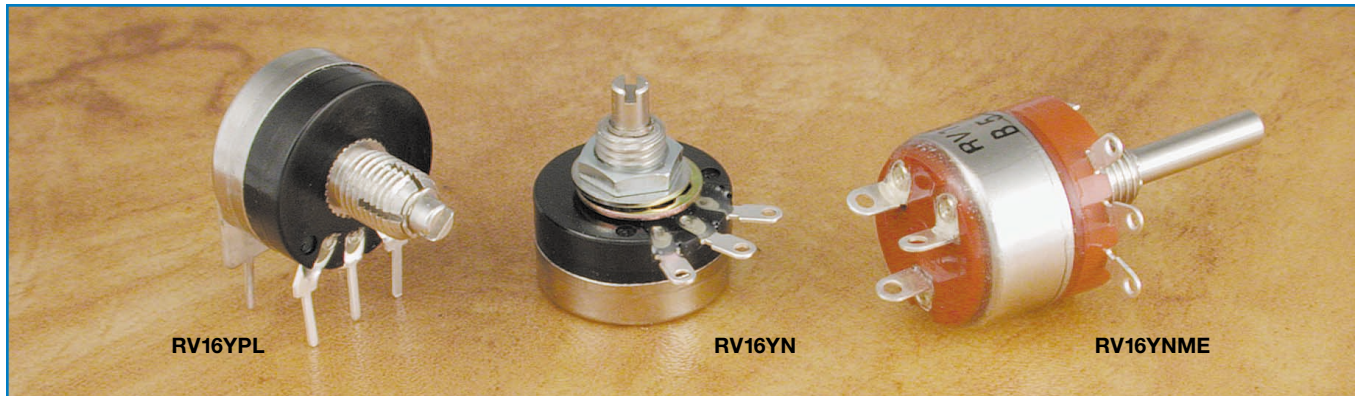


16mm Diameter, Single-Turn, Carbon Industrial Panel Controls



Features

- 16mm diameter, single-turn industrial panel controls
- Carbon film element
- Linear or audio tapers
- Single and tandem units, single shaft; dual unit, dual shaft
- Optional switch, center detent, and shaft lock available
- 3.2mm 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 mount pin configurations

Specifications

Electrical

Standard Resistance Range	B = 100 Ω to 2M Ω A,C = 2k Ω to 2M Ω
Resistance Tolerance	$\pm 10\%$ standard
End Resistance	3 Ω max.
Resistance Taper	B = linear; A = CW audio (logarithm); C = CCW audio (logarithm)
Peak Noise (C.R.V.)	3% or 3 Ω , whichever is greater
Power Rating	B = 0.1 watt; A,C = 0.05 watt at +40 $^{\circ}$ C, 0 watt at +85 $^{\circ}$ C
Maximum Input Voltage	200VDC or power rating, whichever is smaller
Insulation Resistance	100M Ω minimum at 500VDC
Dielectric Strength	500VAC, 1 minute
Adjustment Travel	240 $^{\circ}$ \pm 10 $^{\circ}$

Mechanical

Mechanical Travel	260 $^{\circ}$ \pm 10 $^{\circ}$
Shaft Torque	
Single Unit	20.4 to 204 gf \cdot cm (0.283 to 2.828 oz \cdot in)
Other Units	20.4 to 357 gf \cdot cm (0.283 to 4.949 oz \cdot in)
Stop Strength	3.06 kgf \cdot cm (42.42 oz \cdot in) max.
Mounting Nut Torque	10.2 kgf \cdot cm (141.4 oz \cdot in) max.
Solderability	235 $^{\circ}$ C, 5 seconds
Marking	Model type, taper, resistance code, terminal identification, date code

