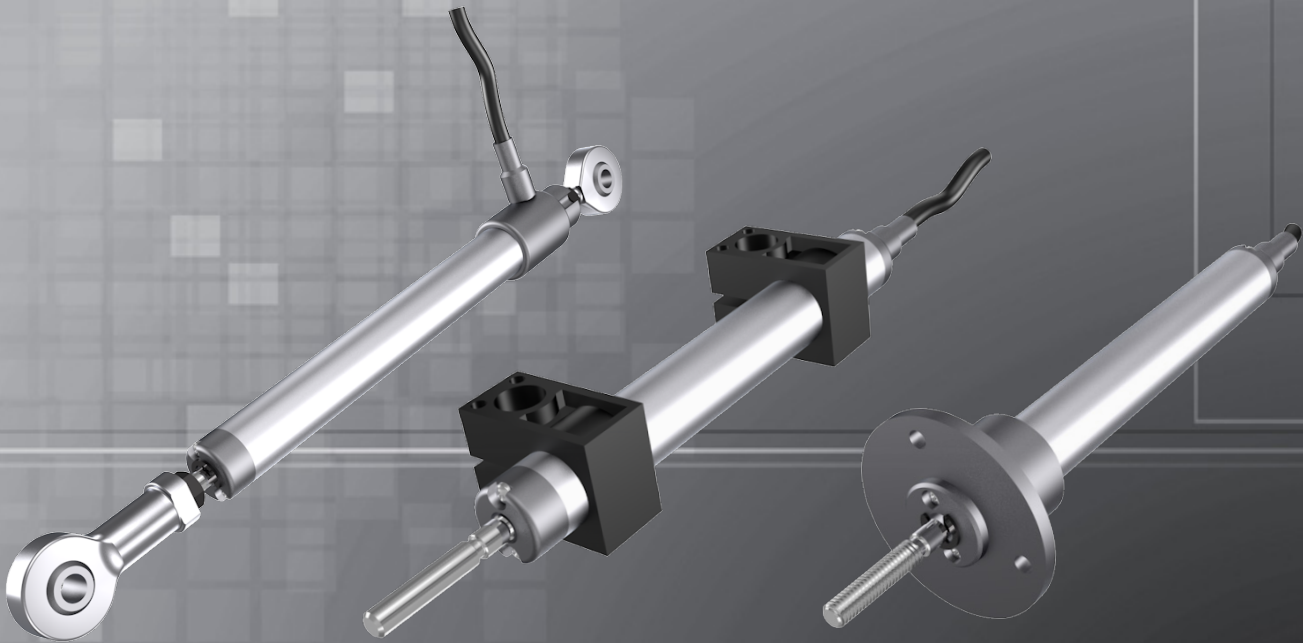


# LINEAR POTENTIOMETER



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## Series LZW1

### Key-Features:

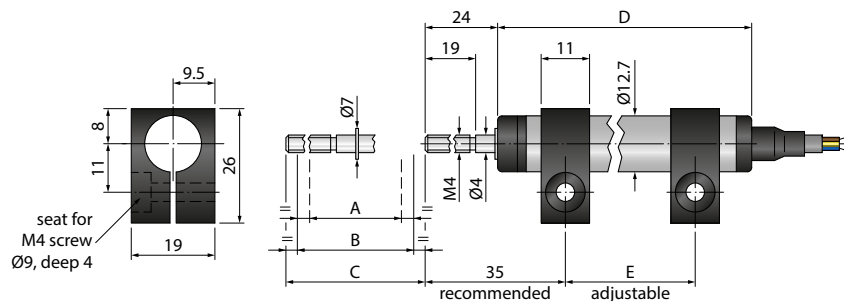
- Housing diameter 12.9 mm
- Flexible mounting with brackets, rod end bearings or flange
- Available measurement ranges from 25 to 250 mm
- Linearity up to  $\pm 0.05\%$
- Displacement speed  $\leq 10$  m/s
- Protection class IP60
- Working temperature  $-30\dots+100$  °C
- Life cycle  $>25 \times 10^6$  m or  $>100 \times 10^6$  operations, whichever is less
- Simple apparatus according to the EN 60079-11

