

Single-Turn Cermet Potentiometers

PC262 Series



Special features

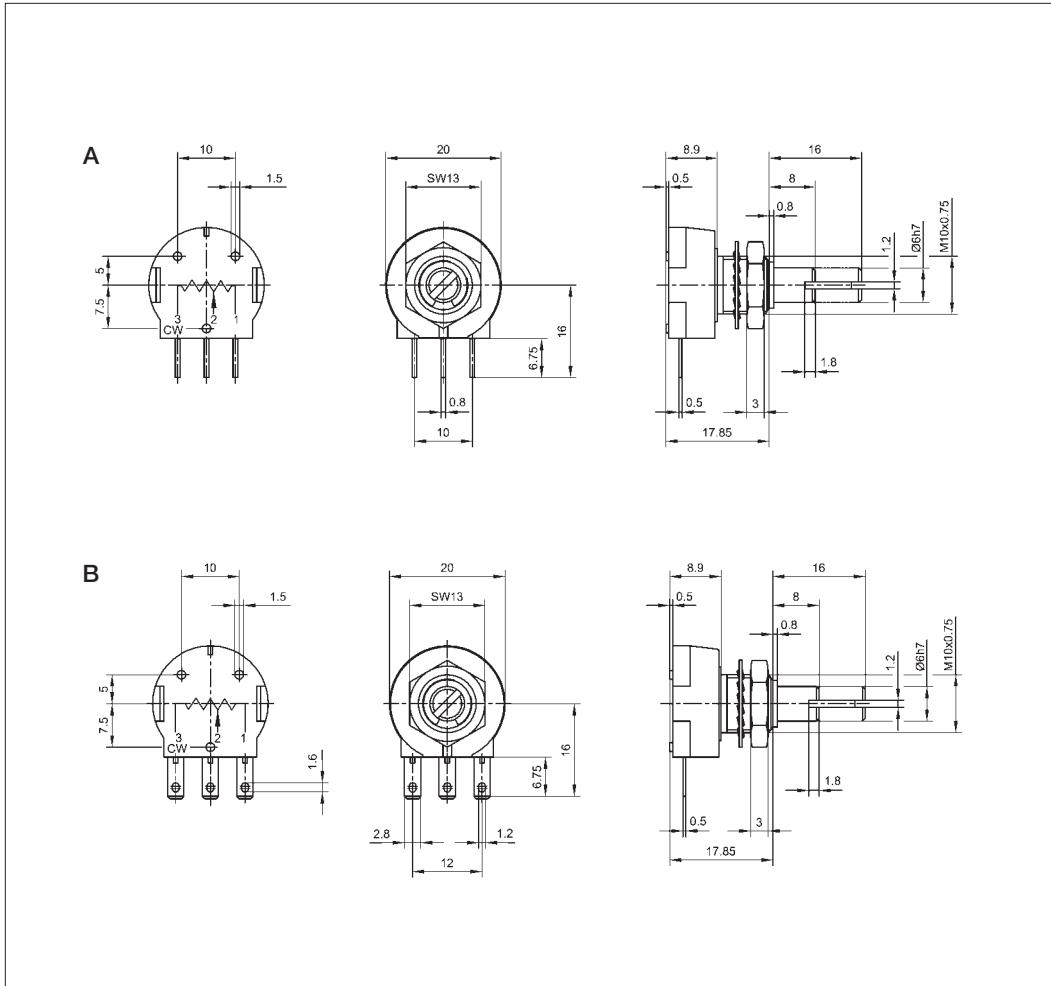
- very small dimensions
- 100×10^3 movements
- linearity $\pm 2\%$
- high resolution – better than 0.1°
- very robust

Low-cost potentiometer with a Cermet resistance element for control electronics and measuring applications.

The Cermet potentiometer combines the high resolution of a screen-printed resistor element with the robustness of a wirewound potentiometer.

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

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



Description

Size	housing diameter 20 mm
Housing	high-quality, temperature-consistent plastic
Shaft	brass, nickel plated
Bearings	sleeve bearings
Resistor element	Metalloxyd ceramics (Cermet)
Wiper assembly	precious metal multi-finger wiper
Electrical connections	tin plated

Type designations	PC262...1A-MB	PC262...4A-MB
Mechanical Data		
Dimensions	see drawing A	see drawing B
Mounting	nut M10 x 0.75, serrated washer 3/8"	
Mechanical travel	272	°
Permitted shaft loading (axial and radial) static or dynamic force	1	N
Torque	≤ 1	Ncm
Permitted max. torque for mech. stops	100	Ncm
Maximum operational speed	120	RPM
Weight	14	g
Electrical Data		
Actual electrical travel	270 ±3	°
Available resistance values	1; 5; 10; 100; 1000	kΩ
Resistance tolerance	±10	%
Repeatability	0.04 (= 0.1°)	%
Effective temperature coefficient of the output-to-applied voltage ratio	5 (typical)	ppm/K
Independent linearity	±2	%
Max. permissible applied voltage	42	V
Recommended operating wiper current	≤ 1	µA
Max. wiper current in case of malfunction	100	mA
Insulation resistance (500 VDC, 1 bar, 2 s)	≥ 10,000	MΩ
Dielectric strength (AC, 50 Hz, 1 min, 1 bar)	1500	V
Environmental Data		
Temperature range	-25...+125	°
Vibration	30...2000 $A_{max} = 0.75$ $a_{max} = 10$	Hz mm g
Life	100 x 10³	movements
Shock (DIN IEC 68 T2-27)	50 7	g ms
Protection class (DIN 40050)	IP 50	

Order designations / Abbreviations

1A: connecting solder pin radial
 4A: connecting pin, radial
 MB: bushing M10 x 0.75,
 axis Ø 6 mm with slot

Included in delivery

1 nut M 10 x 0.75
 1 serrated washer 3/8"

Recommended accessories

Fork coupling Z104 G6, Art. no.
 005690;
 Fork coupling Z105 G6 (back-lash-free), Art. no. 005691,
 MAP process-control indicators
 and display. MUP signal conditioner for standardized output
 signals.

Order designations

Type	Art. no.	R in kΩ	Length shaft in mm
PC262 1K0 1A160 MB	047013	1	16
PC262 5K0 1A160 MB	047017	5	16
PC262 10K0 1A160 MB	047019	10	16
PC262 100K0 1A160 MB	047021	100	16
PC262 1M0 1A160 MB	047015	1000	16
PC262 1K0 4A160 MB	047014	1	16
PC262 5K0 4A160 MB	047018	5	16
PC262 10K0 4A160 MB	047020	10	16
PC262 100K0 4A160 MB	047022	100	16
PC262 1M0 4A160 MB	047016	1000	16