Environmental

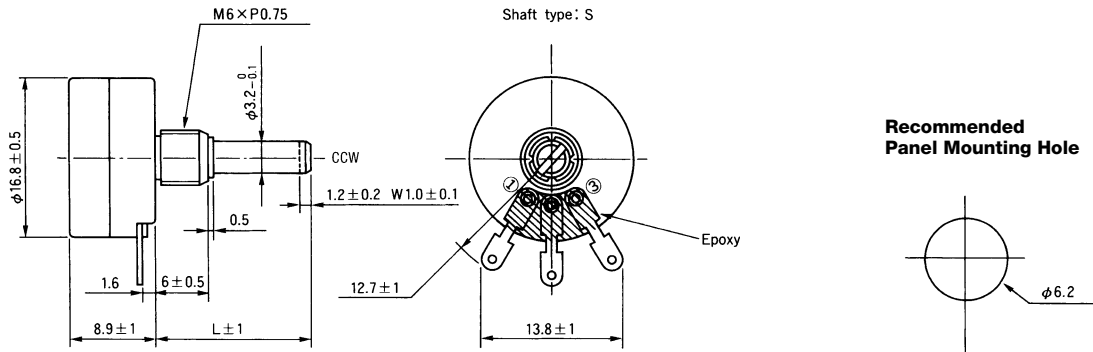
Temperature Range	-10 $^{\circ}$ C to +85 $^{\circ}$ C
Low Temperature Exposure	-10 $^{\circ}$ C, 1 hour without load $\Delta T/R \leq \pm 2.5\%$
Load Life	+40 $^{\circ}$ C, 90 minutes on, 30 minutes off, 1,000 hours with rated load $\Delta T/R \leq \pm 15\%$
Moisture Resistance	+40 $^{\circ}$ C, 90-95% RH, 96 hours without load $\Delta T/R \leq \pm 10\%$
Thermal Shock	-10 $^{\circ}$ C ~ +85 $^{\circ}$ C, 5 cycles without load $\Delta T/R \leq \pm 10\%$
Shock	50G, 11 m/s $\Delta T/R \leq \pm 2.5\%$
Vibration	10-55Hz, 1.5mm amplitude, 3 directions, 2 hours each $\Delta T/R \leq \pm 2.5\%$
Soldering Heat Resistance	350 $^{\circ}$ C, 3 seconds; 260 $^{\circ}$ C, 5 seconds (PCB units) $\Delta T/R \leq \pm 2\%$
Rotational Life	15,000 cycles (500 cycles for shaft lock models only) without load $\Delta T/R \leq \pm 10\%$

Standard Rotary Switches

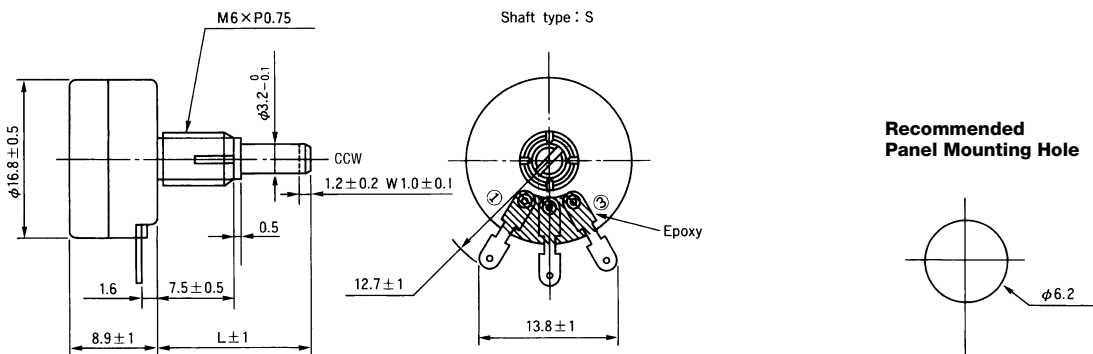
Switch Rating	110VAC, 0.5A, SPDT or SPST
Contact Resistance	0.05 Ω max.
Operating Torque	1,530 gf \cdot cm (21.21 oz \cdot in) max.
Operating Life	10,000 cycles without load