## TECHNICAL DATA

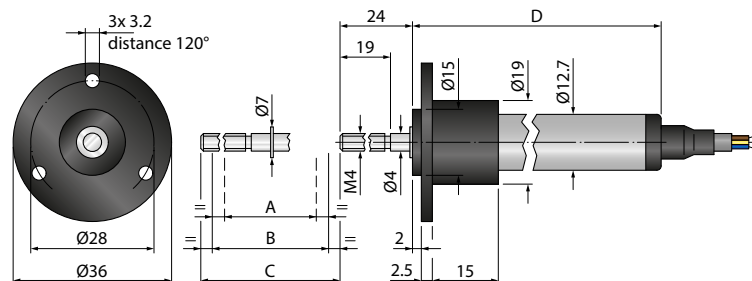
Measurement range	[mm]	25	50	75	100	125	150	200	250
Linearity	[%]	±0.2	±0.1			±0.05			
Resolution		theoretical infinite, depends on the signal quality of the reference respectively supply voltage							
Displacement force	[N]	≤0.5							
Displacement speed	[m/s]	≤10							
Resistance	[kΩ]	1	2	3	4	5	6	8	6
Tolerance on resistance	[%]	±20							
Dissipation at 40 °C (0 W at 120 °C)	[W]	0.5	1	1.5	2	2.5	3		
Applicable voltage max.	[V]	20	40	60					
Recommended cursor current	[μA]	<0.1							
Cursor current max.	[mA]	10							
Electrical isolation		>100 MΩ at 500 VDC, 2 s, 1 bar							
Dielectric strength		<100 μA at 500 VAC, 50 Hz, 2 s, 1 bar							
Protection class		IP60							
Operating temperature	[°C]	-30...+100							
Storage temperature	[°C]	-50...+120							
Temperature coefficient output voltage	[ppm/°C]	<1.5							
Vibration resistance		5...2000 Hz, A <sub>max</sub> = 0.75 mm, a <sub>max</sub> = 20 g							
Shock resistance		50 g, 11 ms							
Life cycle		>25 x 10 <sup>6</sup> m or >100 x 10 <sup>6</sup> operations (whichever is less)							
Connection		cable output (1 m), 3 poles							
Rod		stainless steel, ASIS 303							
Housing		anodised aluminium, Nylon 66 G 25							
Mounting		brackets (LZW1-S), rod end bearings (LZW1-A) or flange (LZW1-F)							

## TECHNICAL DRAWING

### LZW1-S



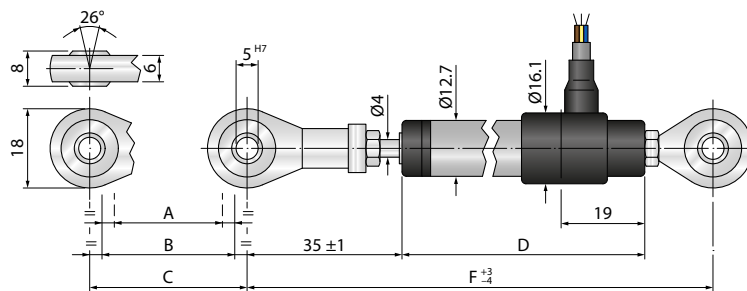
### LZW1-F



<b>Measurement range / useful electrical stroke +1/-0</b>	<b>A</b>	25	50	75	100	125	150	200	250
<b>Theoretical electrical stroke ±1</b>	<b>B</b>	26	51	76	101	126	151	201	251
<b>Mechanical stroke</b>	<b>C</b>	30	55	80	105	130	155	205	255
<b>Housing length LZW1-S, LZW1-F</b>	<b>D</b>	74.5	99.5	124.5	149.5	174.5	199.5	249.5	299.5
<b>Recommended distance between brackets LZW1-S</b>	<b>E</b>	42	67	92	117	142	167	217	267

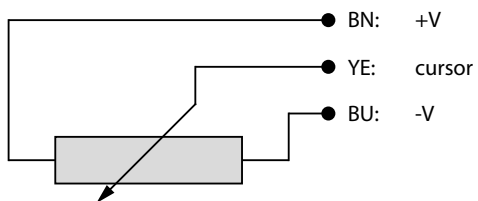
## TECHNICAL DRAWING

### LZW1-A



<b>Measurement range / useful electrical stroke +1/-0</b>	<b>A</b>	25	50	75	100	125	150	200	250
<b>Theoretical electrical stroke ±1</b>	<b>B</b>	26	51	76	101	126	151	201	251
<b>Mechanical stroke</b>	<b>C</b>	30	55	80	105	130	155	205	255
<b>Housing length LZW1-A</b>	<b>D</b>	102	127	152	177	202	227	277	327
<b>Minimum distance between rod end bearings</b>	<b>F</b>	153	178	203	228	253	278	328	378

## ELECTRICAL CONNECTION



### Installation notes:

- Do **NOT** use the sensor as a variable resistor!
- While calibrating the sensor set the stroke so that the output signal does not drop below 1 % or exceed 99 % of the supply voltage.

## ACCESSORIES

### Signal conditioner PMX-24

- Converts potentiometer signals into analog output signals: 4...20 mA, 0...10 V, 0...5 V, ±10 V, ±5 V
- Input: potentiometer 1...20 kΩ
- Configurable output
- DIN-rail-mounting with face-side connector
- For more information please refer to the [PMX-24 data sheet](#).



## ORDER CODE

LZW1 -  -  -

Version	
Installation with brackets	S
Installation with rod end bearings	A
Installation with flange	F

	Cable length
-	Standard 1 m
10M	Optional 10 m

	Measurement range [mm]
	25 / 50 / 75 / 100 / 125 / 150 / 200 / 250

## ACCESSORIES

### Mounting accessories

STA074 <sup>1)</sup>	bracket for LZW1-S
SND001	rod end bearing with M4 external thread, housing side
SND002	rod end bearing with M4 internal thread, rod side

### Digital displays for sensors with analog output, 2 channel

WAY-AX-S	touch screen, supply: 18...30 VDC
WAY-AX-AC	touch screen, supply: 115...230 VAC

For more information and options please refer to the [WAY-AX data sheet](#).

<sup>1)</sup> LZW1-S: 2 pcs. included in delivery

### Signal conditioner

PMX-24 Output signals: 4...20 mA, 0...10 V, 0...5 V, ±10 V, ±5 V

For more information and options please refer to the [PMX-24 data sheet](#).

Subject to change without prior notice.

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