



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 = 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

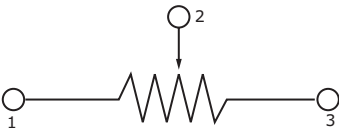
Resistance Taper:
A = Logarithmic
B = Linear
C = Reverse Logarithmic

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

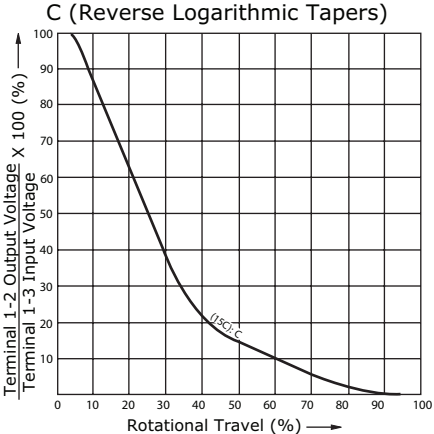
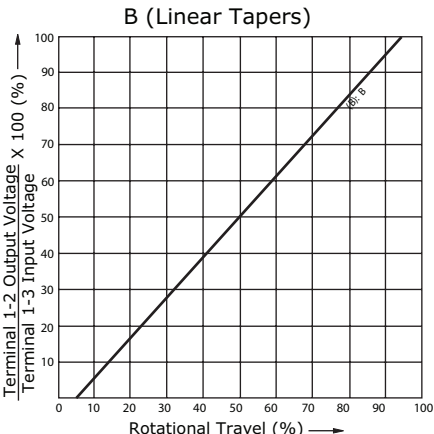
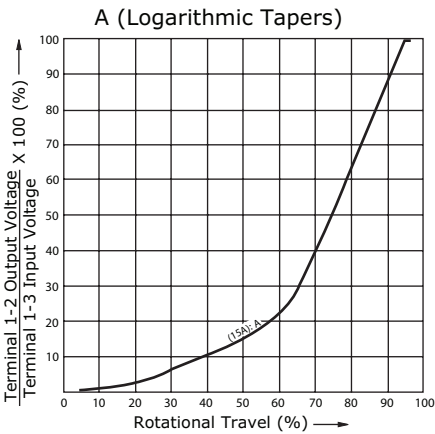
Shaft Length:
15 = 15 mm
20 = 20 mm
25 = 25 mm
30 = 30 mm

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: ± 0.3 mm
unless otherwise noted

D Type	K1 Type	K2 Type
$L \pm 0.5$ $(.020)$ F 4.5 $(.177)$ $6.0 +0.0/-0.1$ $(.236 +.000/-.004)$	$L \pm 0.5$ $(.020)$ A 18 TEETH KNURL $6.0 +0.0/-0.1$ $(.236 +.000/-.004)$	$L \pm 0.5$ $(.020)$ A 40 TEETH KNURL 1.5 $(.059)$ 3.1 $(.122)$ $6.0 +0.0/-0.1$ $(.236 +.000/-.004)$ 0.7 $(.028)$

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

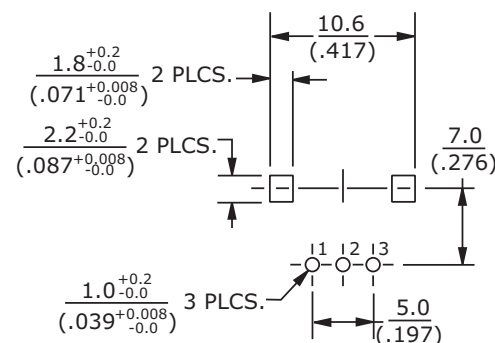
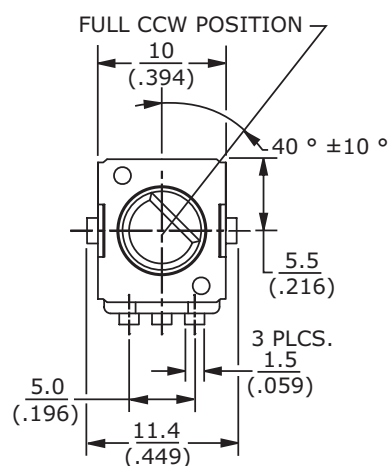
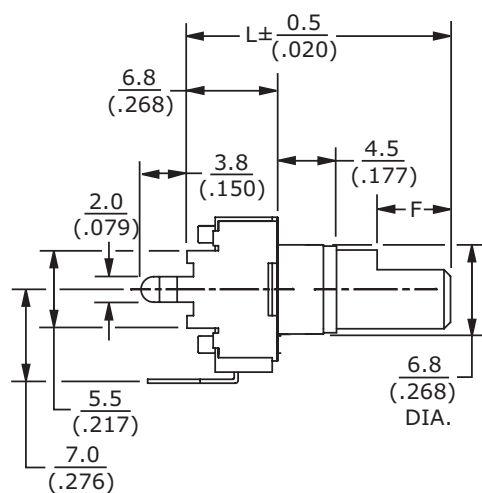
	15K1	20K1	25K1	30K1
L	15	20	25	30
A	6	7	12	12

