

10mm Diameter, Single-Turn, Carbon Industrial Panel Controls



Features

- 10mm diameter, single-turn industrial panel controls
- Carbon film element
- Linear taper
- Available in single unit, single shaft
- Molded plastic construction for housing and bushing
- Small size
- 3mm diameter metal shafts in slot, flat or round end styles
- Standard 10mm or 15mm shaft length
- Panel or PC board mounting styles
- Lug or pin terminals
- Right angle or vertical mount

Specifications

Electrical

| | |
|----------------------------------|---|
| Standard Resistance Range | 100Ω to 2MΩ |
| Resistance Tolerance | ±20% standard (±10% special order) |
| End Resistance | 3Ω max. |
| Resistance Taper | B = linear |
| Peak Noise (C.R.V.) | 1% or 2Ω, whichever is greater |
| Power Rating | 0.25 watt at +40°C, 0 watt at +85°C |
| Maximum Input Voltage | 300VDC or power rating, whichever is smaller |
| Insulation Resistance | 100MΩ minimum at 250VDC |
| Dielectric Strength | 250VAC, 1 minute |
| Adjustment Travel | 270° ±10° |

Mechanical

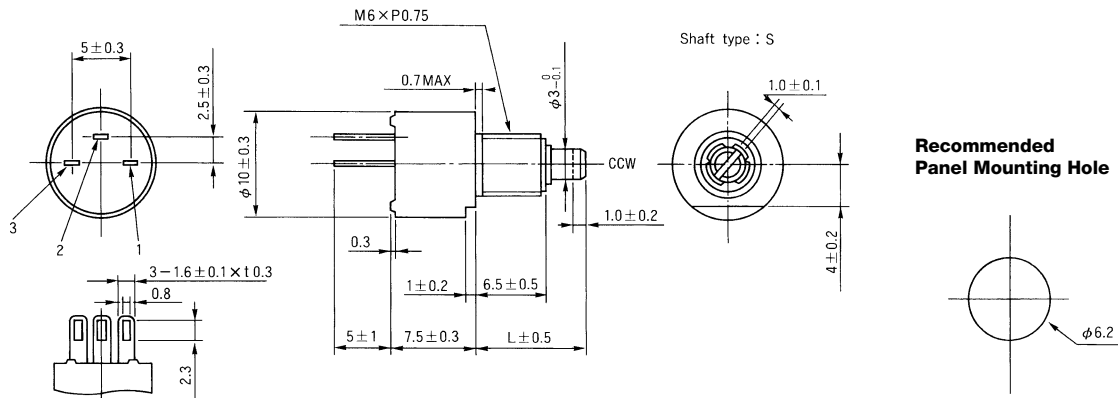
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|----------------------------|---|
| Mechanical Travel | 300° ±10° |
| Shaft Torque | 20 to 200 gf·cm (0.28 to 2.77 oz·in) |
| Stop Strength | 2.55 kgf·cm (35.35 oz·in) max. |
| Mounting Nut Torque | 3.5 kgf·cm (48.52 oz·in) max. |
| Solderability | 235°C, 5 seconds |
| Marking | Model type, taper, resistance code, date code |

Environmental

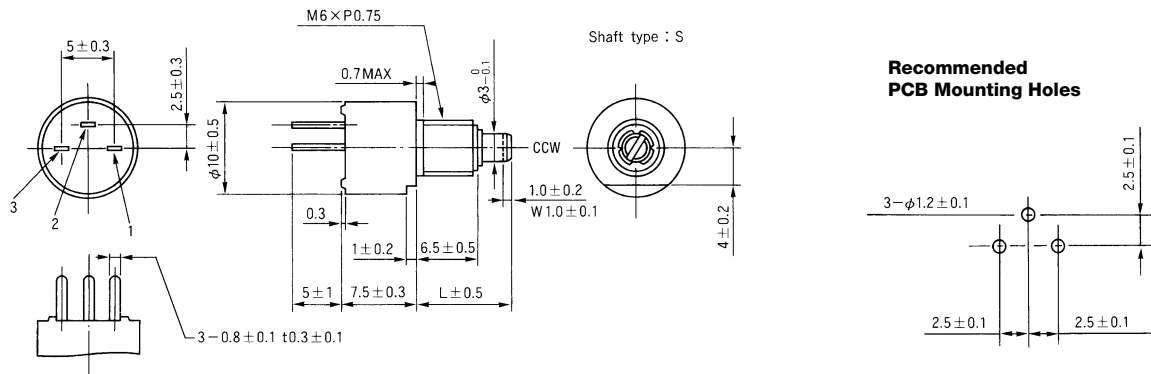
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|----------------------------------|---|
| Temperature Range | -10°C to +85°C |
| Low Temperature Exposure | -10°C, 1 hour without load ΔT/R ≤ ±2.5% |
| Load Life | +40°C, 90 minutes on, 30 minutes off, 1,000 hours with rated load ΔT/R ≤ ±15% |
| Moisture Resistance | +40°C, 90-95% RH, 96 hours without load ΔT/R ≤ ±10% |
| Thermal Shock | -10°C ~ +85°C, 5 cycles without load ΔT/R ≤ ±10% |
| Shock | 50G, 6 m/s ΔT/R ≤ ±2.5% |
| Vibration | 10-55Hz, 1.5mm amplitude, 3 directions, 2 hours each ΔT/R ≤ ±2.5% |
| Soldering Heat Resistance | 350°C, 3.5 seconds ΔT/R ≤ ±2% |
| Rotational Life | 10,000 cycles without load ΔT/R ≤ ±10% |

