

## Rotary Sensor Potentiometer

Series P2500

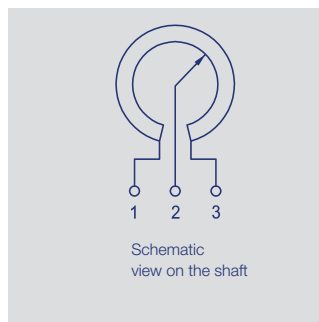
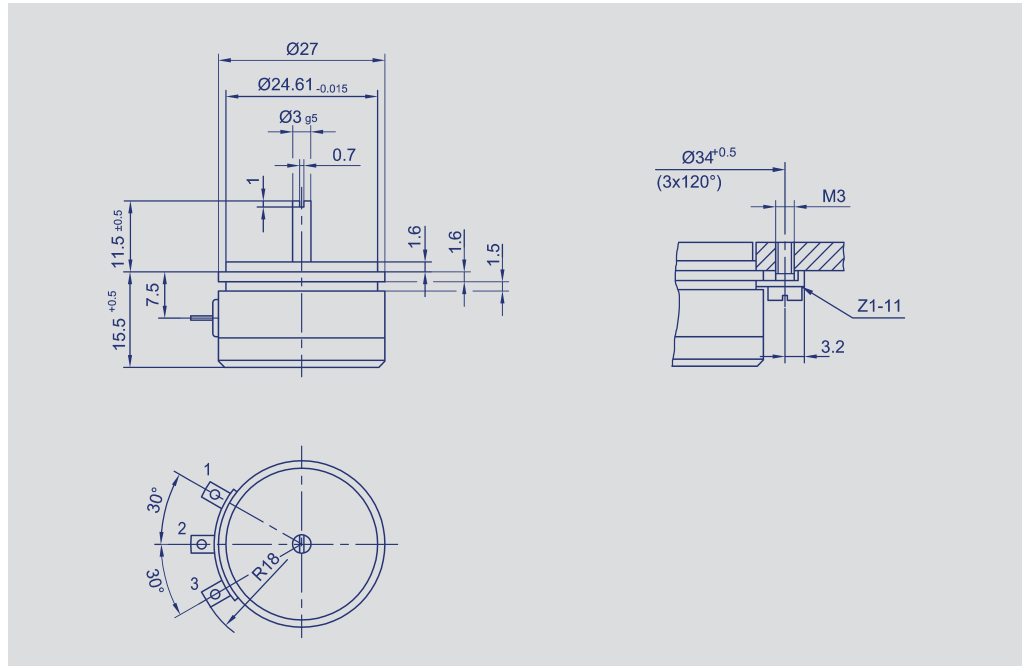


### Special features

- excellent precision - linearity  $\pm 0.2\%$ , repeatability  $\pm 0.03\%$
- very high resolution - better than  $0.01^\circ$
- exceptionally long life - to 100 million movements
- operating speed to 10,000 RPM
- continuous rotation allowed
- sealed to IP40

The P2500 is a precision potentiometer for measuring, control, and instrumentation applications.

It offers a servo size 11 metal case, ball-bearings, a conductive resistance element and elastomer-damped wipers.



Description	
Size	servo size 11
Case	two-part; flange anodized aluminium; cover high-grade, temperature-resistant plastic
Shaft	stainless steel
Bearings	stainless steel ball bearings
Resistance element	conductive plastic
Wiper assembly	precious metal multi-finger wipers
Electrical connections	gold-plated brass terminals

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<b>Mechanical Data</b>		
Dimensions	see drawing	
Mounting with	with 3 clamps Z1-11	
Mechanical travel	360, continuous	°
Permitted shaft loading (axial and radial) static or dynamic force	15	N
Operating Torque	0.07	Ncm
Maximum operational speed	10,000	RPM
Weight	20	g
<b>Electrical Data</b>		
Actual electrical travel	345 ±2	°
Available resistance values	1; 2; 5	kΩ
Resistance tolerance	±10	%
Repeatability	0.003 (Δ 0.01°)	%
Effective temperature coefficient of the output-to-applied voltage ratio	typical 5	ppm/K
Independent linearity	±0.2 (< 0.2 on request)	%
Max. permissible applied voltage	42	V
Recommended operating wiper current	≤ 1	μA
Max. wiper current (in case of malfunction)	10	mA
Insulation resistance (500 VDC, 1 bar, 2 s)	≥ 10	MΩ
Dielectric strength (50 Hz, 2 s, 1 bar, 500 VAC)	≤ 100	μA
<b>Environmental Data</b>		
Temperature range	-40...+100	°C
Vibration	5...2000 Amax = 0.75 amax = 20	Hz mm g
Shock	50 11	g ms
Life	100 x 10 <sup>6</sup>	movements
Protection class	IP 40 (DIN 400 50 / IEC 529)	

#### Included in delivery

3 mounting clamps Z1-11.

#### Recommended accessories

Fork coupling Z-103-G03,  
 P/N 005687;  
 MAP - Process-control indicator, with display,  
 MUP / MUK - signal conditioners.

#### Important

All values given for linearity, lifetime and temperature coefficient are derived with no electrical load on the wiper (I ≤ 1μA).

#### Order designations

Type	P/N	R in kΩ
P-2501-A102	003201	1
P-2501-A202	003202	2
P-2501-A502	003203	5

Type designations for non-standard models will be specified upon receipt of order.