

ANR31

open loop, rotary stepper positioner with smallest footprint and 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	8 x 8 (Ø 10); 7.5 mm	mounting orientation	axis vertical
weight	2.5 g	magnetic field range	0 .. 31 T
through hole in the middle of the axis	Ø 0.6 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	260 nF	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	≈ 3 °/s	Accuracy of Movement	
Fine Positioning Mode		repeatability of step sizes	typically 5 % over full range
	@ 300 K	forward / backward step asymmetry	typically 5 %
	@ 4 K	Connectors and Feedthroughs	
input voltage range	0 .. 60 V	/RT, /LT Versions	all /HV, /UHV Versions
fine positioning range	0 .. 60 m°	connector type	2-pole pin plug, ø 0.5 mm, d = 2 mm, 30 cm cable with connector
fine positioning resolution	µ°	electrical feedthrough solution	VFT/LT
Materials (non-magnetic)			
positioner body	titanium (upgrade option: beryllium copper)		
actuator	PZT ceramics		
connecting wires	insulated twisted pair, copper		
Load (@ ambient conditions)		mounting orientation: axis vertical	
maximum load	0.05 N (5 g)		
maximum dynamic torque around axis	0.03 Ncm		
Mounting			
from the bottom	2 threads M1.6 x 2.1 mm		
load on top	2 threads M1.6 x 1.6 mm		
Article Numbers			
/RT Version	1004583		
/HV Version	1004587		
/UHV Version	1004588		
/LT Version	1004584		
/LT/HV Version	1004585		
/LT/UHV Version	1004586		

Technical Drawings

