

ANPz101/RES

highest stability, open loop, linear, vertical stepper positioner with resistive sensor

Technical Specifications

Technology		Compatibility with Electronics	
travel mechanism	inertial piezo drive	ANC350 piezo positioning controller	all versions
Size and Dimensions		Working Conditions	
footprint; height	24 x 24; 20 mm	mounting orientation	axis vertical
maximum size	24 x 24; 25 mm	magnetic field range	0 .. 31 T
weight	38 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	1.05 µF	0.15 µF	
travel range (step mode)	5 mm	5 mm	
typical minimum step size	0.05 µm	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 .. 5 µm	0 .. 0.8 µm	
fine positioning resolution	sub-nm	sub-nm	
Materials (non-magnetic)		Position Encoder	
positioner body	titanium (other materials on request)	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	mounting orientation: axis vertical (@ 300 K)	Connectors and Feedthroughs	
maximum load	2 N (200 g)	/RT, /LT Versions	all /HV, /UHV Versions
maximum static force along the axis	8 N	connector type	2-pole pin plug, ø 0.5 mm, d = 2 mm, 30 cm cable with connector additional 3-pole plug
maximum dynamic force along the axis	5 N	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	1002813		
/HV Version	1002814		
/UHV Version	1002815		
/LT Version	1002816		
/LT/HV Version	1002817		
/LT/UHV Version	1002818		

Technical Drawings

