Signleturn Potentiometers Conductive Plastic

Series PL130

Special features

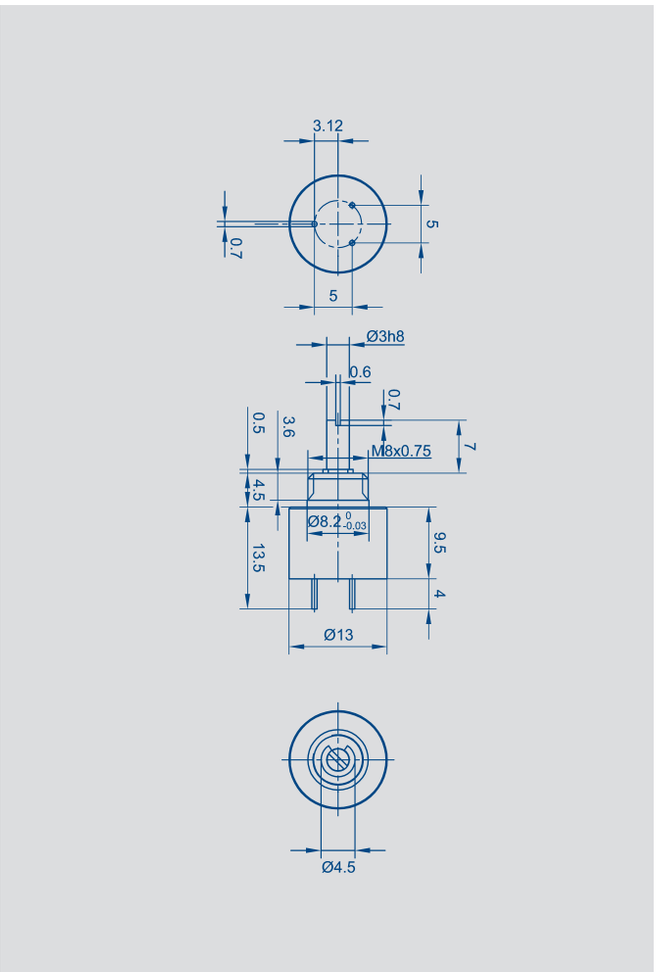
- very small dimensions
- individual variability
- 10 x 10^6 movements
- excellent linearity
- very high resolution - better 0.1°

Small dimensions characterize this potentiometer.

The robust version combines precision and low-cost design for use in servo systems or for measuring applications.

The careful selection of the materials and high quality of the products used ensure a constant and high level of quality throughout the entire service life of the sensor.

Special designs with other angular ranges and shaft dimensions on request.



Description	
Size	housing diameter 13 mm
Housing	brass, nickel plated
Shaft	stainless steel
Bearings	sleeve bearings
Resistance element	conductive plastic
Wiper assemly	precious metal multi-finger wiper
Electrical connections	solder pins, tin plated

Type designations	PL130 MB	
Mechanical Data		
Dimensions	see drawing	
Mounting	nut M8 x 0.75 and serrated washer	
Mechanical travel	316	°
Permitted shaft loading (axial and radial) static or dynamic force	1	N
Torque	≤ 0.5	Ncm
Maximum operational speed	120	min^{-1}
Weight	8	g
Electrical Data		
Actual electrical travel	300 ±3	°
Available resistance values	1; 5	kΩ
Resistance tolerance	± 15	%
Repeatability	0.07 (=0.2°)	%
Effective temperature coefficient of the output-to-applied voltage	typical 5	ppm/K
Independent linearity	± 2.5	%
Max. permissible applied voltage	12	V
Recommended operating wiper current	≤ 1	µA
Max. wiper current in case of malfunction	5	mA
Insulation resistance (500 VDC, 1 bar, 2 s)	≥ 10 000	MΩ
Dielectric strength (AC, 50 Hz, 1 min, 1 bar)	750	V
Environmental Data		
Temperature range	-25...+85	°C
Vibration	30...2000	Hz
	A_{max} = 0.75 a_{max} = 10	mm g
Life	10×10^6	movements
Shock (DIN IEC68T2-27)	50 7	g ms
Protection class (DIN 40050)	IP65	

Order designations / Abbreviations

3G: connecting solder pin axial
MB: bushing M8 x 0.75 axis Ø 3 mm with slot

Included in delivery

1 nut M8 x 0.75
1 serrated washer Ø 8.15 mm

Recommended accessories

Process-controlled indicators MAP... with display,
Signal conditioner MUP... for standardized output signals

Important

All the values given in this data sheet for linearity, lifetime and temperature coefficient in the voltage dividing mode are quoted for the device operating with the wiper voltage driving on operational amplifier working as a voltage follower, where virtually no load is applied to the wiper ($I_e \leq 1$ µ A).

Order designations

Type			Art.no.	R in kΩ
PL130	1K0	3G070 MB	045000	1
PL130	5K0	3G070 MB	045001	5

Subject to changes