

Eingang-Potentiometer
 PC 262/260
 ø 20.0 mm
 50.000 Zyklen
 Cermet

Singleturn Potentiometers
 PC 262/260
 ø 20.0 mm
 50.000 cycles
 Cermet



Mechanische Daten	Mechanical Data	
Durchmesser	Diameter	20.0 mm
Achsdurchmesser	Shaft diameter	6.0 mm
Maximaler Einstelldrehmoment	Max. torque	1 Ncm
Lebensdauer	Life expectancy	50.000 Zyklen/cycles
Elektrische Daten	Electrical Data	
Anschlusswiderstand R	Nominal resistance R	100 Ω... 2M Ω
Widerstandstoleranz	Resistance tolerance	± 10 %
Linearität	Linearity	± 2.0 %
Maximaler Schleiferstrom im Störfall	Max. wiper curr. in case of malfunct.	100 mA
Belastung P	Power rating P	2 W/ 70°C
Maximale Anschlussspannung	Maximum supply voltage	$U_{max} = \sqrt{PxR}$
Maximaler Übergangswiderstand	Maximum contact resistance	CRV 3% vom Anschlusswiderstand CRV 3% of Nominal resistance
Temperaturkoeffizient Widerstand	Temperature coefficient resistance	100 ppm/°C
Spannungsfestigkeit	Dielectric strength	1500 VAC/1 min
Isolationswiderstand	Insulating resistance	10 G Ω bei/at 500 VDC
Umgebungsbedingungen	Environmental Conditions	
Lagertemperatur	Storage temperature	-25°C... +125°C
Betriebstemperatur	Operating temperature	-25°C... +125°C
Klimatische Prüfklasse	Climatic rating	25/125/56
Schutzart	Protection rating	IP 50
Vibrationen	Vibration	10 G (30 – 2000 Hz, 0.75 mm)
Schock	Shock	50 G (Halbsinus, 7 ms) 50 G (half sine pulse, 7 ms)
Material	Material	
Gehäuse	Housing	Thermoplast
Achse	Shaft	Messing vernickelt/brass nickel plated
Anschlüsse	Connections	Messing verzinkt/brass solder plated

Optionen

- Achslänge bis 50 mm
- Achse mit Fläche (positioniert)
- Achsarten gerändelt, gekerbt, verzahnt, usw.
- Flansch an Buchse
- Buchse mit Fläche
- Drehwinkel positioniert zu einer Fläche

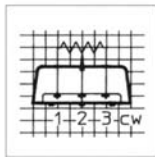
Options

- Shaft length up to 50 mm
- Flattened shaft
- Special shafts according to drawings (rimmed, screw driver slot, flat, etc.)
- Pilot diameter
- Flattened bushing
- Index point

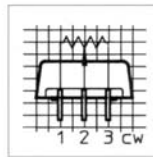


Typ	Model	PC 262-1A-MB	PC 260-1A-MB	PC 262-1B-MB	PC 260-1B-MB	PC 262-4A-MB	PC 260-4A-MB
Anschlussbilder	Connecting diagrams	1	1	2	2	1	3
Massbilder	Dimension drawings	A	A	B	B	C	C
Elektr. Drehwinkel	Electr. angle	270°	270°	270°	270°	270°	270°
Mech. Drehwinkel	Mech. angle	272°	300°	272°	300°	272°	300°

