

**SERIES:** PTN09X | **DESCRIPTION:** ROTARY POTENTIOMETER

**FEATURES**

- ganging up to 4 sections
- center detent option
- carbon element
- multiple shaft options

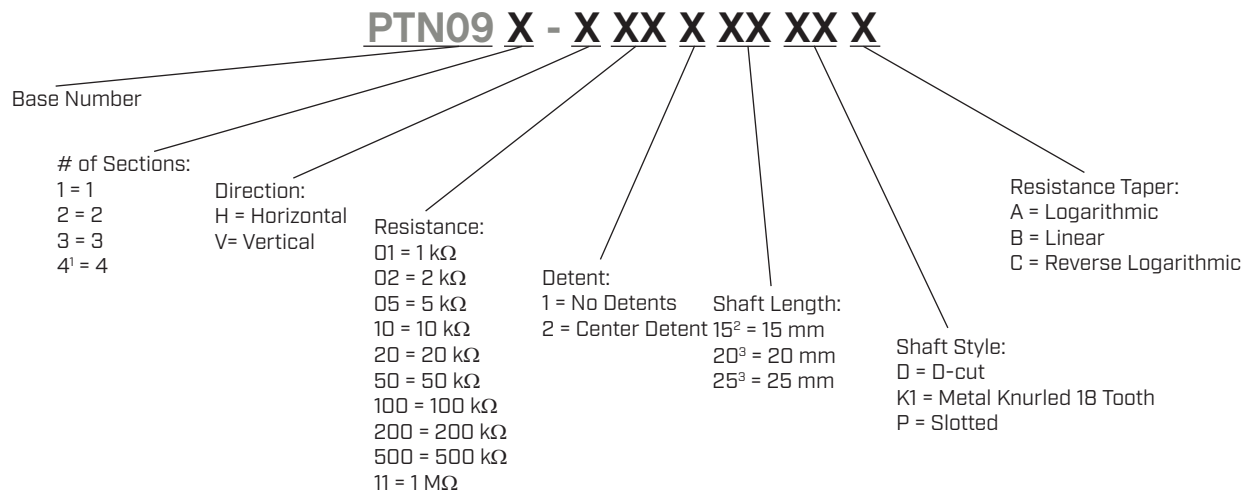

**SPECIFICATIONS**

| parameter                     | conditions/description                       | min | typ      | max      | units              |
|-------------------------------|--|-----|----------|----------|--------------------|
| maximum operating voltage     |  |     |          | 10<br>50 | Vdc<br>Vac         |
| power rating                  |  |     |          | 0.05     | W                  |
| taper                         | linear, logarithmic, and reverse logarithmic |     |          |          |                    |
| standard resistance range     | see Resistance Table                         | 1   |          | 1,000    | k $\Omega$         |
| standard resistance tolerance |  |     | $\pm 20$ |          | %                  |
| sliding noise                 |  |     |          | 68       | mV                 |
| operating temperature         |  | -10 |          | 75       | $^{\circ}\text{C}$ |
| hand soldering                | for 3 seconds max                            |     |          | 350      | $^{\circ}\text{C}$ |
| wave soldering                | for 5 seconds max                            |     |          | 260      | $^{\circ}\text{C}$ |
| RoHS                          | yes  |     |          |          |                    |