	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:
 $X \leq 10$: ± 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

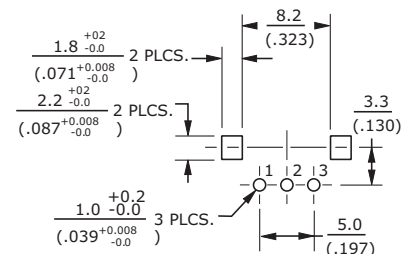
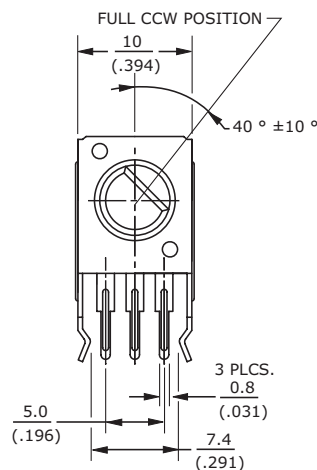
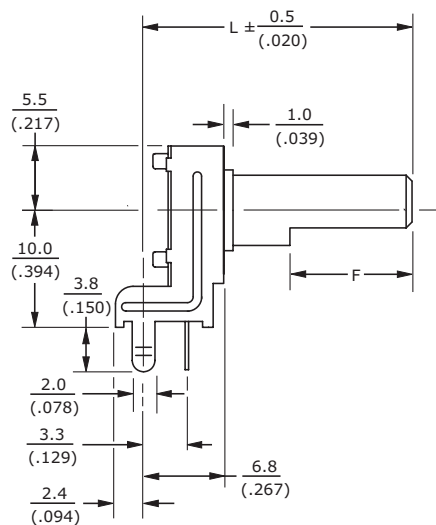
MECHANICAL DRAWING (VERTICAL/SIDE MOUNT, BUSHINGLESS, 10 MM HEIGHT)

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

Recommended PCB Layout
Top View

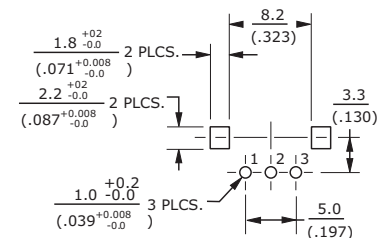
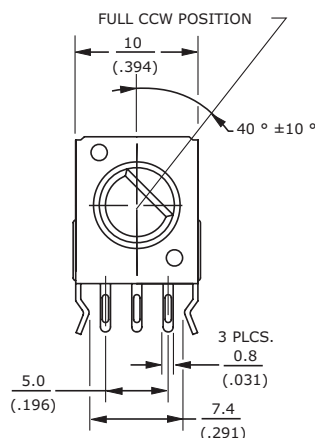
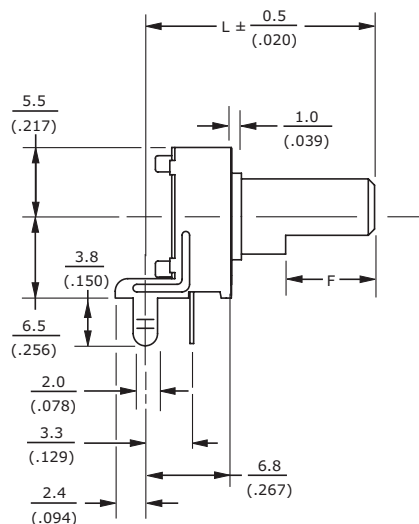
MECHANICAL DRAWING (VERTICAL/SIDE MOUNT, BUSHINGLESS, 6.5 MM HEIGHT)

units: mm [inch]

tolerance:

