

ANPz101eXT12

open loop, linear, vertical stepper positioner providing highest stability with extended travel range

Technical Specifications

Technology			Compatibility with Electronics		
travel mechanism	inertial piezo drive		ANC300 piezo positioning controller	all versions	
			ANC350 piezo positioning controller	all versions	
Size and Dimensions			Working Conditions		
footprint; height	24 x 24; 32 mm		mounting orientation	axis vertical	
maximum size	24 x 24; 44 mm		magnetic field range	0 .. 31 T	
weight	62 g		temperature range (/RT, /HV, /UHV)	0 .. 100 °C	
			temperature range (/LT, /LT/HV, /LT/UHV)	10 mK .. 373 K	
			max. bake out temperature (/UHV, /LT/UHV)	150 °C	
			minimum pressure (/RT, /LT)	1E-4 mbar	
			minimum pressure (/HV, /LT/HV)	1E-8 mbar	
			minimum pressure (/UHV, /LT/UHV)	5E-11 mbar	
Coarse Positioning Mode @ 300 K @ 4 K			Accuracy of Movement		
input voltage range	0 .. 60 V	0 .. 60 V	repeatability of step sizes	typically 5 % over full range	
typical actuator capacitance	1.55 µF	220 nF	forward / backward step asymmetry	typically 5 - 10 % depending on load	
travel range (step mode)	2.5 mm	2.5 mm			
typical minimum step size	0.05 µm	10 nm			
maximum drive velocity	≈ 3 mm/s				
Fine Positioning Mode @ 300 K @ 4 K			Connectors and Feedthroughs /RT, /LT Versions all /HV, /UHV Versions		
input voltage range	0 .. 100 V	0 .. 150 V	connector type	2-pole pin plug, ø 0.5 mm, d = 2 mm, integrated connector	2-pole pin plug (PEEK), ø 0.5 mm, d = 2 mm, 30 cm cable with connector
fine positioning range	0 .. 7.5 µm	0 .. 1.2 µm	electrical feedthrough solution	VFT/LT	VFT/HV, VFT/UHV
fine positioning resolution	sub-nm				
Materials (non-magnetic)					
positioner body	titanium (other materials on request)				
actuator	PZT ceramics				
connecting wires	insulated twisted pair, copper				
Load mounting orientation: axis vertical (@ 300 K)					
maximum load	2 N (200 g)				
maximum static force along the axis	8 N				
maximum dynamic force along the axis	5 N				
Mounting					
from the top	2 through holes dia 2.2 mm, cntrbr. f. M2				
from the bottom	2 threads M2.5 x 3.4 mm				
load on top	10 threads M2 x 3.3 mm				
Article Numbers					
/RT Version	1005140				
/HV Version	1005141				
/UHV Version	1005142				
/LT Version	1005143				
/LT/HV Version	1005144				
/LT/UHV Version	1005145				

Technical Drawings

