



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

Detent:  
1 = No Detent  
2 = Center Detent

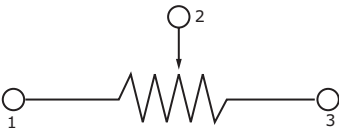
Resistance Taper:  
A = Logarithmic  
B = Linear  
C = Reverse Logarithmic

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

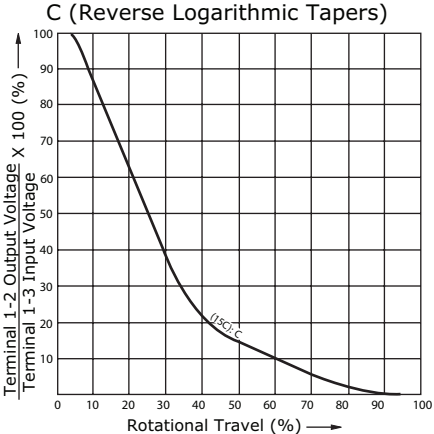
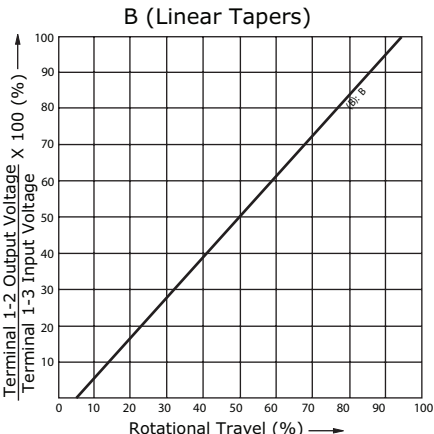
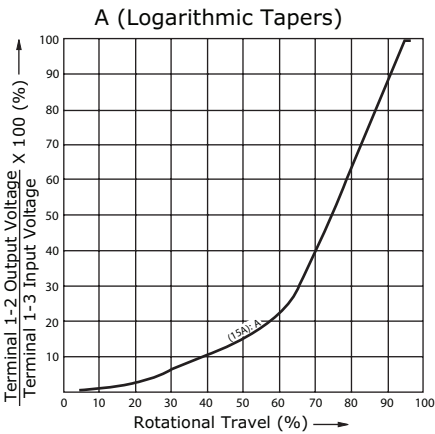
Shaft Length:  
15 = 15 mm  
20 = 20 mm  
25 = 25 mm  
30 = 30 mm

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:  $\pm 0.3$  mm  
unless otherwise noted

| D Type | K1 Type | K2 Type |
|--------|---------|---------|
|        |         |         |

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

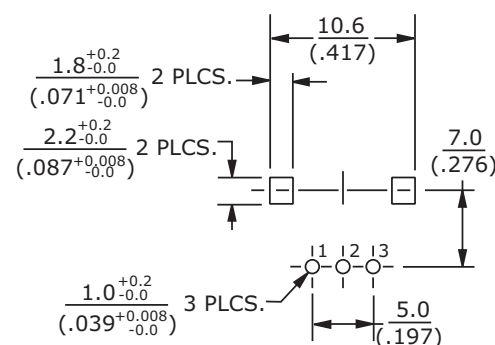
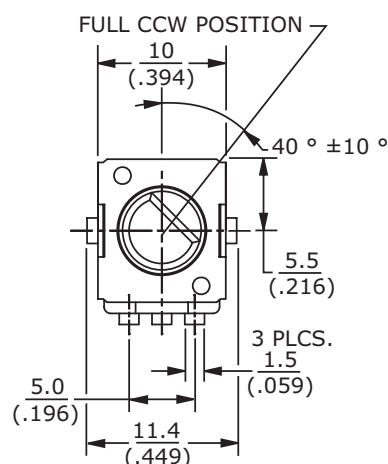
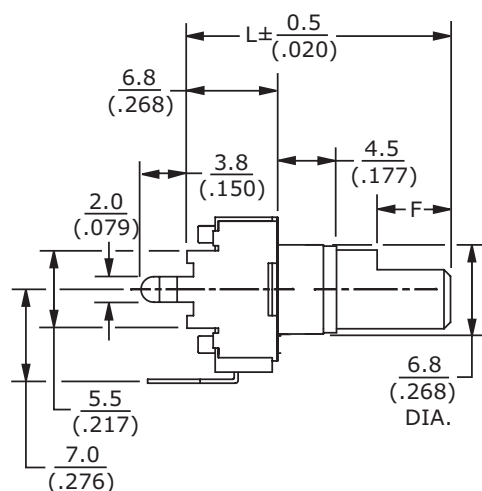
|   | 15K1 | 20K1 | 25K1 | 30K1 |
|---|------|------|------|------|
| L | 15   | 20   | 25   | 30   |
| A | 6    | 7    | 12   | 12   |

