

LINEAR POTENTIOMETER



Series LZW2

Key-Features:

- Housing diameter 19 mm
- Flexible mounting with brackets, rod end bearings or flange
- Available measurement ranges from 25 to 300 mm
- Linearity up to $\pm 0.05\%$
- Displacement speed ≤ 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

Content:

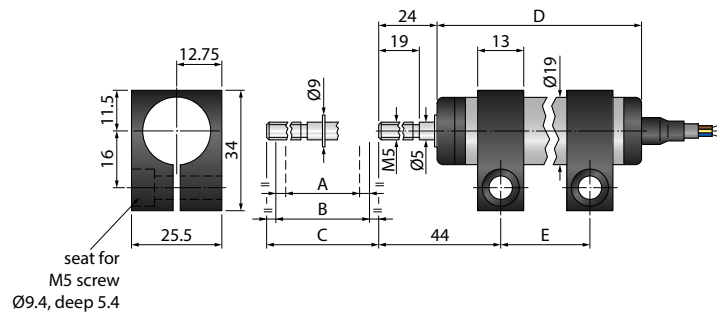
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TECHNICAL DATA

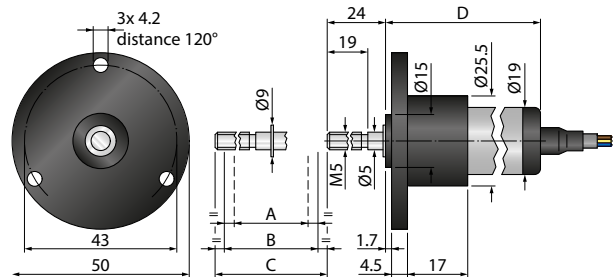
Measurement range	[mm]	25	50	75	100	125	150	175	200	250	300	
Linearity	[%]	±0.2	±0.1			±0.05						
Resolution		theoretical infinite, depends on the signal quality of the reference respectively supply voltage										
Displacement force	[N]	≤0.5										
Displacement speed	[m/s]	≤10										
Resistance	[kΩ]	1	2	3	4	5	6	7	8	10	12	
Tolerance on resistance	[%]	±20										
Dissipation at 40 °C (0 W at 120 °C)	[W]	0.8	1.6	2.6	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 _{max} = 0.75 mm, a _{max} = 20 g										
Shock resistance		50 g, 11 ms										
Life cycle		>25 x 10 ⁶ m or >100 x 10 ⁶ 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 (LZW2-S), rod end bearings (LZW2-A) or flange (LZW2-F)										
Weight	LZW2-S	[g]	90	105	130	160	175	190	205	215	245	275
	LZW2-F		100	115	140	170	185	200	215	225	255	280
	LZW2-A		110	125	150	180	195	210	225	235	260	285

TECHNICAL DRAWING

LZW2-S



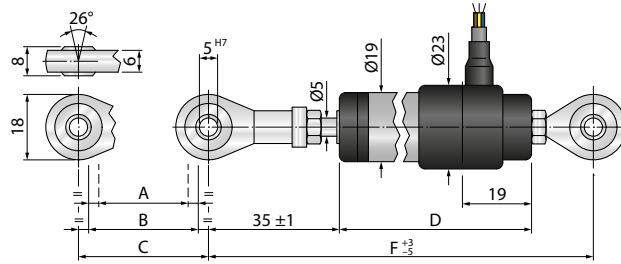
LZW2-F



Measurement range / useful electrical stroke +1/-0	A	25	50	75	100	125	150	175	200	250	300
Theoretical electrical stroke ±1	B	26	51	76	101	126	151	176	201	251	301
Mechanical stroke	C	30	55	80	105	130	155	180	205	255	305
Housing length LZW1-S, LZW1-F	D	83.5	108.5	133.5	158.5	183.5	208.5	233.5	258.5	308.5	358.5
Recommended distance between brackets LZW1-S	E	47	72	97	122	147	172	197	222	272	322

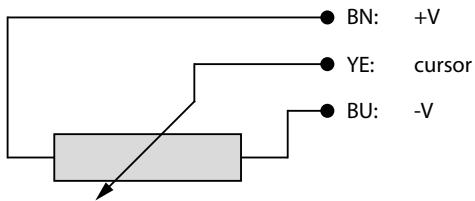
TECHNICAL DRAWING

LZW2-A



Measurement range / useful electrical stroke +1/-0	A	25	50	75	100	125	150	175	200	250	300
Theoretical electrical stroke ±1	B	26	51	76	101	126	151	176	201	251	301
Mechanical stroke	C	30	55	80	105	130	155	180	205	255	305
Housing length LZW1-A	D	110	135	160	185	210	235	260	285	335	385
Minimum distance between rod end bearings	F	163	188	213	238	263	288	313	338	388	438

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

LZW2 - [] - [] - []

Version

Installation with brackets
 Installation with rod end bearings
 Installation with flange

S
 A
 F

-
 10M

Cable length

Standard 1 m
 Optional 10 m

Measurement range [mm]

25 / 50 / 75 / 100 / 125 /
 150 / 175 / 200 / 250 / 300

ACCESSORIES

Mounting accessories

STA075 ¹⁾ bracket for LZW2-S
 SND004 rod end bearing with M4 external thread, housing side
 SND005 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](#).

¹⁾ LZW2-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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