



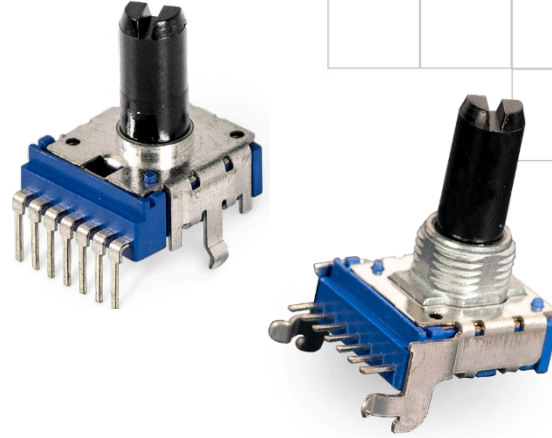
# Series 14VR

## 14mm Panel Potentiometer

- Standard 14mm package size
- Rotational life (15,000 cycles)
- Wide temperature range (-10°C to +70°C)
- Dual output with excellent tracking ( $\pm 2$  dB)
- Variety of standard resistances & tapers

### Applications

- Consumer portable electronics
- Commercial appliances
- Instrument amplifiers and guitar effects
- Keyboards and synthesizers
- Communications equipment



### Ordering Information

Series	Element	Terminal Configuration	Shaft Length	Shaft Trim	Mechanical Travel	Detent Option	Resistance Code	Resistance Taper
14VR	2	H	20	F	2	N	103	B1

Code	Spec.	Code	Spec.	Code	Spec.	Code	Spec.**
X	Horizontal/Side Mount Bushingless, PC Pins, 10mm Height	F	Flatted	N	No Detent	A2	10% Log
H	Vertical/Rear Mount Thread Bushing, PC Pins			C	Center Detent	A3	15% Log
K	Vertical/Rear Mount Sleeve Bushing, PC Pins					B1	linear
Y	Horizontal/Side Mount Thread Bushing, PC Pins, 10mm Height					C3	15% Antilog
U	Vertical/Rear Mount Bushingless, PC Pins						

Code	Spec.	Code	Spec.*	Code	Spec.	Code	Spec.
2	Dual	12	12.5 mm	2	300°	502	5k $\Omega$
		15	15 mm			103	10k $\Omega$
		17	17.5 mm			203	20k $\Omega$
		20	20 mm			503	50k $\Omega$
		22	22.5 mm			104	100k $\Omega$
		25	25 mm			254	250k $\Omega$
		27	27.5 mm			504	500k $\Omega$
		30	30 mm				

\* See shaft trim options for available lengths.

\*\* Other JIS tapers are available. See charts.



## Electrical Specifications

	Min	Typical	Max	Unit
Total Resistance Tolerance	-20	–	+20	%
Power Rating	–	+0.05	–	watt
Operating Voltage	–	–	+50	VAC
Residual Resistance	–	–	+30	Ω
Slider Noise	–	–	+100	mV
Tracking Error	-2	–	+2	dB
Insulation Resistance	250 VDC for 1 min.	+100		MΩ
Dielectric Strength	300 VAC for 1 min. no arcing			
Taper	Linear and audio options (see charts)			

## Mechanical

Total Mechanical Travel	300° ± 5°
Operating Torque	30 to 200 gf-cm
Shaft Wobble	
Bushingsless	0.7 x L/20mm p-p max.; L = Shaft Length
With Bushing	0.7 x L/30mm p-p max.; L = Shaft Length
Shaft Push-Pull Strength	8 kgf for 3 sec.
Stop Strength	5 kgf-cm min.
Detent Position	150° ± 5°
Detent Torque	30 to 300 gf-cm
Rotational Life	15,000 cycles
Panel Nut Tightening Torque	10 kgf-cm
IP Rating	40
Mounting Hardware	One flat washer and one mounting hex nut supplied with bushing option
Packaging	Tray
Weight	3 grams