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

## MECHANICAL DRAWING (HORIZONTAL/REAR MOUNT W/SLEEVE 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

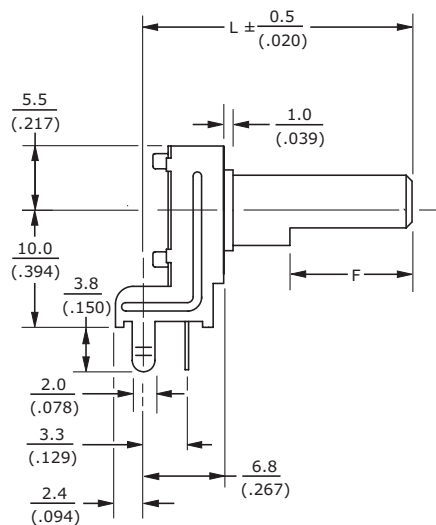
## MECHANICAL DRAWING (VERTICAL/SIDE MOUNT, BUSHINGLESS, 10 MM HEIGHT)

units: mm [inch]

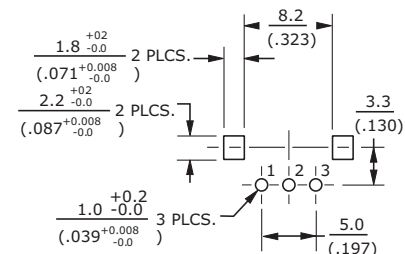
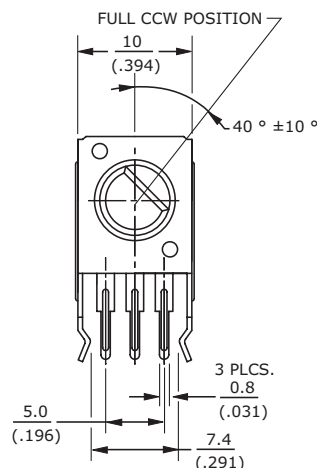
tolerance:

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unless otherwise noted



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| C    | reed        | nickel-zinc alloy |               |
| D    | bracket     | iron              | bright tin    |
| E    | terminals   | cold rolled steel | dark tin      |

Recommended PCB Layout  
Top View

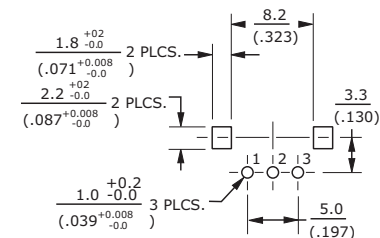
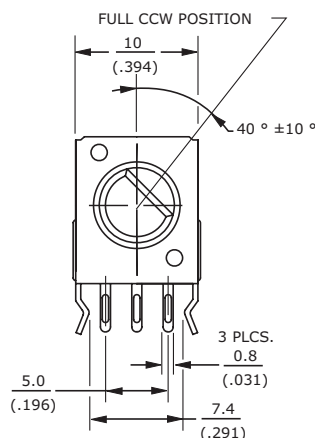
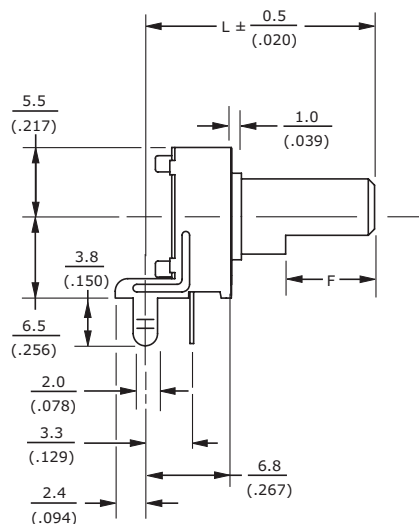
## MECHANICAL DRAWING (VERTICAL/SIDE MOUNT, BUSHINGLESS, 6.5 MM HEIGHT)

