



## 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 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. It is not necessary to lubricate the moving parts of the LRW1.

## DECLARATION OF EC-CONFORMITY

WayCon Positionsmesstechnik GmbH  
Mehlbeerenstrasse 4  
82024 Taufkirchen / Germany

This is to certify that the products

Classification  
Series

Linearpotentiometer  
LRW1

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 LRW1

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!

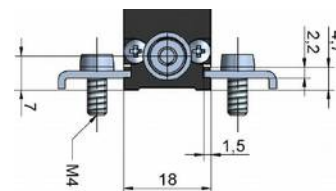
Unpacking and checking:

Carefully lift the position sensor 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.

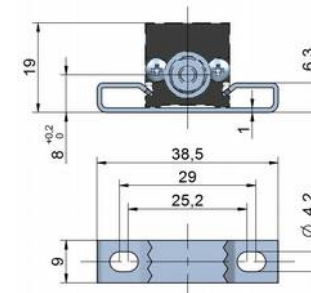
If necessary consult the transportation company, or contact WayCon directly for further assistance.

## MOUNTING THE SENSOR

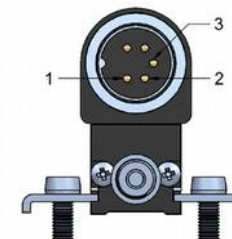
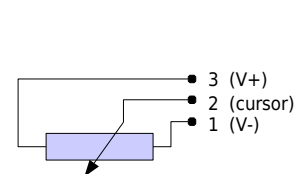
Groove mounting with clamps (included in delivery)



Mounting with brackets  
PKIT006  
(accessory)



## ELECTRICAL CONNECTION



Signal	LRW1-C	LRW1-F
V-	Pin 1	blue
cursor	Pin 2	yellow
V+	Pin 3	brown

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.

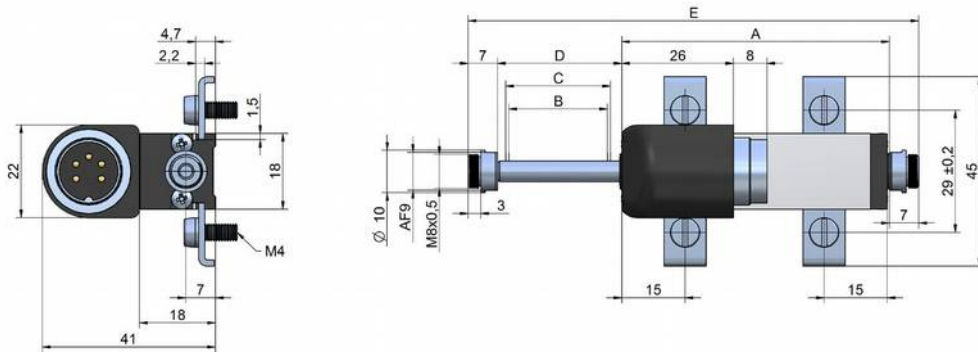
# INSTALLATION GUIDE

## Linear potentiometer Series LRW1

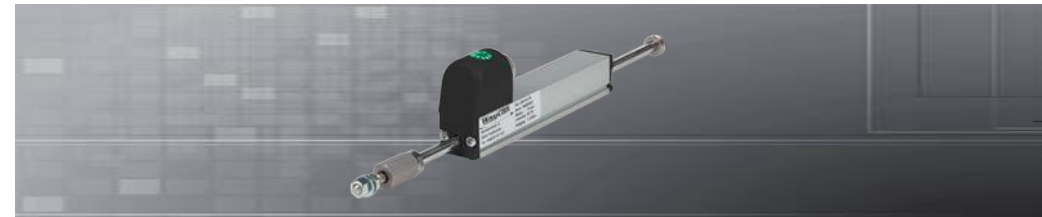
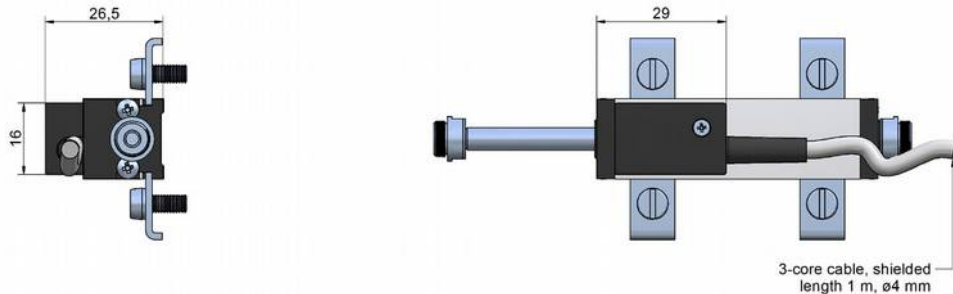
For further information please see the data sheet at [www.waycon.biz/products/linear-potentiometers/](http://www.waycon.biz/products/linear-potentiometers/)

### TECHNICAL DRAWING

#### LRW1-C: connector output, 5 poles



#### LRW1-F: cable output



### 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.

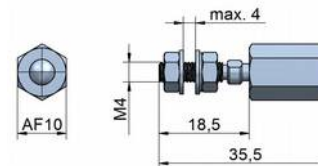
Useful electrical stroke (B) +3/-0	[mm]	25	50	75	100	150
Theoretical electrical stroke (C) ±1	[mm]	B + 1				
Resistance	[kOhm]	5				
Linearity	[%]	±0.2	±0.1			±0.05
Dissipation loss at 40 °C (0 W at 120 °C)	[W]	0.6	1.2	1.8	2.5	3.6
Maximum applicable voltage	[V]	25	60			
Mechanical stroke (D)	[mm]	B + 5				
Case length (A)	[mm]	B + 38				
Case length (E)	[mm]	107	157	207	257	357

### ACCESSORIES

**CON011:** mating connector for LRW1-C for self assembly, IP40, 5 pole, cable diameter 4...6 mm



**PKIT020:** joint coupling (included in delivery)  
max. angular misalignment: ±10 °  
max. radial misalignment: ±0.5 mm



#### 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

