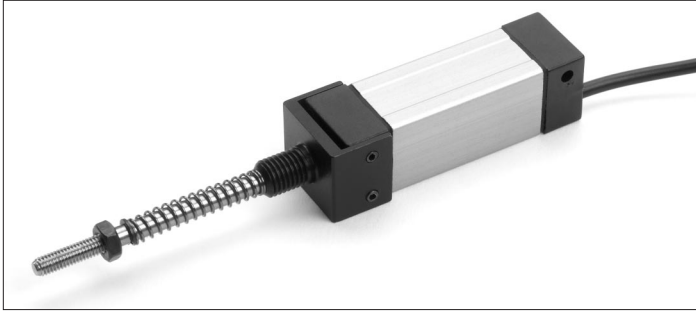


# Conductive Plastic Potentiometric Position Transducers

## KLR Series



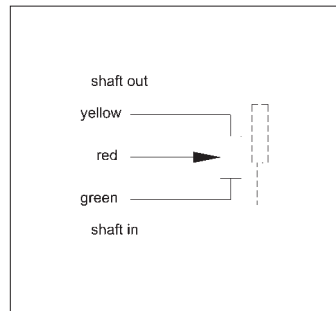
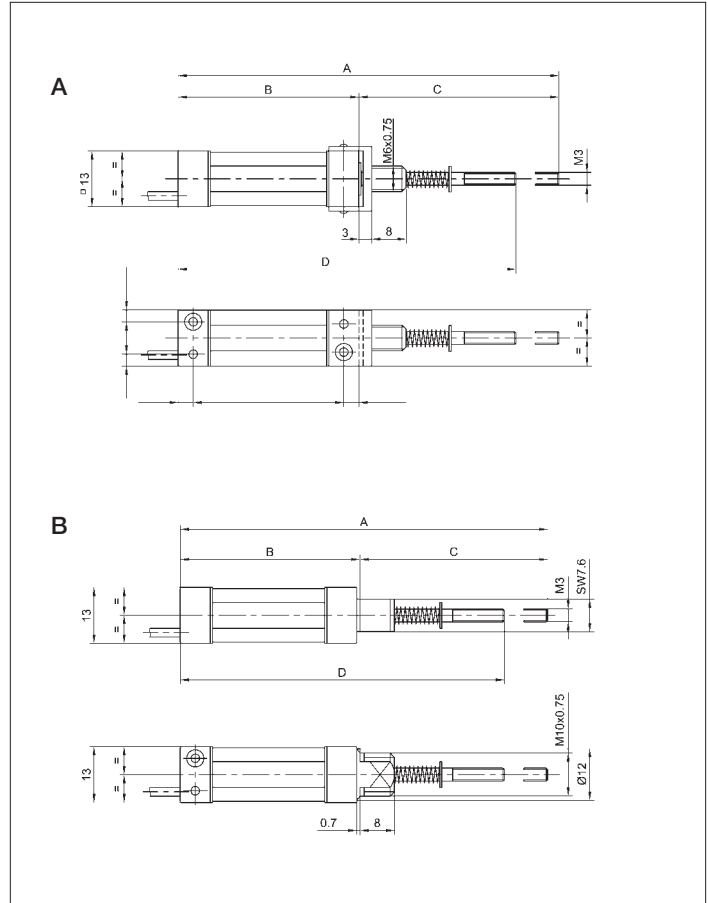
### Special features

- very small dimensions
- $10 \times 10^6$  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 <sup>2</sup>

Type designations	KLR 10...SEFZN	KLR 25...SEFZN	KLR 50...SEFZN	KLR 10...SEFZM	KLR 25...SEFZM	KLR 50...SEFZM	
<b>Mechanical Data</b>							
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	100.2	135.2	mm
Mounting	nut M 6x0.75			nut M 10x0.75			
Permitted shaft loading (radial) static or dynamic force	1						
Operating force of the actuating shaft	≤ 10						
Maximum operating speed	0.1						
Weight	22	28	35	22	28	35	g
<b>Electrical Data</b>							
Actual electrical travel	10		25	50	10	50	mm/25
Available resistance values	1		5	5	1	5	Ω 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						
Independent linearity	± 1						
Max. permissible applied voltage	20						
Recommended operating wiper current	≤ 1						
Max. wiper current in case of malfunction	10						
Insulation resistance (500 VDC, 1 bar, 2 s)	≥ 10,000						
Dielectric strength (AC, 50 Hz, 1 min, 1 bar)	700						
<b>Environmental Data</b>							
Temperature range	-25...+75						
Vibration	30...500 A <sub>max</sub> = 0.75 a <sub>max</sub> = 10						
Life	10 x 10 <sup>6</sup>						
Shock (EN EC 68T2-27)	50 7						

Order designations	
Type	
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)  
Art. no.  
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 (≤ 1 μA).