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

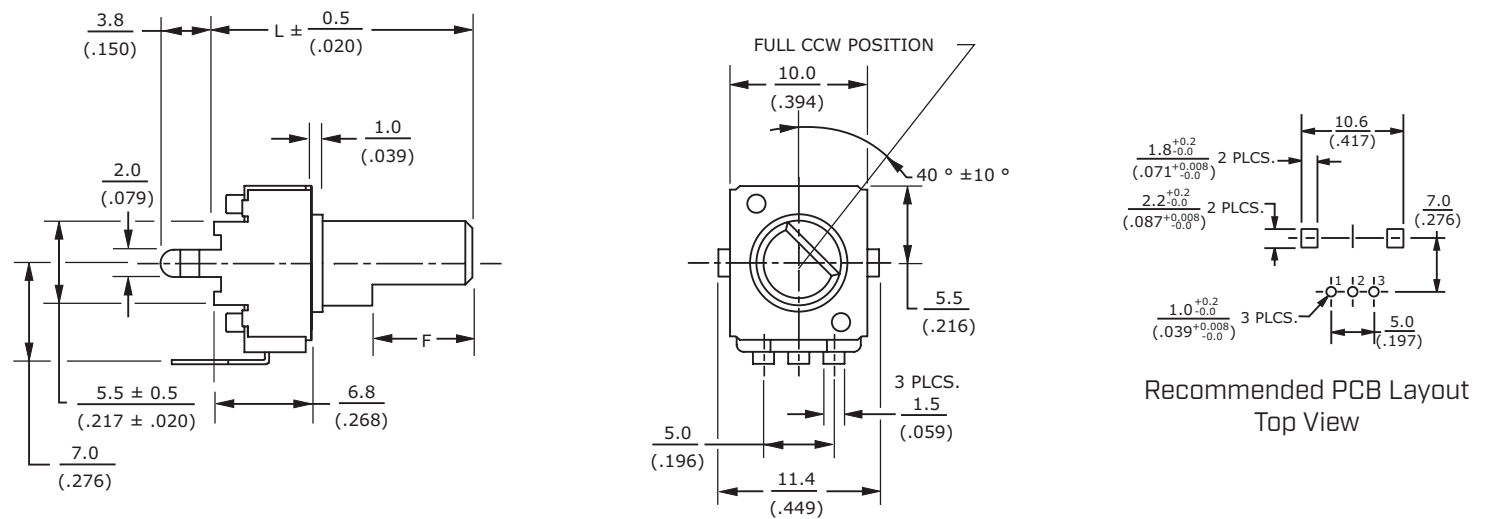
unless otherwise noted

Recommended PCB Layout  
Top View

MECHANICAL DRAWING (HORIZONTAL/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

