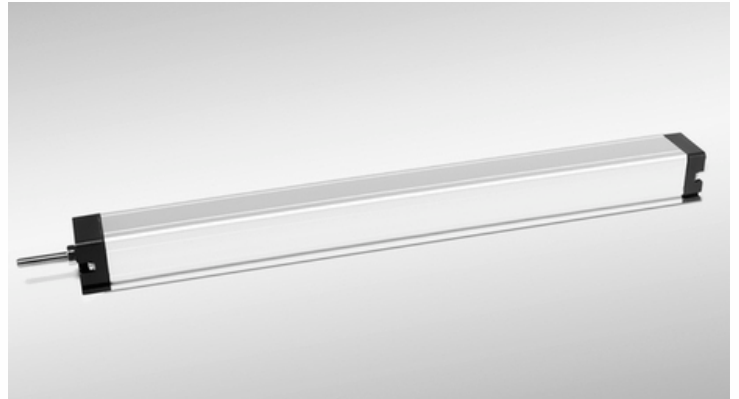


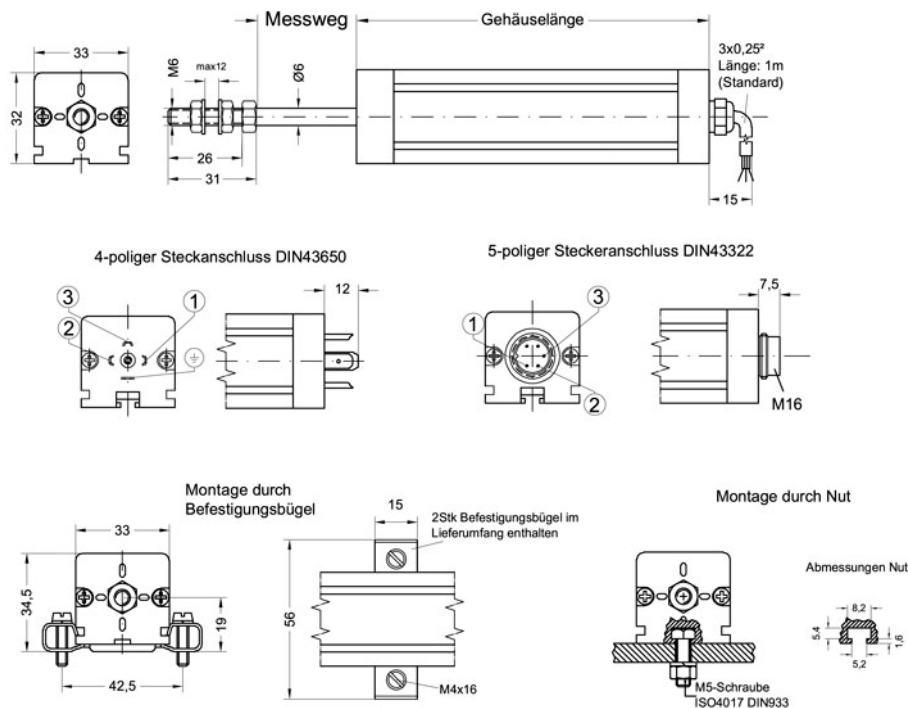
## Series MMS33 IP60, IP65 - Potentiometric Linear Transducer

- Electrical travel from 50 to 900 mm
- Linearity tolerance up to  $\pm 0,05\%$
- Resolution quasi infinite
- Operating temperature  $-30^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$
- Protection class IP60 and IP65



The potentiometric transducer of the series MMS33 are conductive plastic potentiometer with high resolution and lifetime. They are characterized by their solid and compact design. An accurate guidance and long lifetime of 100 mio. moves are guaranteed by a smoothed rod and a low friction sleeve bearing. In case of rough ambient conditions we recommend the IP67 version.

## Drawing



# Series MMS33 IP60, IP65 - Potentiometric Linear Transducer

## Dimensions in mm

MMS33 IP60 / 65	50	75	100	130	150	175	200	225	275	300	350	375	400	450	500	600	650	750	900
Electr. travel + 1	50	75	100	130	150	175	200	225	275	300	350	375	400	450	500	600	650	750	900
Mechan. travel $\pm 1$	59	84	109	139	159	184	210	235	285	310	361	386	412	518	518	619	670	772	924
Housing length	113	138	163	193	218	238	264	289	339	364	415	440	466	517	572	673	725	826	978

## Electrical Data

Resistance Value $\pm 20\%$	50-650 mm: 5kOhm / 750-900 mm: 10kOhm
Linearity Tolerance, independent	$\pm 0,05\%$
Power Rating at 40°C	3 W
Maximum Operating Voltage	60 V
Resolution	< 0,01 mm
Temperature Coefficient	400 ppm/K
Insulation	> 100 MOhm at 500V DC
Maximum Wiper Current	1 mA
Recommended wiper current	< 1 $\mu$ A (voltage divider circuit)

## Mechanical Data

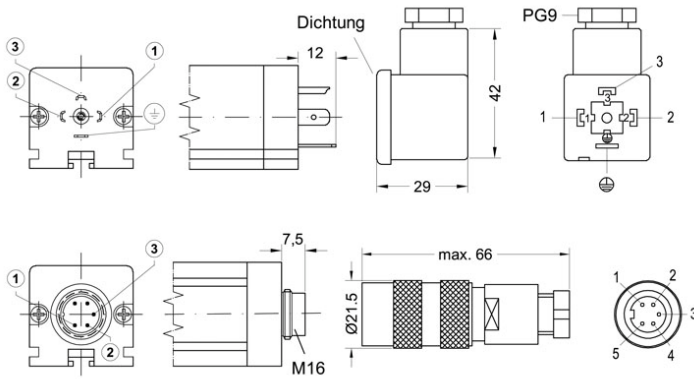
Maximum Displacement Speed	IP60-Version = 10 m/s IP65-Version = 5 m/s
Maximum Accleration	$\leq 200 \text{ m/s}^2$ (20g)
Lifetime	> 25 x 10 <sup>6</sup> meter or > 100 x 10 <sup>6</sup> movements - the smaller value is currently in force
Maximum Operating Friction	IP60-Version = 2 N IP65-Version = 25 N
Housing Material	anodized Aluminium
Rod Material	stainless Steel AISI 303

## Ambient Conditions

Operating Temperature	-30 ... + 100° C
Storage Temperature	-50 ... + 120° C
Shock	50g / 11m/s
Vibration	5 ... 2000 Hz, Amax = 0,75 mm, amax = 20 g

# Series MMS33 IP60, IP65 - Potentiometric Linear Transducer

## Mating Plug



4-pole plug type SW25  
DIN 43650

.....  
5-pole plug type SW61  
DIN 43322

## Options / Accessories

- Plug 4-pole Type SW25, Part No. 110767
- Plug 5-pole (straight) Type SW61, Part No. 110906
- Plug 5-pole (angled) Type SKW, Part No. 114462
- Special cable length

## Order Code

Series	Connection	Travel	Resistance Value	Res. Tol.	Lin. Tol.	Protection
MMS33	K = cable, 1m SV = 4-pole connector DIN43650 P = 5-pole connector DIN43322	50 ... 900	R5K	20%	0,05%	IP60 IP65

**Example: MMS33 K 300 R5K W20% L0,05% IP65**

Tip: The mating plug is not included in delivery, please order separately.

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.  
11. May 2009. All specifications are subject to change without notice.