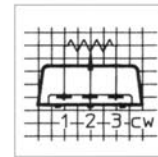
Anschlussbilder
Connecting diagrams



1 Raster: 2.5 mm
Ansicht: von vorne
1 grid: 2.5 mm
front view

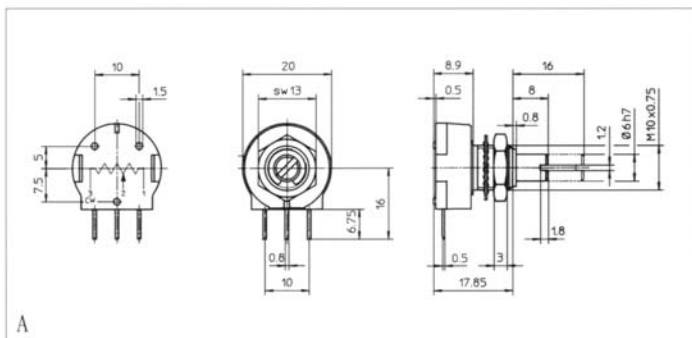


2 Raster: 2.5 mm
Ansicht: von vorne
2 grid: 2.5 mm
front view

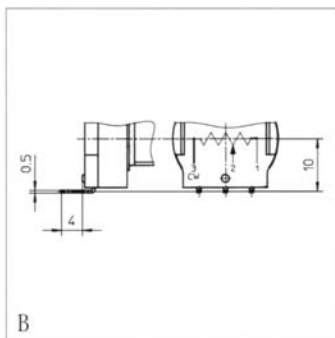


3 Raster: 1.5 mm
Ansicht: von unten
3 grid: 1.5 mm
bottom view

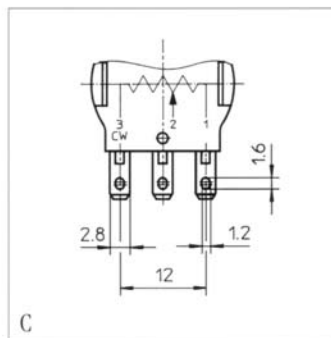
Massbilder
Dimension drawings



A



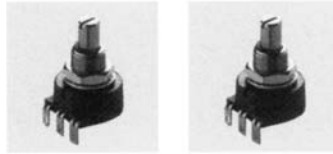
B



C

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Typ	Model	PC 262-4B-MB	PC 260-4B-MB
Anschlussbild	Connecting diagram	4	4
Massbilder	Dimension drawings	B/C	B/C
Elektr. Drehwinkel	Electr. angle	270°	270°
Mechanischer Drehwinkel	Mechanical angle	272°	300°

Typenbezeichnung/Abkürzungen

Marking/Remarks

Anschlussarten: 1A = Print seitlich

Connections: 1A = side PC pins

1B = Print axial

1B = axial PC pins

4A = Steckzunge seitlich

4A = side solder lugs

4B = Steckzunge axial

4B = axial solder lugs

Gewindebuchse M = Metrisches Gewinde

Bushing: M = metric thread

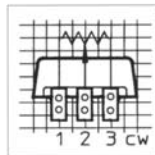
Achse: B = ø 6 mm, mit Schlitz

Shaft: B = ø 6 mm, slotted

Z = nach Zeichnung

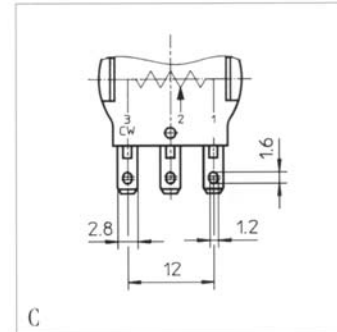
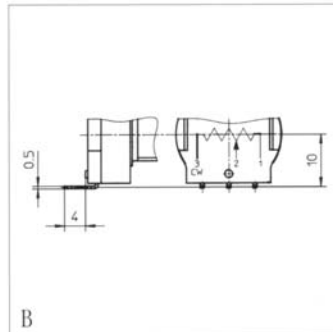
Z = according to drawing

Anschlussbild
 Connecting diagram



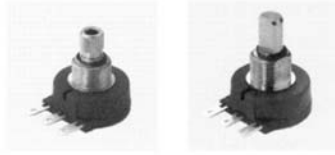
4 Raster: 1.5 mm
 Ansicht: von unten
 4 grid: 1.5 mm
 bottom view

Massbilder
 Dimension drawings



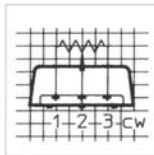
Sondertypen

Special types



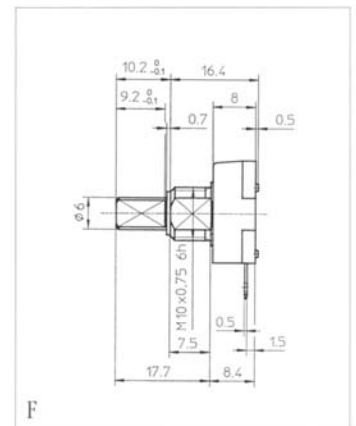
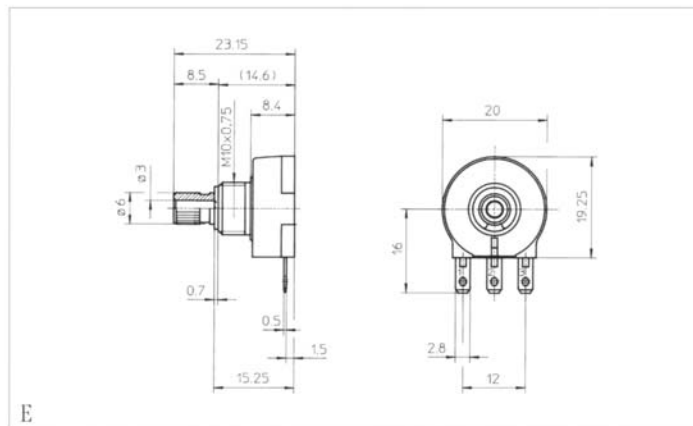
Typ	Model	PC 262-4A-MZ	PC 260-4A-MZ
Anschlussbild	Connecting diagram	1	1
Massbilder	Dimension drawings	E	F
Elektr. Drehwinkel	Electr. angle	270°	270°
Mech. Drehwinkel	Mech. angle	272°	300°

