

Data Sheet for Linear Sensors

Potentiometric Linear Transducer (Conductive Plastic)

Series MM / MMR



The MM / MMR series is used in applications where a miniaturized displacement sensor is required.

- Linear potentiometer (conductive plastic) with almost infinite resolution
- Measuring lengths from 10 mm to 30 mm
- Compact dimensions
- Double bearing push rod
- Long lifetime (up to 40 million movements)
- With and without spring return

This compact sensor will be mounted by means of the pilot ring and the two thread holes on the front side

Electrical Data	MM(R)11	MM(R)15	MM(R)20	MM(R)30
Effective electrical travel 1.)	10 ±0,5 mm	15 ±0,5 mm	20 ±0,5 mm	30 ±0,5 mm
Total resistance 1.)	0,5, 1, 2, 5, 10 kOhm			
Resistance tolerance	±10%			
Independent linearity (best straight line) 1.)	±1% (±0,5%)	±0,5%		
Theoretical resolution 1.)	Almost infinite			
Backlash (Hysteresis) 1.)	≤ 0,1 mm			
Max. / recommended wiper current1.)	1 mA (@ 40°C, 1 min in case of failure) / 2 µA			
Power rating @ 70°C (0W @ 105°C)	≤ 0,2 W	≤ 0,3 W	≤ 0,4 W	≤ 0,5 W
Isolation voltage 1.)	1000 VAC, 1min			
Isolation resistance 1.)	1000 MOhm @ 1000 VDC			

Mechanical Data, Environmental Conditions, Miscellaneous	MM(R)11	MM(R)15	MM(R)20	MM(R)30
Mechanical stroke 1.)	10 +2 mm	15 +2 mm	20 +2 mm	30 +2 mm
Lifetime (90% effective electrical travel) 2.)	40 / 20 Mio. movements (MM / MMR)			
Max. operational speed	< 2 m/s			
Operational force @ RT 1.) 2.)	< 0,3 N / 3 N (MM / MMR)			
End stop force in case of failure	< 20 N			
Operational temperature	-30...+105°C			
Storage temperature	-30...+105°C			
Protection grade (IEC60529)	IP40			
Vibration (IEC 68-2-6, Test Fc)	15 g (10..2000 Hz, 0,75mm, 12h)			
Shock (IEC 68-2-27, Test Ea)	50 g, halfsine, 11 ms (18x)			
Housing length	37 ±1 mm		52 ±1 mm	