

ANR51

compact, open loop, rotary stepper positioner with vertical rotation axis

Technical Specifications

Technology		travel mechanism		inertial piezo drive	
Size and Dimensions		footprint; height		15 x 15 (Ø 20); 9.5 mm	
		weight		10 g	
		through hole in the middle of the axis		Ø 1.5 mm	
Coarse Positioning Mode		@ 300 K		@ 4 K	
		input voltage range		0 .. 60 V	
		typical actuator capacitance		1.025 µF	
		travel range (step mode)		360° endless, both directions	
		typical minimum step size		1 m°	
		maximum drive velocity		≈ 10 °/s	
Fine Positioning Mode		@ 300 K		@ 4 K	
		input voltage range		0 .. 60 V	
		fine positioning range		0 .. 40 m°	
		fine positioning resolution		µ°	
Materials (non-magnetic)		positioner body		titanium (other materials on request)	
		actuator		PZT ceramics	
		connecting wires		insulated twisted pair, copper	
Load		mounting orientation: axis vertical (@ 300 K)			
		maximum load		0.3 N (30 g)	
		maximum static torque around axis		0.3 Ncm	
		maximum dynamic torque around axis		0.2 Ncm	
Mounting		from the bottom		2 threads M2 x 2.3 mm	
		load on top		2 threads M1.6 x 1 mm	
Article Numbers		/RT Version		1003285	
		/HV Version		1003287	
		/UHV Version		1003288	
		/LT Version		1003286	
		/LT/HV Version		1003289	
		/LT/UHV Version		1003290	
Compatibility with Electronics		ANC300 piezo positioning controller		all versions	
		ANC350 piezo positioning controller		all versions	
Working Conditions		mounting orientation		axis vertical	
		magnetic field range		0 .. 31 T	
		temperature range (/RT, /HV, /UHV)		0 .. 100 °C	
		temperature range (/LT, /LT/HV, /LT/UHV)		10 mK .. 373 K	
		max. bake out temperature (/UHV, /LT/UHV)		150 °C	
		minimum pressure (/RT, /LT)		1E-4 mbar	
		minimum pressure (/HV, /LT/HV)		1E-8 mbar	
		minimum pressure (/UHV, /LT/UHV)		5E-11 mbar	
Accuracy of Movement		repeatability of step sizes		typically 5 % over full range	
		forward / backward step asymmetry		typically 5 %	
		wobble		± 1 mrad	
Connectors and Feedthroughs		/RT, /LT Versions		all /HV, /UHV Versions	
		connector type		2-pole pin plug, 2-pole pin plug (PEEK),	
				Ø 0.5 mm, d = 2 mm, Ø 0.5 mm, d = 2 mm,	
				30 cm cable with connector 30 cm cable with connector	
		electrical feedthrough solution		VFT/LT VFT/HV, VFT/UHV	

Technical Drawings

