

ANR51

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

Technical Specifications

Technology		Compatibility with Electronics	
travel mechanism	inertial piezo drive	ANC300 piezo positioning controller	ANM150, ANM300
Size and Dimensions		Working Conditions	
footprint; height	15 x 15 (Ø 20); 9.5 mm	mounting orientation	axis vertical
weight	10 g	magnetic field range	0 .. 31 T
through hole in the middle of the axis	Ø 1.5 mm	temperature range (/RT, /HV, /UHV)	0 .. 100 °C
Coarse Positioning Mode		temperature range (/LT, /LT/HV, /LT/UHV)	10 mK .. 373 K
	@ 300 K	max. bake out temperature (/UHV, /LT/UHV)	150 °C
input voltage range	0 .. 60 V	minimum pressure (/RT, /LT)	1E-4 mbar
typical actuator capacitance	1.9 µF	minimum pressure (/HV, /LT/HV)	1E-8 mbar
travel range (step mode)	360° endless, both directions	minimum pressure (/UHV, /LT/UHV)	5E-11 mbar
typical minimum step size	1 m°		
maximum drive velocity	≈ 10 °/s		
Fine Positioning Mode		Accuracy of Movement	
	@ 300 K	repeatability of step sizes	typically 5 % over full range
input voltage range	0 .. 60 V	forward / backward step asymmetry	typically 5 %
fine positioning range	0 .. 40 m°	wobble	± 1 mrad
fine positioning resolution	µ°		
	@ 4 K		
input voltage range	0 .. 150 V		
fine positioning range	0 .. 6 m°		
fine positioning resolution	µ°		
Materials (non-magnetic)		Connectors and Feedthroughs	
positioner body	titanium (upgrade option: beryllium copper)	/RT, /LT Versions	all /HV, /UHV Versions
actuator	PZT ceramics	connector type	2-pole pin plug, 2-pole pin plug (PEEK),
connecting wires	insulated twisted pair, copper		Ø 0.5 mm, d = 2 mm,
			30 cm cable with connector
		electrical feedthrough solution	30 cm cable with connector
			VFT/HV, VFT/UHV
			VFT/LT
Load (@ ambient conditions)		mounting orientation: axis vertical	
maximum load	0.3 N (30 g)		
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		

Technical Drawings

