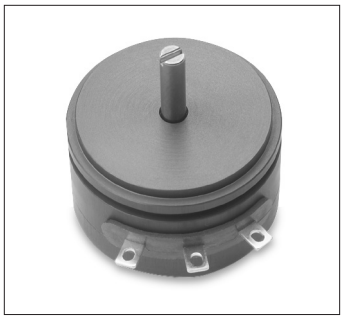
novotechnik
Siedle Group

Standard Potentiometers

P2500 Series

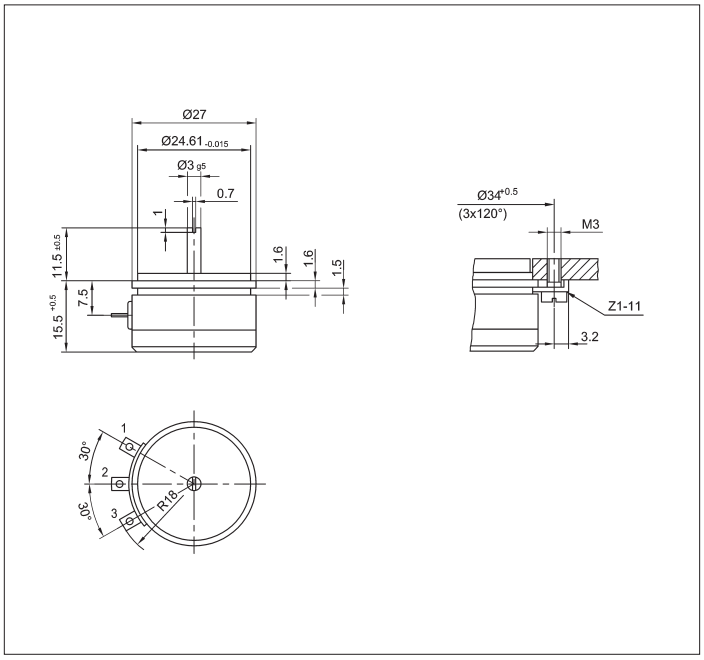


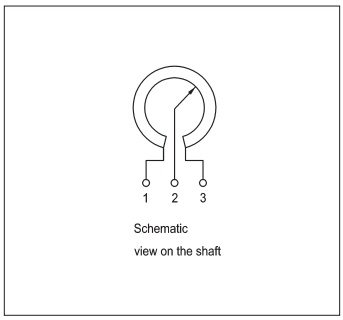
Special features

- unmatched combination of size, performance and price
- very long life – 100 x 10^6 movements
- very good linearity – standard ±0.2%
- very high resolution – better than 0.01°
- high admissible operating speed: 10,000 RPM
- unrestricted continuous rotation

Precision potentiometer with conductive plastic resistance track. For measuring, control and instrumentation applications.

The distinguishing features of the P2500 include an all metal case, ball bearings, conductive-plastic collector track and elastomer-damped wipers for both resistance and collector tracks. Because of its reliability, long life, good linearity, high resolution, high operational speed and corrosion resistance, this component opens up applications that were closed to conventional potentiometers. Special versions with different electrical travels and shaft dimensions are available.





Description	
Size	servo size 11
Case	two part, anodized aluminum case and cover
Shaft	stainless steel
Bearings	stainless steel ball bearings
Resistance element	conductive plastic
Wiper assembly	precious metal multi-finger wiper
Electrical connections	gold-plated brass terminals

Novotechnik U.S., Inc.
155 Northboro Road
Southborough, MA 01772

Phone: 508-485-2244
Fax: 508-485-2430
Email: info@novotechnik.com

Mechanical Data		
Dimensions	see drawing	
Mounting	with 3 clamps Z 1-11	
Mechanical travel	360, continuous	°
Permitted shaft loading (axial and radial) static or dynamic force	15	N
Torque	≤ 0.07	Ncm
Maximum operational speed	10,000	RPM
Weight	20	g
Electrical Data		
Actual electrical travel	345 ±2	°
Available resistance values	1; 2; 5	kΩ
Resistance tolerance	±10	%
Repeatability	0.003 (≙ 0.01°)	%
Effective temperature coefficient of the output-to-applied voltage ratio	5 (typical)	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

Environmental Data		
Temperature range	-40...+100	°C
Vibration	5...2000 A_{max} = 0.75 a_{max} = 20	Hz mm g
Shock	50 11	g ms
Life	100 x 10^6	movem.
Protection class	IP 40 (DIN 400 50 / IEC 529)	

Order designations

Type	Art. no.	R in kΩ
P2501 A102	003201	1
P2501 A202	003202	2
P2501 A502	003203	5

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

Included in delivery
3 mounting clamps Z 1-11

Recommended accessories
Fork coupling Z 103 G 3 (backlash-free),
Process-controlled indicators MAP...with display,
Signal conditioner MUP.../MUK …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 (Ie ≤ 1 µA).

Subject to changes