

## 12mm Round, Single-Turn, Through-Hole Sealed Wirewound Trimmers



### Features

- 12mm round, single-turn, through-hole, sealed wirewound trimmers
- Top and side adjust styles available
- Low equivalent noise resistance
- High setting stability
- Low temperature coefficient
- Long rotational life
- Meets UL 94V-0 flammability requirements
- Sealed to withstand wave soldering and immersion cleaning processes

### Specifications

#### Electrical

<b>Standard Resistance Range</b>	10 $\Omega$ to 20k $\Omega$ (standard 1, 2 & 5 sequence)
<b>Resistance Tolerance</b>	$\pm 10\%$ standard
<b>End Resistance</b>	0.2% or 1 $\Omega$ , whichever is greater
<b>Resistance Taper</b>	Linear
<b>Peak Noise (C.R.V.)</b>	0.5% or 2 $\Omega$ , whichever is greater
<b>Power Rating</b>	0.5 watt at +70°C, 0 watt at +125°C
<b>Temperature Coefficient</b>	$\pm 50$ ppm/°C
<b>Insulation Resistance</b>	1,000M $\Omega$ minimum at 500VDC
<b>Dielectric Strength</b>	900VAC, 1 minute
<b>Adjustment Travel</b>	270° $\pm$ 10°

#### Mechanical

<b>Mechanical Travel</b>	300° $\pm$ 10°
<b>Shaft Torque</b>	30 to 300 gf•cm (0.42 to 4.16 oz•in)
<b>Stop Strength</b>	1 kgf•cm (13.86 oz•in) min.
<b>Flammability of Plastic Materials</b>	Meets UL 94V-0
<b>Nominal Weight</b>	1.5g (P); 2.4g (S, X)
<b>Marking</b>	Resistance code, date code, model type, terminal identification

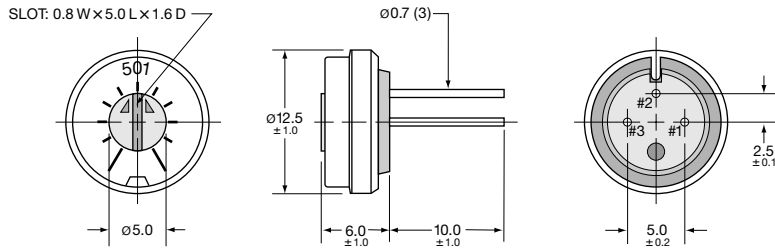
#### Environmental

<b>Temperature Range</b>	-55°C to +125°C
<b>Low Temperature Exposure</b>	-55°C, 1 hours $\Delta T/R \leq \pm 1\% + 0.05\Omega$
<b>High Temperature Exposure</b>	+125°C, 250 hours $\Delta T/R \leq \pm 1\% + 0.05\Omega$
<b>Load Life</b>	+70°C, 0.5 watt, 1,000 hours $\Delta T/R \leq \pm 2\%$
<b>Thermal Shock</b>	-55°C, +125°C, 30 minutes each, 5 cycles $\Delta T/R \leq \pm 1\% + 0.05\Omega$
<b>Humidity</b>	+40°C, 90-95% RH, 0.5 watt, 500 hours $\Delta T/R \leq \pm 2\%$
<b>Soldering Heat Resistance</b>	350°C, 5 seconds $\Delta T/R \leq \pm 1\% + 0.05\Omega$
<b>Seal Test</b>	+85°C, hot water for 1 minute
<b>Rotational Life</b>	200 cycles without discontinuity $\Delta T/R \leq \pm 2\%$

$\Delta T/R$  = Total Resistance Change; S.S. = Setting Stability (voltage ratio)

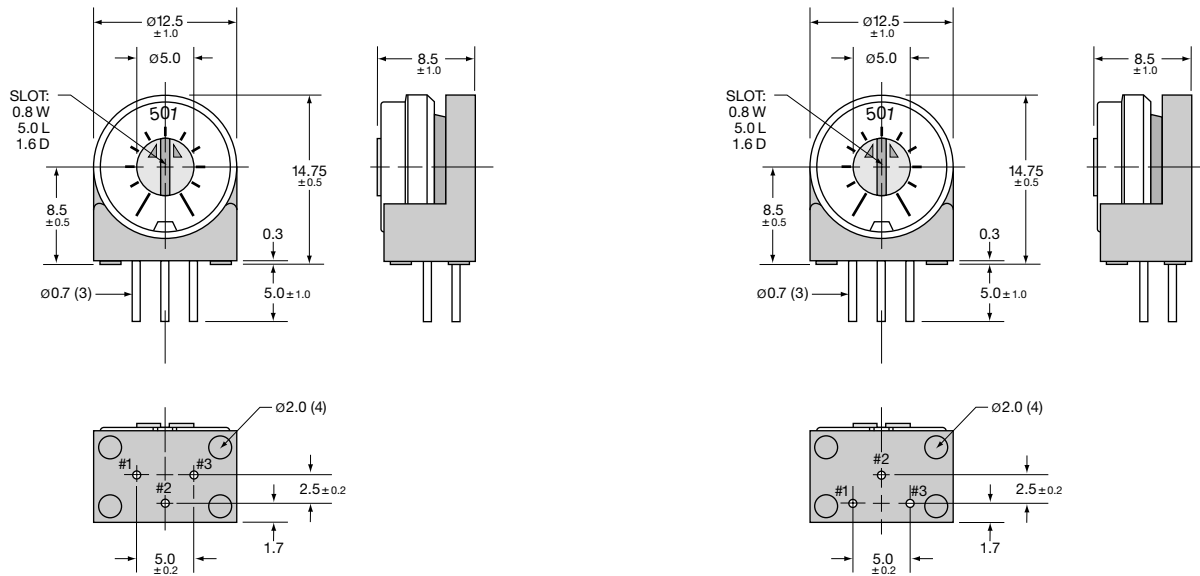
**RA12P**  
P Terminal Style, Single-Slot, Top Adjust

