

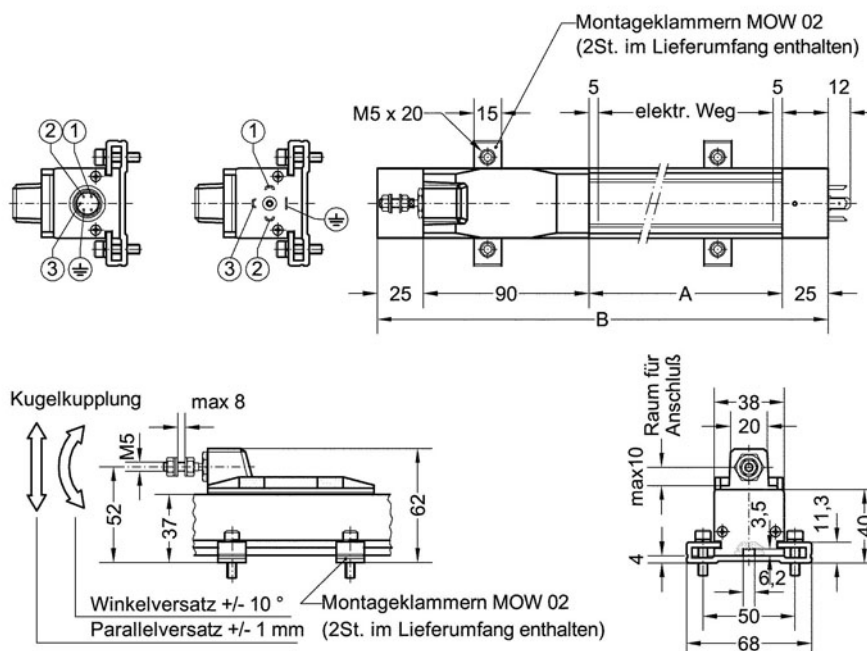
Series MSL38 - Potentiometric Linear Transducer

- Messbereiche von 100 bis 2000 mm
- Linearity tolerances up to $\pm 0,05\%$
- Resolution quasi infinite
- Mechanical connection: Ball joint for compensation of parallel- and angle offset
- Electrical connection: 4-pole angle plug DIN43650, IP65 optional 5-pole plug DIN43322



The rod-less linear transducers series MSL38 are using state of the art conductive plastic technology in order to achieve highest possible life time. They are designed to work in rugged industrial environment. Mechanical interfacing is done on the housing side. The overall housing length of this sensor is therefore reduced to a minimum. The incorporated ball joint interface is able to cope with radial, angular and linear offset between the sensor and the application. If the environment is heavily dirty, we recommend to mount the sensor with head down. That way moisture and dirt will drip of the sensor without damaging the measurement element. Different kinds of connectors are available. The mating parts are not included in the delivery.

Drawing



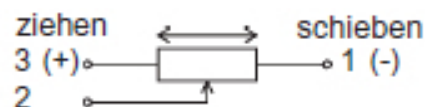
Series MSL38 - Potentiometric Linear Transducer

Electrical Data	100	150	200	300	400	500	600	750	900	1000	1500	2000
Electrical Travel [± 1 mm]	103	153	204	305	406	509	611	763	915	1017	1521	2021
Resistance Values	5 kOhm				10 kOhm					20 kOhm		
Resistance Tolerance	$\pm 20\%$											
Linearity Tolerance, independent	$\pm 0,1\%$						$\pm 0,05\%$					
Resolution	0,01 mm											
Power Rating at 40°C	3 W											
Max. Operating Friction	60 V											
Temperature Coeff. Resistor	400 ppm/K											
Insulation	> 100 MOhm at 500 VDC											
Dielectric Strength	500 Veff. (50 Hz)											
Max. Wiper Current	10 mA											
Recommended Wiper Current	< 0,1 μ A (voltage divider circuit)											

Mechanical Data												
Mech. Travel (A) [mm]	113	163	214	315	416	519	621	773	925	1027	1531	2031
Housing Length(B) [mm]	253	303	354	455	556	659	761	913	1065	1167	1671	2171
Weight [kg]	0,5	0,58	0,65	0,8	0,95	1,1	1,25	1,5	1,7	1,85	2,6	3,8
Weight of wiper block with ball joint	67 g											
Max. Acceleration	≤ 200 m/s (20g)											
Average Life	> 25 x 10 ⁶ meter or > 100 x 10 ⁶ movements the smaller value is currently in force											
Actuating Force	$\leq 1,2$ N											
Ball Joint	Parallel Offset ± 1 mm / Angle Offset $\pm 10^\circ$											
Housing Material	anodized Aluminium / Nylon 66 G 25											
Wiper Material	Nylon 66 GF 40, Latilub 73/13											

Ambient Conditions		
Operating Temperature	-30 ... +100° C	
Storage Temperature	-50 ... +120° C	
Protection Class	IP40	
Shock	50 g / 11 m/s	
Vibration	5 ... 2000 Hz, A max = 0,75 mm / a max = 20 g	

Wiring



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Options	Accessories
<ul style="list-style-type: none"> Version with 5-pole plug 	<ul style="list-style-type: none"> Plug 4-pole IP65, angled, Type SW25, Part No. 110 767 Plug 5-pole IP67, straight, Type SW61, Part No. 110 906 Plug 5-pole IP40, angled, Type SW31, Part No. 111 012 Mounting clamps MOW 02 with screws, 1 set (2 pcs.) included in delivery

Order Code					
Series	Travel	Connection	Resistance Value	Res. Tol.	Lin.Tol.
MSL38	100 ... 2000	- (4-pol.) A (5-pol)	R5K (100-400mm) R10K (400-1000 mm) R20K (1500 + 2000 mm)	± 20%	± 0.1% (up to 400 mm Standard) ± 0.05% (from 500 mm Standard)
Example: MSL38 400 A R10K W20% L0,1%					

The specifications and information in this datasheet cannot consider all special demands that are caused by the application. Because of this, they are no general description of the properties of the product.
28. July 2004. All specifications are subject to change without notice.