CUDEVICES

SERIES: PTN10 | DESCRIPTION: ROTARY POTENTIOMETER

FEATURES

- carbon element
- dust proof enclosure
- multiple rotor options
- linear, logarithmic, and reverse logarithmic tapers



RoHS

SPECIFICATIONS

parameter	conditions/description	min	typ	max	units
maximum operating voltage				200	Vdc
power rating	at 70°C			0.15	W
taper	linear, logarithmic, and reverse logarithmic				
standard resistance range	see Resistance Table	1.0		2,000	kΩ
standard resistance tolerance	±10% or ±20%, see Part Number Key				
residual resistance				10	Ω
sliding noise				68	mV
operating temperature		-10		70	°C
hand soldering	for 3 seconds max			350	°C
wave soldering	for 5±1 seconds	255	260	265	°C
RoHS	yes				

MECHANICAL

parameter	conditions/description	min	typ	max	units
mechanical angle		225	235	245	°
rotational torque		10		80	gf-cm
stop strength		400			gf-cm
rotational life				10,000	cycles
weight	varies by model	0.5		0.7	g

PART NUMBER KEY

PTN10 - X XX X X XX

Base Number

Terminal Configuration:
A = Vertical, Straight Inward Terminals
B = Vertical, Crimped Terminals
C = Vertical, Straight Outward Terminals
D = Horizontal, Crimped Terminals
E = Horizontal, Straight Terminals

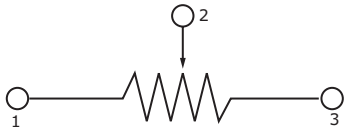
Resistance:
01 = 1 kΩ
02 = 2 kΩ
05 = 5 kΩ
10 = 10 kΩ
20 = 20 kΩ
25 = 25 kΩ
50 = 50 kΩ
100 = 100 kΩ
200 = 200 kΩ
500 = 500 kΩ
11 = 1 MΩ
22 = 2 MΩ

Rotor Type:
S = Screwdriver
H = Hexagonal
C = Cross Slot
D = D-Cut

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

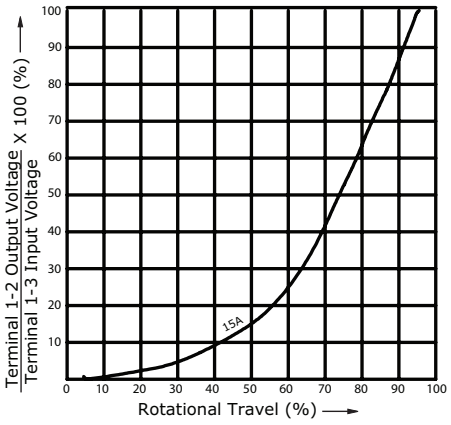
Tolerance:
10 = ±10%
20 = ±20%

SCHEMATIC/TAPERS

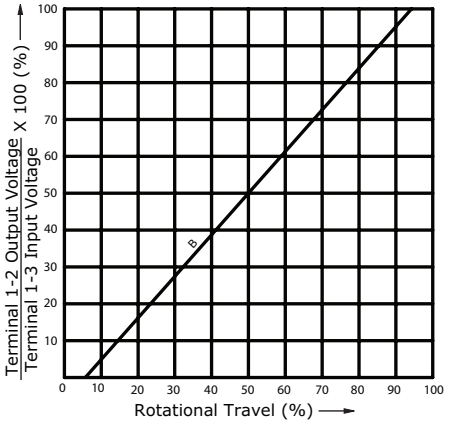


Resistance Table	
Resistance (KΩ)	Code
1	01
2	02
5	05
10	10
20	20
25	25
50	50
100	100
200	200
500	500
1,000	11
2,000	22

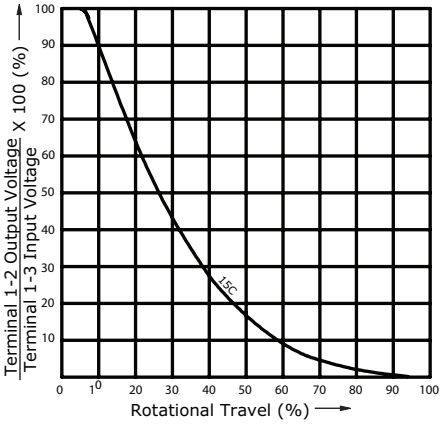
A (Logarithmic Tapers)



B (Linear Tapers)