Anschlussbild Connecting diagram



1 Raster: 2.5 mm
Ansicht: von vorne
1 grid: 2.5 mm
front view

Massbilder Dimension drawings



Zubehör/Optionen Accessories/Options

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see page 39

Single-Turn Cermet Potentiometers

PC262 Series



Special features

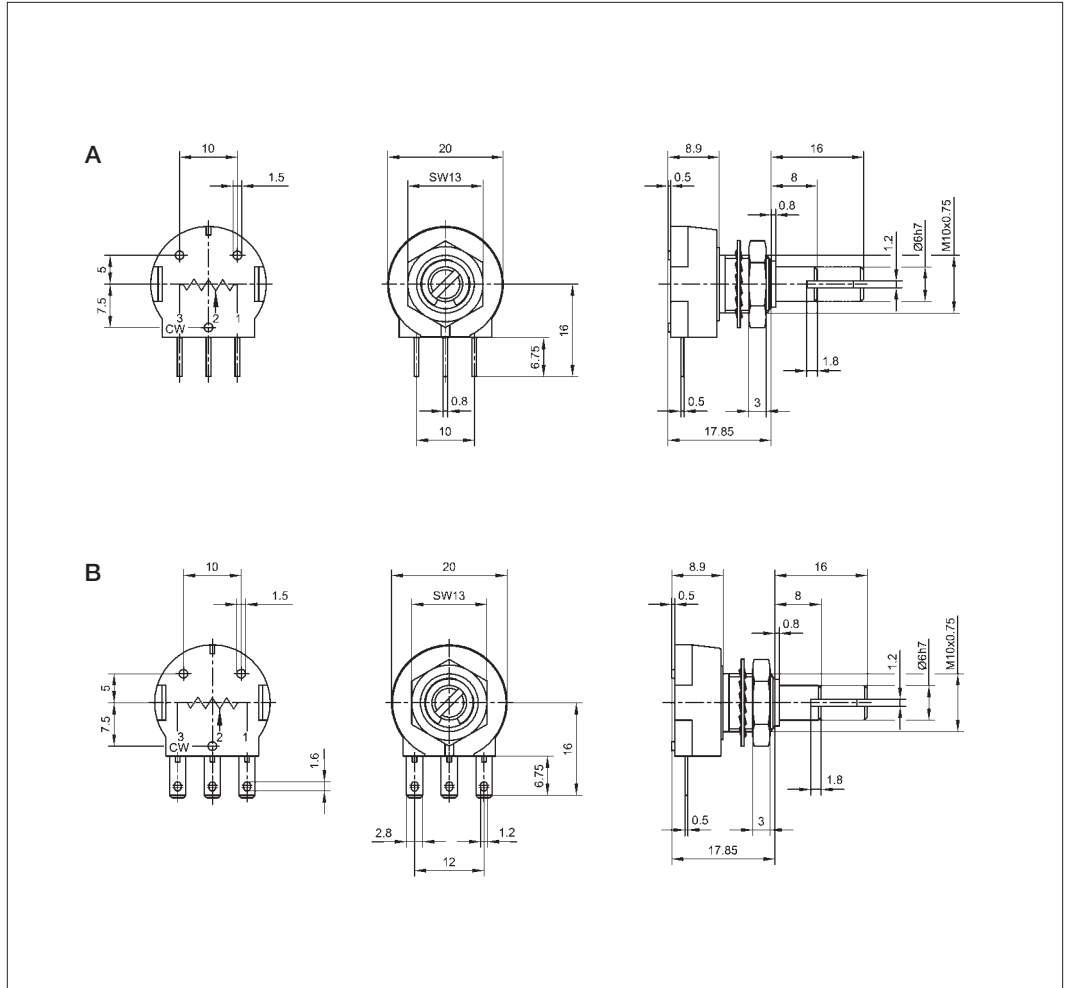
- very small dimensions
- 100×10^3 movements
- linearity $\pm 2\%$
- high resolution – better than 0.1°
- very robust

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 10 ³	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 (backlash-free), Art. no. 005691, MAP process-control indicators and display. MUP signal conditioner for standardized output signals.

Important

All values given for this series – including linearity, lifetime, micro-linearity, resistance to external disturbances and temperature coefficient in voltage dividing mode – are quoted for the device operating with the wiper voltage driving an operational amplifier working as a voltage follower where virtually no load is applied to the wiper ($I_e \leq 1 \mu A$).

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