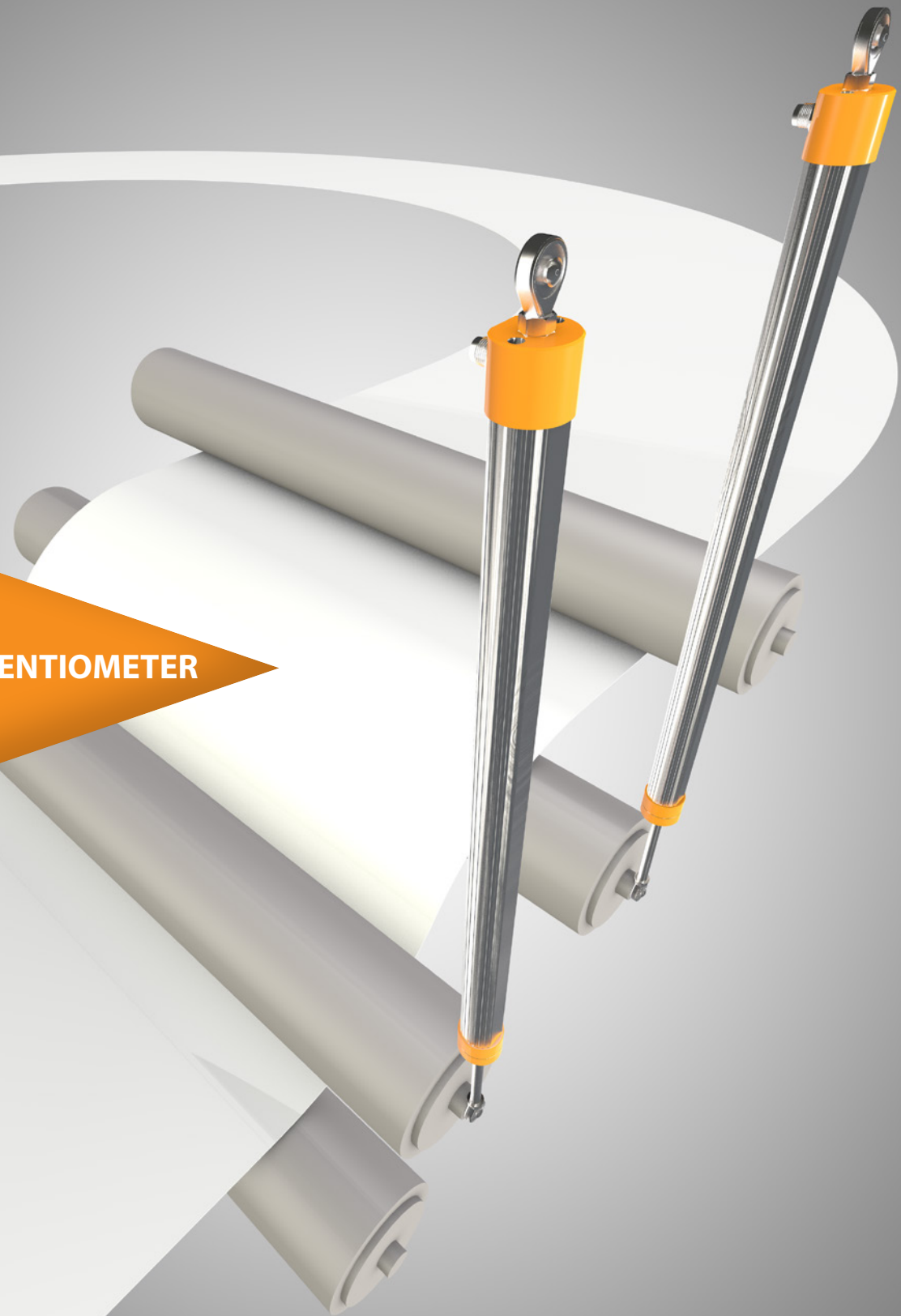


LINEAR POTENTIOMETER



Powerful sensors to meet growing demands

Linear Potentiometer LRW / LSW



Features

- ▶ Measurement ranges of 25 up to 2000 mm
- ▶ Linearity up to $\pm 0.05\%$
- ▶ Displacement speed up to 10 m/s
- ▶ Operating temperature $-30\dots+100\text{ }^{\circ}\text{C}$
- ▶ Protection class up to IP67
- ▶ Simple apparatus according to the EN 60079-11
- ▶ Measurement via push rod or cursor slide

Description

Linear potentiometers combine a simple design with very high precision. Inside the housing is a hybrid plastic layer. A cursor, that is connected to the push rod, travels across this layer and divides the supplied voltage. The LRW and LSW series all share the square housing, which can quite simply be secured with a guide groove and clamps. The LRW1, LRW2 and LRW3 series feature an end-to-end push rod which varies by the tip of the push rod.

