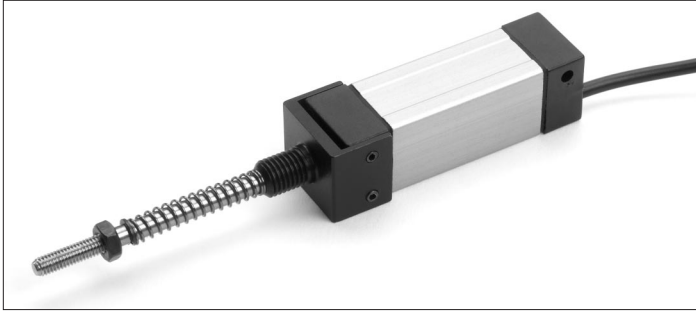


Conductive Plastic Potentiometric Position Transducers

KLR Series



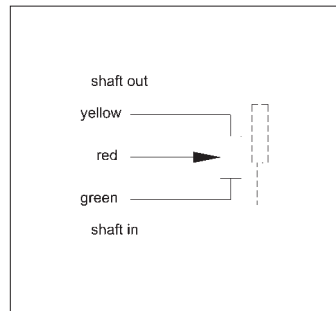
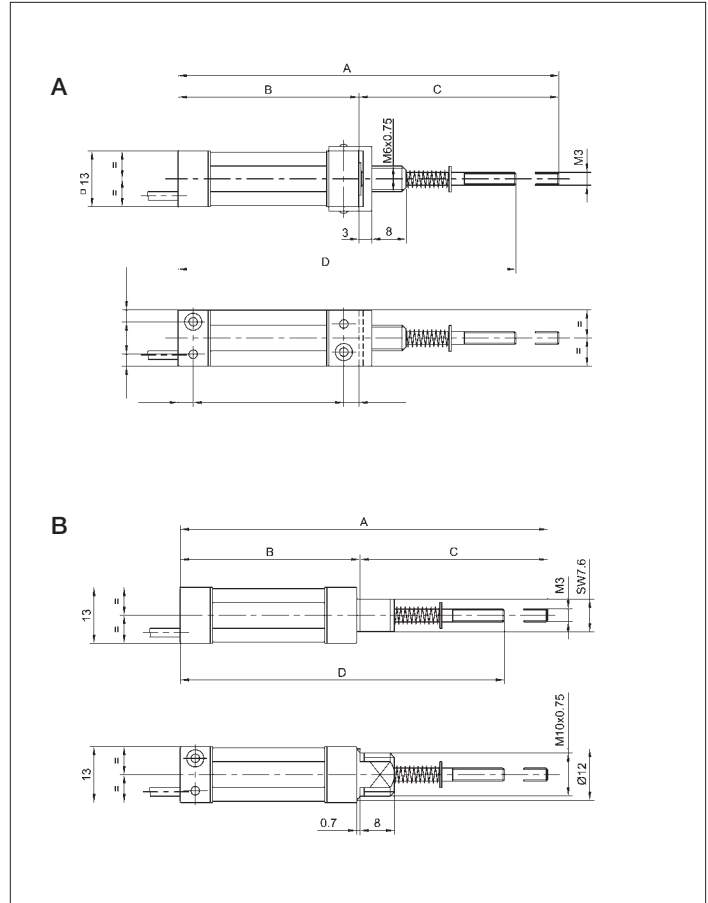
Special features

- very small dimensions
- 10×10^6 movements
- high resolution – better than 0.1 mm

Designed for measuring applications in limited space, the KLR housing is only 13 mm wide.

Careful selection of the materials and high quality components used in KLR potentiometers ensure consistent measurement and reliable operation throughout the service life of the sensor.

Special designs with better linearities are available on request.



Description

Size	see Mechanical Data
Housing	aluminum, anodized
Bearings	sleeve bearing
Resistance element	conductive plastic
Wiper assembly	precious metal multi-finger wiper
Electrical connections	cable 1 m PUR 3 x 0.06 mm ²

Type designations	KLR10...SEFZN	KLR25...SEFZN	KLR50...SEFZN	KLR10...SEFZM	KLR25...SEFZM	KLR50...SEFZM		
Mechanical Data								
Dimensions	see drawing A			see drawing B				
A	88.5	128.5	188.5	85.2	125.2	185.2	mm	
B	42	57	82	41.7	56.7	81.7	mm	
C	46.5	71.5	106.5	43.5	68.5	103.5	mm	
D	78,5	103.5	138.5	75.2	1002	135.2	mm	
Mounting	nut M6x0.75			nut M10x0.75				
Permitted shaft loading (radial) static or dynamic force	1							N
Operating force of the actuating shaft	≤ 10							N
Maximum operational speed	0.1							m/s
Weight	22	28	35	22	28	35	g	
Electrical Data								
Actual electrical travel	10	25	50	10	25	50	mm	
Available resistance values	1	5	5	1	5	5	kΩ	
Resistance tolerance	± 20							%
Repeatability	0.07 (=0.1 mm)	0.07 (=0.1 mm)	0.07 (=0.1 mm)	0.07 (=0.1 mm)	0.07 (=0.1 mm)	0.07 (=0.1 mm)	%	
Effective temperature coefficient of the output-to-applied-voltage ratio	typical 5							ppm/K
Independent linearity	±1							%
Max. permissible applied voltage	20							V
Recommended operating wiper current	≤ 1							μA
Max. wiper current in case of malfunction	10							mA
Insulation resistance (500 VDC, 1 bar, 2 s)	≥ 10,000							MΩ
Dielectric strength (AC, 50 Hz, 1 min, 1 bar)	700							V
Environmental Data								
Temperature range	-25...+75							°C
Vibration	30...500 A _{max} = 0.75 a _{max} = 10							Hz mm g
Life	10 x 10 ⁶							movements
Shock (DIN IEC68T2-27)	50 7							g ms

Order designations

Type	Art. no.
KLR 10 1K0/M SEFZN	023002
KLR 25 5K0/M SEFZN	023005
KLR 50 5K0/M SEFZN	023008
KLR 10 1K0/M SEFZM	023001
KLR 25 5K0/M SEFZM	023004
KLR 50 5K0/M SEFZM	023007

Included in delivery

Nut M6x0.75 (version SEFZN)
Nut M10x0.75 (version SEFZM)

Recommended accessories

MAP process-control indicators and display. MUP signal conditioner for standardized output signals.

Important

All values given for this series – including linearity, lifetime, micro-linearity, resistance to external disturbances and temperature coefficient in voltage dividing mode – are quoted for the device operating with the wiper voltage driving an operational amplifier working as a voltage follower where virtually no load is applied to the wiper ($I_e \leq 1 \mu\text{A}$).