



Features

- Carbon element
- Insulated shaft
- Wide variety of mounting styles
- Center detent option
- RoHS compliant*

R09 Series - 9 mm Rotary Potentiometer

Electrical Characteristics

Taper.....Linear, audio
Standard Resistance Range
.....1 K ohms to 1 M ohms
Standard Resistance Tolerance..... $\pm 20\%$
Residual Resistance
.....50 ohms or $\pm 1\%$ max.

Environmental Characteristics

Operating Temperature..... -10°C to $+60^{\circ}\text{C}$
Power Rating
(Linear and Audio).....0.05 watt
Maximum Operating Voltage
(Linear and Audio).....20 VDC, 50 VAC
Sliding Noise68mV max.

Mechanical Characteristics

Mechanical Angle $280^{\circ} \pm 5^{\circ}$
(or $300^{\circ} \pm 5^{\circ}$)
Rotational Torque10 to 150 gf-cm
Detent Torque20 to 200 gf-cm
Stop Strength2 kg-cm min.
Rotational Life10,000 cycles
Soldering Condition
..... 300°C max. within 3 seconds
HardwareOne flat washer and one
hex nut supplied with bushing version

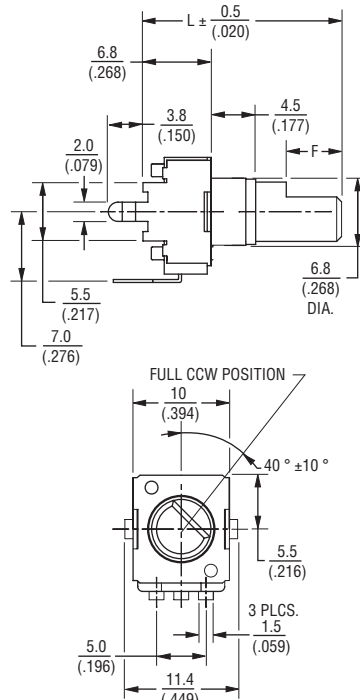
How To Order

R09 - 2 0 20 F - B 203

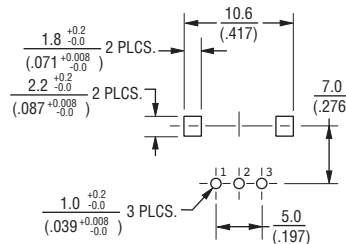
Model _____
Terminal Configuration _____
(Pin Layout)
1 = Horizontal/Rear Mount
w/Sleeve Bushing
2 = Vertical/Side Mount,
Bushless,
10 mm Height
3 = Vertical/Side Mount,
Bushless,
6.5 mm Height
4 = Horizontal/Rear Mount,
Bushless
5 = Horizontal/Rear Mount
w/Plastic Plain Bushing
6 = Horizontal/Rear Mount
w/Metal Threaded
Bushing
7 = Vertical/Side Mount
w/Sleeve Bushing,
6.5 mm Height
8 = Vertical/Side Mount
w/Sleeve Bushing,
10 mm height
Option _____
0 = No Detent 2 = Center
Standard Shaft Length _____
15 = 15 mm 25 = 25 mm
20 = 20 mm 30 = 30 mm
Shaft Style (Plastic) _____
F = Flat Type Insulated Shaft
S = Insulated Knurled (18 Teeth)
U = Insulated Knurled (40 Teeth)
Resistance Taper _____
Taper Series followed by Curve Number
Resistance Code (See Table) _____

Product Dimensions

R09-1 (Horizontal/Rear Mount w/Sleeve Bushing)

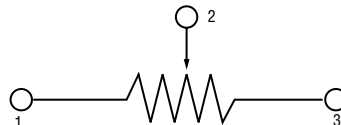


RECOMMENDED PCB LAYOUT (HORIZONTAL/REAR MOUNT)

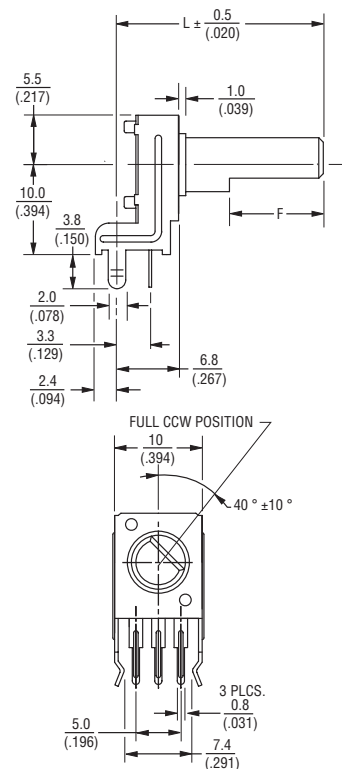


DIMENSIONS: MM
(INCHES)

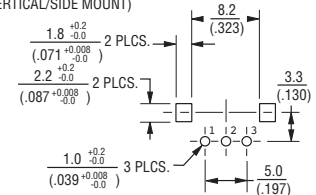
Schematic



R09-2 (Vertical/Side Mount, Bushless, 10 mm Height)



