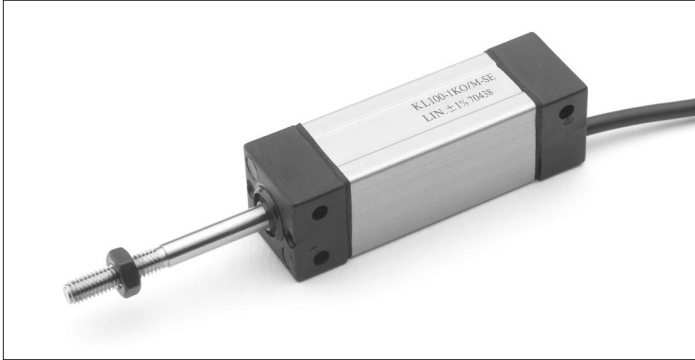


# Conductive Plastic Potentiometric Position Transducers

KL Series



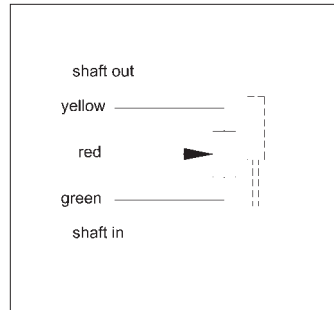
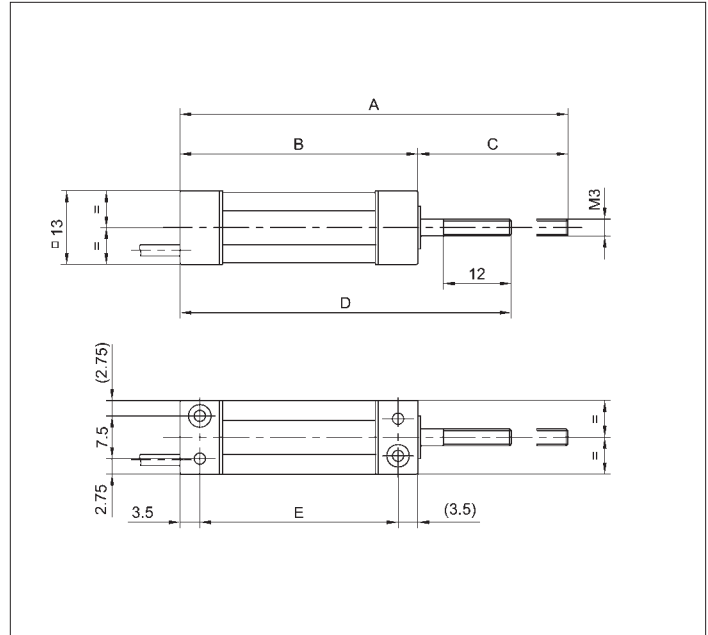
## Special features

- very small dimensions
- $10 \times 10^6$  movements
- high resolution – better than 0.1 mm

With a housing just 13 mm wide, the KL Series is designed for measuring applications in limited space.

Careful selection of the materials and high-quality components used in KL 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	KL10...SE	KL25...SE	KL50...SE	KL75...SE	KL100...SE		
<b>Mechanical Data</b>							
Dimensions	see drawing						
A	68.5	98.5	148.5	198.5	248.5	mm	
B	42	57	82	107	132	mm	
C	26.5	41.5	66.5	91.5	116.5	mm	
D	58.5	73.5	98.5	123.5	148.5	mm	
E	35	50	75	100	125	mm	
Mounting	2 x cylinder head screw M2 (not included in delivery)						
Permitted shaft loading (radial) static or dynamic force	1						N
Operating force of the actuating shaft	≤ 3						N
Maximum operational speed	0.1						m/s
Weight	19	24	29	36	42	g	
<b>Electrical Data</b>							
Actual electrical travel	10	25	50	75	100	mm	
Available resistance values	1	5	5	5	5	kΩ	
Resistance tolerance	±20						%
Repeatability	0.07 (=0.1mm)	0.07 (=0.1mm)	0.07 (=0.1mm)	0.07 (=0.1mm)	0.03 (=0.1mm)	%	
Effective temperature coefficient of the output-to-applied-voltage ratio	typical 5						ppm/K
Independent linearity	±1	±1	±1	±1	±0.25	%	
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
<b>Environmental Data</b>							
Temperature range	-25...+75						°C
Vibration	30...500 A <sub>max</sub> = 0.75 a <sub>max</sub> = 10						Hz mm g
Life	10 x 10 <sup>6</sup>						movements
Shock (DIN IEC68T2-27)	50 7						g ms
Protection class (DIN 40050)	IP 65						

<b>Order designations</b>		
Type		Art. no.
KL 10	1K0/M SE	023000
KL 25	5K0/M SE	023003
KL 50	5K0/M SE	023006
KL 75	5K0/M SE	023009
KL 100	5K0/M SE	023010

#### Recommended accessories

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