

Long Life 16mm Diameter, Single-Turn, Carbon Panel Controls



Features

- Long life 16mm diameter, single-turn industrial panel controls
- Carbon film element
- 100,000 cycle rotational life
- Single unit, single shaft
- Linear taper
- Metal shaft and bushing
- Suitable for automotive applications
- 3.2mm diameter metal shafts in slot, flat or round end styles
- Wide total resistance range of 1k Ω to 500k Ω
- Standard 10mm or 15mm shaft length
- Panel mount style
- Right angle ear-lug terminals

Specifications

Electrical

Standard Resistance Range	1k Ω to 500k Ω
Resistance Tolerance	$\pm 10\%$ standard
End Resistance	10 Ω max.
Resistance Taper	B = linear
Independent Linearity	$\pm 4\%$ max.
Peak Noise (C.R.V.)	3% max.
Power Rating	0.1 watt at +40 $^{\circ}$ C, 0 watt at +85 $^{\circ}$ C
Maximum Input Voltage	224VDC or power rating, whichever is smaller
Insulation Resistance	100M Ω minimum at 500VDC
Dielectric Strength	500VAC, 1 minute
Adjustment Travel	220 $^{\circ}$

Mechanical

Mechanical Travel	260 $^{\circ}$ \pm 10 $^{\circ}$
Shaft Torque	50 gf \cdot cm (0.693 oz \cdot in) max.
Stop Strength	3 kgf \cdot cm (41.59 oz \cdot in) min.
Shaft Strength (push)	50 N (5.1 kgf) min.
Shaft Strength (tensile)	50 N (5.1 kgf) min.
Shaft End Play	$\pm 0.4 \times$ (shaft length/30) mm max.
Mounting Nut Torque	15 kgf \cdot cm (0.208 oz \cdot in) min.
Marking	Model type, taper, resistance code, shaft type, terminal identification, date code

Environmental

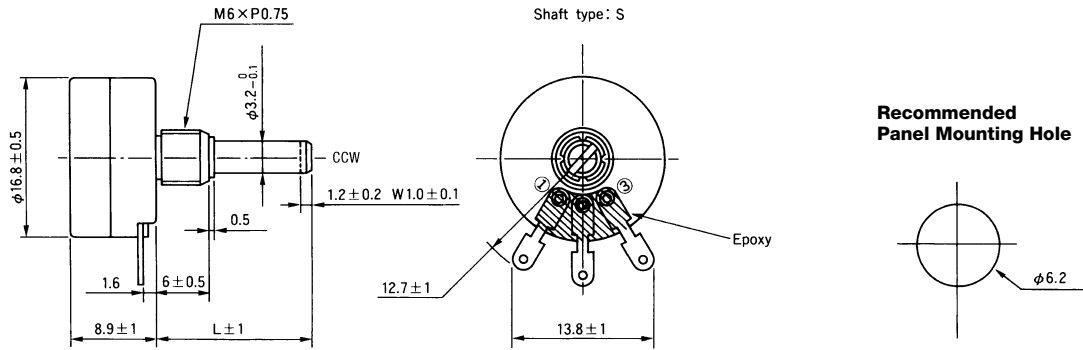
Temperature Range	-10 $^{\circ}$ C to +85 $^{\circ}$ C
Temperature Characteristics	+80 $^{\circ}$ C, 5 hours $\Delta T/R \leq \pm 12\%$
Temperature Cycle	-10 $^{\circ}$ C, +85 $^{\circ}$ C, 30 minutes each, 5 cycles $\Delta T/R \leq \pm 10\%$
Load Life	+40 $^{\circ}$ C, 0.1 watt, 1,000 hours $\Delta T/R \leq \pm 15\%$
Moisture and Load Life	+40 $^{\circ}$ C, 90-95% RH, 0.1 watt, 500 hours $\Delta T/R \leq +20\%$, -10%
Vibration	10-55Hz, 1.5mm amplitude, 3 directions $\Delta T/R \leq \pm 5\%$
Soldering Heat Resistance	350 $^{\circ}$ C \pm 5 $^{\circ}$ C, 3 seconds $\Delta T/R \leq \pm 2\%$
Rotational Life	100,000 cycles without load $\Delta T/R \leq \pm 10\%$

$\Delta T/R$ = Total Resistance Change

Note: A long life panel control should only be used in a circuit as a potentiometer (3-terminal voltage divider).

RVQ16YN
Panel Mount, Single Unit, Single Shaft
Right Angle Ear-Lug Terminals

Unit: mm



Part Numbering System

RV Q 16 Y N 15 S B 103 K

NOTE: FMS = From Mounting Surface

- **Resistance Tolerance: K** = $\pm 10\%$ (standard).
- **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 = 10 Ω ; 101 = 100 Ω ; 102 = 1,000 Ω ; 103 = 10,000 Ω ; 104 = 100,000 Ω). See table for standard resistance values.
- **Resistance Taper: B** = Linear.
- **Shaft End Style: S** = Slotted.
F = Flatted.
R = Round.
- **Standard Shaft Length: 10** = 10mm FMS.
15 = 15mm FMS.
 Up to 30mm shaft length available (special order).
- **Style: N** = Panel Mount, Single Unit, Single Shaft, Right Angle Ear-Lug Terminals.
- **Operating Temperature Range: Y** = -10°C to $+85^{\circ}\text{C}$.
- **Size: 16** = 16mm Diameter.
- **Rotational Life: Q** = Long Life, 100,000 cycles.
- **TOCOS Series Name: RV** = Carbon Film Element.

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
1,000	102	10,000	103	100,000	104
2,000	202	20,000	203	200,000	204
5,000	502	50,000	503	500,000	504

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.