Unit: mm



**RA12S**  
S Terminal Style, Single-Slot, Side Adjust

**RA12X**  
X Terminal Style, Single-Slot, Side Adjust



Recommended PCB Layouts

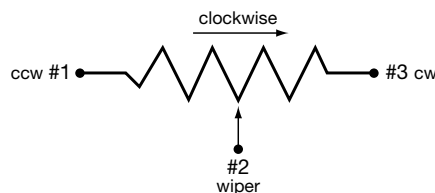
P & S Pin-Out

X Pin-Out

Unit: mm

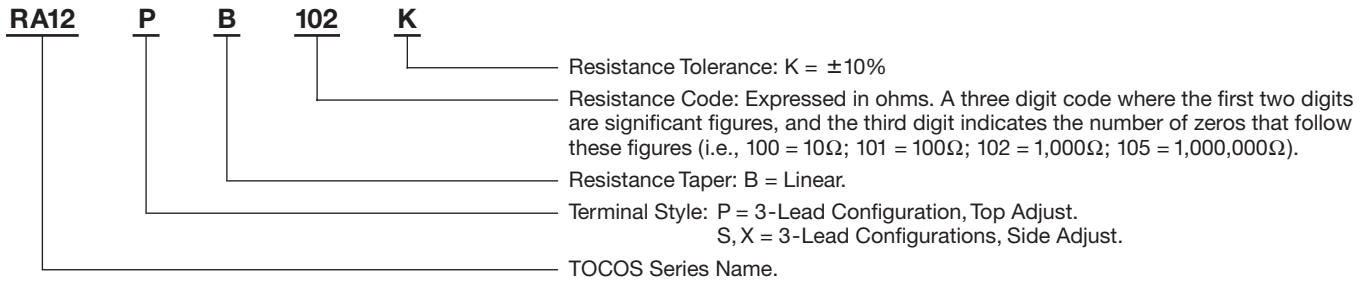


Electrical Schematic



## RA12 Series


## Part Numbering System




## Part Numbers

Nominal Resistance		Catalog No. Bulk	Resolution		Potentiometer Styles
Value ( $\Omega$ )	Code		Ohms ( $\Omega$ )	Percent (%)	


### RA12P Through-Hole, P Terminal Style, Single-Slot, Top Adjust

Value ( $\Omega$ )	Code	Catalog No. Bulk	Ohms ( $\Omega$ )	Percent (%)	 <b>RA12P</b>
10	100	RA12P B 100 K	0.11	1.13	
20	200	RA12P B 200 K	0.18	0.90	
50	500	RA12P B 500 K	0.34	0.69	
100	101	RA12P B 101 K	0.51	0.51	
200	201	RA12P B 201 K	0.81	0.41	
500	501	RA12P B 501 K	2.20	0.44	
1,000	102	RA12P B 102 K	3.90	0.39	
2,000	202	RA12P B 202 K	6.04	0.30	
5,000	502	RA12P B 502 K	10.4	0.20	
10,000	103	RA12P B 103 K	18.9	0.19	
20,000	203	RA12P B 203 K	27.6	0.14	

### RA12S Through-Hole, S Terminal Style, Single-Slot, Side Adjust

Value ( $\Omega$ )	Code	Catalog No. Bulk	Ohms ( $\Omega$ )	Percent (%)	 <b>RA12S</b>
10	100	RA12S B 100 K	0.11	1.13	
20	200	RA12S B 200 K	0.18	0.90	
50	500	RA12S B 500 K	0.34	0.69	
100	101	RA12S B 101 K	0.51	0.51	
200	201	RA12S B 201 K	0.81	0.41	
500	501	RA12S B 501 K	2.20	0.44	
1,000	102	RA12S B 102 K	3.90	0.39	
2,000	202	RA12S B 202 K	6.04	0.30	
5,000	502	RA12S B 502 K	10.4	0.20	
10,000	103	RA12S B 103 K	18.9	0.19	
20,000	203	RA12S B 203 K	27.6	0.14	

### RA12X Through-Hole, X Terminal Style, Single-Slot, Side Adjust

Value ( $\Omega$ )	Code	Catalog No. Bulk	Ohms ( $\Omega$ )	Percent (%)	 <b>RA12X</b>
10	100	RA12X B 100 K	0.11	1.13	
20	200	RA12X B 200 K	0.18	0.90	
50	500	RA12X B 500 K	0.34	0.69	
100	101	RA12X B 101 K	0.51	0.51	
200	201	RA12X B 201 K	0.81	0.41	
500	501	RA12X B 501 K	2.20	0.44	
1,000	102	RA12X B 102 K	3.90	0.39	
2,000	202	RA12X B 202 K	6.04	0.30	
5,000	502	RA12X B 502 K	10.4	0.20	
10,000	103	RA12X B 103 K	18.9	0.19	
20,000	203	RA12X B 203 K	27.6	0.14	

## Packaging

Standard:

Bulk Packaging

Quantity

10 pieces per vinyl bag; 100 pieces per box.

## Soldering and Cleaning Guidelines

For soldering, cleaning and other information, refer to Guidelines and Precautions for Using Potentiometers.

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