**MECHANICAL**

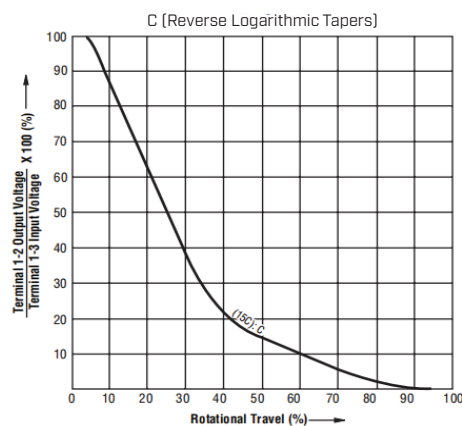
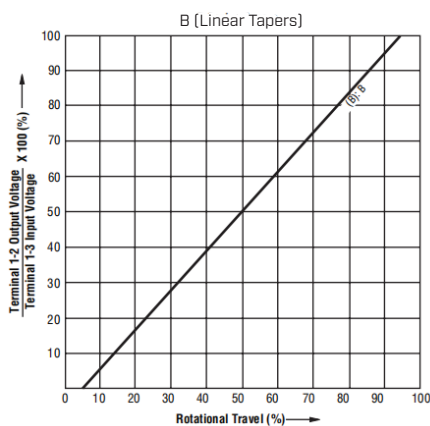
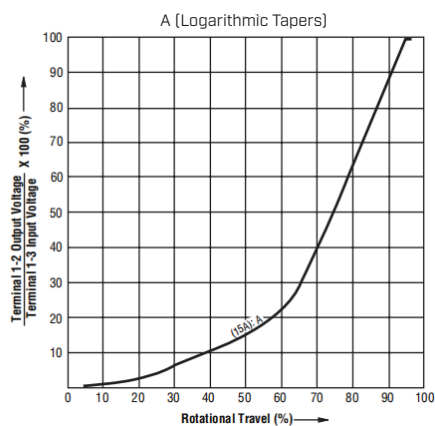
| parameter         | conditions/description | min | typ    | max | units      |
|-------------------|------------------------|-----|--------|-----|------------|
| mechanical angle  |                        | 290 | 300    | 300 | $^{\circ}$ |
| rotational torque |                        | 10  |        | 250 | gf-cm      |
| stop strength     |                        | 4   |        |     | kg-cm      |
| shaft wobble      | 0.5xL/30 mm p-p max    |     |        |     |            |
| rotational life   |                        |     | 10,000 |     | cycles     |
| weight            |                        |     | 5      |     | g          |

## PART NUMBER KEY



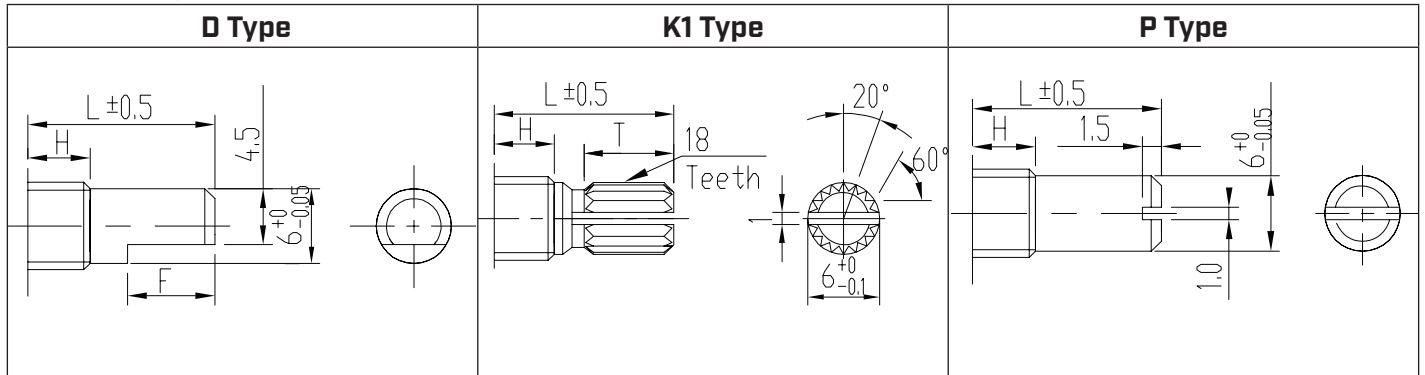
Note:  
 1. 4 sections only available in horizontal version.  
 2. 5 mm bushing length offered on 15 mm shaft only.  
 3. 7 mm bushing length offered on 20 & 25 mm shafts only.

