

# Geared Wirewound Potentiometers

## PD2310 Series



### Special features

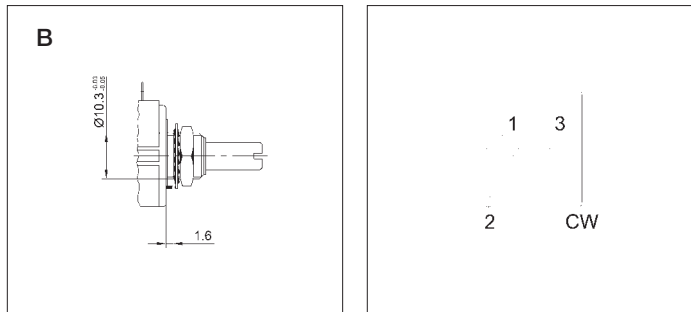
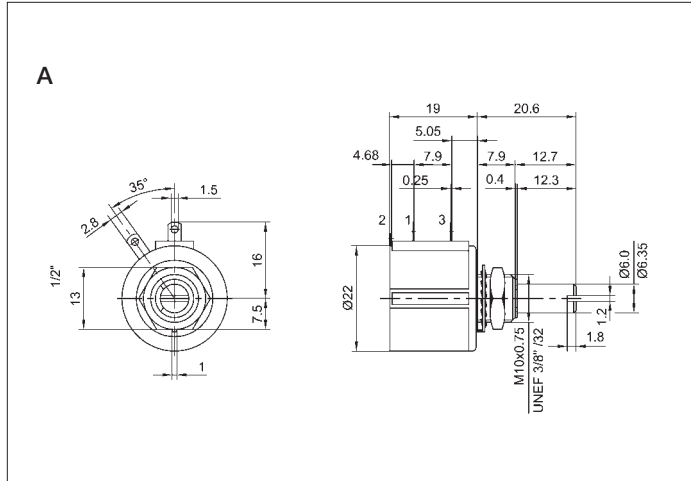
- very small dimensions
- $1 \times 10^6$  movements
- excellent linearity  $\pm 0.15\%$
- very robust

Sealed potentiometer with a wire-wound resistance element for control electronics and measuring applications.

The PD2310 Series of sealed potentiometers provide a wire-wound resistance element in a small package for control electronics and measuring applications. With a housing diameter of only 22 mm and robust design, the PD2310 Series provides reliable measurements in severe environments.

Careful selection of materials and high-quality components ensure a constant measurement throughout the entire service life of the sensor.

Special designs with other reductions and shaft dimensions are available on request.



### Description

Size	housing diameter 22 mm
Housing	Thermoplast
Shaft	brass, nickel plated
Bearings	sleeve bearings
Resistance element	wirewound
Wiper assembly	precious metal
Electrical connections	gold plated

Type designations	PD2310...5A-MB	PD2310...5A-UK	PD2310...5A-FK
<b>Mechanical Data</b>			
Dimensions	see drawing A	see drawing A	see drawing A/B
Mounting	nut M10 x 0.75, serrated washer	nut 3/8" UNEF, serrated washer	
Mechanical travel	3,600		°
Permitted shaft loading (axial and radial) static or dynamic force	3		N
Torque	≤ 0.7		Ncm
Permitted max. torque for mech. stops	50		Ncm
Maximum operational speed	120		RPM
Weight	22		g
<b>Electrical Data</b>			
Actual electrical travel	3,600		°
Available resistance values	1; 5; 10		kΩ
Resistance tolerance	± 5		%
Repeatability	see order designations		
Effective temperature coefficient of the output-to-applied voltage ratio	5 (typical)		ppm/K
Independent linearity	±0.15		%
Max. permissible applied voltage	42		V
Recommended operating wiper current	≤ 10		μA
Max. wiper current in case of malfunction	50		mA
Insulation resistance (500 VDC, 1 bar, 2 s)	≥ 10,000		MΩ
Dielectric strength (AC, 50 Hz, 1 min, 1 bar)	1,000		V
<b>Environmental Data</b>			
Temperature range	-55...+125		°C
Vibration	30...2000 A <sub>max</sub> = 0.75 a <sub>max</sub> = 10		Hz mm g
Life	1 x 10 <sup>6</sup>		movements
Shock (DIN IEC 68 T2-27)	50 7		g ms
Protection class (DIN 40050)	IP 50		

#### Order designations / Abbreviations

5A: connecting side pin  
 MB: bushing  
 M10 x 0.75, axis Ø 6 mm, with slot  
 UK: imperial thread UNEF 3/8", axis Ø 6.35 mm, with slot  
 FK: imperial thread 3/8" with pilot diameter, axis Ø 6.35 mm with slot

#### Included in delivery

1 nut M10 x 0.75  
 or 3/8" UNEF  
 1 serrated washer 3/8"

#### Recommended accessories

MAP process-control indicators and display. MUP signal conditioner for standardized output signals.

#### Order designations

Type	Art. no.	R in kΩ	Repeatability
PD2310 1K0 5A127 MB	048026	1	0.031% (= 1.1°)
PD2310 5K0 5A127 MB	048029	5	0.021% (= 0.76°)
PD2310 10K0 5A127 MB	048032	10	0.020% (= 0.72°)
PD2310 1K0 5A127 UK	048027	1	0.031% (= 1.1°)
PD2310 5K0 5A127 UK	048030	5	0.021% (= 0.76°)
PD2310 10K0 5A127 UK	048033	10	0.020% (= 0.72°)
PD2310 1K0 5A127 FK	048025	1	0.031% (= 1.1°)
PD2310 5K0 5A127 FK	048028	5	0.021% (= 0.76°)
PD2310 10K0 5A127 FK	048031	10	0.020% (= 0.72°)