ΔT/R = Total Resistance Change

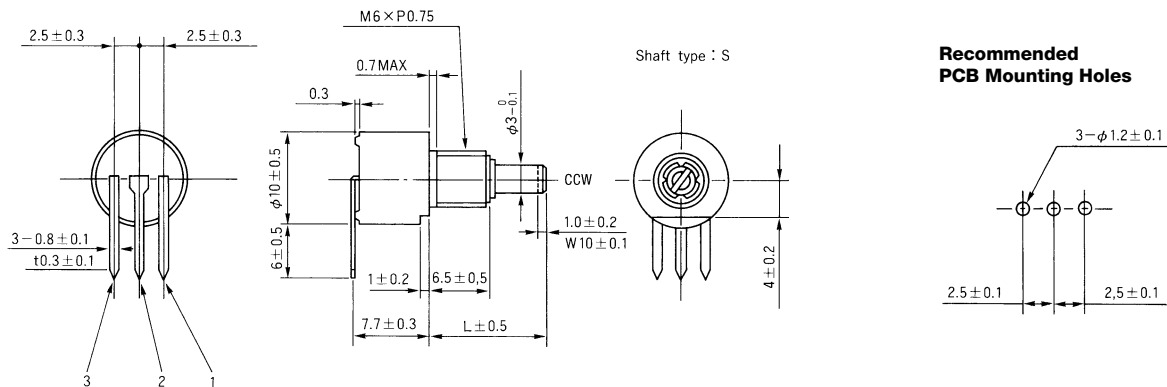
RV102YN
Panel Mount, Single Unit, Single Shaft
Rear Exit Vertical Lug Terminals, 3-Lug Triangular Pattern



RV102YP
PCB Mount, Single Unit, Single Shaft
Rear Exit Vertical Mount Pin Terminals, 3-Pin Triangular Pattern



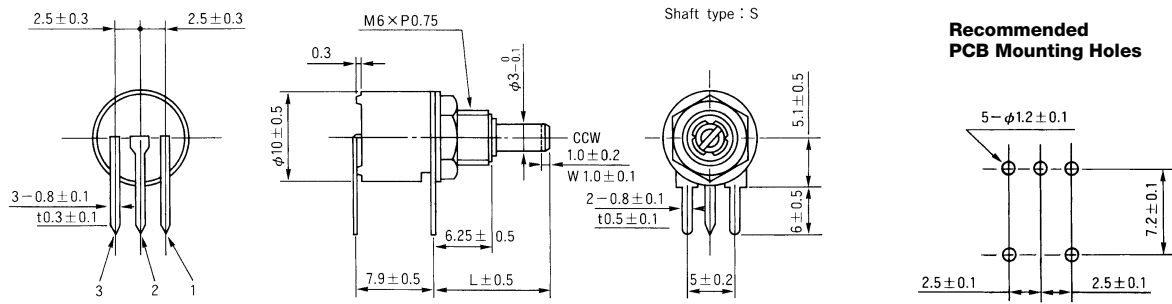
RV102YP2
PCB Mount, Single Unit, Single Shaft
Rear Exit Right Angle Mount Pin Terminals, 3-Pin Inline Pattern



RV102YP3

PCB Mount, Single Unit, Single Shaft

Rear Exit Right Angle Mount Pin Terminals, 3-Pin Inline Pattern, 2-Pin Standoff Front Support Bracket



RV 102 Y N 10 S B 103 M

NOTE: FMS = From Mounting Surface

➔ **Resistance Tolerance:** **M** = ±20% (standard).
K = ±10% (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:** **10** = 10mm FMS.
15 = 15mm FMS.
 Up to 30mm shaft length available (special order).

➔ **Style:** **N** = Panel Mount, Single Unit, Single Shaft, Rear Exit Vertical Lug Terminals, 3-Lug Triangular Pattern.
P = PCB Mount, Single Unit, Single Shaft, Rear Exit Vertical Mount Pin Terminals, 3-Pin Triangular Pattern.
P2 = PCB Mount, Single Unit, Single Shaft, Rear Exit Right Angle Mount Pin Terminals, 3-Pin Inline Pattern.
P3 = PCB Mount, Single Unit, Single Shaft, Rear Exit Right Angle Mount Pin Terminals, 3-Pin Inline Pattern, 2-Pin Standoff Front Support Bracket.

➔ **Operating Temperature Range:** **Y** = -10°C to +85°C.

➔ **Size and Style:** **10** = 10mm Diameter; **2** = Style of 10mm Size.

➔ **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 | Resistance (Ω) | Code |
|----------------|------|----------------|------|----------------|------|----------------|------|----------------|------|
| 100 | 101 | 1,000 | 102 | 10,000 | 103 | 100,000 | 104 | 1,000,000 | 105 |
| 200 | 201 | 2,000 | 202 | 20,000 | 203 | 200,000 | 204 | 2,000,000 | 205 |
| 500 | 501 | 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.