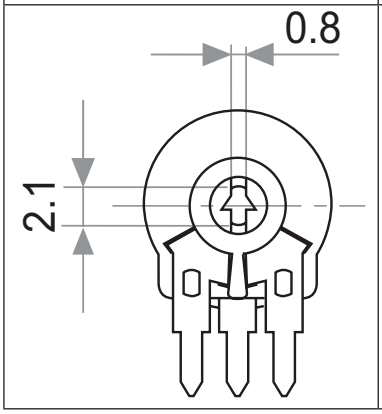
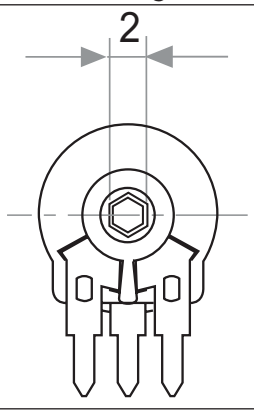
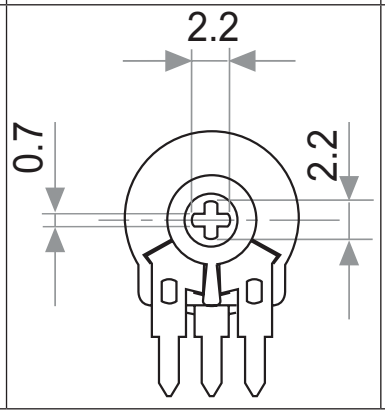
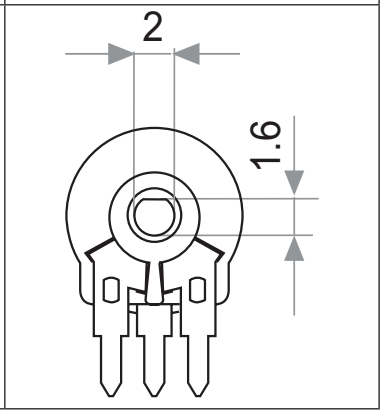


C (Reverse Logarithmic Tapers)



ROTOR TYPE

units: mm
tolerance: ±0.3 mm
unless otherwise noted

S = Screwdriver	H = Hexagonal	C = Cross Slot	D = D-Cut
			

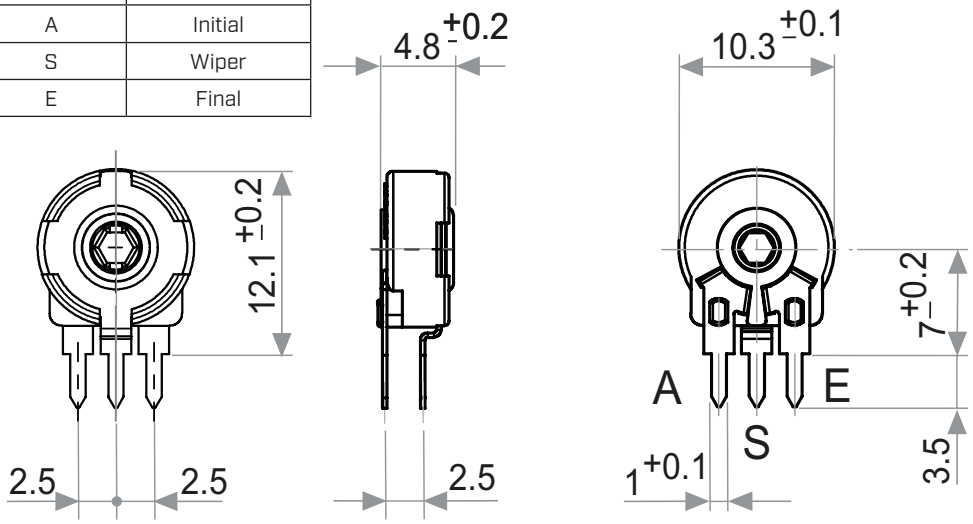
Note: Default delivery is at initial position of wiper.

