



High Precision Range

Bushing Mount

Economical

- **7/8" (22mm) Diameter**
- **10 Million Turns Life**
- **Infinite Resolution**
- **1K to 100K ohms Resistance Values**

Industry standard 22mm (7/8") body diameter with side terminals. Very long life, high precision with a wide range of options available. Available with or without mechanical stops.

Electrical Specifications	MP20	MP21
Electrical Angle	320 ±5°	
Resistance Value (ohms)	1k...100k	
Resistance Tolerance	±15% (±10% opt.)	
Linearity Tolerance (std.)	±1%	
Linearity Tolerance (best)	±0.5%	
Resolution	Essentially infinite	
Max. Voltage (V)	200	
Wiper Current	1 mA nominal	
Power @ 40° (W)	1	
Insulation Resistance	>1000 Mohm @ 1000 VDC	
Dielectric Strength	1 minute @ 1000 VAC	
Output Smoothness	< 0.1% per MIL-R-39023	
Mechanical Specifications		
Mechanical Angle	360° (continuous)	320° ±5°
Maximum Operating Torque	0.3 (Ncm)	
Stopper Strength	-	25 (Ncm)
Life Expectancy	10 million cycles	
Max. Axial Play of Shaft	0.2 mm	
Max. Radial Play of Shaft	0.1 mm	
Vibration	15 g / 10Hz to 2,000 Hz	
Shock	50 g / 11ms	
Bearing	Sleeve bearing	
Environmental Specifications		
Operating Temperature	-55°C to +105°C	
IP Protection Grade	IP40 (IP65 optional)	
Standard	per MIL-R-12934	

Materials

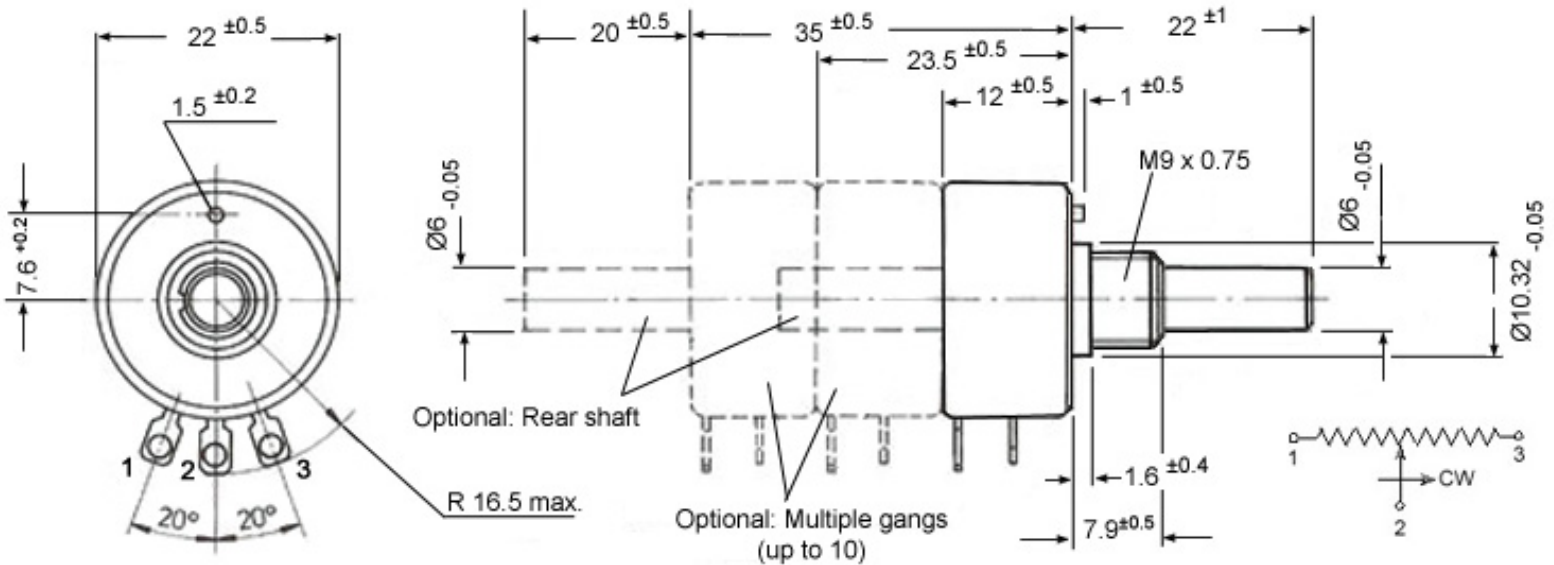
Housing	Engineered plastic
Shaft	Stainless steel
Bushing	Brass
Terminals	Gold plated

Operating Characteristics

Resistance Value (ohms)	Resolution (%)	Vmax across element (V)	I _{max} through element (mA)*	Temperature coefficient of element (±ppm/k)
1k	infinite**	28	28	300
2k		40	20	
5k		63	12	
10k		90	9	
20k		126	6	
50k		200	4	

* maximum wiper current = 1mA **theoretical, actual practice < 0.01°

Standard Dimesnisons (mm)



Options

- Extra tap (1 only)
- Special shaft machining
- Rear shaft
- Slipping clutch
- Special operating angles
- Tighter tolerances
- Multiple gangs (up to 10)
- Sealed housing
- Higher IP ratings
- Special resistance values
- High torque
- O-ring shaft seal

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