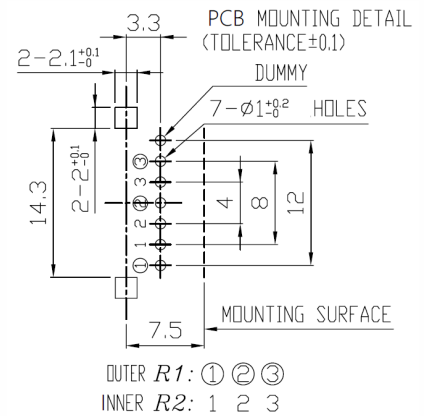
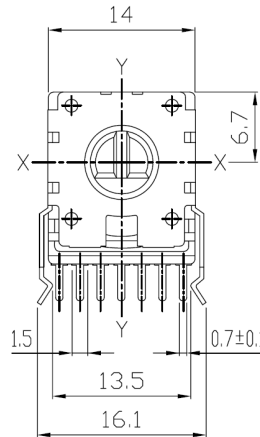
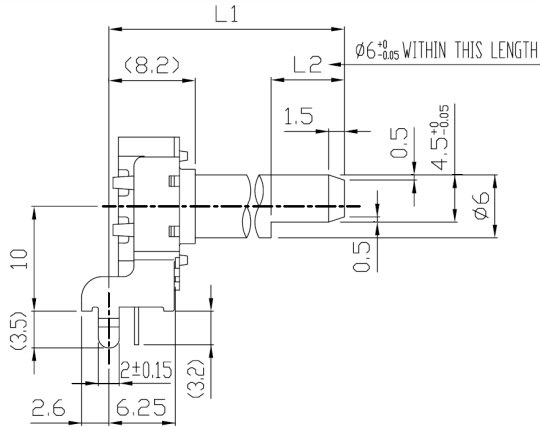
## Environmental

	Min	Typical	Max	Unit
Operating Temperature	-10	–	+70	°C
Storage Temperature	-30	–	+70	°C
Soldering Conditions				
Wave Solder	Preheat: 100°C max for 2 min max; Solder temperature: 260°C ± 5°C for 5 sec max.; No clean foam flux recommended			
Manual Solder Wash	350°C ± 5°C for 3 sec max.; Sn95Ag5 no clean solder Not recommended			
Moisture Sensitivity Level	1			
ESD Classification (HBM)	Not applicable			

All testing is performed at room ambient conditions except as noted. Users should verify device actual performance in their specific applications  
This product is compliant to RoHS3 Directive 2015/863 Amendments of Annex II on 31 March 2015, and REACH SVHC Directive EC 1907/2006 Amendments of Annex XIV & Annex XVII on 15 January 2018.  
Custom and value-added options available on request. Please contact your sales representative for additional information.

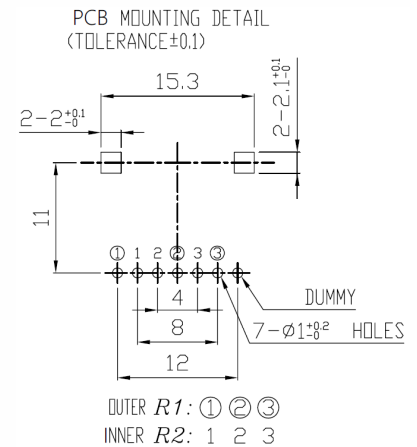
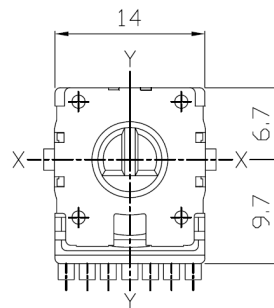
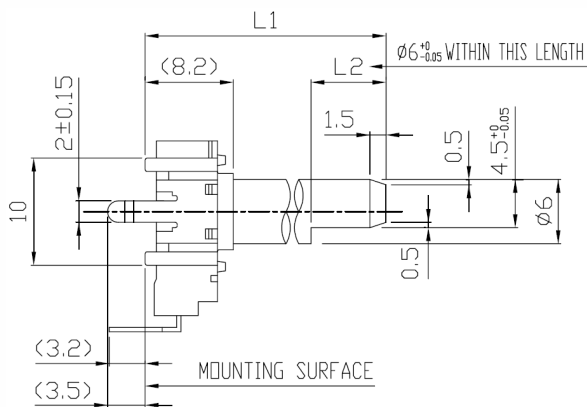
### Mechanical Specifications

#### Series 14VR Horizontal/Side Mount Bushingless

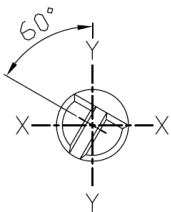


SHAFT SHOWN IN CENTER POSITION  
OR CENTER CLICK POSITION

#### Series 14VR Vertical/Rear Mount Bushingless

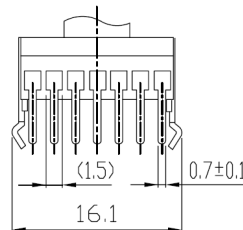
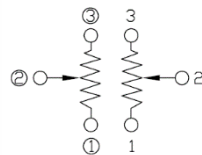