Technical Data

SERIES ▶ CHARACTERISTICS ▼	LRW	LRW1	LRW2 / LRW3	LSW
Measurement range max.	900 mm	150 mm		2000 mm
Linearity max. ¹⁾	$\pm 0.05\%$			
Displacement speed	$\leq 10\text{ m/s}$			
Operating temperature	$-30\dots+100\text{ }^{\circ}\text{C}$			
Life cycle	$>25 \times 10^6\text{ m}$ or $>100 \times 10^6\text{ operations}$ (whichever is less)			
Resistance max.	10 k Ω	5 k Ω		20 k Ω
Protection class max.	IP67	IP40		
Applicable voltage max.	60 V			
Housing material	anodised aluminium, Nylon			
Housing profile	rectangular			
Mechanic	push rod		spring-loaded rod	cursor slide

¹⁾ based on the measurement range

Linear Potentiometer LMI / LME / LMS



Features

- ▶ Measurement ranges of 50 up to 1000 mm
- ▶ Linearity up to $\pm 0.05\%$
- ▶ Displacement speed up to 5 m/s
- ▶ Operating temperature $-30\dots+100\text{ }^\circ\text{C}$
- ▶ Protection class up to IP67
- ▶ Simple apparatus according to the EN 60079-11
- ▶ Contactless measurement via magnetic cursor drag
- ▶ LMI12-SE: Analog output 4...20 mA

Description

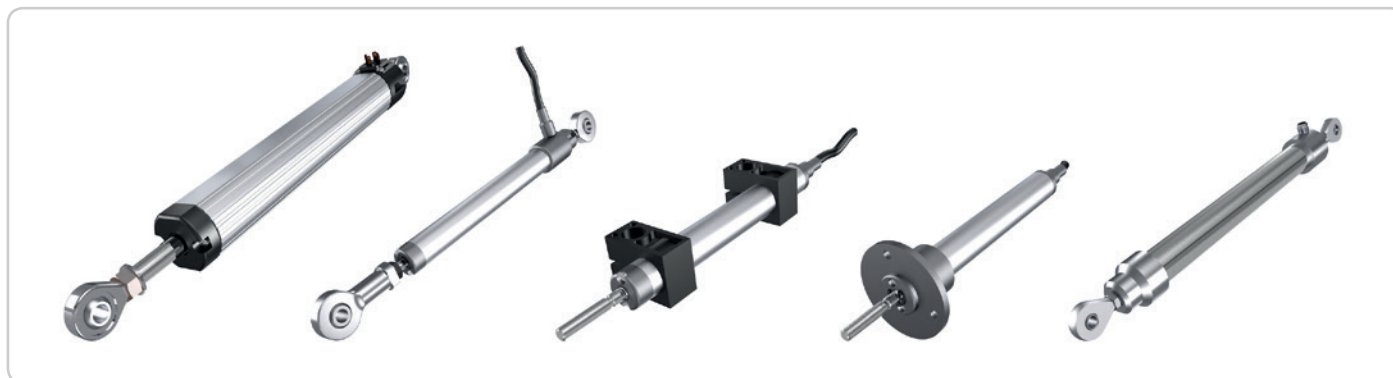
On the LMI, LME and LMS series the hybrid plastic layer is located inside an enclosed rod. A circular magnet travels along the rod without touching as the measurement object moves. Measuring the stroke in small to medium size cylinders is a classic application of this principle. Versions with simple fastening options, e.g. using brackets (LME12) or rod end bearings (LMS), however, also allow them to be used for quite different applications.

Technical Data

SERIES ▶ CHARACTERISTICS ▼	LME12	LMI12	LMI12-SE	LMI12-SL	LMS18
Measurement range max.	1000 mm				
Linearity max. ¹⁾	$\pm 0.05\%$		$\pm 0.35\%$		$\pm 0.05\%$
Displacement speed	$\leq 5\text{ m/s}$				
Operating temperature	$-30\dots+100\text{ }^\circ\text{C}$		$-30\dots+80\text{ }^\circ\text{C}$	$-30\dots+100\text{ }^\circ\text{C}$	
Life cycle	$>25 \times 10^6\text{ m}$ or $>100 \times 10^6\text{ operations}$ (whichever is less)				
Resistance max.	20 k Ω		-	20 k Ω	
Protection class max.	IP67				
Hysteresis	$<250\text{ }\mu\text{m}$				
Operating pressure max.	20 bar		250 bar		-
Housing material	anodised aluminium		stainless steel		anodised aluminium
Housing profile	cylindric				
Mechanic	magnetic cursor drag				

¹⁾ based on the measurement range

Linear Potentiometer LZW



Features

- ▶ Measurement ranges of 25 up to 750 mm
- ▶ Linearity up to $\pm 0.05\%$
- ▶ Displacement speed up to 10 m/s
- ▶ Operating temperature $-30\dots+100\text{ }^{\circ}\text{C}$
- ▶ Protection class up to IP67
- ▶ Simple apparatus according to the EN 60079-11
- ▶ Measurement via push rod
- ▶ LZW: Versions with teachable measurement range and analog output 0.5...4.5 V or 0...10 V

Description

Featuring self-aligning rod end bearings, bracket and flange mounts, the LZW, LZW1 and LZW2 series linear potentiometers provide a mounting option for virtually any application. The robust LZW series, also available as IP67 version, is suitable for greater measurement ranges. LZW1 linear potentiometers were designed for applications in tight spaces. At a housing diameter of only 12.9 mm, they are truly compact, but measure just as accurately as the slightly larger LZW2 series.

Technical Data

SERIES ▶ CHARACTERISTICS ▼	LZW	LZW1	LZW2
Measurement range max.	750 mm	250 mm	300 mm
Linearity max. ¹⁾	$\pm 0.05\%$		
Displacement speed	$\leq 5\text{ m/s}$	$\leq 10\text{ m/s}$	
Operating temperature	$-30\dots+100\text{ }^{\circ}\text{C}$		
Life cycle	$>25 \times 10^6\text{ m}$ or $>100 \times 10^6\text{ operations}$ (whichever is less)		
Resistance max.	10 k Ω	6 k Ω	12 k Ω
Protection class max.	IP67	IP60	IP67
Housing material	anodised aluminium, Nylon		
Housing profile	cylindric		
Mechanic	push rod		

¹⁾ based on the measurement range

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