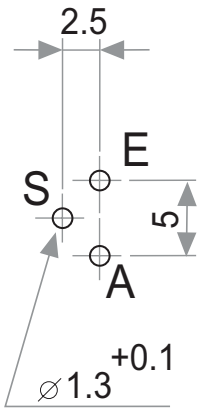
MECHANICAL DRAWING (VERTICAL, STRAIGHT INWARD TERMINALS)

units: mm
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	housing	PA6 (UL94HB)	black
B	terminals	steel	tin
C	reed	tin bronze	

TERMINAL CONNECTIONS	
TERMINAL	DESCRIPTION
A	Initial
S	Wiper
E	Final





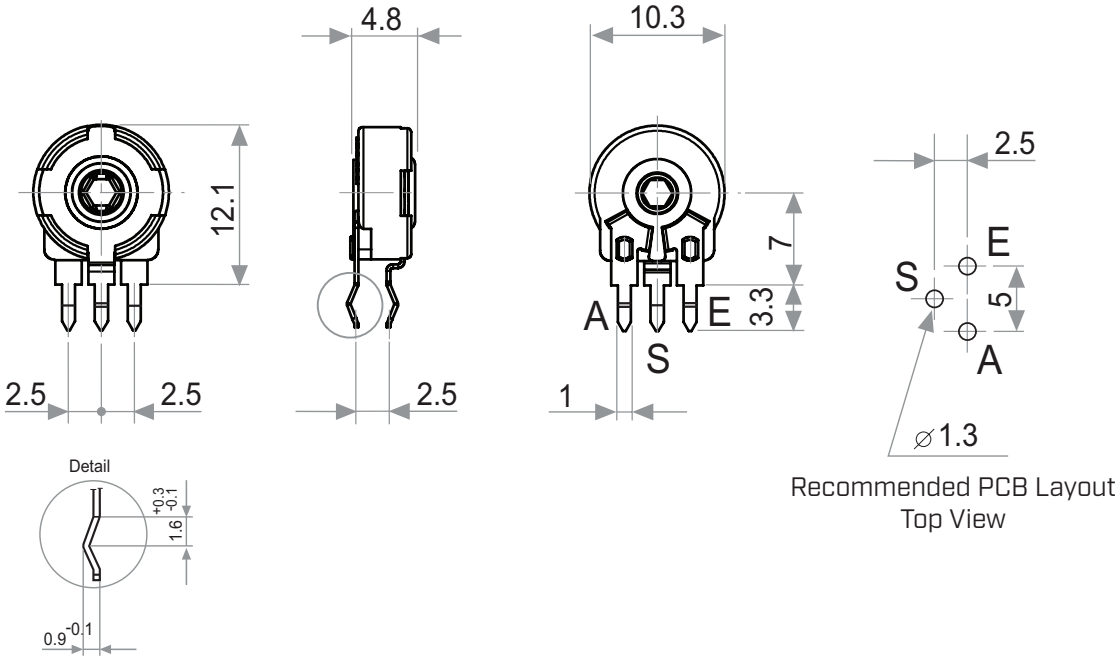
Recommended PCB Layout
Top View

MECHANICAL DRAWING (VERTICAL, CRIMPED TERMINALS)

units: mm
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	housing	PA6 (UL94HB)	black
B	terminals	steel	tin
C	reed	tin bronze	

