

ANPz101eXT12/RES

closed loop, linear, vertical stepper positioner with resistive encoder and extended travel range

Technical Specifications

Technology		Compatibility with Electronics	
travel mechanism	inertial piezo drive	ANC350 piezo positioning controller	ANC350/RES
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	58.8 g	temperature range (/LT, /LT/HV, /LT/UHV)	10 mK .. 373 K
		max. bake out temperature (/UHV, /LT/UHV)	150 °C
Coarse Positioning Mode	@ 300 K	@ 4 K	
input voltage range	0 .. 60 V	0 .. 60 V	
typical actuator capacitance	1.55 µF	220 nF	
travel range (step mode)	12 mm	12 mm	
typical minimum step size	50 nm	10 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 (non-magnetic)		Position Encoder	
positioner body	titanium (upgrade option: beryllium copper)	readout mechanism	resistive sensor
actuator	PZT ceramics	sensor power (when measuring)	1 µW .. 1 mW
connecting wires	insulated twisted pair, copper	encoded travel range	full travel
		sensor resolution	≈ 200 nm
		repeatability	1..2 µm
		linearity (over full travel)	< 1%
		absolute accuracy	typically < 1% of travel range
Load (@ ambient conditions)	mounting orientation: axis vertical	Connectors and Feedthroughs	
maximum load	2 N (200 g)	/RT, /LT Versions	all /HV, /UHV Versions
maximum dynamic force along the axis	5 N	connector type	2-pole pin plug, ø 0.5 mm, d = 2 mm, 30 cm cable with connector additional 3-pole plug
		encoder connector	VFT/LT
		electrical feedthrough solution	VFT/HV, VFT/UHV
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	1005146		
/HV Version	1005147		
/UHV Version	1005148		
/LT Version	1005149		
/LT/HV Version	1005150		
/LT/UHV Version	1005151		

Technical Drawings

