

Conductive Plastic Potentiometric Position Transducers

KL Series



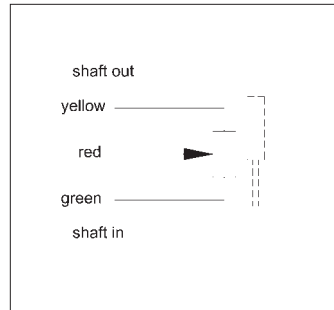
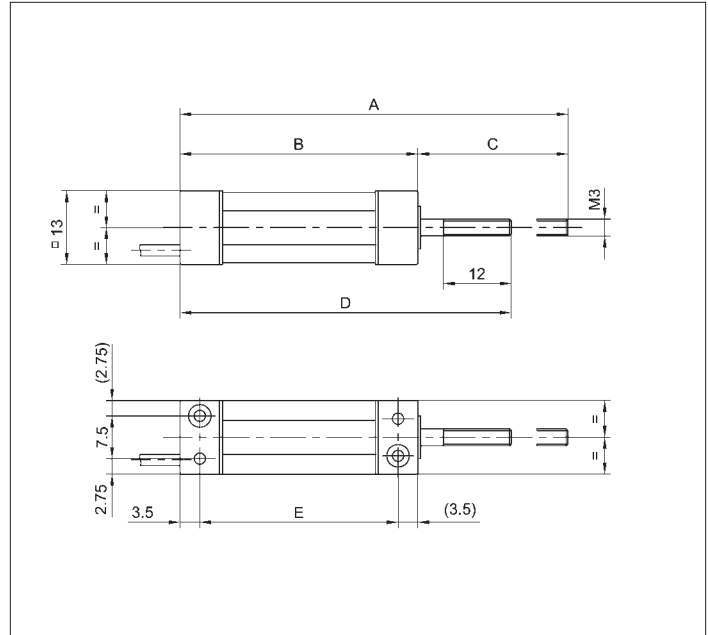
Special features

- very small dimensions
- 10×10^6 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 ²

Type designations	KL10...SE	KL25...SE	KL50...SE	KL75...SE	KL100...SE
Mechanical Data					
Dimensions	see drawing				
A	68.5	198.5	98.5	248.5	148.5
B	42	107	57	132	82
C	26.5	91.5	41.5	116.5	66.5
D	58.5	123.5	73.5	148.5	98.5
E	35	100	50	125	75
Mounting	2 x cylinder head screw M2 (not included in delivery)				
Permitted shaft loading (radial) static and dynamic force	1				
Operating force of the actuating shaft	≤ 3				
Maximum operational speed	0.1				
Weight	19	36	24	42	29

Electrical Data					
Actual electrical travel	10	25	100	50	mm
Available resistance values	1	5	5	5	kΩ
Resistance tolerance	±20				
Repeatability	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				
Independent linearity	±1	±1	±0.25	±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	MΩ				
Dielectric strength (AC, 50 Hz, 1 min, 1 bar)	700				

Environmental Data					
Temperature range	-25...+75				
Vibration	30...500				
	$A_{max} = 0.75$				Hz
	$a_{max} = 10$				mm
					g
Life	10 x 10				
Shock (DIN IEC68T2-27)	50				
	7				g
					ms
Protection class (DIN 40050)	IP 65				

Order designations		
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.