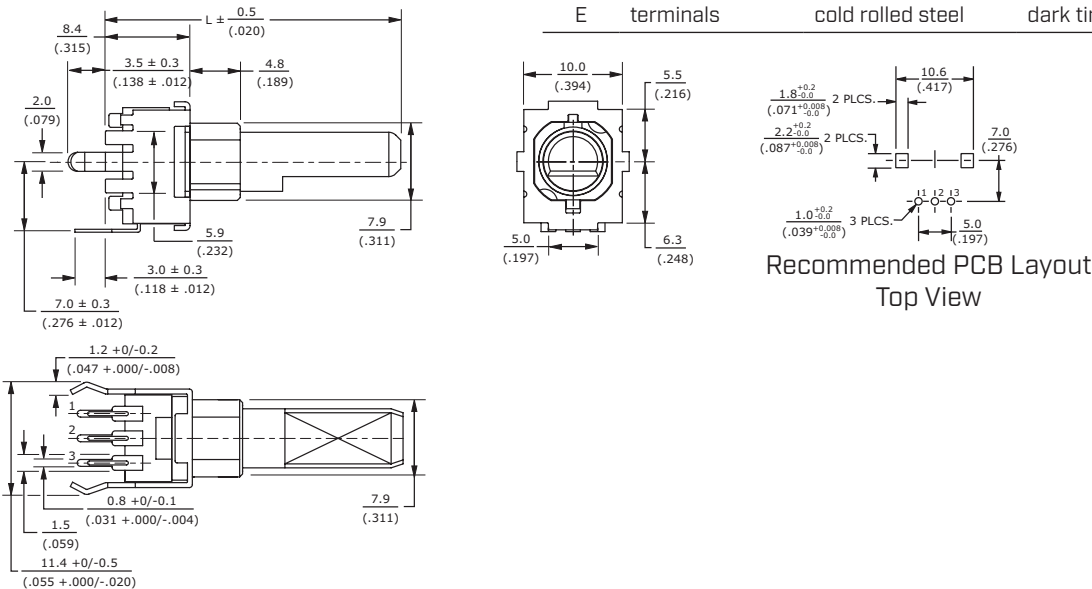
| ITEM | DESCRIPTION | MATERIAL          | PLATING/COLOR |
|------|-------------|-------------------|---------------|
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| B    | shaft       | PC [UL94V-0]      | black         |
| C    | reed        | nickel-zinc alloy |               |
| D    | bracket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



MECHANICAL DRAWING (HORIZONTAL/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      |



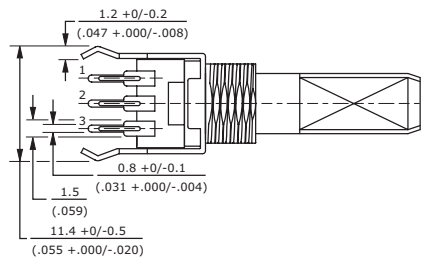
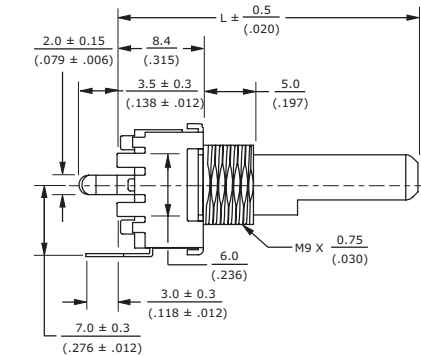
## MECHANICAL DRAWING (HORIZONTAL/REAR MOUNT W/METAL THREADED BUSHING)

units: mm [inch]

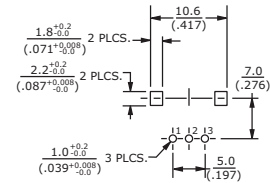
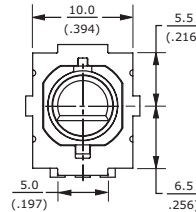
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unless otherwise noted



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| E    | terminals   | cold rolled steel | dark tin      |