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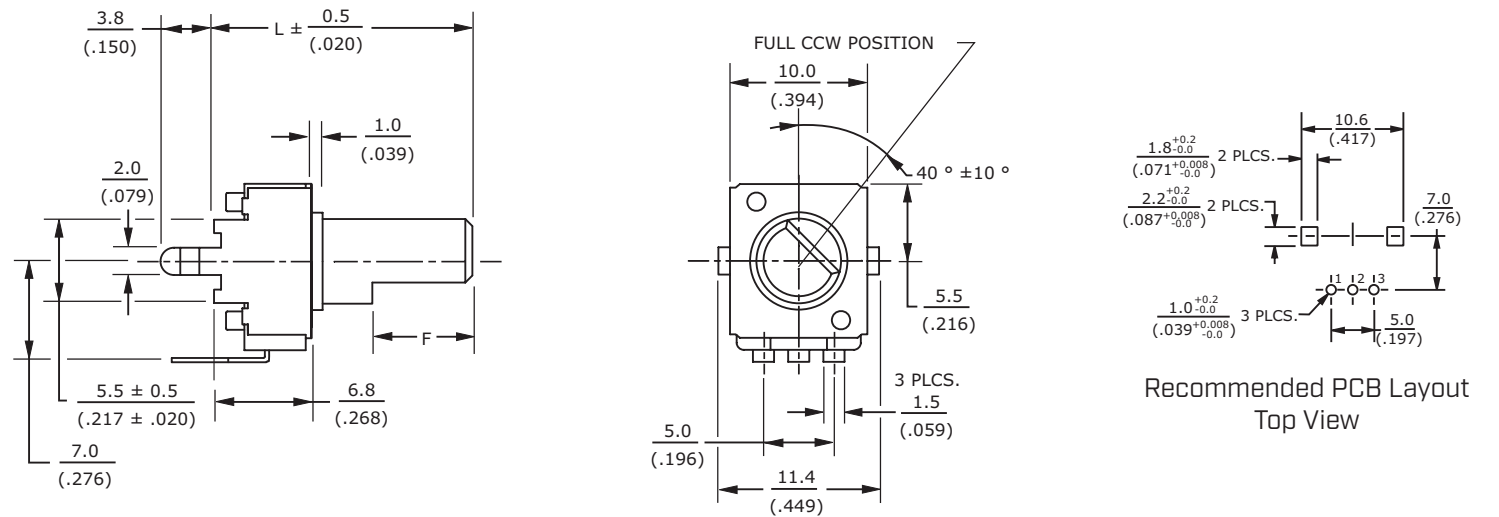
unless otherwise noted

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

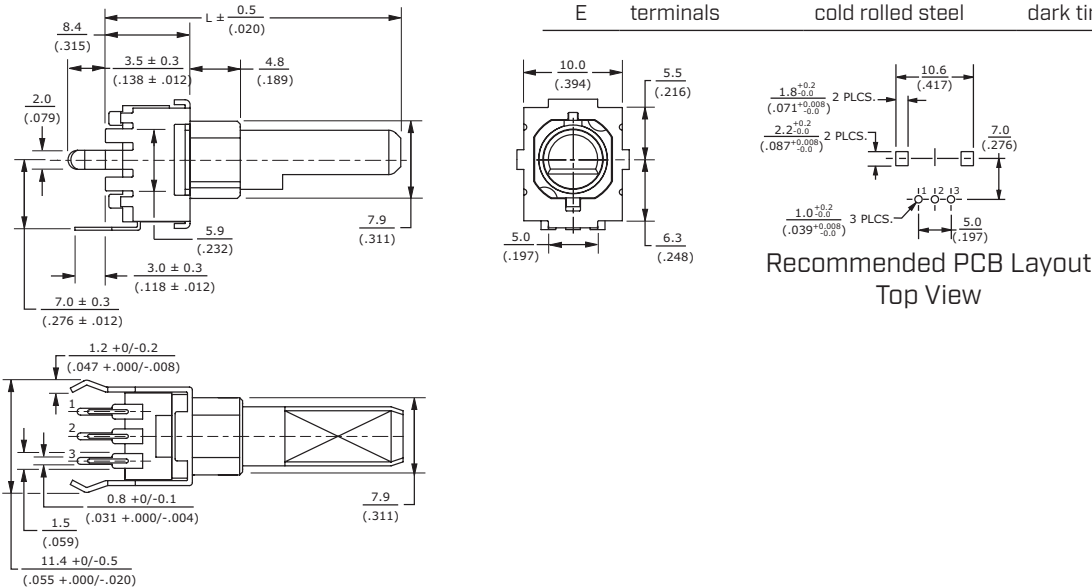
ITEM	DESCRIPTION	MATERIAL	PLATING/COLOR
A	base	PBT [UL94V-0]	black
B	shaft	PC [UL94V-0]	black
C	reed	nickel-zinc alloy	
D	bracket	iron	bright tin
E	terminals	cold rolled steel	dark tin



