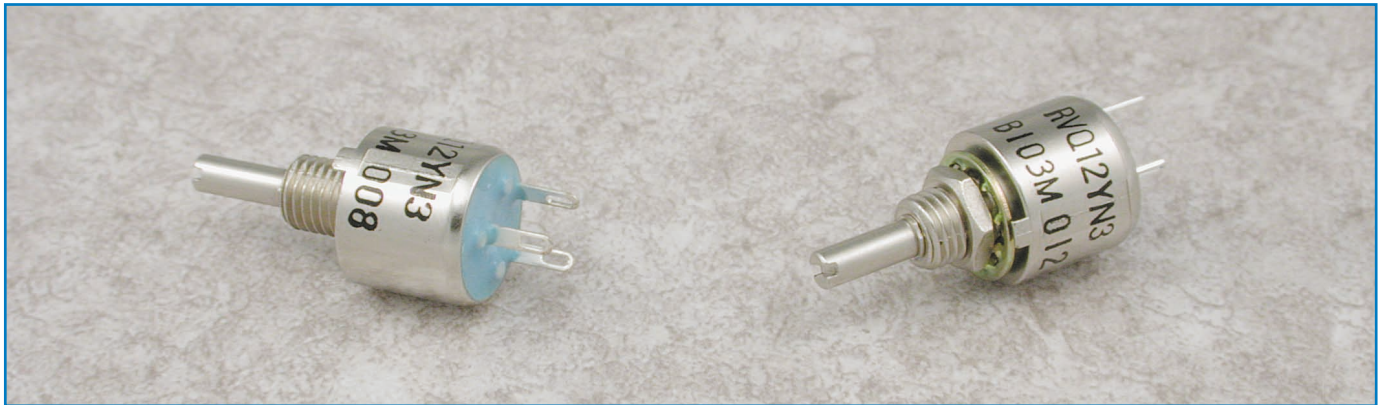


Long Life 12mm Diameter, Single-Turn, Carbon Panel Controls



Features

- Long life 12mm diameter, single-turn industrial panel controls
- Carbon film element
- 50,000 cycle rotational life
- Single unit, single shaft
- Zinc alloy housing and bushing
- Suitable for high power applications
- 3.2mm diameter metal shafts in slot, flat or round end styles
- Standard 10mm or 15mm shaft length
- Linear taper
- Panel mount style
- Rear exit vertical lug terminals
- PCB mounting style available as special order

Specifications

Electrical

Standard Resistance Range	1kΩ to 1MΩ
Resistance Tolerance	±20% standard
End Resistance	3Ω max.
Resistance Taper	B = linear
Independent Linearity	Not applicable
Peak Noise (C.R.V.)	2% max.
Power Rating	0.5 watt at +40°C, 0 watt at +85°C
Maximum Input Voltage	300VDC or power rating, whichever is smaller
Insulation Resistance	100MΩ minimum at 500VDC
Dielectric Strength	500VAC, 1 minute
Adjustment Travel	Not applicable

Mechanical

Mechanical Travel	300° ±10°
Shaft Torque	20 to 200 gf•cm (0.28 to 2.77 oz•in)
Stop Strength	2.5 kgf•cm (34.66 oz•in) min.
Shaft Strength (push)	29.4 N (3 kgf) min.
Shaft Strength (tensile)	9.8 N (1 kgf) min.
Shaft End Play	±0.3 × (shaft length/15) mm max.
Mounting Nut Torque	3 kgf•cm (41.59 oz•in) min.
Marking	Model type, taper, resistance code, date code

Environmental

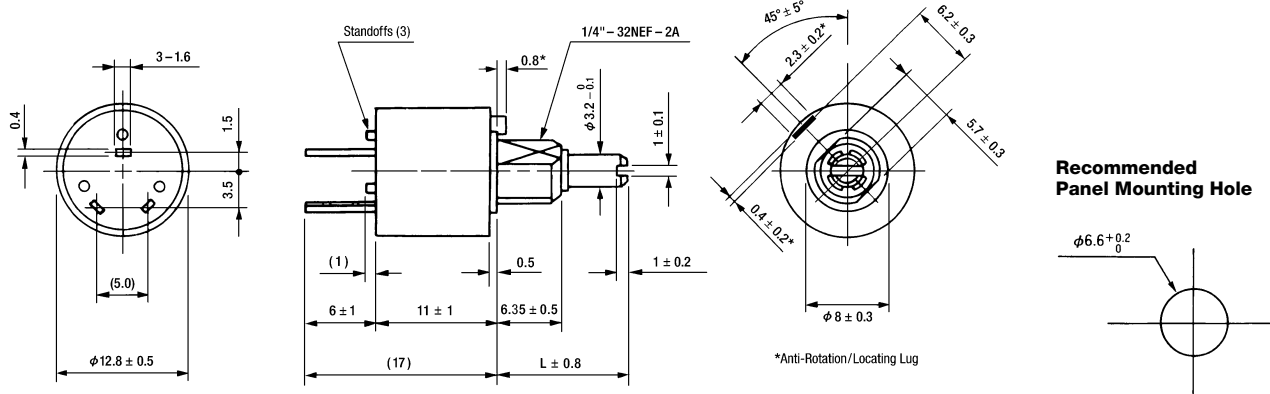
Temperature Range	-10°C to +85°C
Temperature Characteristics	+85°C, 5 hours ΔT/R ≤ ±10%
Temperature Cycle	-10°C, +85°C, 30 minutes each, 5 cycles ΔT/R ≤ ±10%
Load Life	+40°C, 0.5 watt, 1,000 hours ΔT/R ≤ ±10%
Moisture and Load Life	+40°C, 90-95% RH, 0.5 watt, 500 hours ΔT/R ≤ ±10%
Vibration	10-55Hz, 1.5mm amplitude, 3 directions ΔT/R ≤ ±2.5%
Soldering Heat Resistance	350°C ±5°C, 3 seconds ΔT/R ≤ ±2%
Rotational Life	50,000 cycles without load ΔT/R ≤ ±10%

ΔT/R = Total Resistance Change

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

RVQ12YN3
Panel Mount, Single Unit, Single Shaft
Rear Exit Vertical Lug Terminals, 3-Lug Triangular Pattern

Unit: mm



Part Numbering System

RV Q 12 Y N 3 15 S B 103 M

NOTE: FMS = From Mounting Surface

- **Resistance Tolerance: M** = ±20% (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 = 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: 10** = 10mm FMS; **15** = 15mm FMS.
 Up to 30mm shaft length available (special order).
- **Design Type: 3** = Design Variation of 12mm Size.
- **Style: N** = Panel Mount, Single Unit, Single Shaft, Rear Exit Vertical Lug Terminals, 3-Lug Triangular Pattern (standard).
P = PCB Mount, Single Unit, Single Shaft, Rear Exit Vertical Mount Pin Terminals, 3-Pin Triangular Pattern (special order).
- **Operating Temperature Range: Y** = -10°C to +85°C.
- **Size: 12** = 12mm Diameter.
- **Rotational Life: Q** = Long Life, 50,000 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	Resistance (Ω)	Code
1,000	102	10,000	103	100,000	104	1,000,000	105
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.