

**MCP40****MCP50****High Precision****All Metal****Very Long Life**

- 50 Million Turns Life
- $\pm 0.1\%$  Standard Linearity
- Two Precision Ball Bearings
- 1K to 500K ohms Resistance Values

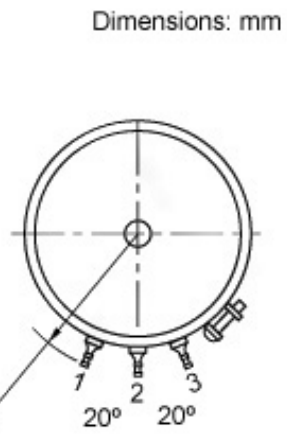
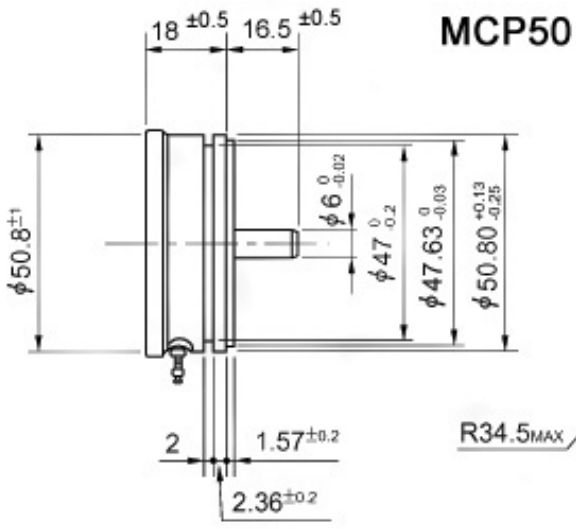
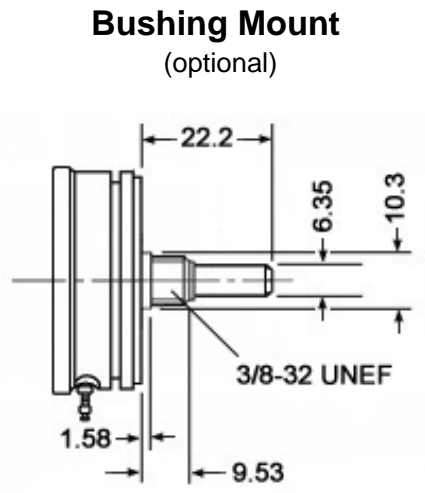
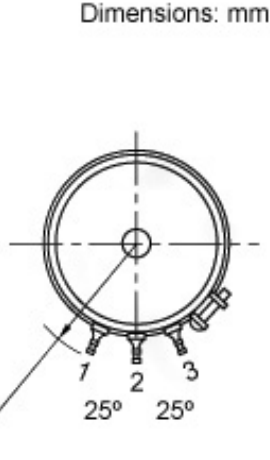
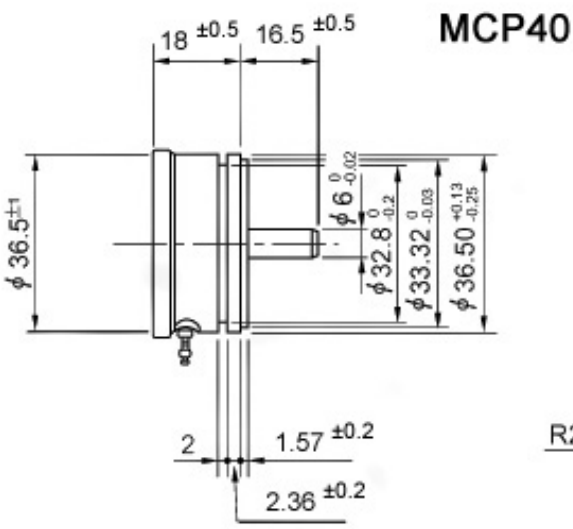
Very high precision and long life. All metal construction. Essentially infinite resolution. Ideal for position feedback applications where high precision and/or long life is required. Bushing mount version also available.

Electrical Specifications	MCP40	MCP50
Electrical Angle	340 $\pm 5^\circ$	350 $\pm 5^\circ$
Resistance Value (ohms)	1K ~ 200K	1K ~ 500K
Resistance Tolerance	$\pm 5\%$ (3% opt.)	$\pm 5\%$ (2% opt.)
Linearity Tolerance (std.)	$\pm 0.1\%$	
Linearity Tolerance (best)	$\pm 0.05\%$	
Resolution	Essentially infinite	
Wiper Current	1mA	
End Resistance	< 0.1%	
Power @ 40° (W)	2	3
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)	
Maximum Operating Friction	0.2 (Ncm)	0.3 (Ncm)
Life Expectancy	50 million cycles	
Weight (g)	60	80
Max. Axial Play of Shaft	0.2 mm	
Max. Radial Play of Shaft	0.05 mm	
Vibration	15 g / 10Hz to 2,000 Hz	
Shock	50 g / 11ms	
Bearing	2 x precision ball bearings	
Environmental Specifications		
Operating Temperature	-55°C to +125°C	
IP Protection Grade	IP40 (IP54 opt.)	
Standard	per MIL-R-12934	

**Materials**

Housing	Anodized aluminum, black
Shaft	Stainless steel
Terminals	Gold plated (turret terminals)

**Standard Dimensions (mm)**



**Note:** shaft length, diameter and bushing dimensions can be specified. Typical dimensions shown.

**Options**

- 6.35mm shaft diameter
- Special shaft machining
- Special resistance values
- Special operating angles
- Multiple gangs (up to 7)
- Bushing mount
- Extra tap (up to 3)
- Rear shaft (6mm x 15mm)
- Higher IP ratings

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