

RA30 Series

TOCOS®
PANEL CONTROLS

30mm Diameter, Single-Turn, Wirewound Industrial Panel Controls



Features

- 30mm diameter, single-turn industrial panel controls
- Wirewound element
- Linear or audio tapers
- Single, tandem and triple units, single shaft; dual unit, dual shaft
- SPST or SPDT switch with 1A or 3A rating
- Shaft lock and center tap models
- Metal shaft and bushing
- Temperature range of -10°C or -30°C , up to $+100^{\circ}\text{C}$
- Panel mount only
- 6mm diameter shafts in slot, flat or round end styles
- Standard 15mm or 20mm shaft length

Specifications

Electrical

Standard Resistance Range B = 5Ω to $20\text{k}\Omega$
A, C = 100Ω to $5\text{k}\Omega$

Resistance Tolerance $\pm 10\%$ standard
($\pm 5\%$, $\pm 2\%$ or $\pm 1\%$ special order)

End Resistance $R < 500\Omega = 1\Omega$ max.
 $R \geq 500\Omega = 0.2\%$ max.

Resistance Taper B = linear; A = CW audio (logarithm);
C = CCW audio (logarithm)

Power Rating B = 2.5 watts; A, C = 1.25 watts, at $+40^{\circ}\text{C}$

Insulation Resistance $100\text{M}\Omega$ minimum at 500VDC

Dielectric Strength 500VAC, 1 minute

Theoretical Resolution

Resistance (Ω)	Resolution (%)	Resistance (Ω)	Resolution (%)
5	1.62	500	0.23
10	0.81	1,000	0.19
20	0.67	2,000	0.15
50	0.45	5,000	0.14
100	0.44	10,000	0.12
200	0.32	20,000	0.10

Mechanical

Mechanical Travel $300^{\circ} \pm 5^{\circ}$

Shaft Torque

Single Unit 70.1 to 306 gf·cm (0.972 to 4.242 oz·in)

Tandem Unit 70 to 701 gf·cm (0.97 to 9.718 oz·in)

Other Units 70 to 450 gf·cm (0.97 to 6.238 oz·in)

Stop Strength 10.2 kgf·cm (141.4 oz·in) max.

Mounting Nut Torque 15 kgf·cm (207.94 oz·in) max.

Solderability 235°C , 3 seconds

Marking Taper, resistance, resistance tolerance,
terminal identification, date code

Environmental

Temperature Range Y = -10°C to $+100^{\circ}\text{C}$
or X = -30°C to $+100^{\circ}\text{C}$

Temperature Characteristics $+85^{\circ}\text{C}$, 5 hours
without load
 $\Delta T/R \leq \pm 5\%$

Low Temperature Exposure -10°C (Y), -30°C (X)
1 hour without load
 $\Delta T/R \leq \pm 3\%$

Load Life $+40^{\circ}\text{C}$, 1,000 hours with rated load
 $\Delta T/R \leq \pm 3\%$

Moisture and Load Life $+40^{\circ}\text{C}$, 90-95% RH,
500 hours with 1/10 rated load
 $\Delta T/R \leq \pm 5\%$

Vibration 10-55Hz, 1.5mm amplitude,
2 directions, 2 hours each
 $\Delta T/R \leq \pm 1\%$

Soldering Heat Resistance 350°C , 3.5 seconds;
 $\Delta T/R \leq \pm 2\%$

Rotational Life 15,000 cycles (500 cycles for shaft lock
models only) with 1/2 rated load
 $\Delta T/R \leq \pm 3\%$

Standard Rotary Switches

Switch Rating 110VAC, 1A or 3A, SPDT or SPST

Contact Resistance 0.05Ω max.

Operating Torque 1,500 gf·cm (20.79 oz·in) max.

