

LINEAR POTENTIOMETER



LZW2-IP Series

Key-Features:

- Protection class IP67
- Housing diameter 19 mm
- Flexible mounting with brackets or rod end bearings
- Available measurement ranges from 25 to 300 mm
- Displacement speed ≤ 3 m/s
- Linearity up to ± 0.05 %
- Working temperature $-30 \dots +100$ °C
- Life cycle $> 25 \times 10^6$ meters or $> 100 \times 10^6$ operations, whichever is less
- Simple apparatus according to the EN 60079-11 standard

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TECHNICAL DATA

Measurement range	[mm]	25 / 50 / 75 / 100 / 125 / 150 / 175 / 200 / 250 / 300
Protection class		IP67
Displacement speed	[m/s]	≤3
Displacement force	[N]	≤20
Resolution		Resolution depends on the signal quality of the reference voltage respectively supply voltage.
Tolerance on resistance	[%]	±20
Recommended cursor current	[µA]	<0.1
Maximum cursor current	[mA]	10
Temperature coefficient of the output voltage	[ppm/°C]	<5
Electrical isolation		>100 MOhm at 500 V=, 1 bar, 2 s
Dielectric strength		<100 µA at 500 V~, 50 Hz, 1 bar, 2 s
Working temperature	[°C]	-30...+100
Storage temperature	[°C]	-50...+120
Rod material		C45 chrome steel, 20 µm
Housing material		anodised aluminium
Mounting		LZW2-S-IP with brackets, LZW2-A-IP with rod end bearings

DIMENSIONS AND ELECTRICAL DATA

Measurement range	[mm]	25	50	75	100	125	150	175	200	250	300	
Electrical stroke (B) +1/-0	[mm]	25	50	75	100	125	150	175	200	250	300	
Theoretical electrical Stroke (C) ±1	[mm]	B + 1										
Resistance	[kOhm]	1	2	3	4	5	6	7	8	10	12	
Linearity	[±%]	0.2	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	
Maximum dissipation at 40 °C (0 W at 120 °C)	[W]	0.8	1.6	2.6	8							
Maximum power supply	[V]	20	40	60								
Mechanical stroke (D)	[mm]	B + 5										
Case length (A) LZW2-A-IP	[mm]	128.5	153.5	178.5	203.5	228.5	253.5	278.5	303.5	353.5	403.5	
Minimum distance between rod end bearings (E)	[mm]	163	188	213	238	263	288	313	338	388	438	
Case length (A) LZW2-S-IP	[mm]	106.5	131.5	156.5	181.5	206.5	231.5	256.5	281.5	331.5	381.5	
Recommended distance between brackets (E)	[mm]	21	46	71	96	121	146	171	196	246	296	

INSTALLATION INSTRUCTION

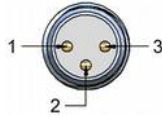
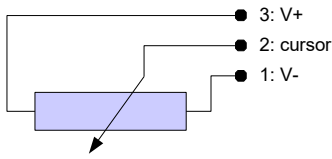
Installation instructions

- Please pay attention that the sensor is not used as a variable resistor.
- Please be careful while calibrating the sensor to set the stroke so that the output signal does not drop below 1% or rise above 99% of the voltage level.

It is recommended to keep all sliding parts lubricated at least every 6 months.

ELECTRICAL CONNECTION

LZW2-A-IP: pin assignment, connection cable, connectors



PIN No.	Colour K3..	PIN No.	Colour K3..
1	blue	3	brown
2	black		

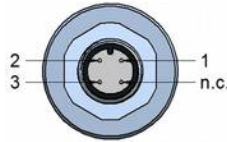
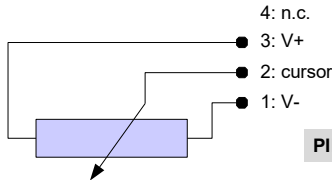
Cable with connector M8, 3 pole, shielded, IP67

K3P2M-S-M8	2 m, connector, straight
K3P5M-S-M8	5 m, connector, straight
K3P10M-S-M8	10 m, connector, straight

Connector M8, 3 pole, IP67, shielded

D3-G-M8-S	connector, straight, (self assembly)
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LZW2-S-IP: pin assignment, connection cable, connectors



PIN No.	Colour K4..	PIN No.	Colour K4..
1	brown	3	blue
2	white	4	n.c.

Cable with connector M12, 4 pole, shielded IP67

K4P2M-S-M12	2 m, connector, straight
K4P5M-S-M12	5 m, connector, straight
K4P10M-S-M12	10 m, connector, straight

Connector M12, 4 pole, IP67, shielded

D4-G-M12-S	connector, straight, (self assembly)
D4-W-M12-S	connector, angular, (self assembly)

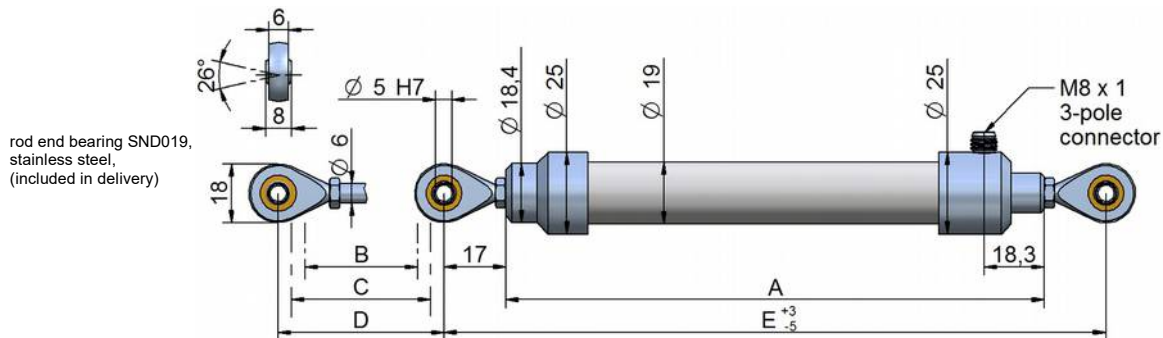
Signal conditioner PMX-24

- 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 further information please contact WayCon or [download](#) the data sheet.

