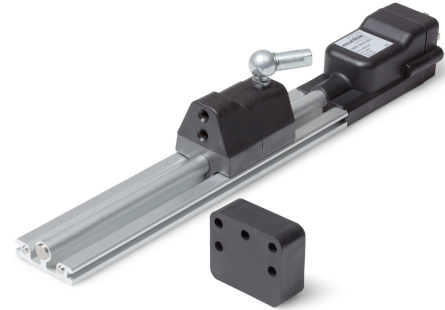


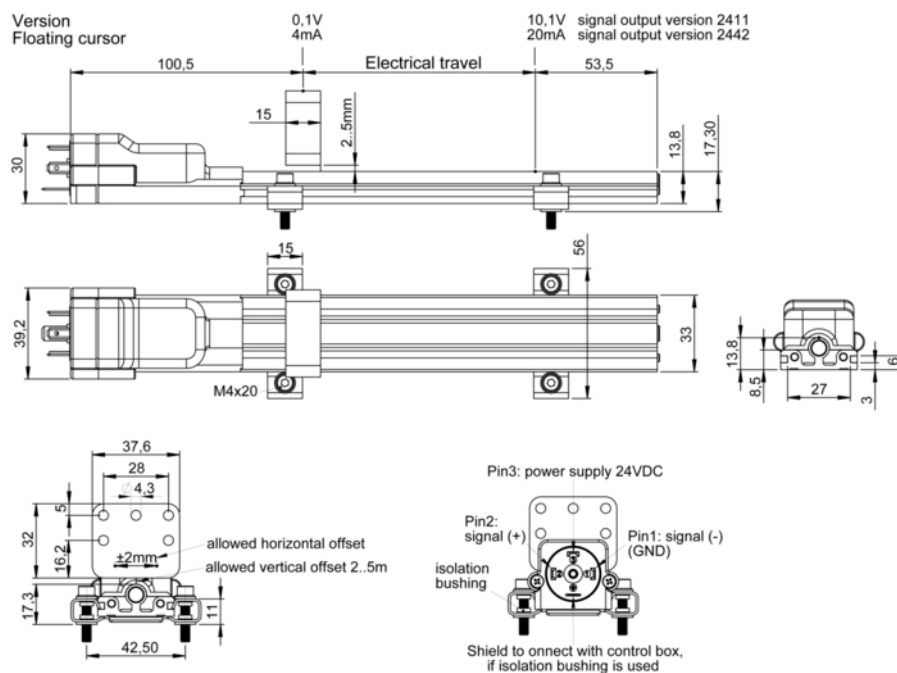
## Magnetostrictive Linear Transducer Series OMS

- Contactless measurement principle, magnetostrictive with printed coil technology
  - Infinite lifetime
  - Robust against shock- and vibration influences
- Accurate measurement because of high resolution and low linearity tolerance of  $\pm 0,04\%$
- Output signal is absolute (4...20mA / 0,1...10,1V)
- Measurement length between 50 mm and 1500 mm in 31 versions