## TAPERS



## SHAFT TYPES

units: mm  
 tolerance:  
 $X \leq 10.00$ :  $\pm 0.30$  mm  
 $10.00 < X \leq 30.00$ :  $\pm 0.50$  mm  
 $30.00 < X \leq 100.00$ :  $\pm 1.0$  mm  
 unless otherwise noted



|   |    |    |    |
|---|----|----|----|
| H | 5  | 7  | 7  |
| L | 15 | 20 | 25 |
| F | 7  | 12 | 12 |

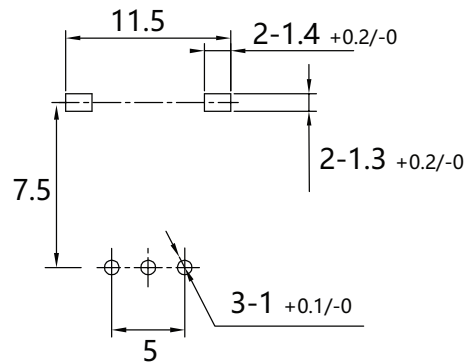
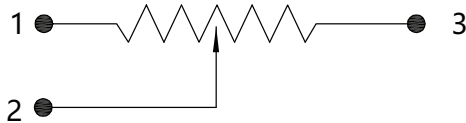
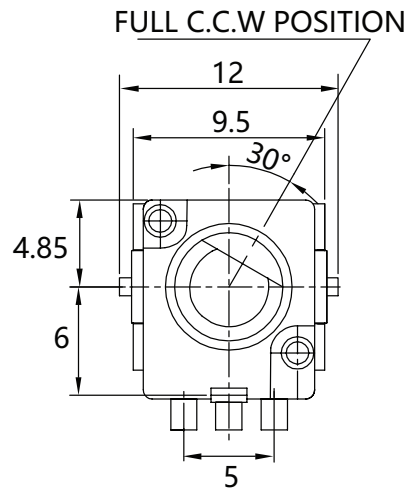
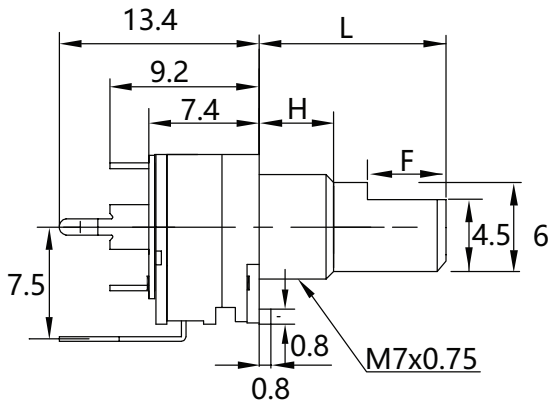
|   |    |    |    |
|---|----|----|----|
| H | 5  | 7  | 7  |
| L | 15 | 20 | 25 |
| F | 6  | 10 | 12 |

|   |    |    |    |
|---|----|----|----|
| H | 5  | 7  | 7  |
| L | 15 | 20 | 25 |

## MECHANICAL DRAWING (VERTICAL, 1 SECTION)

units: mm  
 tolerance:  
 $X \leq 10.00$ :  $\pm 0.30$  mm  
 $10.00 < X \leq 30.00$ :  $\pm 0.50$  mm  
 $30.00 < X \leq 100.00$ :  $\pm 1.0$  mm  
 unless otherwise noted

| DESCRIPTION   | MATERIAL          |
|---------------|-------------------|
| shaft         | aluminum          |
| bushing       | zinc alloy        |
| driving plate | POM               |
| rivet         | aluminum          |
| reed          | phosphor copper   |
| base          | PBT               |
| carbon plate  | FR4 substrate     |
| terminal      | cold rolled strip |
| cover plate   | PBT               |



Recommended PCB Layout  
 Top View

## MECHANICAL DRAWING (VERTICAL, 2 SECTIONS)

units: mm

tolerance:

