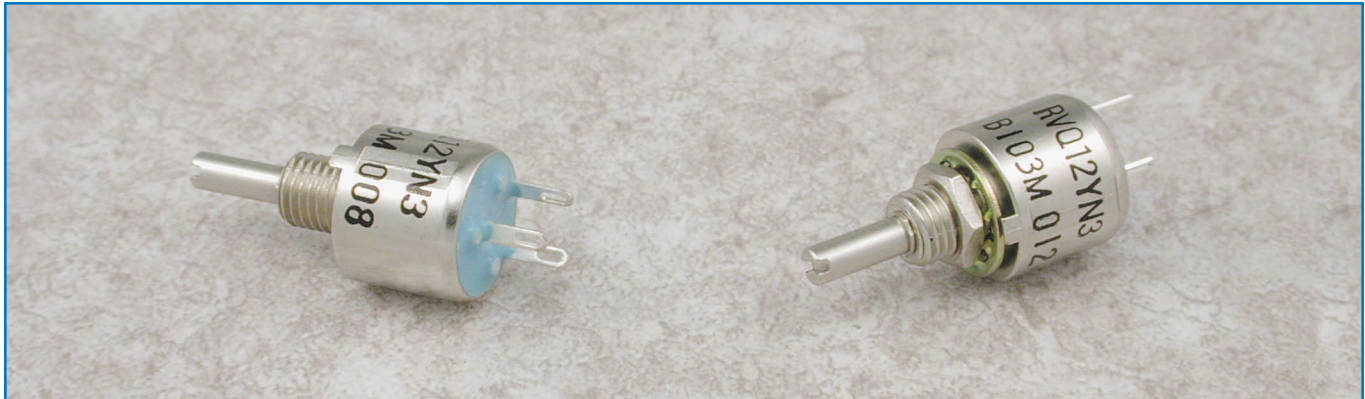


Long Life 12mm Diameter, Single-Turn, Carbon Panel Controls



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

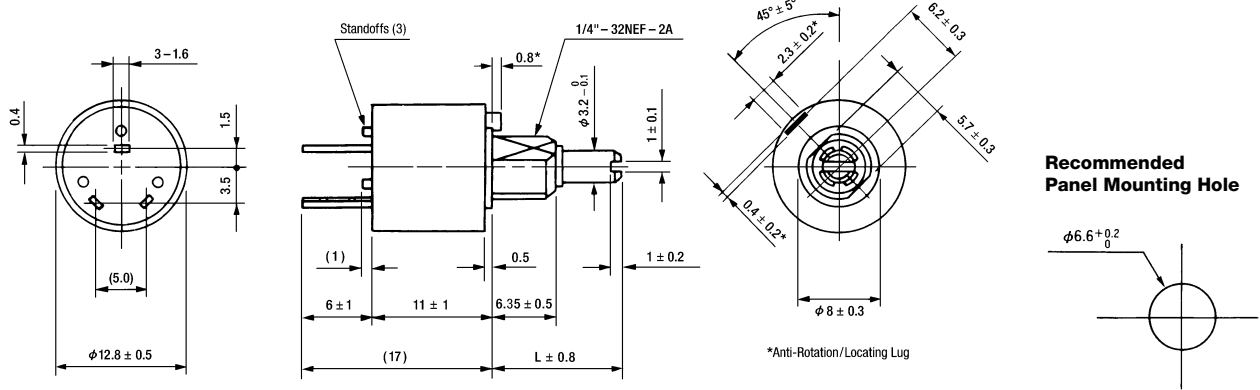
| | |
|--|---|
| Temperature Range | -10°C to +85°C |
| Temperature Characteristics | +85°C, 5 hours ΔT/R ≤ ±10% |
| Temperature Cycle | -10°C, +85°C, 30 minutes each, 5 cycles ΔT/R ≤ ±10% |
| Load Life | +40°C, 0.5 watt, 1,000 hours ΔT/R ≤ ±10% |
| Moisture and Load Life | +40°C, 90-95% RH, 0.5 watt, 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.