

LINEAR POTENTIOMETER



LRW1 Series

Key-Features:

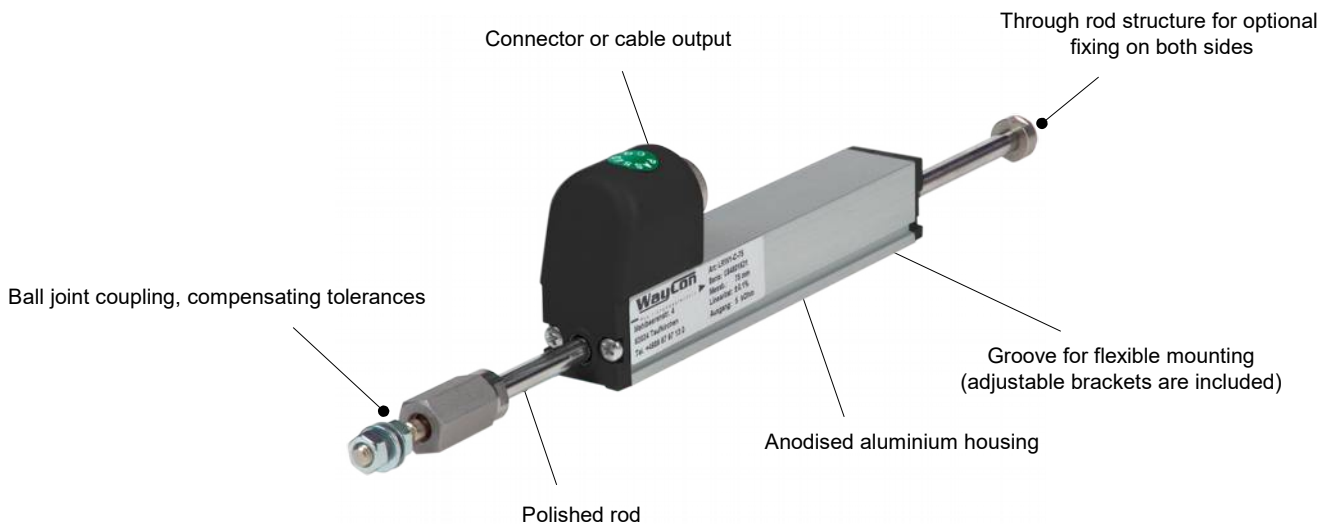
- Compact rectilinear displacement transducer
- Available measurement ranges from 25 to 150 mm
- Through-rod structure with double rod support, guaranteeing greater overall strength of the transducer
- Displacement speed up to 10 m/s
- Linearity up to $\pm 0.05\%$
- Working temperature $-30...+100\text{ }^{\circ}\text{C}$
- Life cycle $>25 \times 10^6 \text{ m}$, or $>100 \times 10^6$ operations, whichever is less
- Simple apparatus according to the EN 60079-11 Standard

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TECHNICAL DATA

Useful electrical stroke	[mm]	25 / 50 / 75 / 100 / 150
Protection class		IP40
Displacement speed	[m/s]	≤10
Displacement force	[N]	≤0.3
Linearity		s. table below
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]	<1.5
Electrical Isolation		>100 MΩ at 500V~, 1 bar, 2 s
Dielectric strength		<100 µA at 500 V~, 50 Hz, 2 s, 1 bar
Vibration DIN IEC68T2-6		5...2000 Hz, 20 g max., 11 ms
Shock test DIN IEC68T2-27		50 g, 11 ms
Working temperature	[°C]	-30...+100
Storage temperature	[°C]	-50...+120
Life cycle		>25 x 10 ⁶ m or >100 x 10 ⁶ operations (whichever is less)
Rod material		Stainless steel AISI 303
Case material		Anodised aluminium, Nylon 66 G25
Mounting		included in delivery: 4 small fixing brackets with screws, optional: 2 large brackets PKIT006

