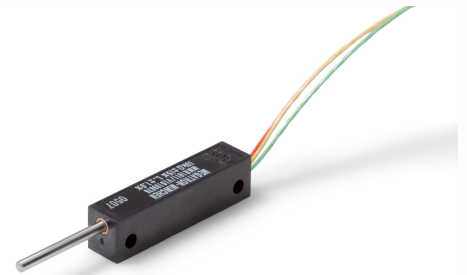


Serie MM10 - Potentiometric Linear Transducer

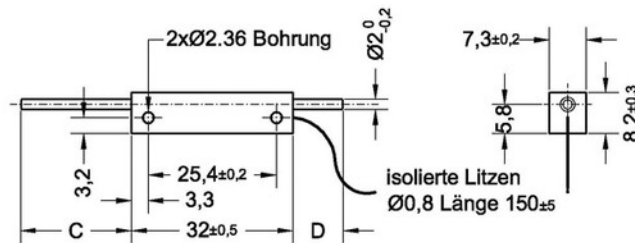
- Conductive plastic element, resolution quasi infinite
- Electrical travel from 8 mm to 15 mm
- Small dimensions
- Double sleeve bearing
- High Lifetime
- Spring return optional



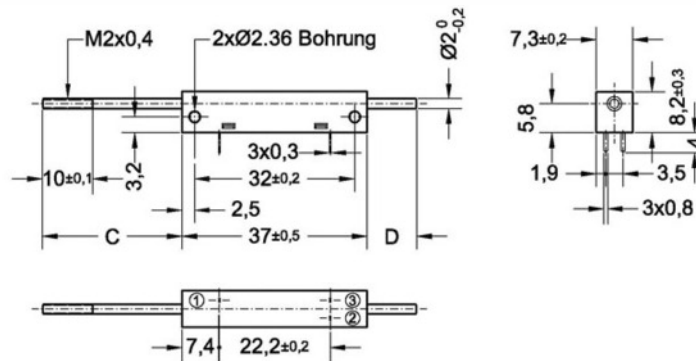
The compact series MM are mounted in a Dusoplast housing. The stainless shaft can be provided with a spring return device, thus it is useabel as a sensor.

Drawing

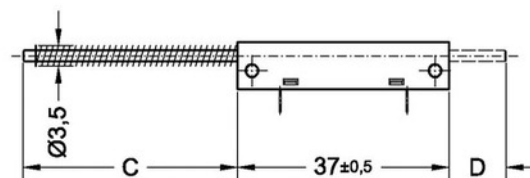
MM10_8 / MM10_11 / MM10_12
with or without spring



MM10_15
without spring



MM10_15
with spring



Serie MM10 - Potentiometric Linear Transducer

Dimensions

Type	MM(R)10_8	MM(R)10_11	MM(R)10_12	MM10_15	MMR10_15
C max. [± 1 mm]	18	22	23	28	37
C min. [± 1 mm]	10	10	10	10	19
D max. [± 1 mm]	18	22	23	28	18
D min. [± 1 mm]	10	10	10	10	0

Wiring:

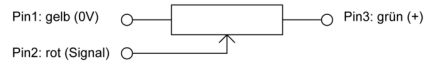


Diagram is equivalent to the shaft position in the drawing above

Electrical Data	MM10_8	MM10_11	MM10_12	MM10_15
Electrical Travel [$\pm 0,5$ mm]	8	11	12,7	15
Resistance Values	1, 2, 5, 10, 20 kOhm			
Resistance Tolerance	$\pm 15\%$ ($\pm 10\%$ optional)			
Linearity Tolerance	$\pm 2\%$ ($\pm 1\%$ optional)			
Linearity Tolerance, best possible	--	$\pm 0,5\%$	--	--
Resolution	<0,01 mm			
Power Rating at 40°C	0,2 W			0,3 W
Temperature Coefficient Resistor	400 ppm/K			
Starting Resistance	<2%			
Insulation	> 1000 MOhm (bei 500 VDC)			
Dielectric Strength	500 Veff. / 1 min.			
Maximum Wiper Current	1 mA			
Recommendende Wiper Current	< 1 μ A (voltage divider)			

Serie MM10 - Potentiometric Linear Transducer

Mechanical Data	MM10_8	MM10_11	MM10_12	MM10_15
Mechanical Travel	8 ± 1 mm	12 ± 1 mm	13 ± 1 mm	15 +5/-0 mm
Maximum Operating Friction MM	0,3 N			0,5 N
Maximum Operating Friction MMR	3 N			5 N
Stopper strength statically	10 N			
Weight	≈5 g			
Rod Bearing	2 Sleeve Bearings			
Max. Displacement Speed	2 m/s			
Average lifetime (shaft movements)	MM: 40 Mio. MMR: 20 Mio.			
Housing Material	Duroplast			
Rod Material	stainless Steel			
Terminal Material	MM 10_8, 11, 12: 3 insulated wires Ø0,8mm, length 150mm ± 5mm MM 10_15: gold-plated solder lugs (opt. 3 wires AWG28)			

Ambient Conditions	
Operating Temperature	-25 ... + 105° C
Storage Temperature	-40 ... + 125° C
Vibration	15 g / 10...2000 Hz
Shock	50g / 11ms
Protection Class	IP40 / optional IP54 with different connection

Options	
Mechanical	Electrical
<ul style="list-style-type: none"> • Special shaft (length, shape, thread) • Spring return device (lower lifetime) • IP54 (Attention: different mechanical dimensions) 	<ul style="list-style-type: none"> • Special resistance value • Tighter tolerances • MM 10 15: connection with wires instead of solder lugs

Order Code					
Series	MM (R)10				
Resistance value		R1k			
		R2k (*)			
		R5k			
		R10k			
Stroke [mm]			8		
			11		
			12		
			15		
Resistance tolerance				W15%	
				W10% (*)	
Independent linearity tolerance					L2%
					L1% (*)

(*) = on request available for projects

27.10.2016