$\Delta T/R$ = Total Resistance Change

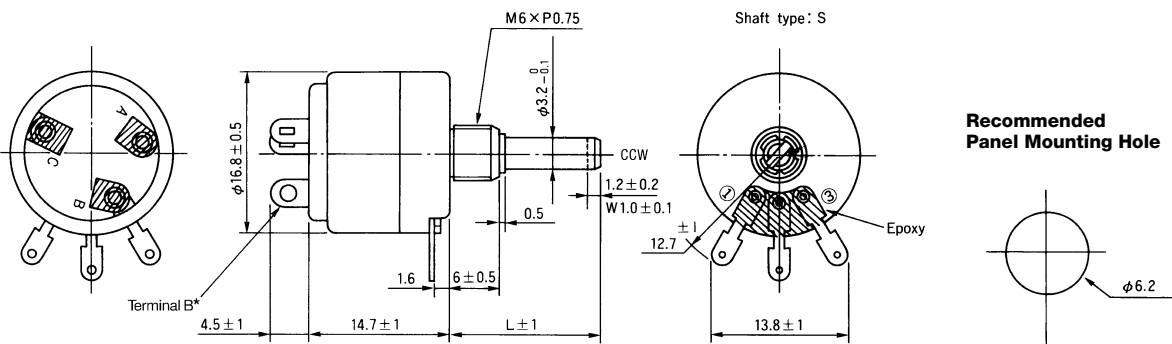
RV16YN & RV16YN-4C (with Center Detent)
Panel Mount, Single Unit, Single Shaft
Right Angle Ear-Lug Terminals



RV16YL
Panel Mount, Single Unit, Single Shaft with Shaft Lock
Right Angle Ear-Lug Terminals



RV16YNMH & RV16YNSH
Panel Mount, Single Unit with Switch, Single Shaft
Right Angle Ear-Lug Terminals, Rear Exit Lug Terminals for 0.5A SPDT or SPST Switch

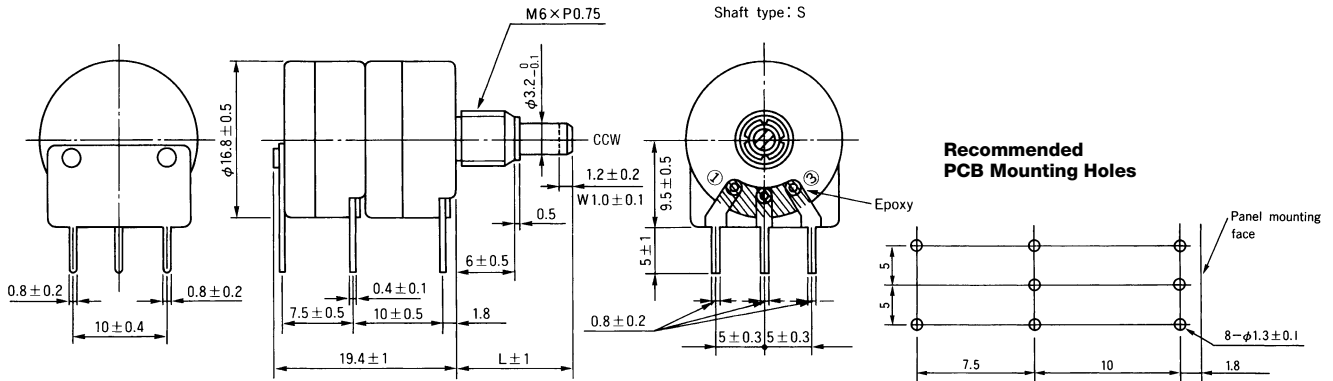


*The SPST switch (SH code designation) does not have a B terminal.

