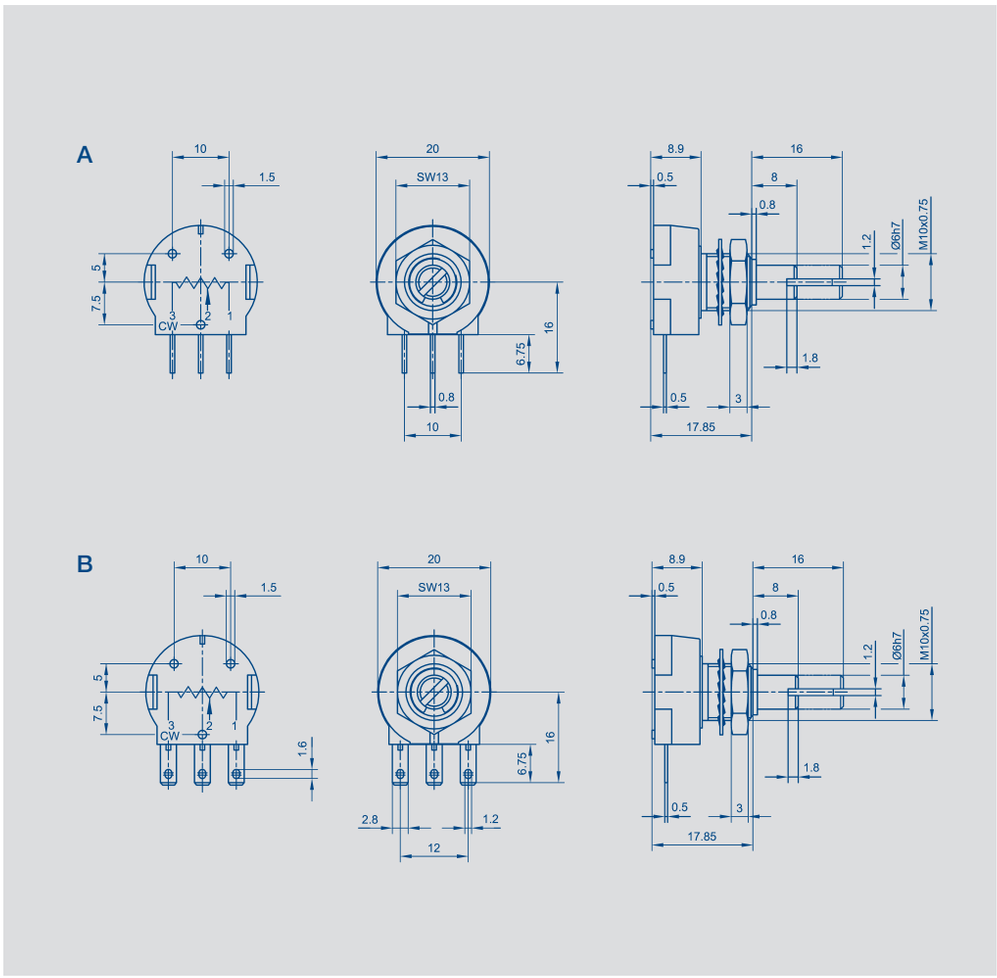
Singleturn Potentiometers Cermet

Series PC262



Special features

- very small dimensions
- 100 x 10^3 movements
- linearity ±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 wire-wound potentiometer.

The careful selection of the materials and high quality of the components used 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 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		min^{-1}
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	typical 5		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 10^3		movements
Shcok (DIN IEC68T2-27)	50 7		g ms
Protection class (DIN 40050)	IP50		

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 (backlash-free), Art.no. 005691,
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 ≤ 1 µ A).

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

Subject to changes