

ANPx311

open loop, bearing based, linear, horizontal stepper positioner

Technical Specifications

Technology		Compatibility with Electronics	
travel mechanism	inertial piezo drive	ANC300 piezo positioning controller	ANM150, ANM300
Size and Dimensions		Working Conditions	
footprint; height	30 x 30; 10 mm	mounting orientation	axis horizontal
maximum size	36 x 30; 10 mm	magnetic field range	0 .. 31 T
weight	30 g	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	1.55 µF	minimum pressure (/HV, /LT/HV)	1E-8 mbar
travel range (step mode)	6 mm	minimum pressure (/UHV, /LT/UHV)	5E-11 mbar
typical minimum step size	100 nm	Accuracy of Movement	
maximum drive velocity	≈ 3 mm/s	repeatability of step sizes	typically 5 % over full range
Fine Positioning Mode		forward / backward step asymmetry	typically 5 %
	@ 300 K	Connectors and Feedthroughs	
	@ 4 K	/RT, /LT Versions	all /HV, /UHV Versions
input voltage range	0 .. 100 V	connector type	2-pole pin plug, Ø 0.5 mm, d = 2 mm, 30 cm cable with connector
fine positioning range	0 .. 7.5 µm	electrical feedthrough solution	VFT/LT
fine positioning resolution	sub-nm		
Materials		High Load Option (/HL)	
positioner body	titanium	/HL/RT - ambient conditions	2 N
actuator	PZT ceramics	/HL/UHV - UHV conditions	1 N
connecting wires	insulated twisted pair, copper	/HL/LT - cryogenic temperature conditions	0.75 N
bearings	ceramics	Article Numbers /HL Option	
Load (@ ambient conditions)		/HL/RT Version	
	mounting orientation: axis horizontal	1008939	
maximum load	20 N (2 kg)	/HL/HV Version	
maximum dynamic force along the axis	2 N	1008940	
Mounting		/HL/UHV Version	
from the top	4 through holes dia 2.2 mm, cntrbr. f. M2	1008941	
from the bottom	4 threads M2.5 x 2 mm	/HL/LT Version	
load on top	12 threads M 2 x 2.5 mm	1008942	
Article Numbers		/HL/LT/HV Version	
/RT Version	1008059	1008943	
/HV Version	1008058	/HL/LT/UHV Version	
/UHV Version	1008057	1008944	
/LT Version	1008056		
/LT/HV Version	1007437		
/LT/UHV Version	1008060		

Technical Drawings