Recommended PCB Layout  
Top View

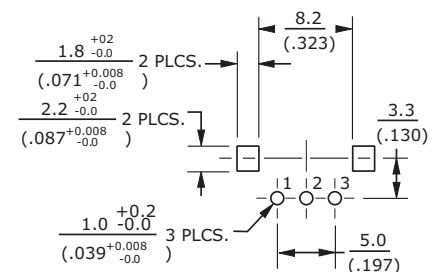
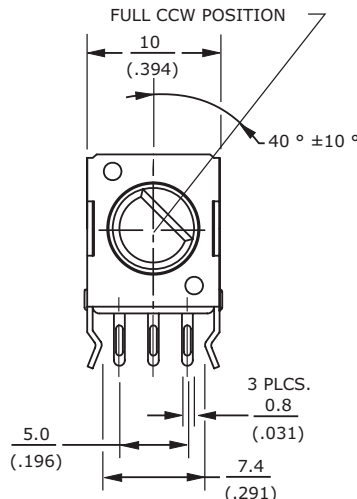
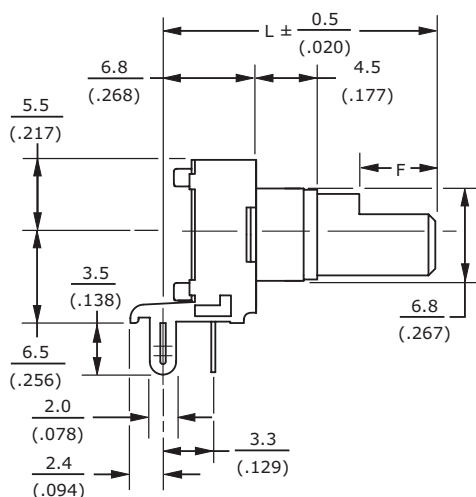
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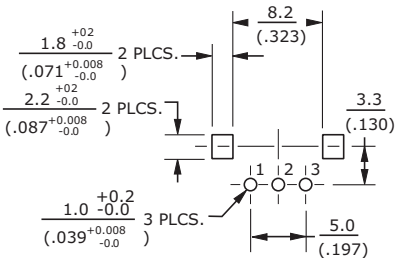
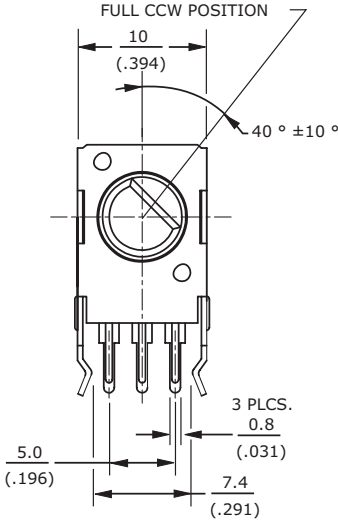
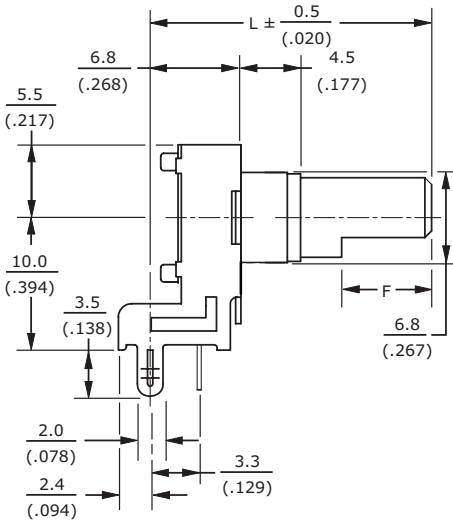
unless otherwise noted

Recommended PCB Layout  
Top View

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

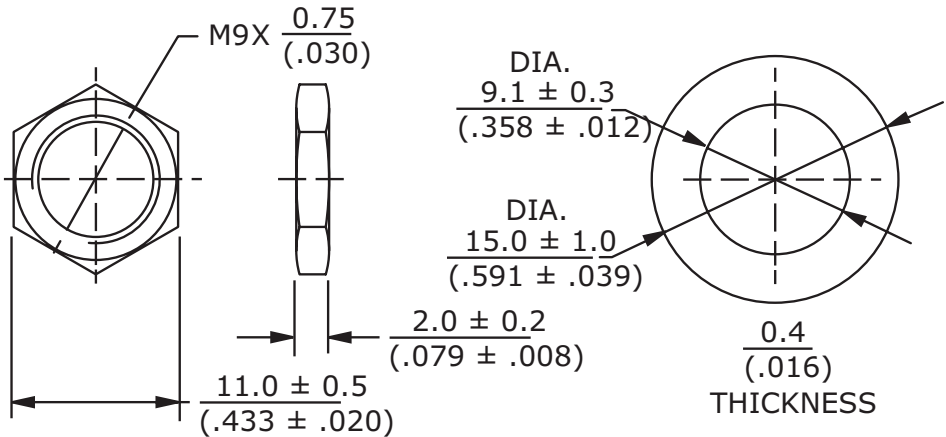
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| E    | terminals   | cold rolled steel | dark tin      |



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 |

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



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