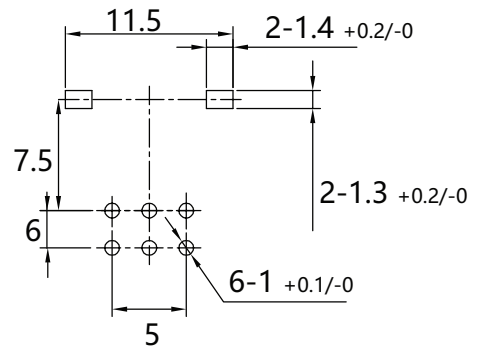
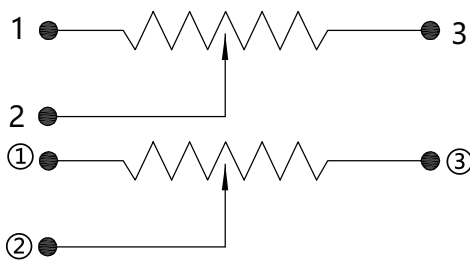
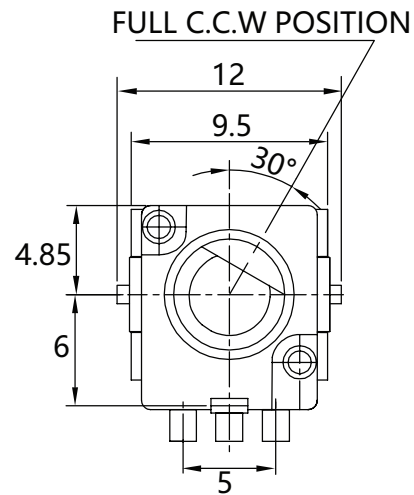
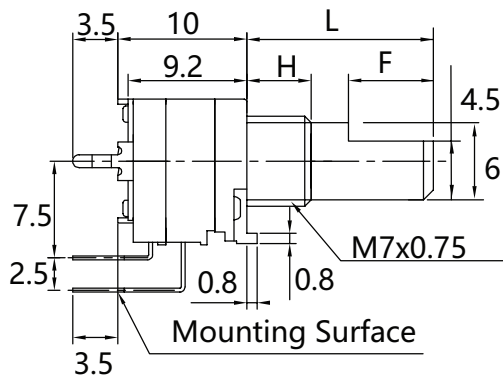
$X \leq 10.00$ :  $\pm 0.30$  mm

$10.00 < X \leq 30.00$ :  $\pm 0.50$  mm

$30.00 < X \leq 100.00$ :  $\pm 1.0$  mm

unless otherwise noted

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| base          | PBT               |
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| terminal      | cold rolled strip |
| cover plate   | PBT               |



Recommended PCB Layout  
Top View

## MECHANICAL DRAWING (VERTICAL, 3 SECTIONS)

units: mm

tolerance:

