



**High Precision Range**

**Servo Mount**

**Front & Rear Ball Bearings**

- **10 Million Turns Life**
- **22mm Housing Diameter**
- **Two Precision Ball Bearings**
- **500 to 100K ohms Resistance Values**

Long life, high resolution potentiometer in an industry standard 22mm (7/8") package. MPS20 features continuous mechanical rotation and MPS21 features mechanical stops for 320° rotation. Series features many custom options which are listed below.

Electrical Specifications	MPS20	MPS21
Electrical Angle	340 ±4°	320 ±5°
Resistance Value (ohms)	500...100k	
Resistance Tolerance	±15% (±10% opt.)	
Linearity Tolerance (std.)	±1%	
Linearity Tolerance (best)	±0.5%	
Resolution	Essentially infinite	
Max. Voltage (V)	400	
Wiper Current	10 µA max. / 2 µA recommended	
Contact Resistance Variation	< 2% C.R.V.	
Power @ 40° (W)	1	
Insulation Resistance	>1000 Mohm @ 500 VDC	
Dielectric Strength	1 minute @ 500 VAC	
Output Smoothness	< 0.1% per MIL-R-39023	
Mechanical Specifications		
Mechanical Angle	360° (continuous)	320°
Operating Torque	0.5 (Ncm) max.	
Stopper Strength	-	60 (Ncm)
Life Expectancy	10 million cycles	
Weight (g)	approx. 20	
Max. Axial Play of Shaft	0.13 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	

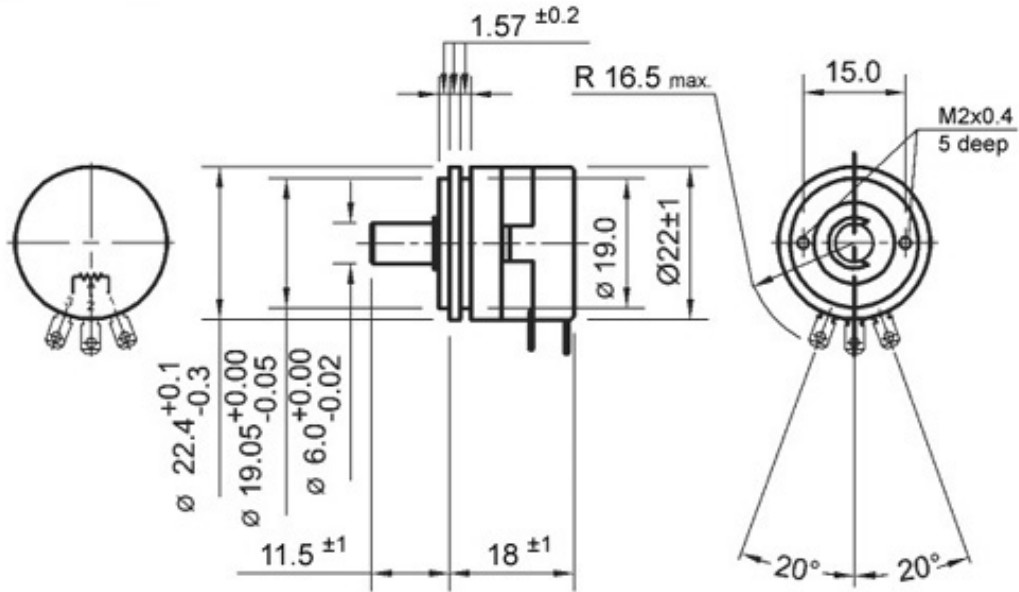
## Environmental Specifications

Operating Temperature	-55°C to +105°C
IP Protection Grade	IP40 (IP65)
Standard	per MIL-R-12934

## Materials

Housing	Synthetic plastic
Shaft	Stainless steel
Terminals	Gold plated (blade terminal, DIN 46247)

## Standard Dimensions (mm)



## Options

- 1/4" shaft diameter (6.35mm)
- Special operating angles
- Extra tap (1 only)
- Special shaft machining
- Multiple gangs (up to 10)
- Rear shaft (6mm x 20mm)
- Special resistance values
- Tighter tolerances
- Higher IP ratings (sealed)

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