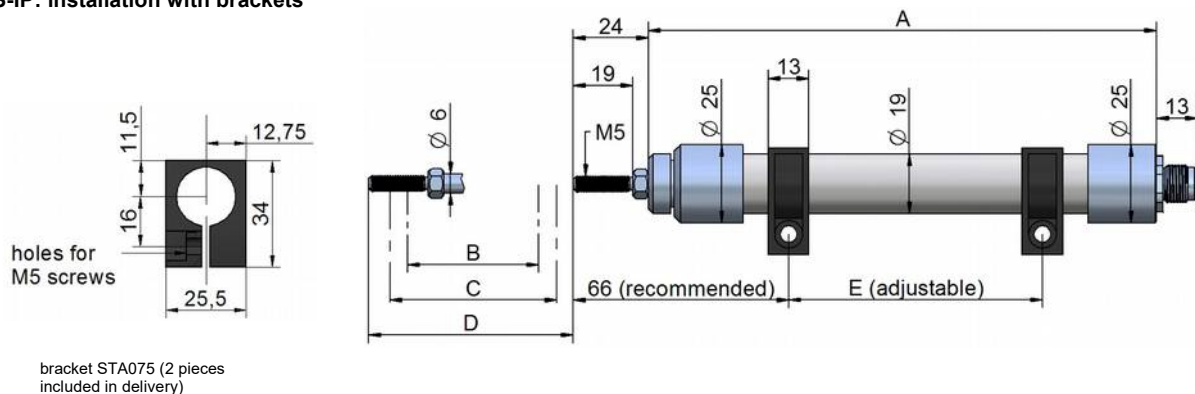


TECHNICAL DRAWING

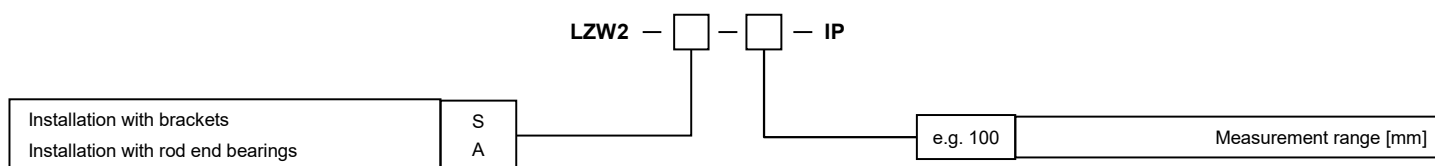
LZW2-A-IP: installation with rod end bearings



LZW2-S-IP: installation with brackets



ORDER CODE



OVERVIEW

LZW2-A-25-IP	25 mm	LZW2-S-25-IP	25 mm
LZW2-A-50-IP	50 mm	LZW2-S-50-IP	50 mm
LZW2-A-75-IP	75 mm	LZW2-S-75-IP	75 mm
LZW2-A-100-IP	100 mm	LZW2-S-100-IP	100 mm
LZW2-A-125-IP	125 mm	LZW2-S-125-IP	125 mm
LZW2-A-150-IP	150 mm	LZW2-S-150-IP	150 mm
LZW2-A-175-IP	175 mm	LZW2-S-175-IP	175 mm
LZW2-A-200-IP	200 mm	LZW2-S-200-IP	200 mm
LZW2-A-250-IP	250 mm	LZW2-S-250-IP	250 mm
LZW2-A-300-IP	300 mm	LZW2-S-300-IP	300 mm

ACCESSORIES

Cable with connector M8, IP67, 3 pole, for LZW2-A-IP		Cable with connector M12, IP67, 4 pole, for LZW2-S-IP	
K3P2M-S-M8	2 m, straight connector, shielded	K4P2M-S-M12	2 m, connector, straight, shielded
K3P5M-S-M8	5 m, straight connector, shielded	K4P5M-S-M12	5 m, connector, straight, shielded
K3P10M-S-M8	10 m, straight connector, shielded	K4P10M-S-M12	10 m, connector, straight, shielded
Mating connector M8, IP67, 3 pole, for LZW2-A-IP		Mating connector M12, IP67, 4 pole, for LZW2-S-IP	
D3-G-M8-S	straight, shielded, for self assembly	D4-G-M12-S	connector, straight, shielded
		D4-W-M12-S	connector, angular, shielded
Rod end bearing for LZW2-S-IP (included in delivery)		Bracket for LZW2-S-IP (included in delivery)	
SND019	M8 external thread, stainless steel	STA075	1 bracket
Signal Conditioner			
PMX-24	different analog output signals in one device		
For further information please contact WayCon or download the data sheet.			



Subject to change without prior notice.

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