

ANRv51

compact, open loop, rotary stepper positioner with horizontal 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	10 x 20; 21 mm	mounting orientation	axis horizontal
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	Connectors and Feedthroughs	
Materials (non-magnetic)		/RT, /LT Versions	all /HV, /UHV Versions
positioner body	titanium (upgrade option: beryllium copper)	connector type	2-pole pin plug (PEEK), Ø 0.5 mm, d = 2 mm, 30 cm cable with connector
actuator	PZT ceramics	electrical feedthrough solution	VFT/LT
connecting wires	insulated twisted pair, copper		30 cm cable with connector VFT/HV, VFT/UHV
Load (@ ambient conditions)		mounting orientation: axis horizontal	
maximum load	0.2 N (20g)		
maximum dynamic torque around axis	0.2 Ncm		
Mounting			
from the top	2 threads M2 x 3 mm		
from the bottom	2 threads M2 x 3 mm		
load on top	2 threads M1.6 x 1 mm		
Article Numbers			
/RT Version	1003297		
/HV Version	1003299		
/UHV Version	1003300		
/LT Version	1003298		
/LT/HV Version	1003301		
/LT/UHV Version	1003302		

Technical Drawings

