



## NOTES

All the data reported in this brochure and the data sheet, like linearity, lifetime, temperature coefficient are valid for a sensor utilization as a ratiometric device with a max current across the cursor  $I_c \leq 0.1 \text{ mA}$ .

Do NOT use the linear transducer as variable resistance!

When calibrating the transducer, be careful to set the stroke so that the output does not drop below 1% or rise above 99% of the voltage level.

## MAINTENANCE

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

## DECLARATION OF EC-CONFORMITY

WayCon Positionsmesstechnik GmbH  
Mehlbeerenstrasse 4  
82024 Taufkirchen / Germany

This is to certify that the products

Classification  
Series

Linear potentiometer  
LZW2-IP

fulfill the current request of the following EC-directives:  
EMV-directive 2004/108/CE  
applied harmonized standards:  
EN 61000-6-2:2005, EN 61000-6-4:2007, EN 61326-1:2006

The declaration of conformity loses its validity if the product is misused or modified without proper authorisation.

Taufkirchen, 13.03.2013

Andreas Täger  
CEO

# INSTALLATION GUIDE

## Linear Potentiometer Series LZW2-IP

For further information please see the data sheet at [www.waycon.biz/products/linear-potentiometers/](http://www.waycon.biz/products/linear-potentiometers/)

## FIRST STEPS

WayCon Positionsmesstechnik GmbH would like to thank you for the trust you have placed in us and our products. This manual will make you familiar with the installation and operation of our linear potentiometers. Please read this manual carefully before initial operation!

Unpacking and checking:

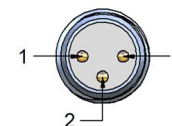
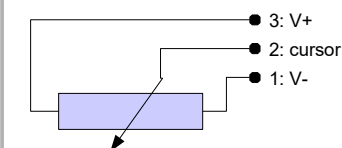
Carefully lift the device out of the box by grabbing the housing. After unpacking the device, check it for any visible damage as a result of rough handling during the shipment. Check the delivery for completeness.

If necessary consult the transportation company, or contact WayCon directly for further assistance.

## ELECTRICAL CONNECTION

Sensor is to be used as voltage divider, using a maximum cursor current of  $I_c \leq 0.1 \mu\text{A}$  (do NOT use the sensor as variable resistance!). Please pay attention to the notes on the last page.

### LZW2-A-IP



PIN	cable colour K3..
1	brown
2	black
3	blue

#### Available as accessory

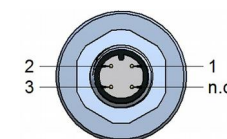
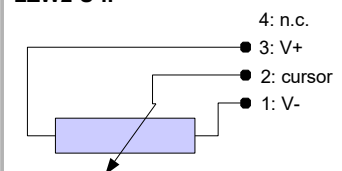
##### Cable with mating connector M8, 3 poles

K3P2M-S-M8	2 m, straight connector, IP67
K3P5M-S-M8	5 m, straight connector, IP67
K3P10M-S-M8	10 m, straight connector, IP67

##### Mating connector, M8, 3 poles, IP67

D3-G-M8-S	straight version
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### LZW2-S-IP



PIN	cable colour K4..	PIN	cable colour K4..
1	brown	3	blue
2	white	4	n.c.

#### Available as accessory

##### Cable with mating connector M12, 4 poles

K4P2M-S-M12	2 m, straight connector, IP67
K4P5M-S-M12	5 m, straight connector
K4P10M-S-M12	10 m, straight connector, IP67

##### Mating connector, M12, 4 poles, IP67

D4-G-M12-S	straight version
D4-W-M12-S	angular version

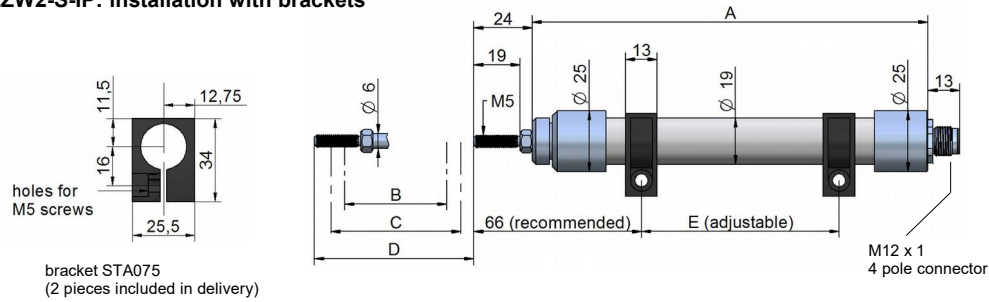
# INSTALLATION GUIDE

## Linear potentiometer Series LZW2-IP

For further information please see the data sheet at [www.waycon.biz/products/linear-potentiometers/](http://www.waycon.biz/products/linear-potentiometers/)

### TECHNICAL DRAWING

#### LZW2-S-IP: installation with brackets



bracket STA075  
(2 pieces included in delivery)

#### Available as accessory

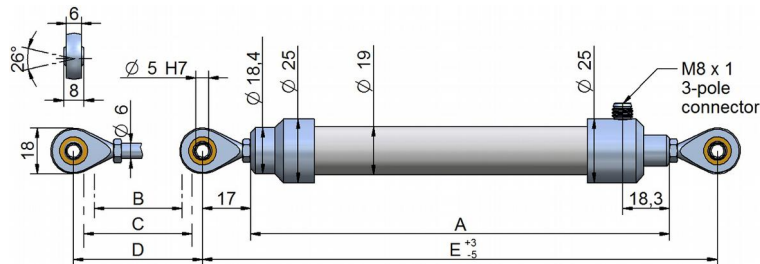
##### Cable with mating connector M12, 4 poles, IP67

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

##### Mating connector, M12, 4 poles, IP67

- D4-G-M12-S straight version
- D4-W-M12-S angular version

#### LZW2-A-IP: installation with rod end bearings



rod end bearing SND019,  
stainless steel, (included in delivery)

#### Available as accessory

##### Cable with mating connector M8, 3 poles, IP67

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

##### Mating connector, M8, 3 poles, IP67

- D3-G-M8-S straight version

### TECHNICAL DATA

Useful electrical stroke B: corresponds to the sensors measurement range

Theoretical electrical stroke C: actual length of the conductive path, that has to be longer than B, in order to get a valid electrical signal at the start and end point of the measurement range.

When calibrating the transducer, be careful to set the stroke so that the output does not drop below 1% or rise above 99% of the voltage level.

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	
Max 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 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 brackets (E)	[mm]	21	46	71	96	121	146	171	196	246	296	

### ACCESSORIES

#### Spare parts

- STA075 bracket for LZW2-S-IP, 1 piece
- SND019 rod end bearing with M8 external thread, stainless steel for LZW2-A-IP

#### PMX-24 Signal Conditioner

- 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 check the PMX-24 data sheet, or contact WayCon



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