TERMINAL CONNECTIONS	
TERMINAL	DESCRIPTION
A	Initial
S	Wiper
E	Final



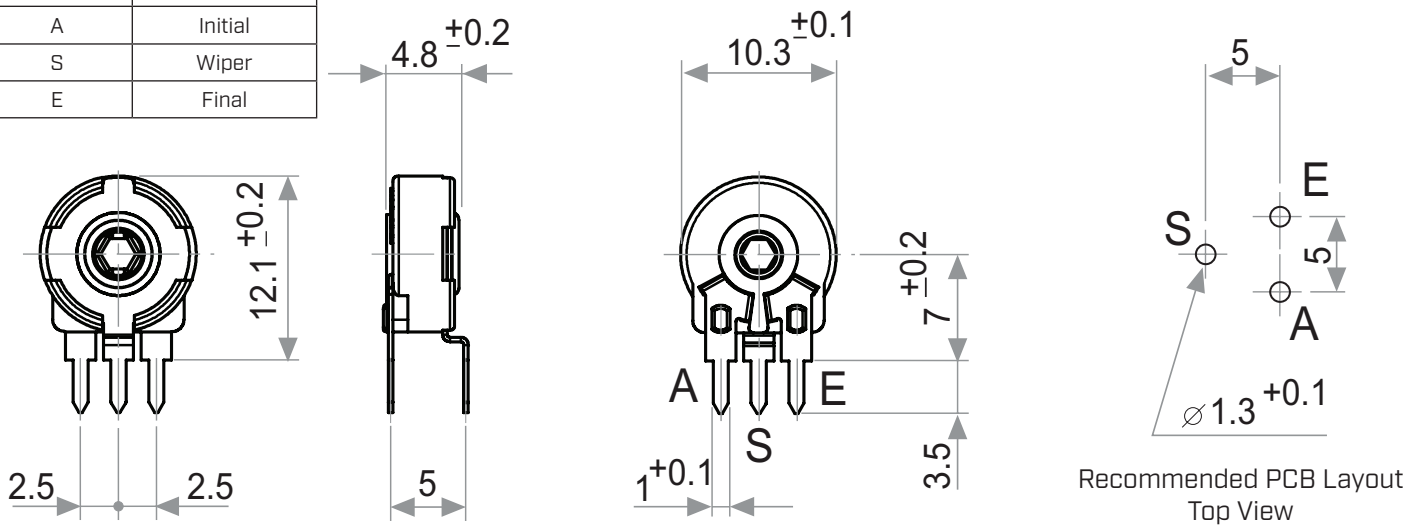
Recommended PCB Layout
Top View

MECHANICAL DRAWING (VERTICAL, STRAIGHT OUTWARD TERMINALS)

units: mm
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	housing	PA6 (UL94HB)	black
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C	reed	tin bronze	

TERMINAL CONNECTIONS	
TERMINAL	DESCRIPTION
A	Initial
S	Wiper
E	Final



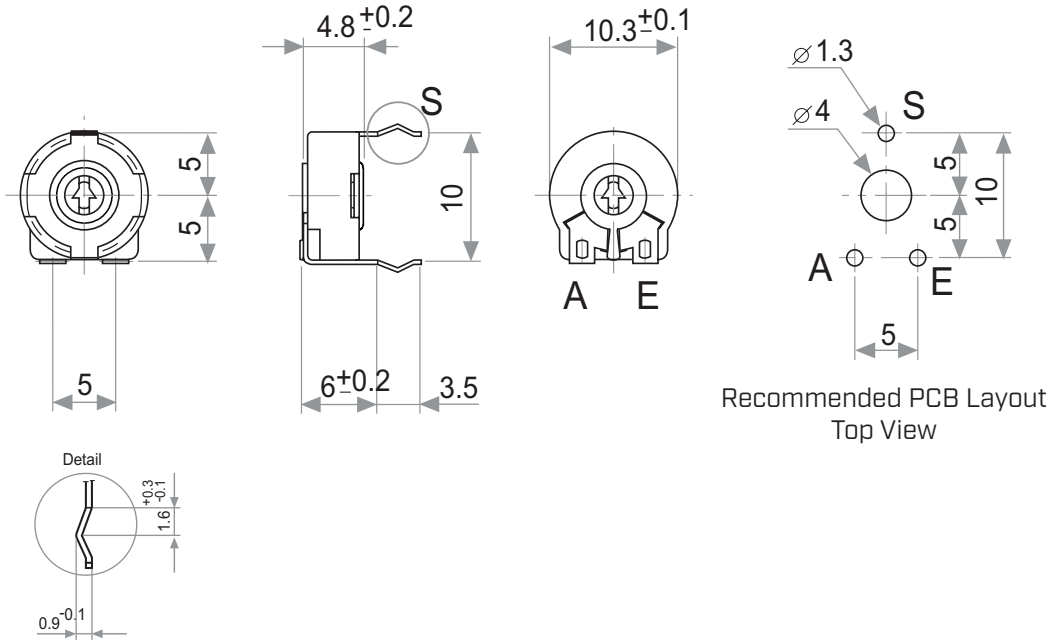
Recommended PCB Layout
Top View

MECHANICAL DRAWING (HORIZONTAL, CRIMPED TERMINALS)

units: mm
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	housing	PA6 (UL94HB)	black
B	terminals	steel	tin
C	reed	tin bronze	