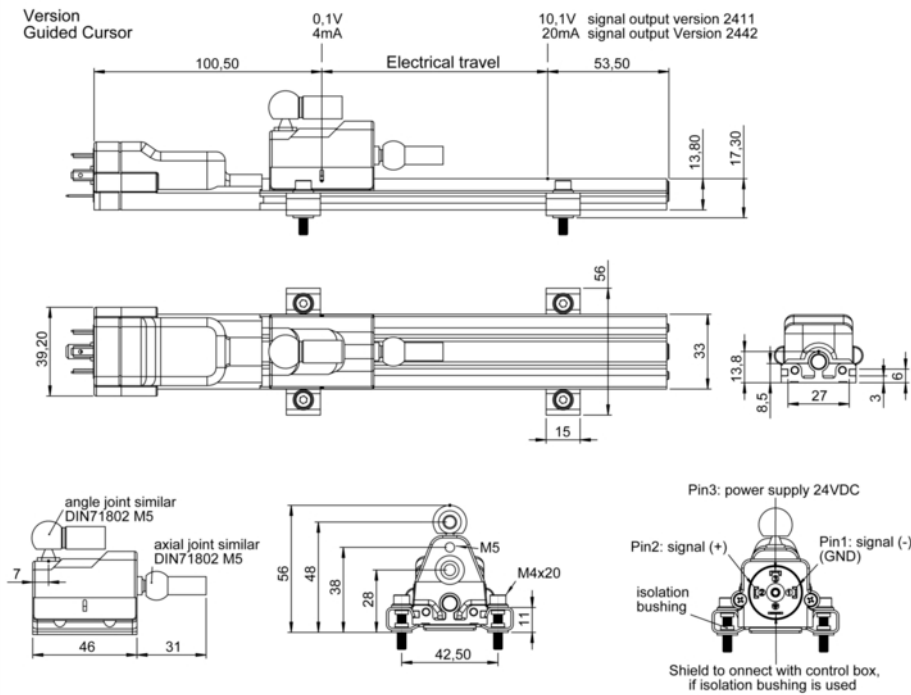


The main features of the magnetostrictive OMS linear transducer with printed coil technology are robust design, accurate measurement of the position in linear movement and endless lifetime because of his contactless measurement principle. The printed coil technology has more sensitivity in the magnetostrictive measurement and that allows more resolution and better robustness against shock- and vibration influences. Further advantage of the new printed coil technology is the simplification in the assembling which reduces the costs of manufacturing. For measuring there are two kind of cursors: The floating cursor which allows  $\pm 1,5\text{mm}$  deviation in vertical direction and  $\pm 2\text{mm}$  in horizontal direction or the guided cursors with axial or angle ball joint for good mechanical coupling. The high protection class with IP65 and the low current consumption with only 35...60mA gives a good additional performance. To make the electrical connecting saver, the signal output line is equipped with a own protection circuit.

## Drawing



# Magnetostrictive Linear Transducer Series OMS



## Electrical Data

Electrical Travel in mm	50, 75, 100, 130, 150, 175, 200, 225, 250, 300, 350, 360, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000, 1100, 1200, 1250, 1300, 1400, 1500 mm
Independent Linearity Tolerance	$< \pm 0,04 \% \text{F.S.}$ (Mind. $\pm 0,09 \text{mm}$ )
Power Supply	24V DC $\pm 20\%$
Max. Current Consumption	35 mA (0,1 - 10,1V) 60 mA (4 - 20mA)
Insulation	50 V DC
Output Signal	0,1 - 10,1 V / 4 - 20 mA
Maximum Output Signal	12V / 30mA
Output Signal in Case of Malfunction	10,5V / 21mA
Resolution	quasi infinite (limited by output ripple)
Load Resistance	$> 10 \text{K}\Omega$ (0,1 - 10,1 V) 50...500 Ohm (4 - 20 mA)
Hysteresis	$< 0,02 \text{ mm}$
Temperature Coefficient	$< 0,01 \% \text{FS}/^\circ\text{C}$
Sample Rate	1 ms (50 - 600 mm) 1,5 ms (650 - 900 mm) 2 ms (950 - 1300mm) 3 ms (1400 - 1500mm)

# Magnetostrictive Linear Transducer Series OMS

## Ambient Conditions

Operating Temperature	-30 ... +75°C
Storage Temperature	-40 ... 100°C
Shock DIN IEC68T2-27	100g - 11ms - single cycle
Vibration DIN IEC68T2-6	12g / 10 ... 2000Hz
Protection Class	IP65

## Mechanical Data

Maximum Displacement Speed	≤10 m/s
Maximale Acceleration	≤100 m/s <sup>2</sup>

## Accessories

- **Guided Cursor:**  
Not included in delivery. Please order separately.  
- Axial ball joint = Part No. 128 101  
- Angel ball joint = Part No. 128 102
- **Floating Cursor:**  
Not included in delivery. Please order separately. = Part No. 120 639
- **Mounting Brackets:**  
1 Set included in delivery. 1 Set = 2 brackets with 4 screws M4x20 and 4 washers = Part No. 128 103
- **Plug:**  
Not included in delivery. Please order separately. 4-pol. plug 27x27mm angled = Part No. 110 767

## Order Code

Series	<b>OMS</b>				
Stroke [mm]		<b>50 (*)</b>			
		<b>75</b>			
		<b>100</b>			
		<b>150</b>			
		<b>175</b>			
		<b>200</b>			
		300 (*)			
		400 (*)			
		<b>500</b>			
		750(*)			
		900(*)			
		<b>1000</b>			
Connector				<b>S</b>	
Output signal:					
4-20 mA					2442
0,1..10,1V					2411

"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

23.02.2015