

ANPx321

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	40 x 41.6; 11.5 mm	mounting orientation	axis horizontal
maximum size	40 x 56.6; 11.5 mm	magnetic field range	0 .. 31 T
weight	74 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)	15 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		2-pole pin plug (PEEK), Ø 0.5 mm, d = 2 mm, 30 cm cable with connector
Materials			VFT/HV, VFT/UHV
positioner body	titanium	High Load Option (/HL)	
actuator	PZT ceramics	mounting orientation: axis vertical	
connecting wires	insulated twisted pair, copper	/HL/RT - ambient conditions	3 N
bearings	ceramics	/HL/UHV - UHV conditions	2 N
Load (@ ambient conditions)		mounting orientation: axis horizontal	1.5 N
maximum load	20 N (2 kg)	Article Numbers /HL Option	
maximum dynamic force along the axis	2 N	/HL/RT Version	1008325
Mounting		/HL/HV Version	1008326
from the top	4 through holes dia 2.2 mm, cntrbr. f. M2	/HL/UHV Version	1008327
from the bottom	4 threads M2.5 x 2 mm	/HL/LT Version	1008328
load on top	10 threads M 2 x 3 mm	/HL/LT/HV Version	1008329
Article Numbers		/HL/LT/UHV Version	1008330
/RT Version	1006724		
/HV Version	1006725		
/UHV Version	1006726		
/LT Version	1007258		
/LT/HV Version	1007259		
/LT/UHV Version	1007260		

Technical Drawings

