \leq 100$: ± 1.0 mm
 unless otherwise noted



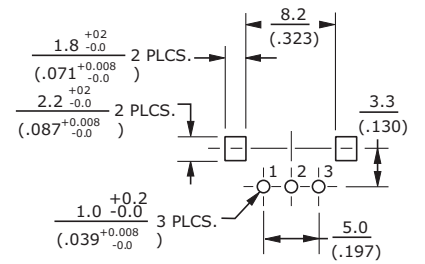
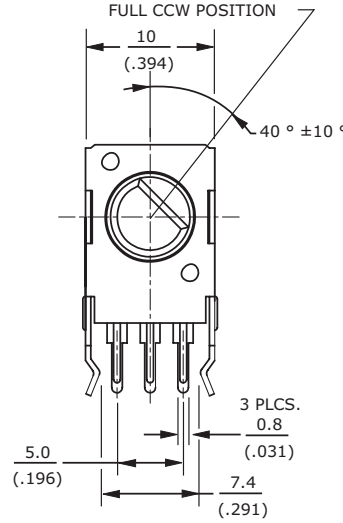
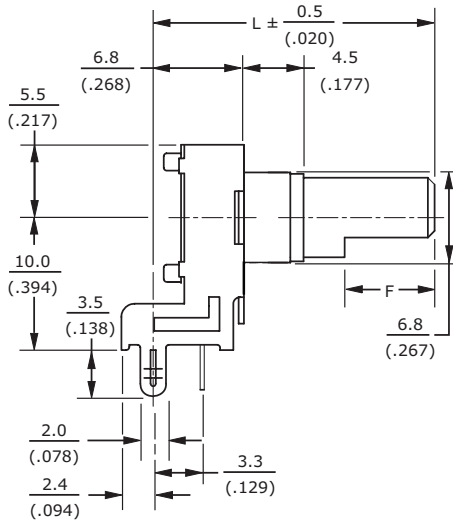
Recommended PCB Layout
Top View

| 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:
 $X \leq 10$: ± 0.3 mm
 $10 < X \leq 30$: ± 0.5 mm
 $30 < X \leq 100$: ± 1.0 mm
 unless otherwise noted

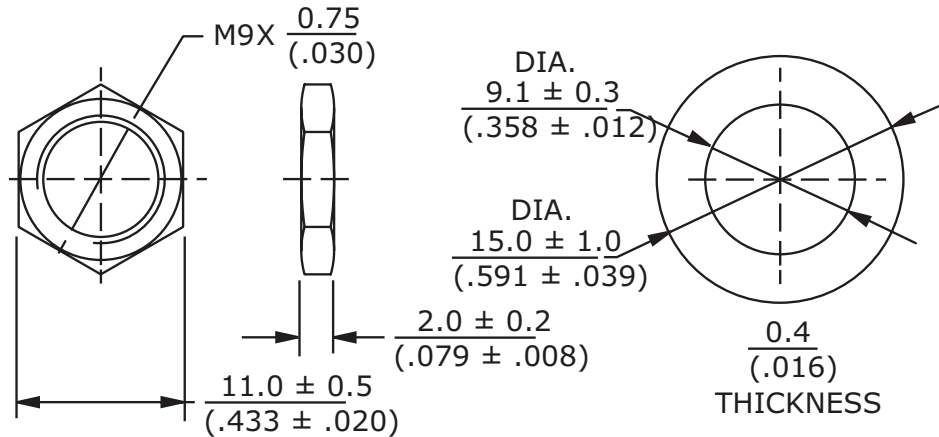
| ITEM | DESCRIPTION | MATERIAL | PLATING/COLOR |
|------|-------------|-------------------|---------------|
| A | base | PBT [UL94V-0] | black |
| B | shaft | PC [UL94V-0] | black |
| C | reed | nickel-zinc alloy | |
| D | bracket | iron | bright tin |
| E | terminals | cold rolled steel | dark tin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



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 |

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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