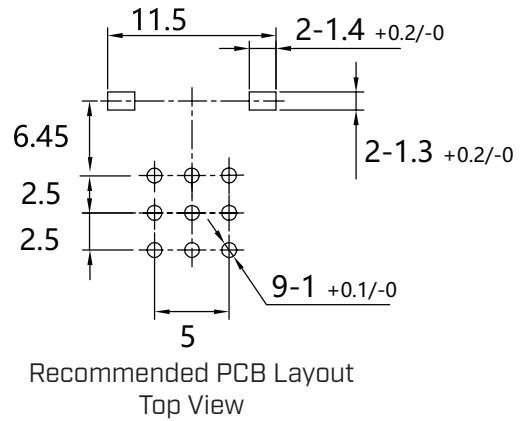
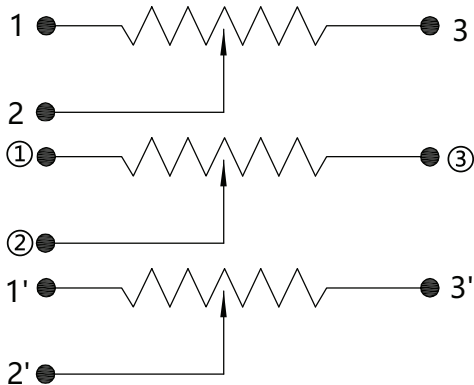
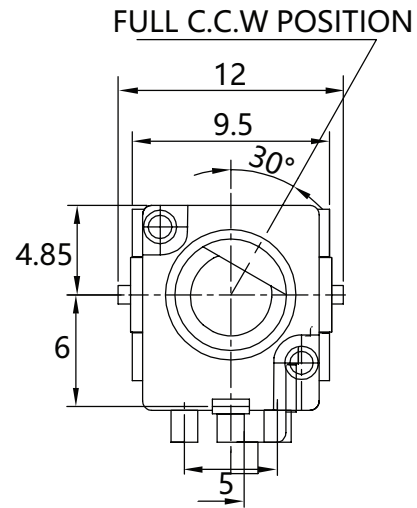
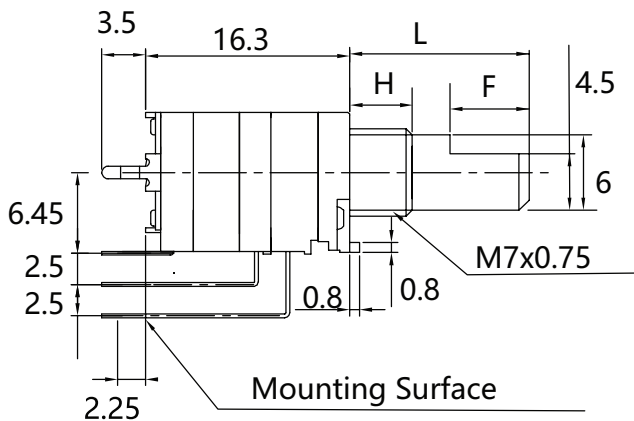
$X \leq 10.00$ :  $\pm 0.30$  mm

$10.00 < X \leq 30.00$ :  $\pm 0.50$  mm

$30.00 < X \leq 100.00$ :  $\pm 1.0$  mm

unless otherwise noted

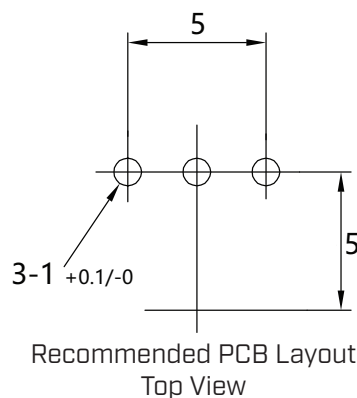
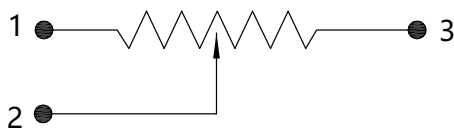
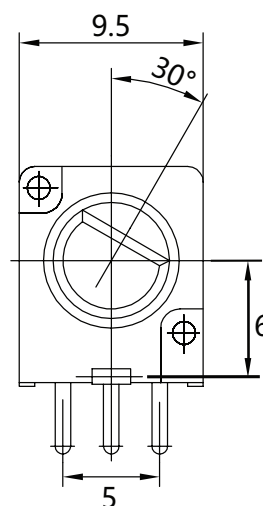
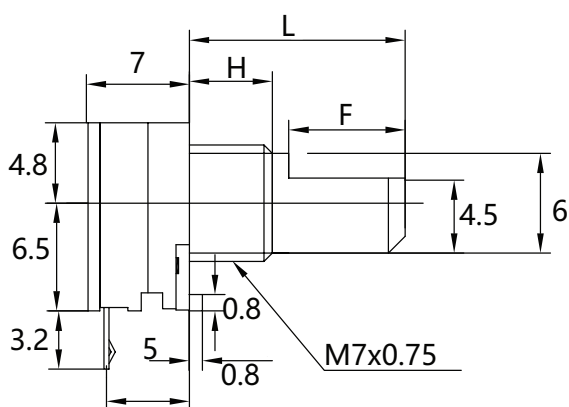
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|---------------|-------------------|
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| driving plate | POM               |
| rivet         | aluminum          |
| reed          | phosphor copper   |
| base          | PBT               |
| carbon plate  | FR4 substrate     |
| terminal      | cold rolled strip |
| cover plate   | PBT               |