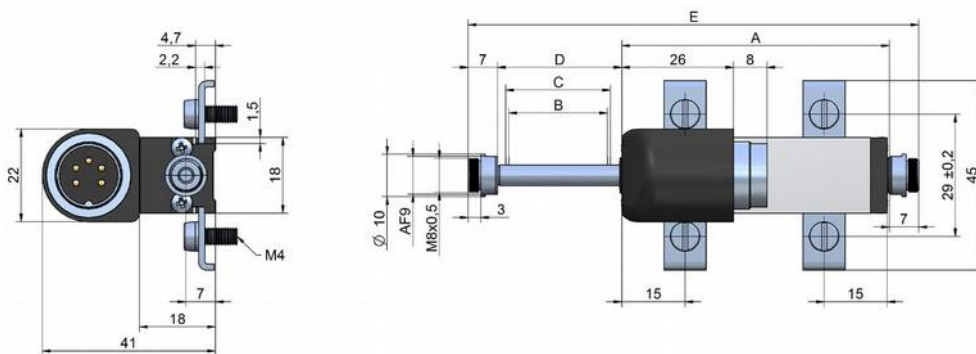


DIMENSIONS AND ELECTRICAL DATA

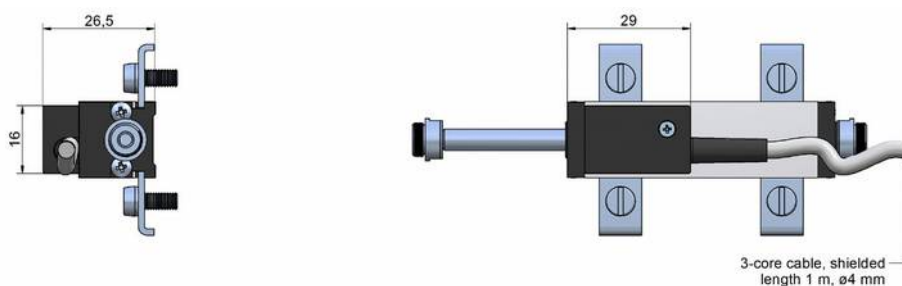
Useful electrical stroke (B) +3/-0	[mm]	25	50	75	100	150
Theoretical electrical stroke (C) ±1	[mm]			B + 1		
Resistance	[kOhm]	1		5		
Linearity	[%]	±0.2		±0.1		±0.05
Dissipation loss at 40 °C (0 W at 120 °C)	[W]	0.6	1.2	1.8	2.5	3.6
Maximum applicable voltage	[V]	25		60		
Mechanical stroke (D)	[mm]		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

TECHNICAL DRAWING

LRW1-C: connector output, 5 poles

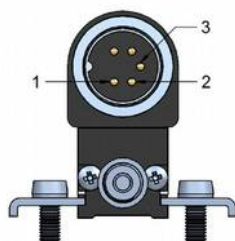
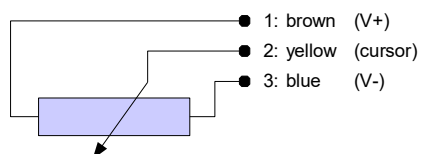


LRW1-F: cable output, 1 m length



ELECTRICAL CONNECTION

Electrical connection



CON011: Mating connector for LRW1-C

for self assembly
IP40, 5 pole, cable diameter 4...6 mm



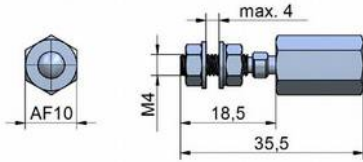
Installation instructions

- 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 exceed 99 % of the supply voltage.

ACCESSORIES

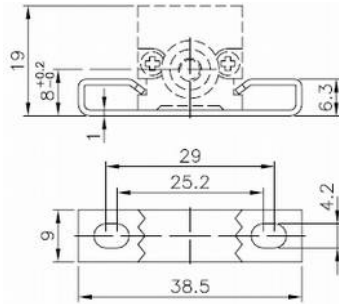
PKIT020 joint coupling

(included in delivery)
 max. angular misalignment: $\pm 10^\circ$
 max. radial misalignment: ± 0.5 mm
 (also available as accessory)



PKIT006 brackets

accessory, consisting of
 2 brackets, screws

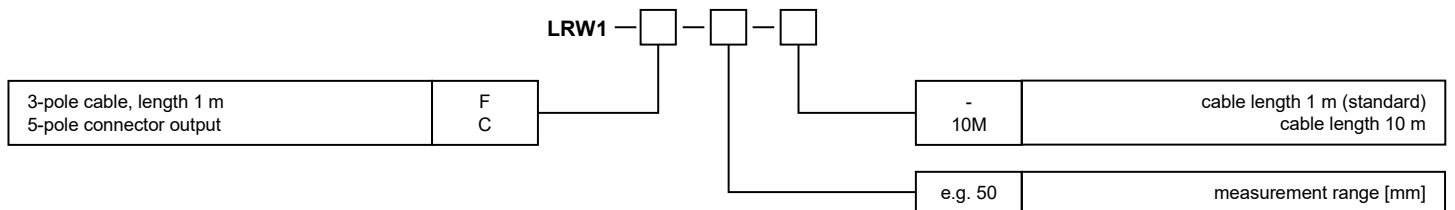


PMX-24 signal converter

- Converts potentiometer signals into analog output signals
- Input: potentiometer 1...20 k Ω
- Configurable output
- DIN-rail-mounting with face-side connector
- For further information please contact WayCon or [download](#) the data sheet.



ORDER CODE



OPTIONS AND ACCESSORIES

Accessories

CON011	mating connector, 5-pole, IP40
PKIT006	mounting kit, 2 large brackets, screws
PKIT020	joint coupling (is included in delivery)

Options

-10M	cable length 10 m
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Signal Conditioner

PMX-24	different analog output signals in one device
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For further information please contact WayCon or [download](#) the data sheet.

Subject to change without prior notice.

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