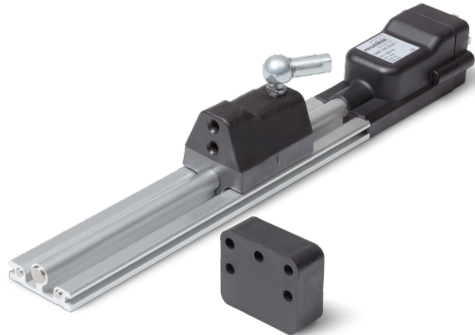


Data Sheet for Linear Sensors

Magnetic (magnetostrictive) Linear Transducer with analogue output

Series OMS



OMS linear sensors are used in harsh environments who requiring a rugged, non-contact and low-profile sensor with very long lifespan.

- For 50..1500 mm
- Wear-free measuring principle with absolute analog signal
- For harsh conditions IP65
- Very flat construction with only 14 mm installation height
- High precision due to high resolution and good linearity

Electrical Data

Effective electrical travel in mm 1.)	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	
Independent linearity (best straight line) 1.)	$\leq \pm 0,04\%$ (Min. $\pm 0,090$ mm)	
Output signal	0,1..10,1 V	4..20 mA
Theoretical resolution 1.)	Almost infinite	
Backlash (Hysteresis) 1.)	< 0,02 mm	
Update rate	1 ms (50..600 mm) / 1,5 ms (650..900 mm) / 2 ms (950..1300 mm) / 3 ms (1400..1500 mm)	
Supply voltage	24 V $\pm 20\%$	
Power consumption (no load)	≤ 35 mA (0,1..10,1 V)	≤ 60 mA (4..20 mA)
Output load	≥ 10 kOhm (0,1..10,1 V)	$\geq 50..500$ Ohm (4..20 mA)
Power ripple	< 10 mVpp	
Output value	≤ 12 V	≤ 30 mA
Alarm output value	10,5 V	21 mA
Isolation voltage 1.)	50 V	
Protection against polarity inversion, overvoltage, power supply in output: Yes		

Mechanical Data, Environmental Conditions, Miscellaneous

Mechanical stroke in mm 1.)	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	
Lifetime (90% effective electrical travel) 2.)	Almost infinite	
Max. operational speed	< 10 m/s	
Max. acceleration	≤ 100 m/s ²	
Operational temperature	-20..+75°C	
Storage temperature	-40..+100°C	
Protection grade (IEC60529)	IP65	
Vibration (IEC 68-2-6, Test Fc)	12 g (10..2000 Hz)	
Shock (IEC 68-2-27, Test Ea)	100 g, halfsine, 11 ms	

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Mechanical Data, Environmental Conditions, Miscellaneous

Housing length (+ 154 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
Fastening parts included in delivery	1 mounting set: 2 x clamps + 4 x screws + 4 x spring washer
Cursor	Not included in delivery
Material housing	Anodized Aluminium, Nylon 66 G 25
Material Cursor	Plastic
Electrical connection	4 pole valve connector EN 175301-803 design A (optional 5 pole M12- circular connector)
Sensor mounting	Adjustable mounting brackets

1.) According IEC 60393

2.) Determined by climatic conditions according to IEC 68-1, para. 5.3.1 without load collectives

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Bestellschlüssel

Description		Selection: standard=black/bold, possible options=grey/cursive					
Series:	OMS						
Effective electrical travel:							
<i>Option 50 mm</i>	50						
75 mm	75						
100 mm	100						
<i>Option 130 mm</i>	130						
150 mm	150						
175 mm	175						
200 mm	200						
<i>Option 225 mm</i>	225						
<i>Option 250 mm</i>	250						
300 mm	300						
<i>Option 350 mm</i>	350						
<i>Option 360 mm</i>	360						
<i>Option 400 mm</i>	400						
<i>Option 450 mm</i>	450						
500 mm	500						
<i>Option 550 mm</i>	550						
<i>Option 600 mm</i>	600						
<i>Option 650 mm</i>	650						
<i>Option 700 mm</i>	700						
<i>Option 800 mm</i>	800						
<i>Option 850 mm</i>	850						
<i>Option 900 mm</i>	900						
<i>Option 950 mm</i>	950						
1000 mm	1000						
<i>Option 1100 mm</i>	1100						
<i>Option 1200 mm</i>	1200						
<i>Option 1250 mm</i>	1250						
<i>Option 1300 mm</i>	1300						
<i>Option 1400 mm</i>	1400						
<i>Option 1500 mm</i>	1500						
Electrical connection:							
4 pole valve connector			S				
<i>Option 5 pole connector</i>			S5				
Output signal:							
4..20 mA				2442			
0,1..10,1 V				2411			
Protection class standard IP65					-		

For higher quantities or on-going demand, additional options are available as described below on request

For example:

- Special connectors, assembled cables with / without connector

Accessory (not included in delivery):

- Mating connector SW25 #110767: 4-pole angled IP65
- Cursor guided with axial joint #128101
- Cursor guided with angle joint #128102
- Free cursor #120639