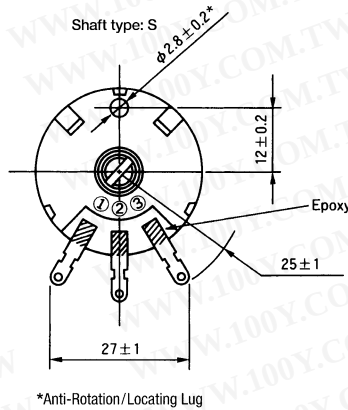
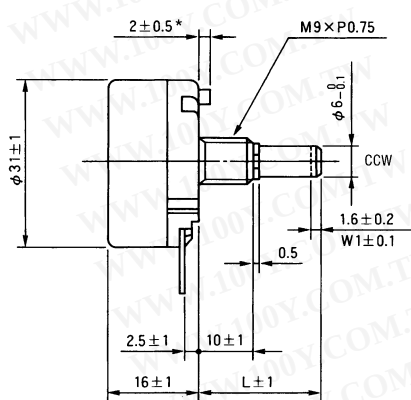
Operating Life 10,000 cycles without load

R = Total Resistance Value; $\Delta T/R$ = Total Resistance Change

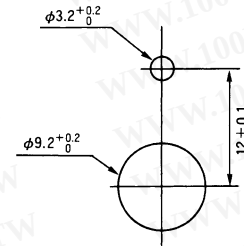
勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-54151736
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

RA30Y & RA30X

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

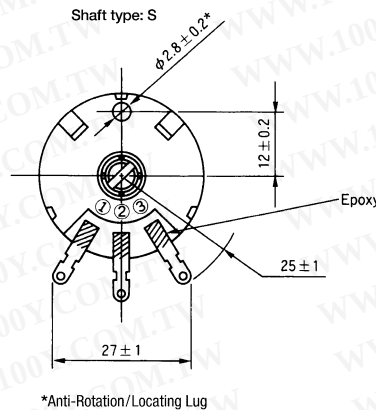
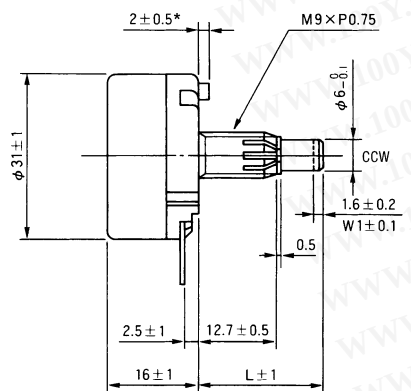


Recommended Panel Mounting Holes

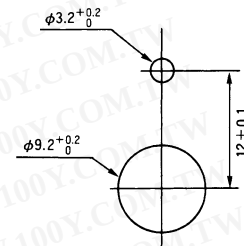


RA30YL & RA30XL

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

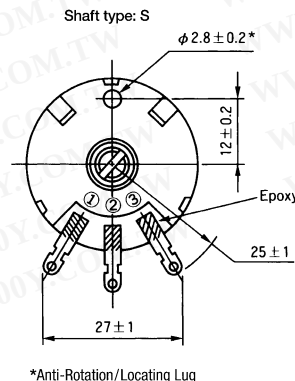
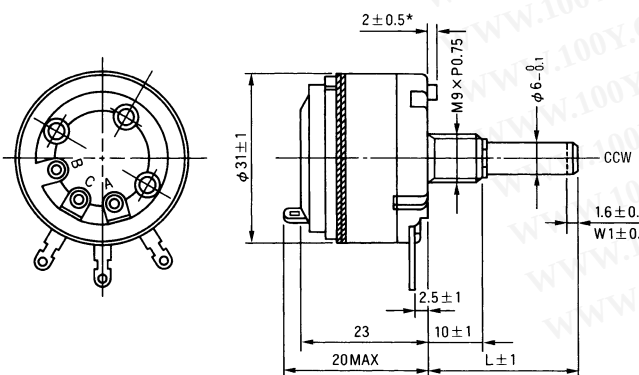


Recommended Panel Mounting Holes



RA30YME, RA30YMF, RA30YSE, RA30YSF RA30XME, RA30XMF, RA30XSE, RA30XSF

Panel Mount, Single Unit with Switch, Single Shaft
Right Angle Ear-Lug Terminals, Rear Exit Lug Terminals for 1A or 3A SPST or SPDT Switch



Recommended Panel Mounting Holes

