

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

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

Mechanical

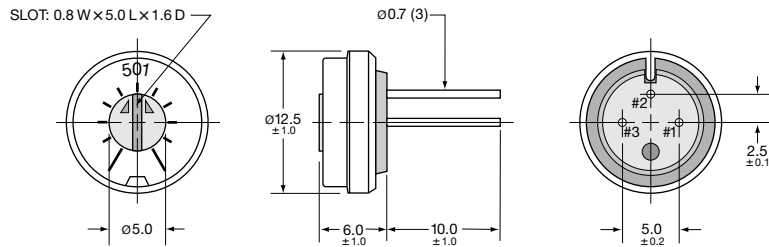
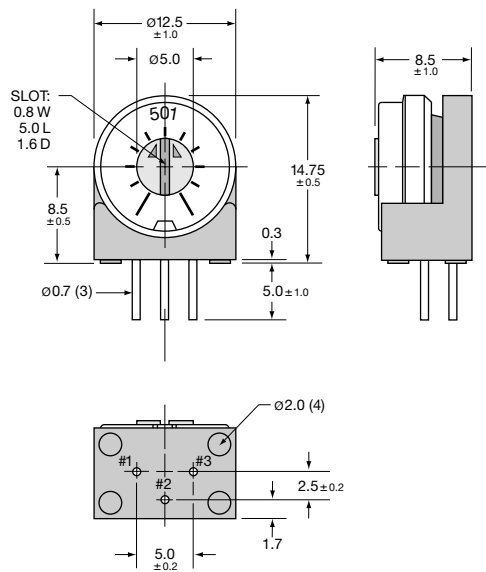
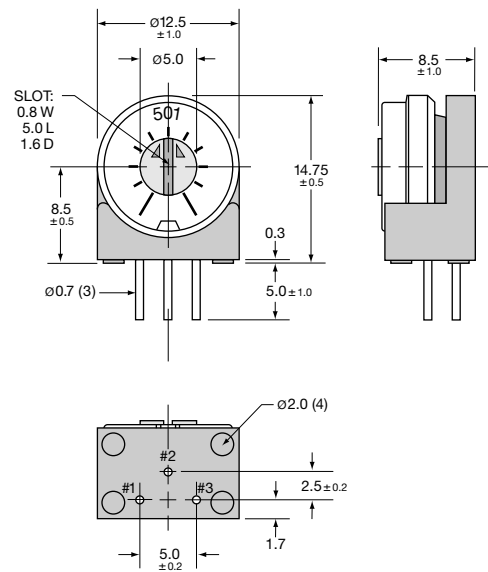
Mechanical Travel	300°±10°
Shaft Torque	30 to 300 gf·cm (0.42 to 4.16 oz·in)
Stop Strength	1 kgf·cm (13.86 oz·in) min.
Flammability of Plastic Materials	Meets UL 94V-0
Nominal Weight	1.5g (P); 2.4g (S, X)
Marking	Resistance code, date code, model type, terminal identification

Environmental

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

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

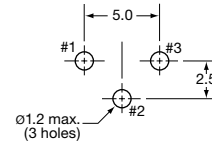
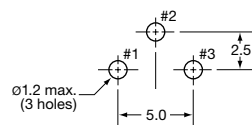
Unit: mm

RA12P
P Terminal Style, Single-Slot, Top Adjust

RA12S
S Terminal Style, Single-Slot, Side Adjust

RA12X
X Terminal Style, Single-Slot, Side Adjust


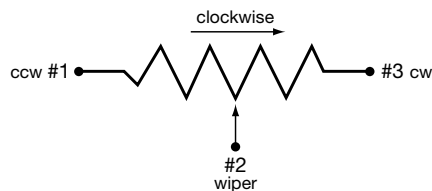
Recommended PCB Layouts

P & S Pin-Out
X Pin-Out

Unit: mm

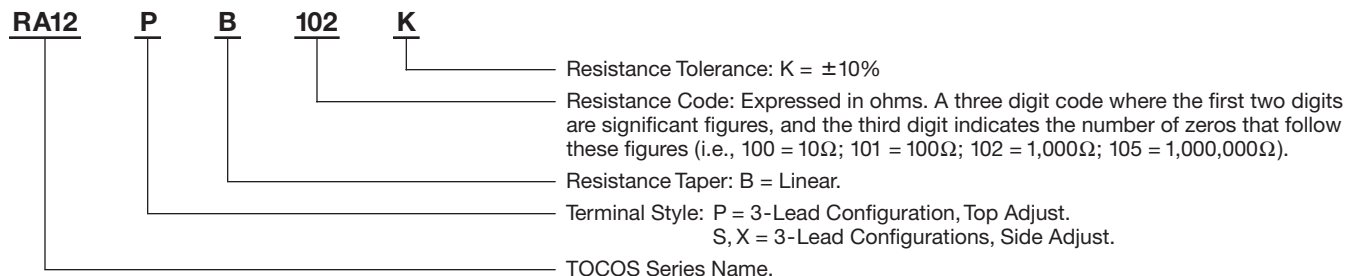


Electrical Schematic



RA12 Series

Part Numbering System



Part Numbers

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

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

10	100	RA12P B 100 K	0.11	1.13	 RA12P
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

10	100	RA12S B 100 K	0.11	1.13	 RA12S
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

10	100	RA12X B 100 K	0.11	1.13	 RA12X
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.

TOCOSAMERICA, INC.

1177 East Tower Road, Schaumburg, IL 60173 Tel: 847-884-6664 Fax: 847-884-6665 E-mail: sales@tocos.com www.tocos.com