## MECHANICAL DRAWING (HORIZONTAL, 1 SECTION)

units: mm  
 tolerance:  
 $X \leq 10.00$ :  $\pm 0.30$  mm  
 $10.00 < X \leq 30.00$ :  $\pm 0.50$  mm  
 $30.00 < X \leq 100.00$ :  $\pm 1.0$  mm  
 unless otherwise noted

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| reed          | phosphor copper   |
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| carbon plate  | FR4 substrate     |
| terminal      | cold rolled strip |
| cover plate   | PBT               |



## MECHANICAL DRAWING (HORIZONTAL, 2 SECTIONS)

units: mm

tolerance:

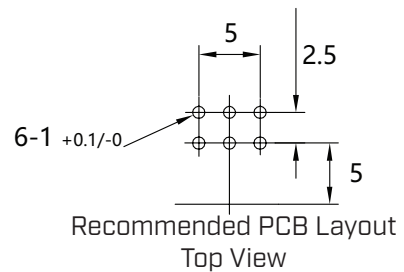
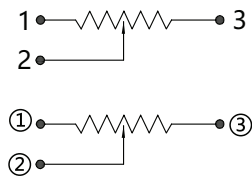
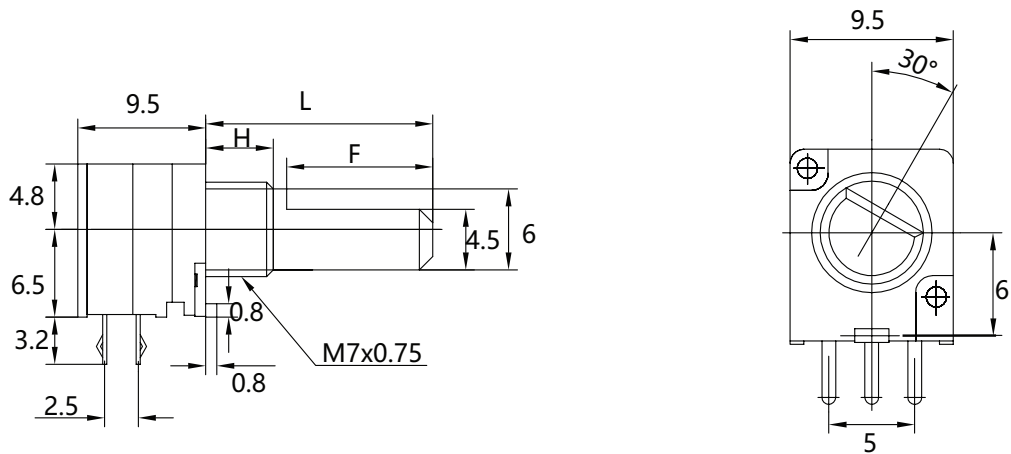
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unless otherwise noted

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| base          | PBT               |
| carbon plate  | FR4 substrate     |
| terminal      | cold rolled strip |
| cover plate   | PBT               |

