

Rotary Sensor Multiple Section Potentiometer

Series P2500



The P2500 Multi is a multiple-section version of the proven P2500 potentiometer. It provides redundancy for demanding applications.

A metal housing and multiple ball bearings provide long life.

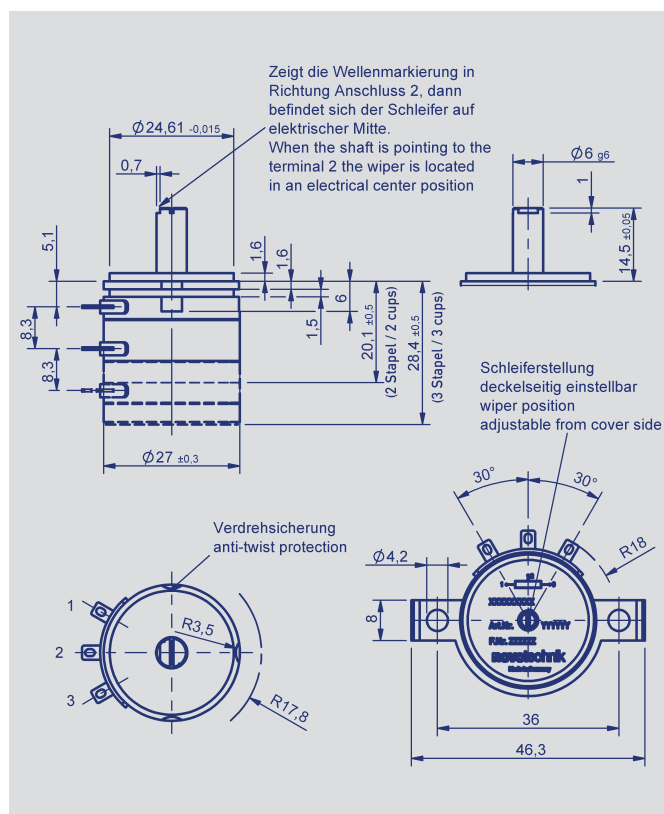
Outputs are factory-calibrated to provide interlinearity of $\pm 1\%$.

Special features

- redundant version of P2500 with 2 or 3 sections
- high precision in a small package
- very good linearity and interlinearity
- very high resolution - better than 0.01°
- long operating lifetime - to 50 million movements
- unrestricted continuous rotation

Applications

- Ship control units
- Weighing equipment
- User interface for special vehicles



Description

Size	servo size 11
Housing	aluminium, anodized
Shaft	stainless steel
Bearing	stainless steel ball bearings
Resistance element	conductive plastic
Wiper	precious metal multi-finger wiper
Electrical connections	gold-plated brass terminals

Technical Data

	P-2501-120-285-001 (2 sections) P-2501-120-385-001 (3 sections)	P-2501-240-286-001 (2 sections) P-2501-240-386-001 (3 sections)	P-2501-345-253-001 (2 sections) P-2501-345-353-001 (3 sections)	
Mechanical Data				
Dimensions	see dimension drawing			
Mounting	clamp with 2 cylinder screws M4x10			
Mechanical travel	360 continuous			°
Permitted shaft loading (axial and radial) static or dynamic force	15			N
Torque	< 1.5			Ncm
Maximum operational speed	2,000			RPM
Weight	24 (2 sections) / 31 (3 sections)			g
Electrical Data				
Measuring range (dimension L)	120 ±2	240 ±2	345 ±2	°
Defined electrical range	114	234	339	°
Nominal resistance	1	2	5	kΩ
Resistance tolerance	20			±%
Independent linearity	0.3			±%FS
Repeatability	0.01			°
Interlinearity	1			±%FS
Maximum permissible applied voltage	42			VDC
Recommended wiper operating current	≤ 1			μA
Maximum wiper current in case of malfunction	max. 10			mA
Effective temperature coefficient of the output-to-applied voltage ratio	typ. 5			ppm/K
Insulation resistance (500 VDC)	≥ 10			MΩ
Dielectric strength (500 VAC, 50 Hz)	≤ 100			μA
Environmental Data				
Temperature range	-40 ... +100			°C
Vibration (IEC 60068-2-6)	5...2000 Amax = 0.75 amax = 20			Hz mm g
Shock (IEC 60068-2-27)	50 (11 ms)			g
Life	50x10 ⁶			movements
Functional safety	When using our products in safety-related systems, please contact us.			
Protection class (DIN 40050 / IEC 529)	IP40			

Order designations

Type	P/N
P-2501-120-285-001 (angle 120°, 2-section)	003266*
P-2501-240-286-001 (angle 240°, 2-section)	003267*
P-2501-345-253-001 (angle 345°, 2-section)	003268
P-2501-120-385-001 (angle 120°, 3-section)	003263*
P-2501-240-386-001 (angle 240°, 3-section)	003264*
P-2501-345-353-001 (angle 345°, 3-section)	003265

Up to 6 sections available on request.
*) Minimum order quantity 5 pcs.

Included in delivery

1 mounting clamp and
2 cylinder screws M4x10

Recommended accessories

Fork coupling Z-104-G-6,
with low backlash, P/N 005690;
Fork coupling Z-105-G-6,
backlash-free, P/N 005691;
MAP process control
indicators with display;
MUP/MUK signal conditioners
for standardized voltage or
current output signals