Data Sheet for Linear Sensors



Magnetic (magnetostrictive) Linear Transducer with analogue output

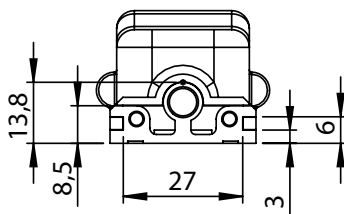
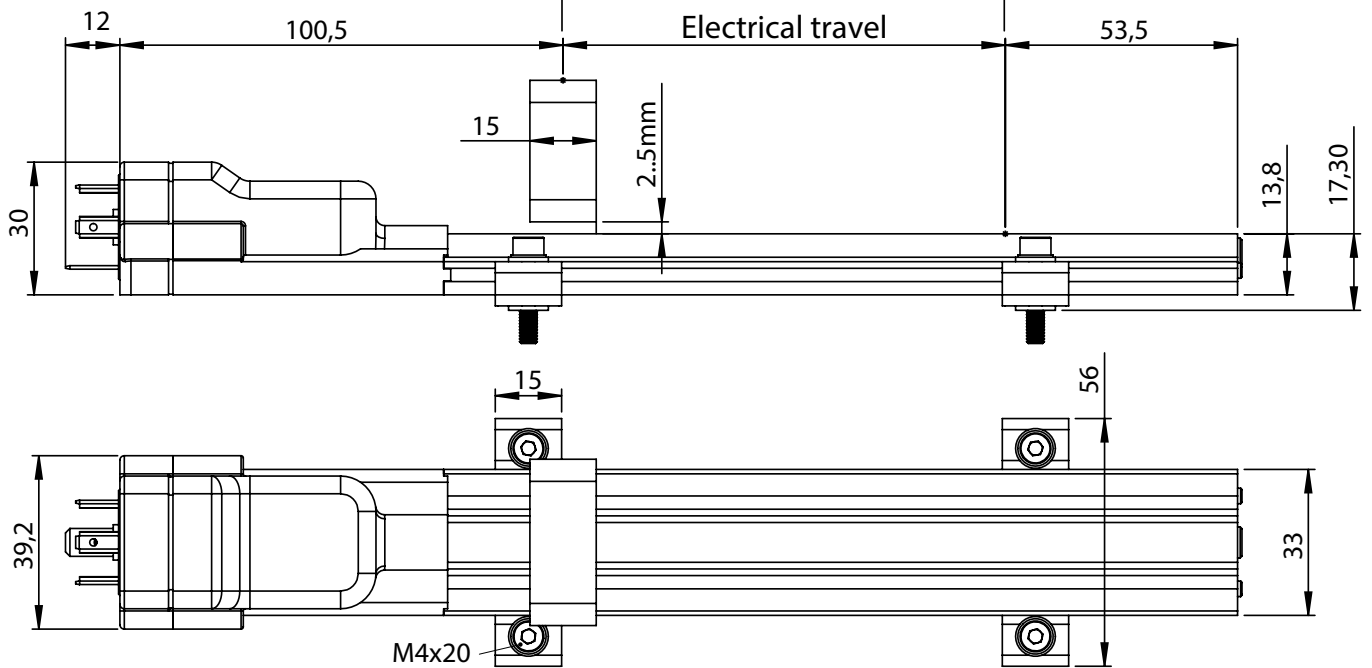
Series OMS

Drawing

Version
Floating cursor

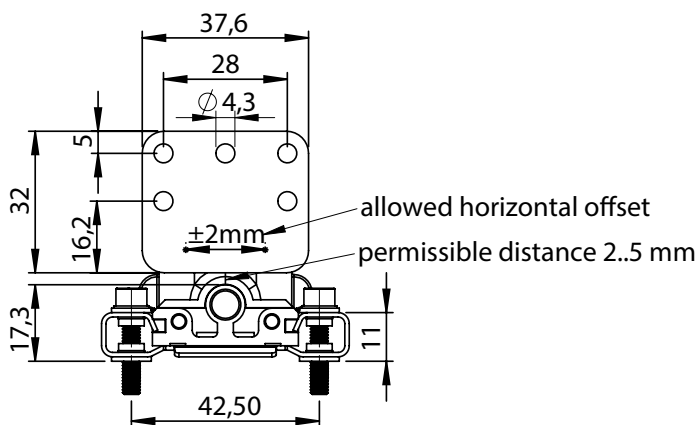
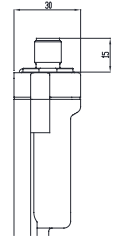
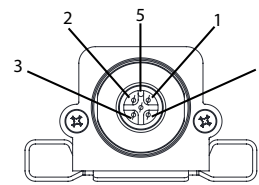
0,1V
4mA

10,1V signal output version 2411
20mA signal output version 2442



PIN	
1	Output
2	GND Output
3	n.d.
4	Power supply -
5	Power supply +

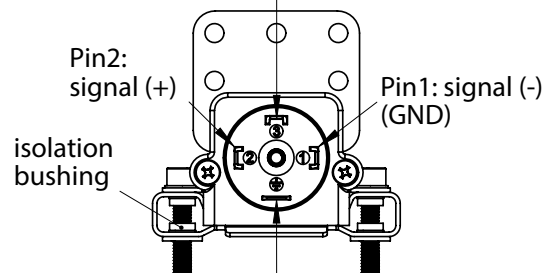
M12 connector



Dimensions in mm

Valve connector
DIN 43650 ISO4400

Pin3: power supply 24VDC



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Series OMS

Drawing

Version
Guided Cursor