TERMINAL CONNECTIONS	
TERMINAL	DESCRIPTION
A	Initial
S	Wiper
E	Final



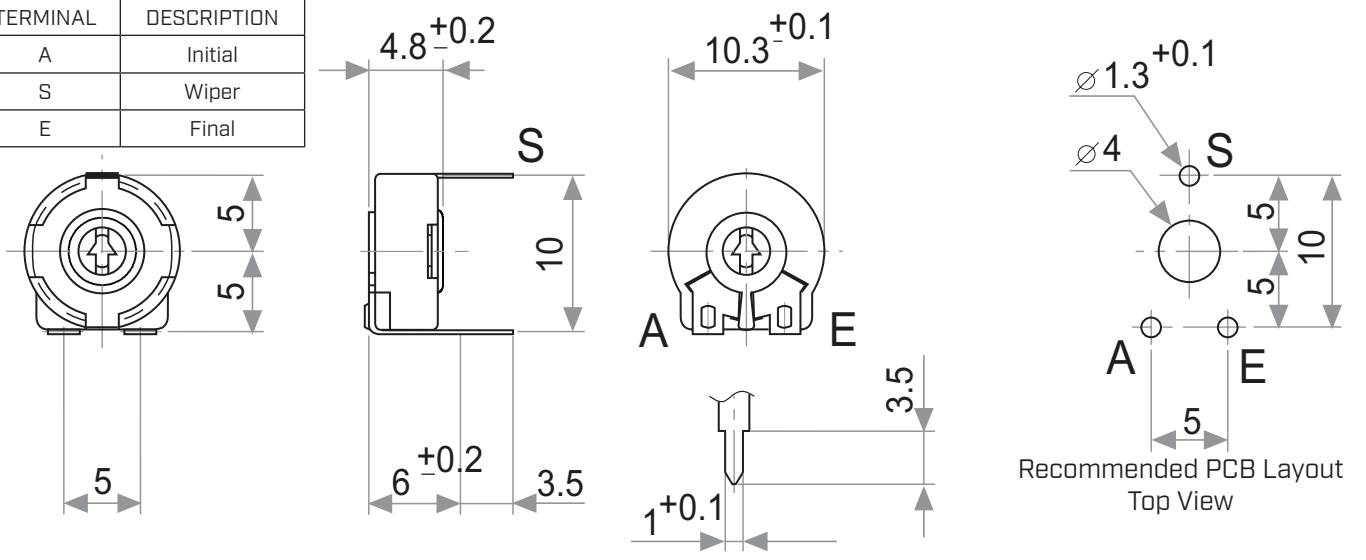
Recommended PCB Layout
Top View

MECHANICAL DRAWING (HORIZONTAL, STRAIGHT TERMINALS)

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

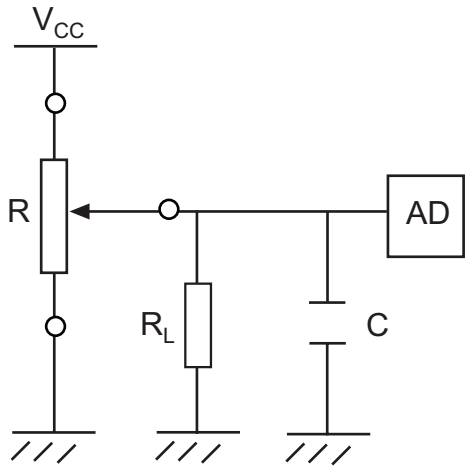
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TERMINAL CONNECTIONS	
TERMINAL	DESCRIPTION
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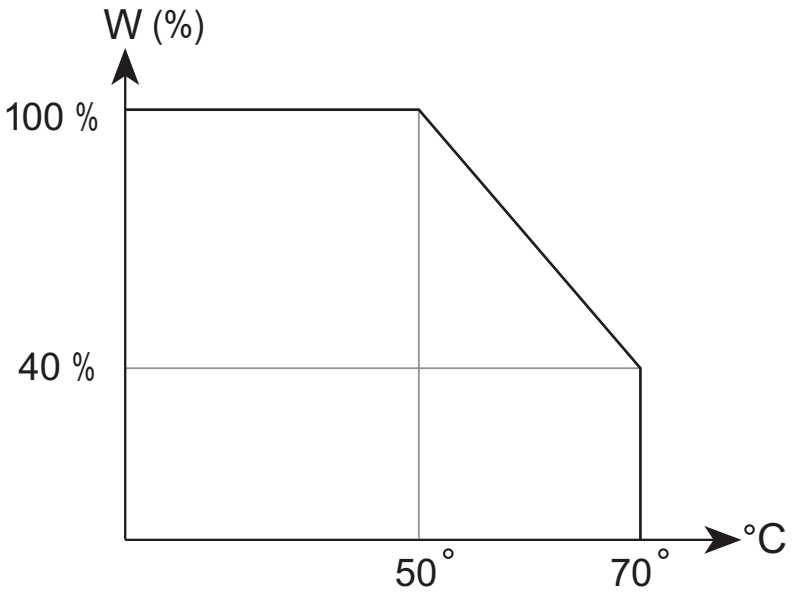
Recommended PCB Layout
Top View

RECOMMENDED CIRCUIT



$R_L \approx 100 \times R$

POWER DERATING CURVE



REVISION HISTORY

rev.	description	date
1.0	initial release	06/22/2022
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.

CUI Devices offers a one (1) year limited warranty. Complete warranty information is listed on our website.

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