



## 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

The sensors are maintenance free. However we recommend to lubricate the moving parts of the LZW-IP 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  
LZW

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 LZW

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

## FIRST STEPS

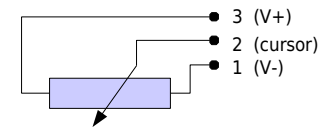
WayCon Positionsmesstechnik GmbH would like to thank you for the trust you have placed in us and our products. This manual will make you familiar with the installation and operation of our linear potentiometers. Please read this manual carefully before initial operation!

Unpacking and checking:

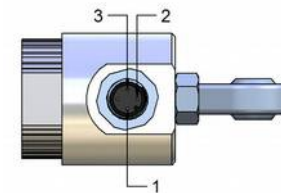
Carefully lift the device out of the box by grabbing the housing. After unpacking the device, check it for any visible damage as a result of rough handling during the shipment. Check the delivery for completeness.

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

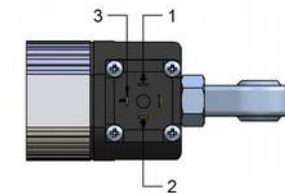
## ELECTRICAL CONNECTION



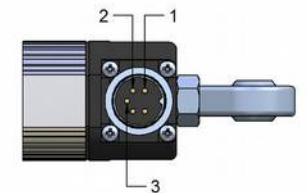
Sensor is to be used as voltage divider, using a maximum cursor current of  $I_c \leq 0.1 \mu\text{A}$  (do NOT use the sensor as variable resistance!). Please pay attention to the notes on the last page.



output LZW-IP (IP67)



output LZW-M



output LZW-B

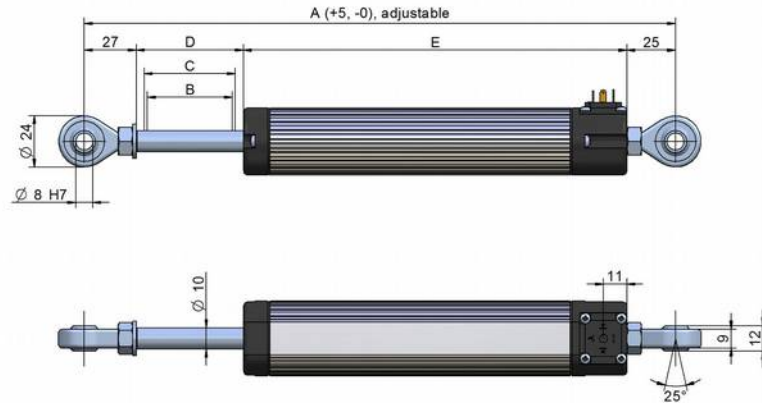
# INSTALLATION GUIDE

## Linear potentiometer Series LZW

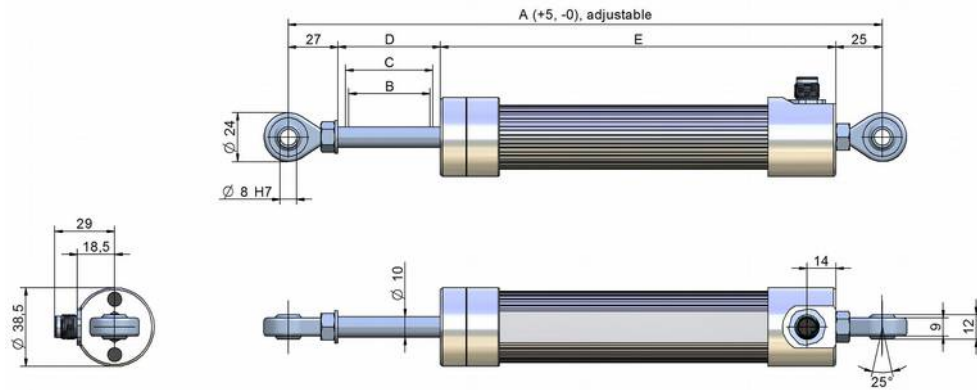
For further information please see the data sheet at [www.waycon.biz/products/linear-potentiometers/](http://www.waycon.biz/products/linear-potentiometers/)

### TECHNICAL DRAWING

#### LZW-M / LZW-B



#### LZW-IP



### 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.

Useful electrical stroke (B) +3/-0	[mm]	50 - 175	200-300	360	375	400	450	500	600	750
Theoretical electrical stroke (C) ±1	[mm]	B + 3	B + 4	364	380	406	457	508	609	762
Resistance	[kOhm]	5								
Mechanical stroke (D) LZW-M, LZW-B	[mm]	B + 9	B + 10	370	386	412	463	518	619	772
Mechanical stroke (D) LZW-IP	[mm]	B + 9	B + 10	386	412	463	518	619	772	
Housing length (E) LZW-M, LZW-B	[mm]	B + 129	B + 130	496	512	538	589	664	765	918
Housing length (E) LZW-IP	[mm]	B + 148	B + 149	515	531	557	608	683	784	937
Minimum distance (A) LZW-M, LZW-B	[mm]	B + 177	B + 178	544	560	586	637	712	813	966
Minimum distance (A) LZW-IP	[mm]	B + 196	B + 197	563	579	605	656	731	832	985

### TECHNICAL DATA

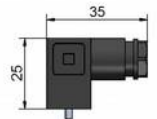
#### LZW-B

CON011:  
mating connector for self assembly  
IP40, 5 pole, cable Ø 4...6 mm



#### LZW-M

CON008:  
mating connector for self assembly  
IP65, 4 pole, cable gland PG9,  
cable Ø 6...8 mm



#### LZW-IP

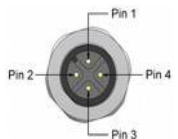
##### Cable with connector M12, 4 poles, shielded, IP67

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

Signal	cable colour K4P...
V+	brown
cursor	white
V-	blue

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

D4-G-M12-S	straight, cable passage: Ø 4...8 mm
D4-W-M12-S	angular, cable passage: Ø 4...8 mm



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