

LINEAR POTENTIOMETER



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Series LRWA1

Key-Features:

- Joint with up-take of slack and M4 threading provides greater tolerances in movement
- Small dimensions
- Available measurement ranges 25 up to 150 mm
- Displacement speed up to 5 m/s
- Linearity up to $\pm 0.05\%$
- Working temperature $-30...+100\text{ }^{\circ}\text{C}$
- Life cycle $>25 \times 10^6$ m or $>100 \times 10^6$ operations, whichever is less
- Simple apparatus according to the EN 60079-11 standard

TECHNICAL DATA

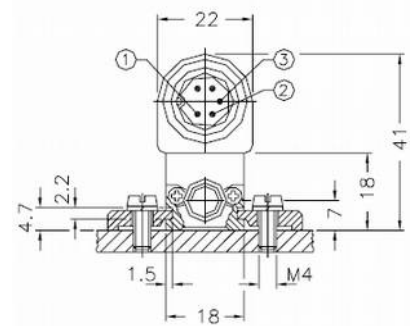
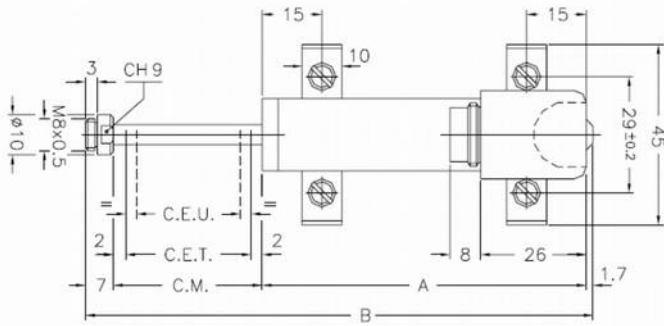
Measuring range	[mm]	25 / 50 / 75 / 100 / 150
Protection class		IP40
Displacement speed	[m/s]	≤5
Displacement force	[N]	<1.2
Linearity		see table below
Resolution		Resolution depends on the signal quality of the reference voltage respectively supply voltage.
Tolerance on resistance	[%]	±20
Recommended cursor current	[mA]	<0.1
Maximum cursor current	[mA]	10
Temperature coefficient of the output voltage	[ppm/°C]	<1.5
Electrical isolation		>100 MOhm at 500 V~, 1 bar, 2 s
Dielectric strength		<100 µA at 500 V~, 50 Hz, 1 bar, 2 s
Vibrations DIN IEC68T2-6		5...2000 Hz, 20 g max., 11 ms
Shock DIN IEC68T2-27		50 g, 11 ms, single cycle
Working temperature	[°C]	-30...+100
Storage temperature	[°C]	-50...+120
Life cycle		>25 x 10 ⁶ m or > 100 x 10 ⁶ strokes
Rod material		Stainless steel, AISI 303
Housing material		Anodised aluminium, Nylon 66 G 25
Installation		Included in delivery: 4 brackets, M4x10 screws, grower optional: mounting set PKIT006

DIMENSIONS AND ELECTRICAL DATA

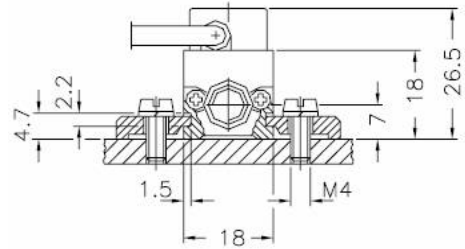
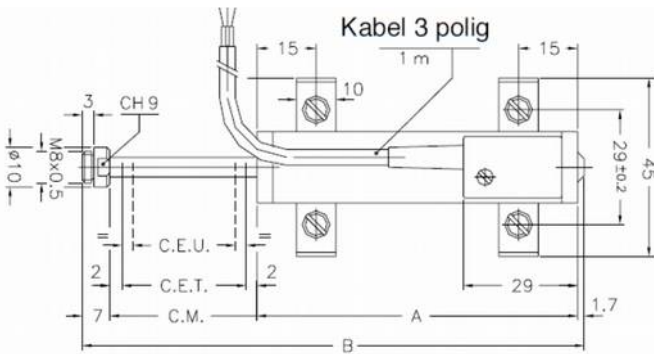
Electrical stroke (B) +1/-0	[mm]	25	50	75	100	125	150
Theoretical electrical stroke (C) ±1	[mm]	C.E.U. + 1					
Resistance	[kOhm]	1	5				
Linearity	[%]	±0.2	±0,1			±0,05	
Dissipation at 40°C (0 W at 100°C)	[W]	0.6	1.2	1.8	2.5	3.0	3.6
Maximum applicable voltage	[V]	25	60				
Mechanical stroke (D)	[mm]	C.E.U. + 5					
Housing length (A)	[mm]	C.E.U. + 38					
Total length (E)	[mm]	113	163	213	263	313	363.2

TECHNICAL DRAWING

LRWA1-C: 5 pole connector output

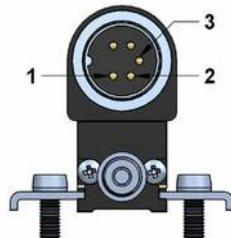
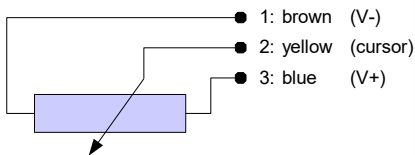


LRWA1-F: cable, 1 m length, 3 wires



ELECTRICAL CONNECTION

Cable output 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.