RV16YGP

PCB Mount, Ganged Tandem Unit, Single Shaft

Right Angle Mount Pin Terminals on Each Unit, 3-Pin Inline Pattern, 2-Pin Standoff Rear Support Bracket



RV16YGMH

Panel Mount, Ganged Tandem Unit with Rear Unit Switch, Single Shaft

Right Angle Ear-Lug Terminals on Each Unit, Rear Exit Lug Terminals for 0.5A SPDT Switch



*Connect the A and C terminals only for a SPST switch. Do not use the B terminal.

RV16YD

Panel Mount, Dual Unit, Dual Concentric Shaft

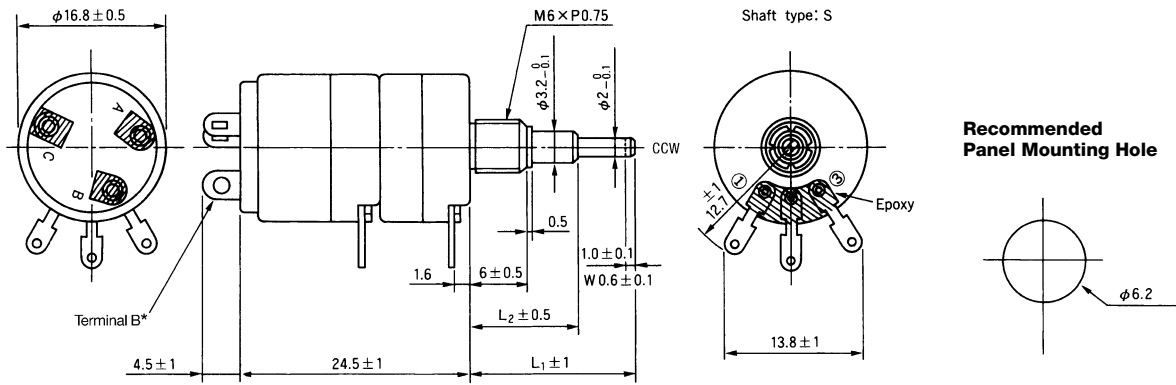
Right Angle Ear-Lug Terminals on Each Unit