MECHANICAL DRAWING (HORIZONTAL/REAR MOUNT W/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



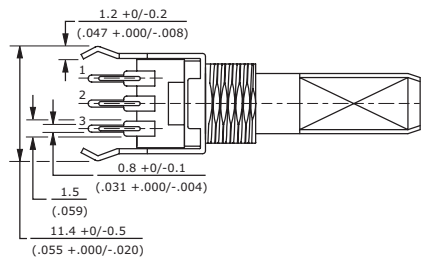
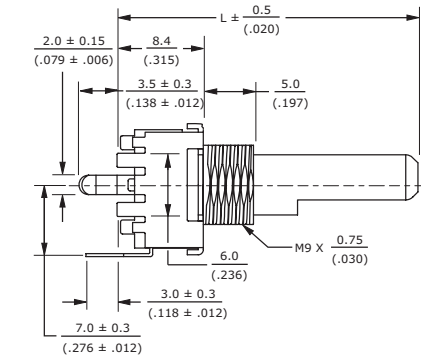
MECHANICAL DRAWING (HORIZONTAL/REAR MOUNT W/METAL THREADED BUSHING)

units: mm [inch]

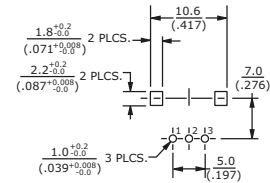
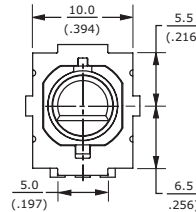
tolerance:

 $X \leq 10$: ± 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

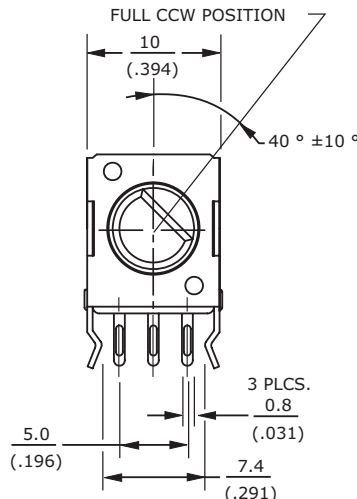
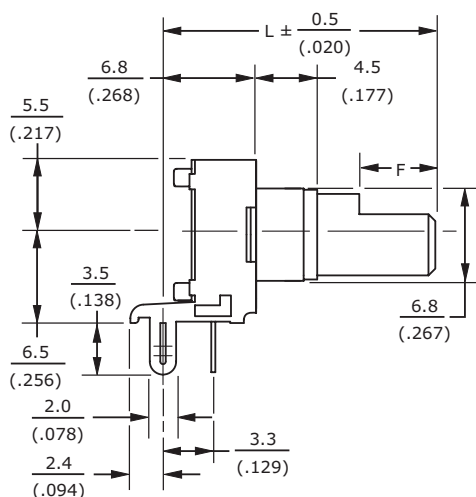
MECHANICAL DRAWING (VERTICAL/SIDE MNT W/SLEEVE BUSHING, 6.5 MM HEIGHT)

units: mm [inch]

