

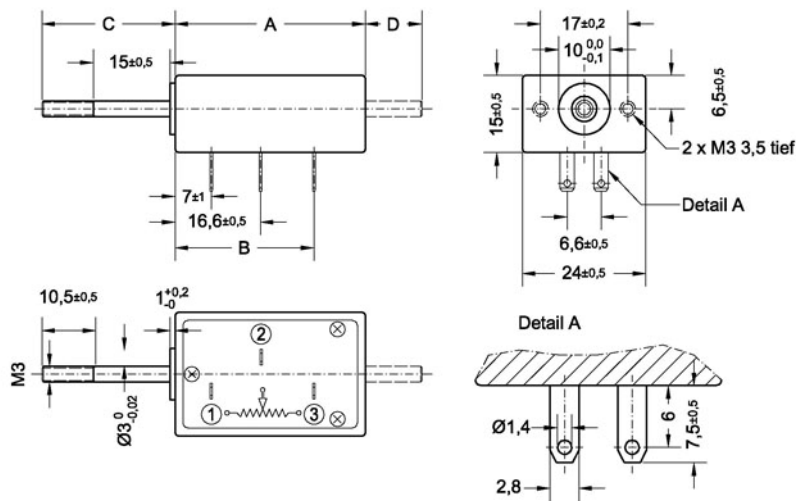
## Series MM - Potentiometric Linear Transducer

- Conductive plastic element, resolution quasi infinite
- Electrical travel from 10 mm to 30 mm
- Small dimensions
- Double sleeve bearing
- Resistance values 500 Ohm to 10 kOhm
- Internal spring return device optional

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



## Drawing



## Wiring

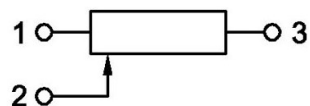


Diagram is equivalent to the shaft position in the above drawing

## Series MM - Potentiometric Linear Transducer

### Dimensions

Type	MM(R) 11	MM(R) 15	MM(R) 20	MM(R) 30
A [ $\pm 1$ mm]	37	37	52	52
B [ $\pm 1,5$ mm]	27	27	42	42
C max. [ $\pm 0,1$ mm]	26	31	36	46
C min. [ $\pm 0,5$ mm]	15	15	15	15
D max. [ $\pm 0,5$ mm]	11	16	21	31
D min. [ $\pm 0,5$ mm]	0	0	0	0

Version with solder lugs qualified for push-on-contact acc. DIN 46247 part 3, and AMP 110 (2,8 x 0,5)  
2 washers and 2 nuts included in delivery.

**Tip: At lowest strokes, and if high resolution and life expectancy are required, we are recommending our inductive sensors with an inductive electronic. They work with a direct d.c. voltage-input and -output.**

Electrical Data	MM 11	MM 15	MM 20	MM 30
Electrical Travel [ $\pm 0,5$ mm]	10 mm	15 mm	20 mm	30 mm
Resistance Value	0,5, 1, 2, 5, 10 kOhm			
Resistance Tolerance	$\pm 10\%$			
Linearity Tolerance, Standard	$\pm 1\%$	$\pm 0,5\%$		
Linearity Tolerance, best	$\pm 0,5\%$			
Resolution	< 0,01 mm			
Power Rating at 40°C	0,2 W	0,3 W	0,4 W	0,5 W
Temperature Coefficient resistor	400 ppm/K			
Starting Resistance	< 2%			
Insulation	> 1000 MOhm (at 1000V DC)			
Dielectric Strength	1000 Veff. / 1 min.			
Max. Wiper Current	1 mA			
Recommended Wiper Current	< 1 $\mu$ A (voltage divider circuit)			

## Series MM - Potentiometric Linear Transducer

Mechanical Data	MM 11	MM 15	MM 20	MM 30
Mechanical Travel	10 + 2 mm	15 + 2 mm	20 + 2 mm	30 + 2 mm
Operating Friction	0,3 N maximum			
Stopper Strength statically	20 N			
Weight	≈30 g			
Rod Bearingn	2 Sleeve Bearings			
Displacement Speed	2 m/s max.			
Average Life (Shaft Movements)	MM (without spring) 40Mio. MMR (with spring) 20Mio.			
Housing Material	Duroplast			
Rod Material	Stainless Steel			
Terminals	gold-plated solder lugs, for AMP 110 series (28 x 0,5 mm) or replacement types			

Ambient Conditions	
Operating Temperature	-30 ... + 105° C
Storage Temperature	-40 ... + 125° C
Vibration	15 g / 10 ... 2000Hz
Shock	50g / 11ms
Protection Class	IP40 / optional IP54 with a different connection

Options	
Mechanical	Electrical
<ul style="list-style-type: none"> <li>• Special shaft (length, shape, bushing)</li> <li>• Spring return device (lower lifetime)</li> <li>• IP54 (Attention: different dimensions)</li> </ul>	<ul style="list-style-type: none"> <li>• Special resistance values</li> <li>• Tighter tolerances</li> <li>• Center tapping</li> </ul>

Order Code				
Series	MM ( R)			
Stroke [mm]		<b>11</b>		<b>1% (0,5%*)</b>
		<b>15</b>		<b>0,50%</b>
		<b>20</b>		<b>0,50%</b>
		<b>30</b>		<b>0,50%</b>
Resistance value			<b>R1k</b>	
			<b>R2k</b>	
			<b>R5k</b>	
			<b>R10k</b>	
Resistance tolerance				<b>W10%</b>
Independent linearity tolerance				<b>depends on the stroke (see above)</b>

"bold print = standard option"

short-term stock types can be found on: <http://www.megatron.de/en/stocklists/linear-sensors/lagerliste.html>

(\*) = on request available for projects

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