SHAFT SHOWN IN CENTER POSITION  
OR CENTER CLICK POSITION



SHAFT SHOWN IN FULL CCW POSITION

#### CIRCUIT DIAGRAM



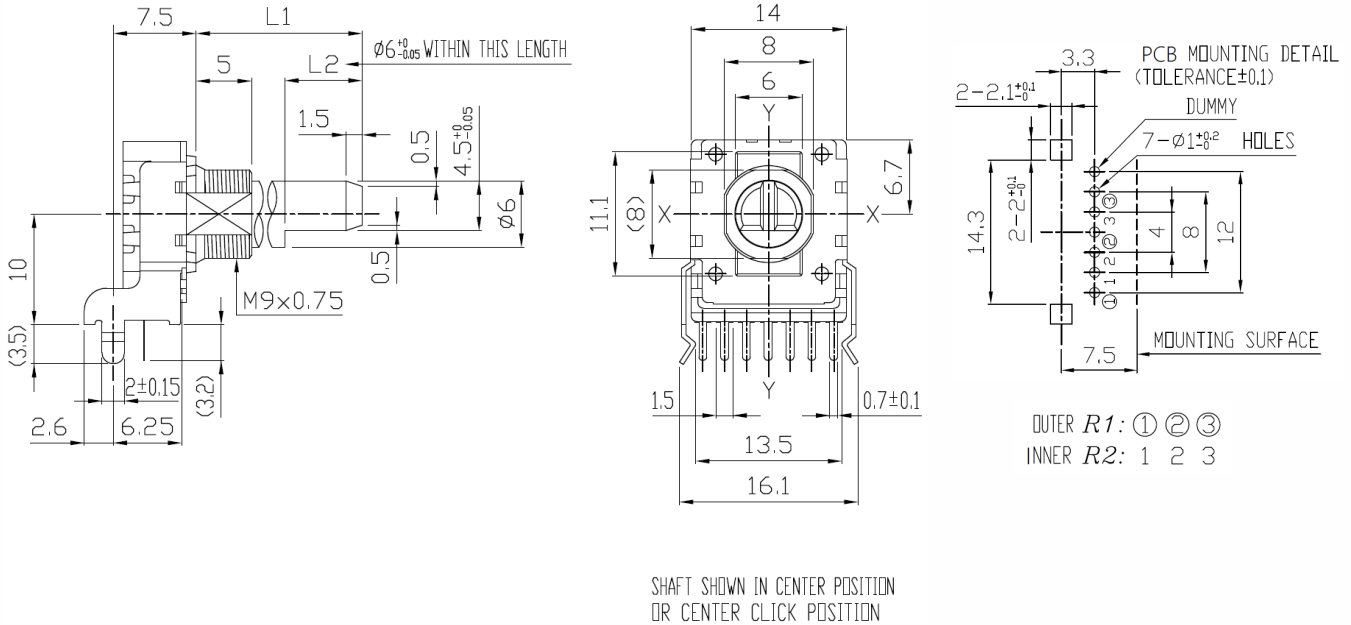
LENGTH	
L1	L2
20	7
22.5	7
25	12
27.5	12
30	12

Unit: mm

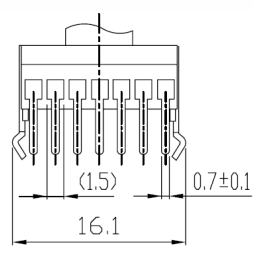
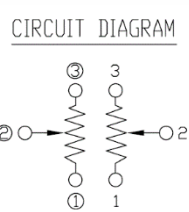
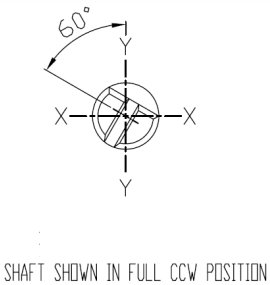
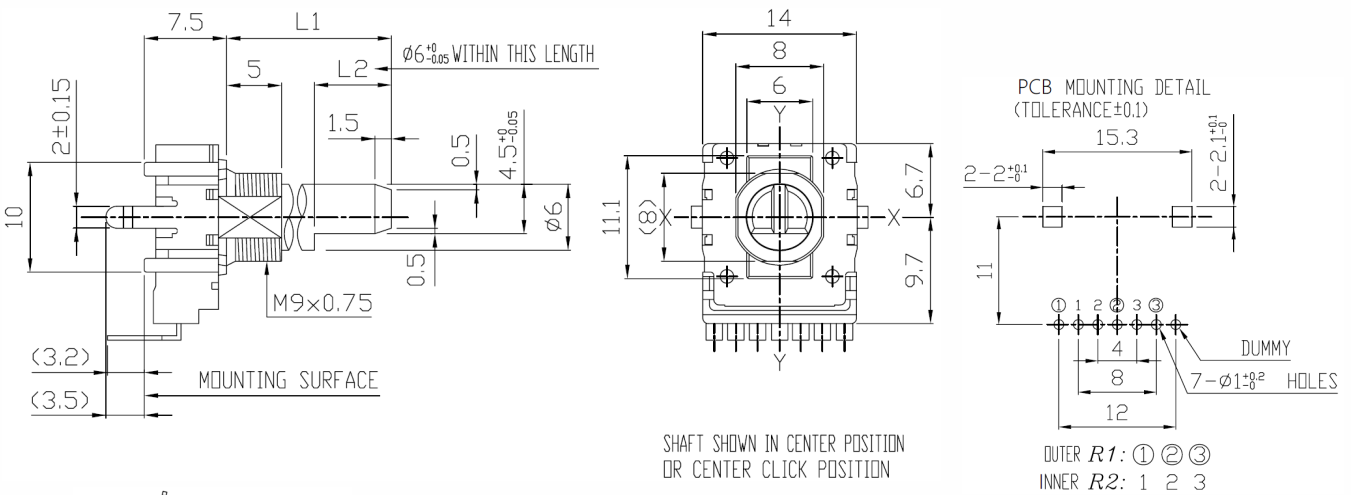
TOLERANCES UNLESS OTHERWISE SPEC	
$L \leq 10$	$\pm 0.3$
$10 < L \leq 100$	$\pm 0.5$
$100 < L$	$\pm 0.8$
ANGULAR DIMENSION	$\pm 5^\circ$