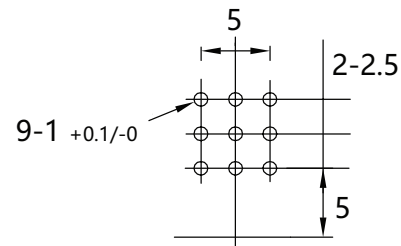
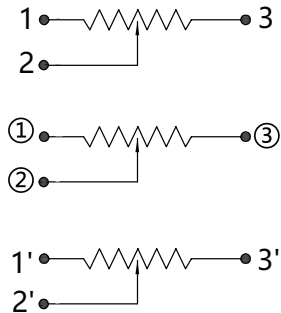
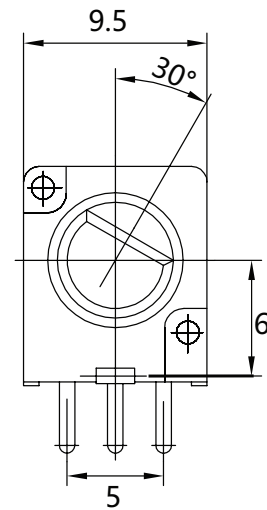
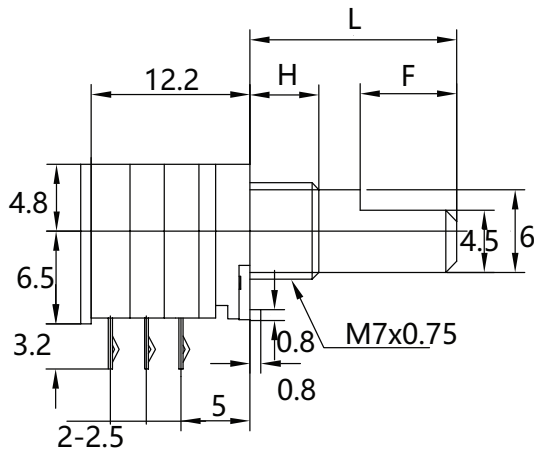




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| base          | PBT               |
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| terminal      | cold rolled strip |
| cover plate   | PBT               |



Recommended PCB Layout  
Top View

## MECHANICAL DRAWING (HORIZONTAL, 4 SECTIONS)

units: mm

tolerance:

