

# ANPz101eXT12

open loop, linear, vertical stepper positioner with extended travel range

## Technical Specifications

<b>Technology</b>		<b>Compatibility with Electronics</b>	
travel mechanism	inertial piezo drive	ANC300 piezo positioning controller	ANM150, ANM300
<b>Size and Dimensions</b>		<b>Working Conditions</b>	
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
<b>Coarse Positioning Mode</b>		temperature range (/LT, /LT/HV, /LT/UHV)	10 mK .. 373 K
	<b>@ 300 K</b>	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)	12 mm	minimum pressure (/UHV, /LT/UHV)	5E-11 mbar
typical minimum step size	50 nm	<b>Accuracy of Movement</b>	
maximum drive velocity	≈ 3 mm/s	repeatability of step sizes	typically 5 % over full range
<b>Fine Positioning Mode</b>		forward / backward step asymmetry	typically 5 - 10 % depending on load
	<b>@ 300 K</b>	<b>Connectors and Feedthroughs</b>	
input voltage range	0 .. 100 V	<b>/RT, /LT Versions</b>	<b>all /HV, /UHV Versions</b>
fine positioning range	0 .. 7.5 µm	connector type	2-pole pin plug, ø 0.5 mm, d = 2 mm, integrated connector
fine positioning resolution	sub-nm	electrical feedthrough solution	VFT/LT
<b>Materials (non-magnetic)</b>			
positioner body	titanium (upgrade option: beryllium copper)		
actuator	PZT ceramics		
connecting wires	insulated twisted pair, copper		
<b>Load (@ ambient conditions)</b>		<b>mounting orientation: axis vertical</b>	
maximum load	2 N (200 g)		
maximum dynamic force along the axis	5 N		
<b>Mounting</b>			
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		
<b>Article Numbers</b>			
/RT Version	1005140		
/HV Version	1005141		
/UHV Version	1005142		
/LT Version	1005143		
/LT/HV Version	1005144		
/LT/UHV Version	1005145		

## Technical Drawings