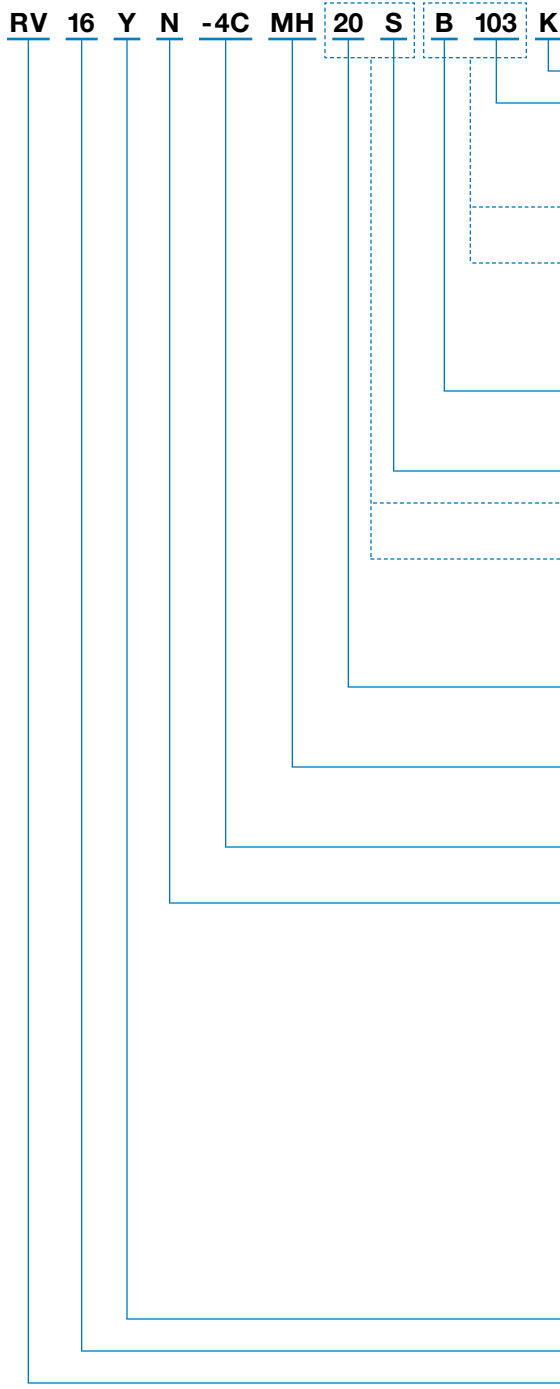
RV16YDMH & RV16YDSH

Panel Mount, Dual Unit with Rear Unit Switch, Dual Concentric Shaft

Right Angle Ear-Lug Terminals on Each Unit, Rear Exit Lug Terminals for 0.5A SPDT or SPST Switch



***The SPST switch (SH code designation) does not have a B terminal.**



NOTE: FMS = From Mounting Surface

- **Resistance Tolerance: K** = ±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 = 10Ω; 101 = 100Ω; 102 = 1,000Ω; 103 = 10,000Ω; 105 = 1,000,000Ω). See table for standard resistance values.
- **For Single Unit:**
Specify taper and resistance code as shown.
- **For Ganged Tandem Unit or Dual Unit:**
Specify a taper code and resistance code for each unit starting with the front unit followed by the rear unit. If both units have the same taper and resistance codes, add "X2" suffix per example below.
Examples: **B103A503** or if both units are the same: **B103X2**
- **Resistance Taper: B** = Linear.
A = CW Audio (logarithm).
C = CCW Audio (logarithm).
- **Shaft End Style: S** = Slotted; **F** = Flatted; **R** = Round.
- **For Single Shaft:**
Specify the shaft length (FMS) and shaft end style as shown.
- **For Dual Concentric Shafts:**
Specify the shaft length (FMS) and shaft end style for the inner shaft followed by the shaft length (FMS) and shaft end style for the outer shaft. Use a dash (-) to separate the code groups for the inner and outer shaft specifications. Example: **30R-20R**
- **Standard Shaft Length: 10** = 10mm FMS.
15 = 15mm FMS.
Up to 30mm shaft length available (special order).
- **Switch Type: MH** = SPDT, 110VAC, 0.5A, Rear Exit Lug Terminals.
SH = SPST, 110VAC, 0.5A, Rear Exit Lug Terminals.
Blank = No Switch.
- **Detent: -4C** = Center Detent.
Blank = No Detent.
- **Style: N** = Panel Mount, Single Unit, Single Shaft, Right Angle Ear-Lug Terminals.
L = Panel Mount, Single Unit, Single Shaft with Shaft Lock, Right Angle Ear-Lug Terminals.
P = PCB Mount, Single Unit, Single Shaft, Right Angle Mount Pin Terminals, 3-Pin Inline Pattern, 2-Pin Standoff Rear Support Bracket.
PL = PCB Mount, Single Unit, Single Shaft with Shaft Lock, Right Angle Mount Pin Terminals, 3-Pin Inline Pattern, 2-Pin Standoff Rear Support Bracket.
G = Panel Mount, Ganged Tandem Unit, Single Shaft, Right Angle Ear-Lug Terminals on Each Unit.
GP = PCB Mount, Ganged Tandem Unit, Single Shaft, Right Angle Mount Pin Terminals on Each Unit, 3-Pin Inline Pattern, 2-Pin Rear Standoff Support Bracket.
D = Panel Mount, Dual Unit, Dual Concentric Shaft, Right Angle Ear-Lug Terminals on Each Unit.
- **Operating Temperature Range: Y** = -10°C to +85°C.
- **Size: 16** = 16mm Diameter.
- **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.