RECOMMENDED PCB LAYOUT (VERTICAL/SIDE MOUNT)



Standard Resistance Table

Resistance (Ohms)	Resistance Code
1,000	102
2,000	202
5,000	502
10,000	103
20,000	203
50,000	503
100,000	104
200,000	204
500,000	504
1,000,000	105

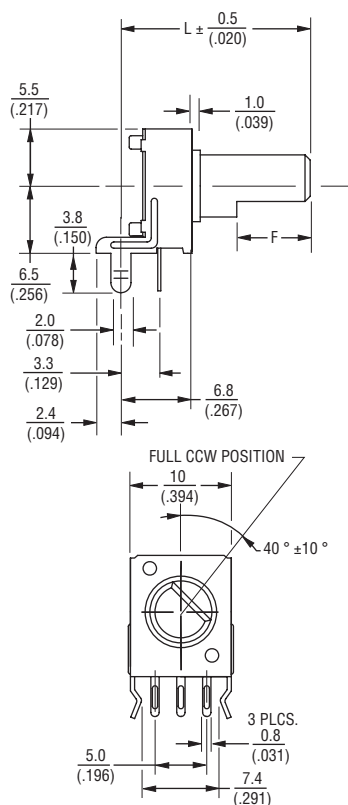
Applications

- Commercial communications equipment
- Portable electronics
- Amplifiers/mixers/drum machines/synthesizers
- Consumer goods
- Commercial appliances

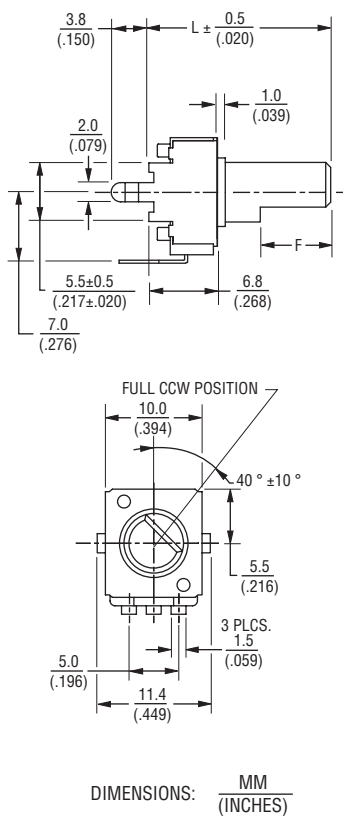
R09 Series - 9 mm Rotary Potentiometer

Product Dimensions (Continued)

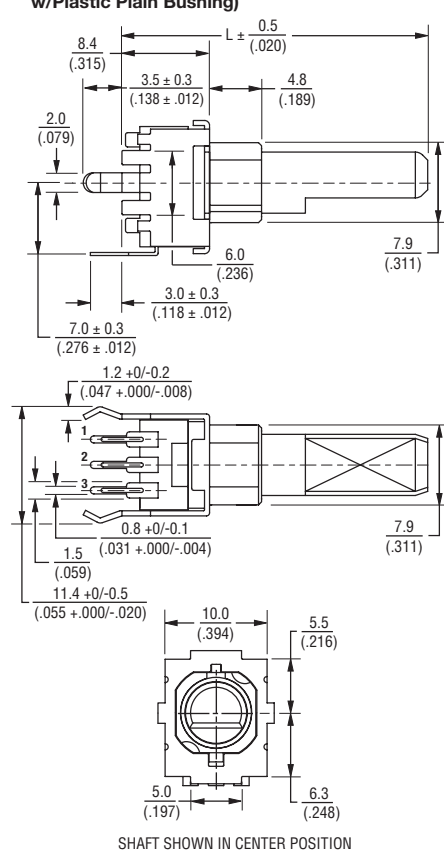
R09-3
(Vertical/Side Mount,
Bushingsless, 6.5 mm Height)



R09-4
(Horizontal/Rear Mount, Bushingless)



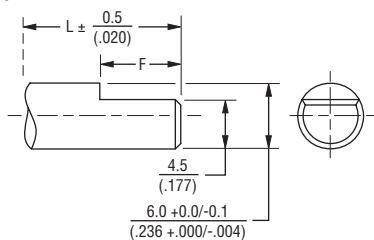
R09-5
(Horizontal/Rear Mount
w/Plastic Plain Bushing)



SHAFT SHOWN IN CENTER POSITION

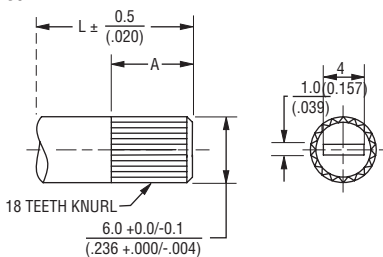
Shaft Styles

F-Type



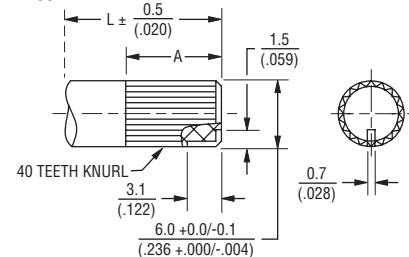
L	15 (.591)	20 (.787)	25 (.984)	30 (1.181)
F	6 (.236)	7 (.275)	12 (.472)	12 (.472)

