## 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 Ic ≤ 0.1 mA.

Do NOT use the sensor 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 LSW every 6 months.

## DECLARATION OF EC-CONFORMITY

WayCon Positionsmesstechnik GmbH
Mehlbeerenstrasse 4
82024 Taufkirchen / Germany

This is to certify that the products

| | |
|---|---|
| Classification | Linearpotentiometer |
| Series | LSW |

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 LSW

For further information please see the data sheet at www.waycon.biz/products/linear-potentiometers/

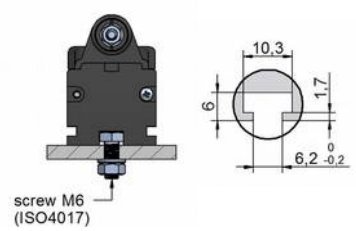
## FIRST STEPS

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!

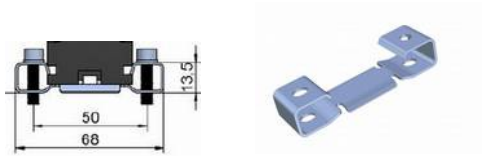
Unpacking and checking:
Carefully lift the linear transducer out of the box by grabbing the housing. After unpacking the device, check it for any visible damage as a result of rough handling during the shipment. Check the delivery for completeness.
If necessary consult the transportation company, or contact WayCon directly for further assistance.

## MOUNTING THE SENSOR

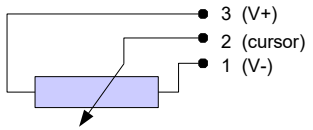
**Groove mounting**




**Mounting with brackets** (included in delivery)
PKIT059: 2 brackets, screws (100 - 900 mm)
PKIT061: 3 brackets, screws (1000 - 2000 mm)



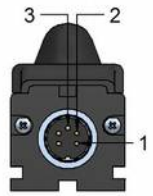

## ELECTRICAL CONNECTION




Sensor is to be used as voltage divider, using a maximum cursor current of Ic ≤ 0.1 µA (do NOT use the sensor as variable resistance!). Please pay attention to the notes on the last page.

output LSW-M


output LSW-B



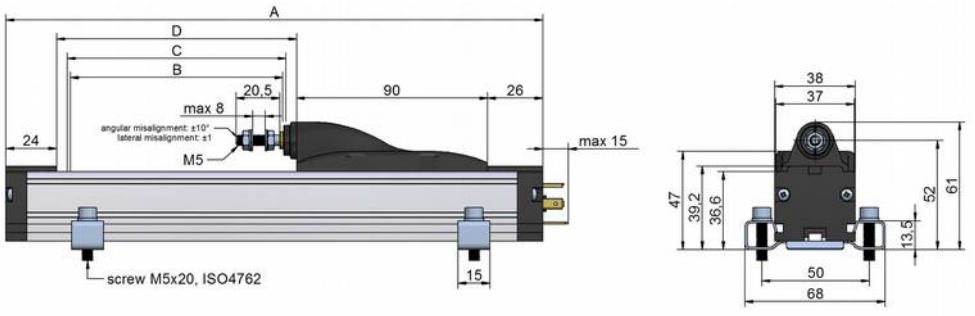

WayCon Positionsmesstechnik

# INSTALLATION GUIDE

## Linear potentiometer Series LSW

For further information please see the data sheet at www.waycon.biz/products/linear-potentiometers/

## TECHNICAL DRAWING




## 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.

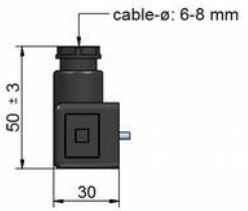
When calibrating the transducer, be careful to set the stroke so that the output does not drop below 1% or rise above 99% of the voltage level.

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Measurement range | [mm] | 100 | 130 | 150 | 200 | 225 | 300 | 400 | 450 | 500 | 600 | 750 | 900 | 1000 | 1250 | 1500 | 1750 | 2000 |
| Useful electrical stroke (B) +3/-0 | [mm] | 100 | 130 | 150 | 200 | 225 | 300 | 400 | 450 | 500 | 600 | 750 | 900 | 1000 | 1250 | 1500 | 1750 | 2000 |
| Theoretical electrical stroke (C) ±1 | [mm] | 103 | 133 | 153 | 204 | 229 | 305 | 406 | 458 | 509 | 611 | 763 | 915 | 1017 | 1271 | 1521 | 1771 | 2021 |
| Resistance | [kOhm] | 5 | | | | | | 10 | | | | | | | 20 | | | |
| Mechanical stroke (D) | [mm] | 113 | 143 | 163 | 214 | 239 | 315 | 416 | 468 | 519 | 621 | 773 | 925 | 1027 | 1281 | 1531 | 1781 | 2031 |
| Housing length (A) | [mm] | 253 | 283 | 303 | 354 | 379 | 455 | 556 | 608 | 659 | 761 | 913 | 1065 | 1167 | 1421 | 1671 | 1921 | 2171 |

## ACCESSORIES

**LSW-M**

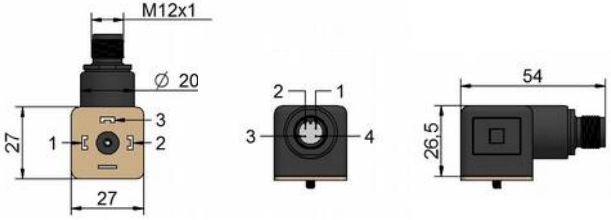
CON006:
mating connector,
IP40, 4 pole, PG9 cable gland




**LSW-M**

CON006-M12:
mating connector,
adapter to M12

| Signal | Pin | Cable colour K4P... |
|---|---|---|
| V- | 1 | brown |
| cursor | 2 | white |
| V+ | 4 | black |




**LSW-B**

CON011:
mating connector, IP40,
5 pole, cable diameter 4...6 mm

| Spare Parts | |
|---|---|
| PKIT059 | 2 brackets,screws for ranges: 100 – 900 mm |
| PKIT061 | 3 brackets,screws for ranges: 1000 – 2000 mm |

| 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 |

**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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