### Mechanical Specifications

#### Series 14VR Horizontal/Side Mount with Threaded Bushing



#### Series 14VR Vertical/Rear Mount with Threaded Bushing



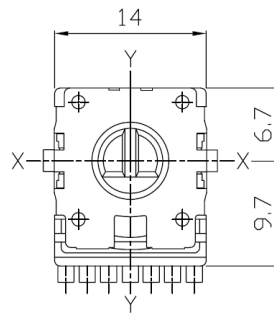
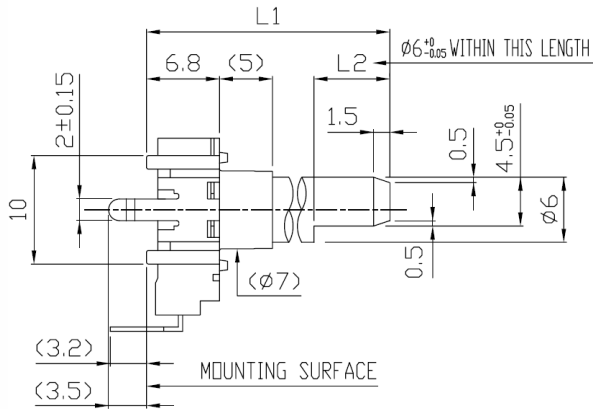
LENGTH	
L1	L2
12.5	7
15	7
17.5	12
20	12
22.5	12
25	12
30	12

Unit: mm

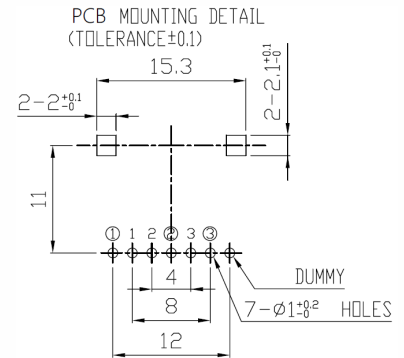
TOLERANCES UNLESS OTHERWISE SPEC	
L ≤ 10	±0.3
10 < L ≤ 100	±0.5
100 < L	±0.8
ANGULAR DIMENSION	±5°

## Mechanical Specifications

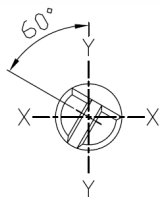
### Series 14VR Vertical/Rear Mount with Sleeve Bushing



SHAFT SHOWN IN CENTER POSITION  
OR CENTER CLICK POSITION

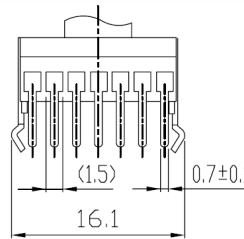
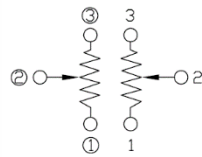


OUTER R1: ① ② ③  
INNER R2: 1 2 3



SHAFT SHOWN IN FULL CCW POSITION

#### CIRCUIT DIAGRAM



LENGTH	
L1	L2
20	7
22.5	7
25	12
27.5	12
30	12

Unit: mm

TOLERANCES UNLESS OTHERWISE SPEC	
$L \leq 10$	$\pm 0.3$
$10 < L \leq 100$	$\pm 0.5$
$100 < L$	$\pm 0.8$
ANGULAR DIMENSION	$\pm 5^\circ$

## Electrical Specification

### Series 14VR Taper Graphs