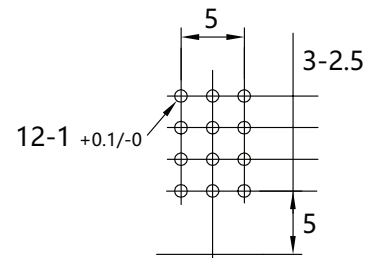
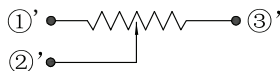
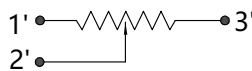
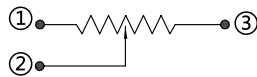
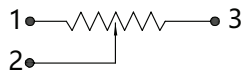
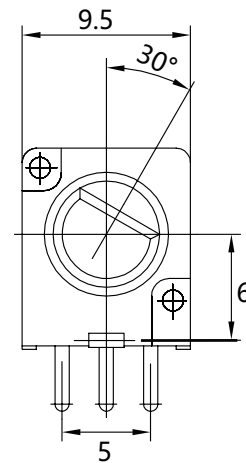
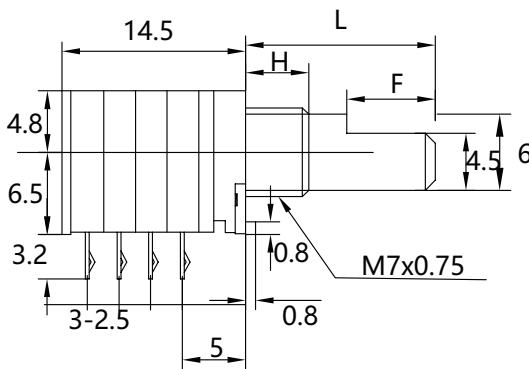
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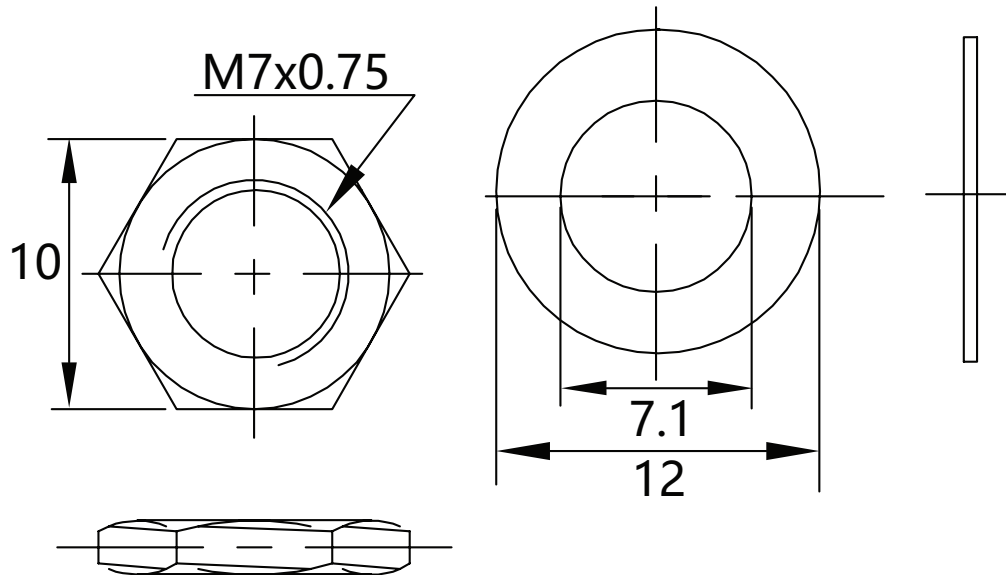
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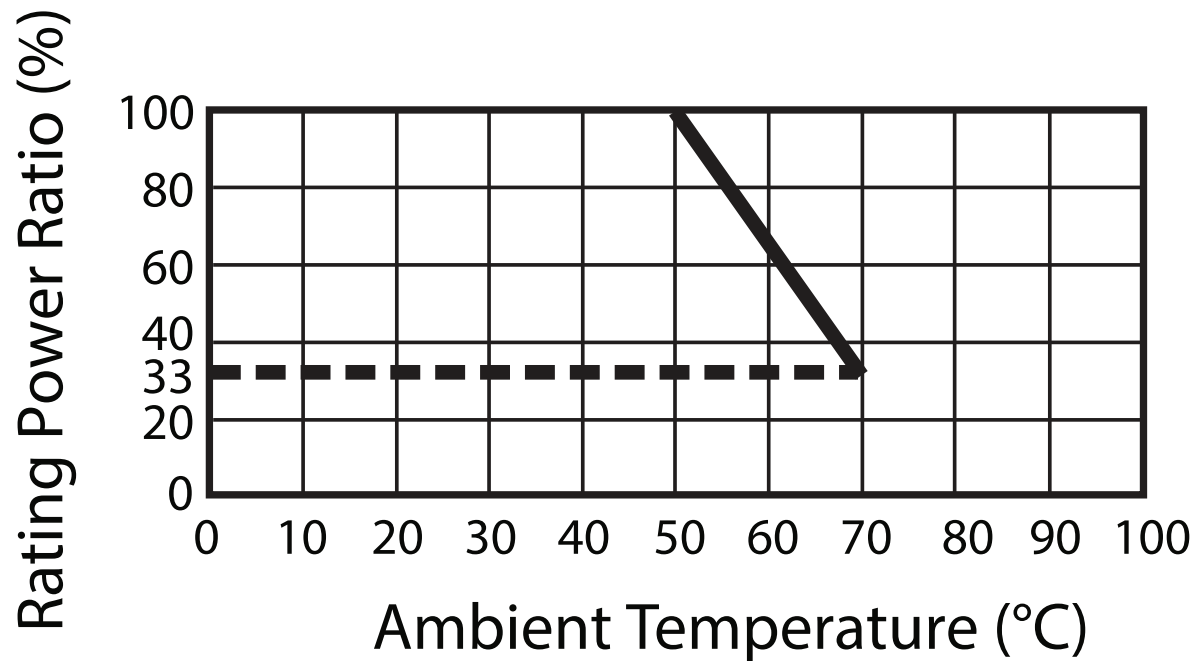
Recommended PCB Layout  
Top View

## MOUNTING HARDWARE

units: mm  
tolerance:  
 $X \leq 10.00$ :  $\pm 0.30$  mm  
unless otherwise noted



## POWER DERATING CURVE



## REVISION HISTORY

| rev. | description                       | date       |
|------|-----------------------------------|------------|
| 1.0  | initial release                   | 08/01/2024 |
| 1.01 | 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.

Same Sky products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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