

ANPx311/RES

closed loop, bearing based, linear, horizontal stepper positioner with resistive encoder

Technical Specifications

Technology			Compatibility with Electronics		
travel mechanism		inertial piezo drive		ANC350 piezo positioning controller	ANC350/RES
Size and Dimensions					
footprint; height		30 x 34; 10 mm		axis horizontal	
maximum size		36 x 34; 10 mm		0 .. 31 T	
weight		32 g		0 .. 100 °C	
				10 mK .. 373 K	
				150 °C	
				1E-4 mbar	
				1E-8 mbar	
				5E-11 mbar	
Coarse Positioning Mode		@ 300 K	@ 4 K		
input voltage range		0 .. 60 V	0 .. 60 V		
typical actuator capacitance		1.60 µF	220 nF		
travel range (step mode)		6 mm	6 mm		
typical minimum step size		100 nm	20 nm		
maximum drive velocity		≈ 3 mm/s			
Fine Positioning Mode		@ 300 K	@ 4 K		
input voltage range		0 .. 100 V	0 .. 150 V		
fine positioning range		0 .. 7.5 µm	0 .. 1.2 µm		
fine positioning resolution		sub-nm	sub-nm		
Materials					
positioner body		titanium			
actuator		PZT ceramics			
connecting wires		insulated twisted pair, copper			
bearings		ceramics			
Load (@ ambient conditions)		mounting orientation: axis horizontal			
maximum load		20 N (2 kg)			
maximum dynamic force along the axis		2 N			
Mounting					
from the top		4 through holes dia 2.2 mm, cntrbr. f. M2			
from the bottom		4 threads M2.5 x 2 mm			
load on top		12 threads M 2 x 2.5 mm			
Article Numbers					
/RT version		1008059			
/HV version		1008058			
/UHV version		1008057			
/LT version		1008056			
/LT/HV version		1007437			
/LT/UHV version		1008060			
Connectors and Feedthroughs		/RT, /LT Versions		all /HV, /UHV Versions	
connector type		2-pole pin plug, ø 0.5 mm, d = 2 mm, 30 cm cable with connector		2-pole pin plug (PEEK), ø 0.5 mm, d = 2 mm, 30 cm cable with connector	
encoder connector		additional 3-pole plug		additional 3-pole plug (PEEK)	
electrical feedthrough solution		VFT/LT		VFT/HV, VFT/UHV	
High Load Option (/HL)		mounting orientation: axis vertical			
/HL/RT - ambient conditions		2 N			
/HL/UHV - UHV conditions		1 N			
/HL/LT - cryogenic temperature conditions		0.75 N			
Article Numbers /HL Option					
/HL/RT version		1008945			
/HL/HV version		1008946			
/HL/UHV version		1008947			
/HL/LT version		1008948			
/HL/LT/HV version		1008949			
/HL/LT/UHV version		1008950			

Technical Drawings

