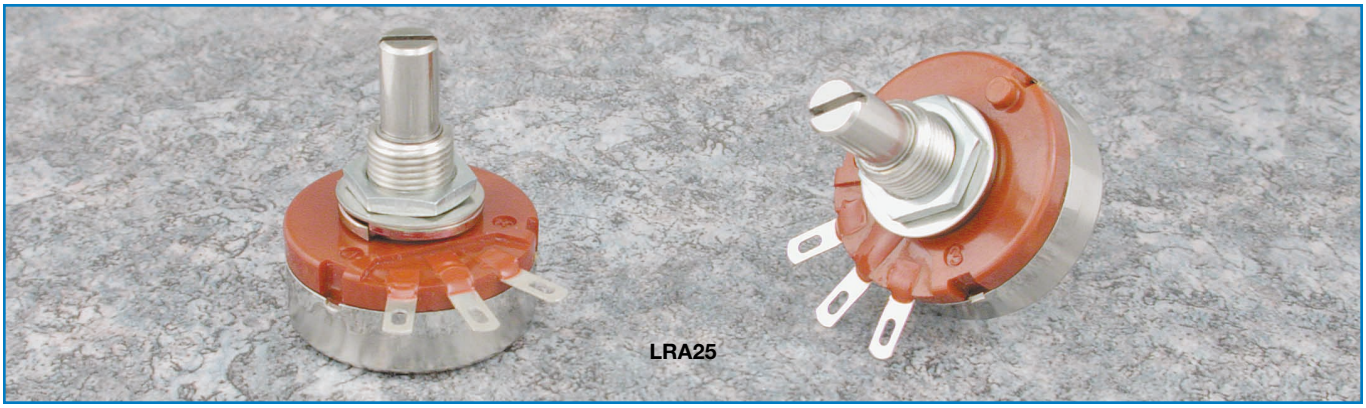
LRA25 Series

TOCOS® PANEL CONTROLS

25mm Diameter, Single-Turn, Wirewound Industrial Panel Controls



Features

■ 25mm diameter, single-turn industrial panel controls ■ Wirewound element ■ High linearity, ±0.5% max.
■ Single unit, single shaft ■ Linear taper ■ ±5% standard total resistance tolerance ■ Metal shaft and bushing
■ Wide operating temperature of −10°C to +100°C ■ Panel mounting style only ■ Right angle ear-lug terminals
■ 6mm diameter shafts in slot, flat or round end styles ■ Standard 20mm shaft length

Specifications

Electrical

Standard Resistance Range . . . . . 500Ω to 20kΩ
Resistance Tolerance . . . . . ±5% standard (±2% or ±1% special order)
End Resistance . . . . . 0.2% max.
Resistance Taper . . . . . B = linear
Independent Linearity . . . . . ±0.5% max.
Power Rating . . . . . 1.5 watts at +40°C
Insulation Resistance . . . . . 100MΩ minimum at 500VDC
Dielectric Strength . . . . . 500VAC, 1 minute

Theoretical Resolution

Resistance (Ω)	Resolution (%)	Resistance (Ω)	Resolution (%)
500	0.27	5,000	0.12
1,000	0.21	10,000	0.08
2,000	0.17	20,000	0.09

Mechanical

Mechanical Travel . . . . . 300°±5°
Shaft Torque . . . . . 70.2 to 306 gf•cm (0.973 to 4.242 oz•in)
Stop Strength . . . . . 10.2 kgf•cm (141.4 oz•in) max.
Mounting Nut Torque . . . . . 15 kgf•cm (207.94 oz•in) max.
Solderability . . . . . 235°C, 3 seconds
Marking . . . . . Taper, resistance, resistance tolerance, terminal identification, date code

Environmental

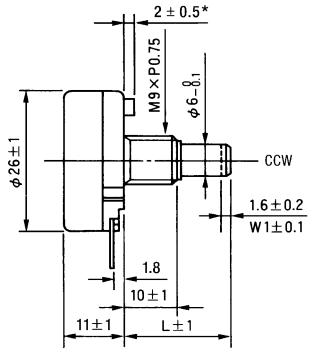
Temperature Range . . . . . −10°C to +100°C
Temperature Characteristics . . . . . +85°C, 5 hours without load ΔT/R ≦±5%
Low Temperature Exposure . . . −10°C, 1 hour without load ΔT/R ≦±3%
Load Life . . . . . +40°C, 1,000 hours with rated load ΔT/R ≦±3%
Moisture and Load Life . . . . . +40°C, 90-95%RH, 500 hours with 1/10 rated load ΔT/R ≦±5%
Vibration . . . . . 10-55Hz, 1.5mm amplitude, 2 directions, 2 hours each ΔT/R ≦±1%
Soldering Heat Resistance . . . . . 350°C, 3.5 seconds ΔT/R ≦±2%
Rotational Life . . . . . 15,000 cycles with 1/2 rated load ΔT/R ≦±3%

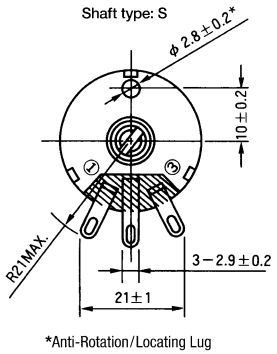
ΔT/R = Total Resistance Change

LRA25 Series — Dimensions

LRA25
Panel Mount, Single Unit, Single Shaft
Right Angle Ear-Lug Terminals

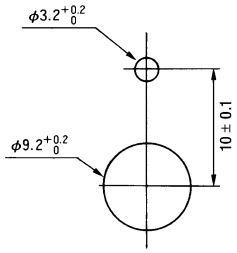
Unit: mm





*Anti-Rotation/Locating Lug

Recommended Panel Mounting Holes



Part Numbering System

L RA 25 20 S B 103 J

NOTE: FMS = From Mounting Surface

Resistance Tolerance: J = ±5% (standard).
G = ±2% (special order).
F = ±1% (special order).

Resistance Code: Expressed in ohms. A three digit code where the first two digits are significant figures, and the third digit indicates the number of zeros that follow these figures (i.e., 100 = 10Ω; 101 = 100Ω; 102 = 1,000Ω; 103 = 10,000Ω; 105 = 1,000,000Ω). *See table for standard resistance values.*

Resistance Taper: B = Linear.

Shaft End Style: S = Slotted.
F = Flatted.
R = Round.

Standard Shaft Length: 20 = 20mm FMS.
Up to 50mm shaft length available (special order).

Size: 25 = 25mm Diameter.

TOCOS Series Name: RA = Wirewound Element.

Linearity: L = High Linearity, ±0.5% Max.

Standard Resistance Values and Part Numbering Codes

Standard Nominal Total Resistance Values and Part Numbering Codes

Resistance (Ω)	Code	Resistance (Ω)	Code	Resistance (Ω)	Code
500	501	1,000	102	10,000	103
		2,000	202	20,000	203
		5,000	502		

Refer to Shaft End Styles Specifications and Hardware Specifications for details and availability.
For additional information, refer to Guidelines and Precautions for Using Panel Controls.

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