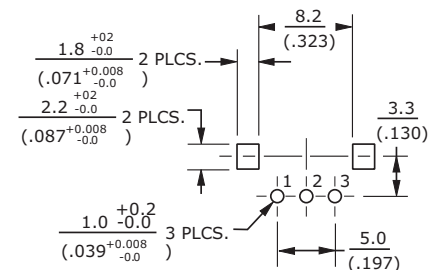
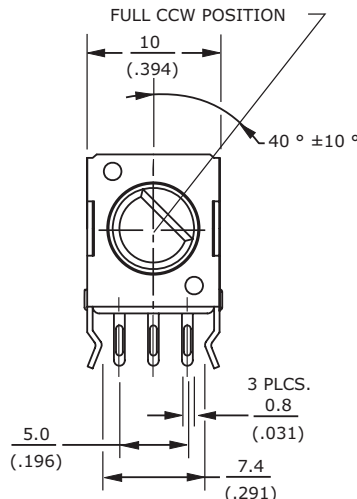
tolerance:

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

unless otherwise noted



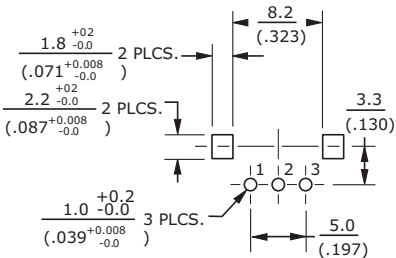
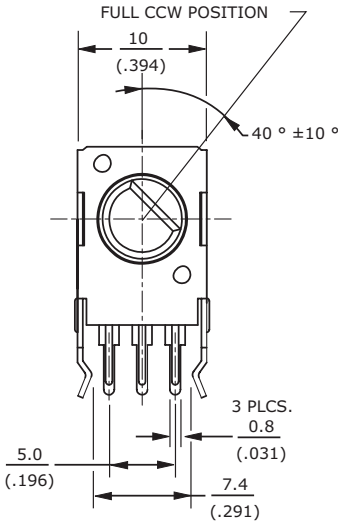
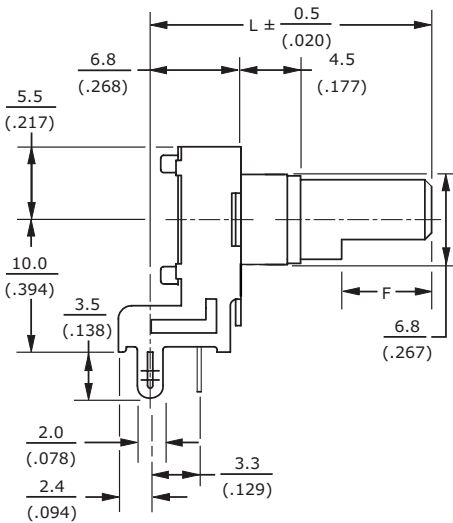
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B	shaft	PC [UL94V-0]	black
C	reed	nickel-zinc alloy	
D	bracket	iron	bright tin
E	terminals	cold rolled steel	dark tin

Recommended PCB Layout
Top View

MECHANICAL DRAWING (VERTICAL/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

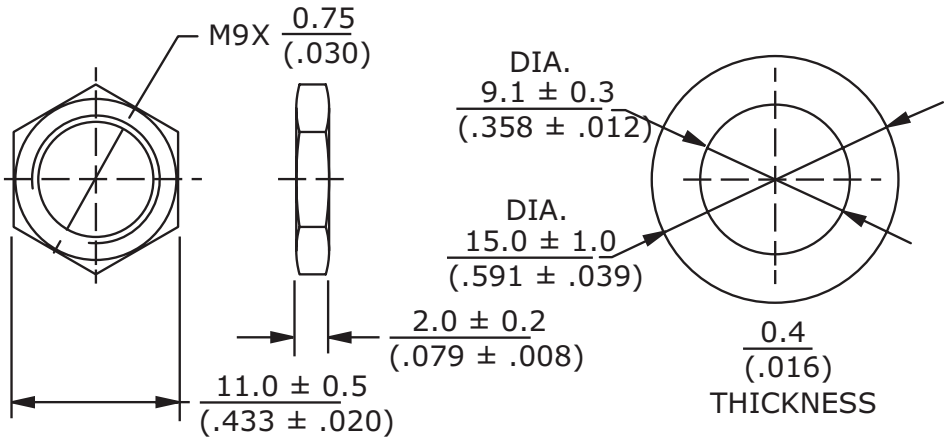
ITEM	DESCRIPTION	MATERIAL	PLATING/COLOR
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C	reed	nickel-zinc alloy	
D	bracket	iron	bright tin
E	terminals	cold rolled steel	dark tin



Recommended PCB Layout
Top View

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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