S-Type



L	15 (.591)	20 (.787)	25 (.984)	30 (1.181)
A	6 (.236)	7 (.275)	12 (.472)	12 (.472)

U-Type

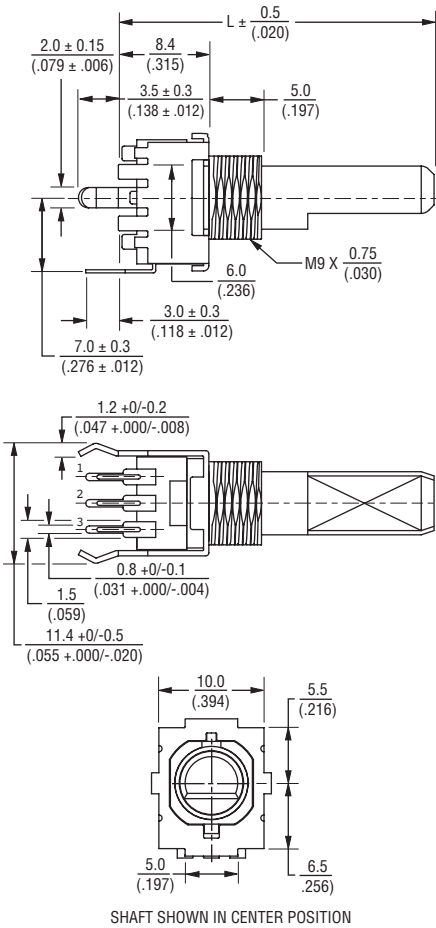


L	15 (.591)	20 (.787)	25 (.984)	30 (1.181)
A	6 (.236)	7 (.275)	12 (.472)	12 (.472)

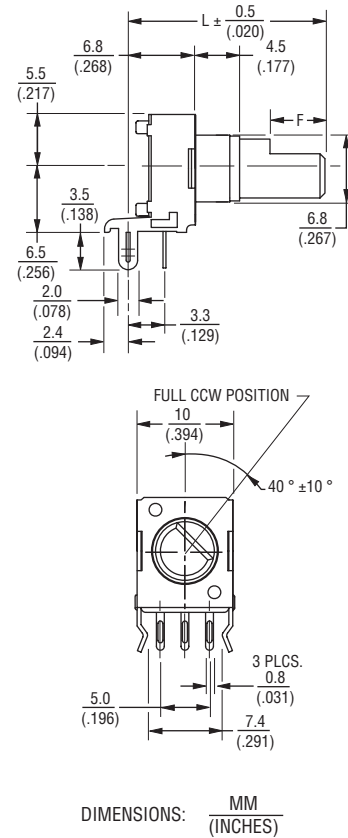
R09 Series - 9 mm Rotary Potentiometer

Product Dimensions (Continued)

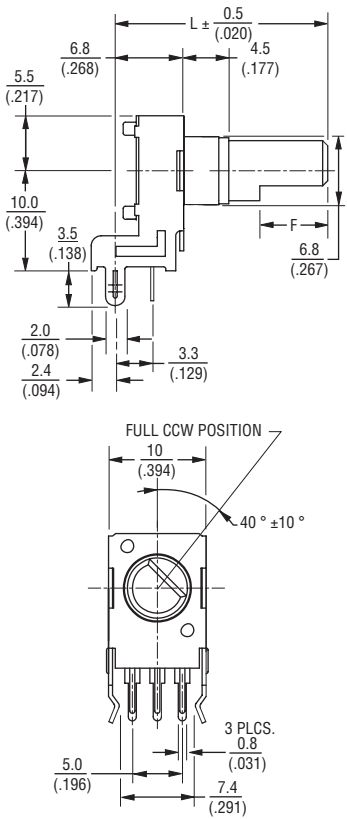
R09-6
(Horizontal/Rear Mount
w/Metal Threaded Bushing)



R09-7
(Vertical/Side Mount
w/Sleeve Bushing, 6.5 mm Height)

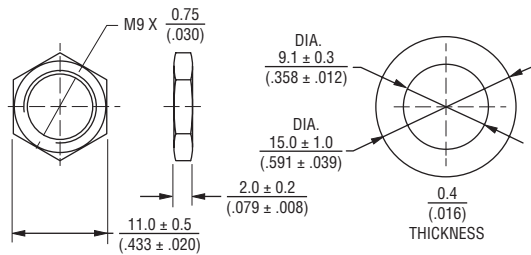


R09-8
(Vertical/Side Mount
w/Sleeve Bushing, 10 mm Height)



DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Mounting Hardware



General Tolerance

Dimension:

$X < 10 \pm 0.3\text{mm}$

$10 \leq X < 30 \pm 0.5\text{mm}$

$30 \leq X \leq 100 \pm 1\text{mm}$

Angle: $\pm 5^\circ$

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Tapers

