

# ANPz101

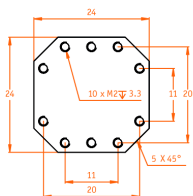
open loop, linear, vertical stepper positioner

## Technical Specifications

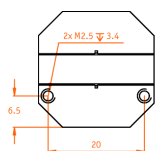
<b>Technology</b>		<b>Compatibility with Electronics</b>	
travel mechanism	inertial piezo drive	ANC300 piezo positioning controller	ANM150, ANM300
<b>Size and Dimensions</b>		<b>Working Conditions</b>	
footprint; height	24 x 24; 20 mm	mounting orientation	axis vertical
maximum size	24 x 24; 25 mm	magnetic field range	0 .. 31 T
weight	36 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
<b>Coarse Positioning Mode</b>		<b>Accuracy of Movement</b>	
	<b>@ 300 K</b>	<b>@ 4 K</b>	repeatability of step sizes
input voltage range	0 .. 60 V	0 .. 60 V	forward / backward step asymmetry
typical actuator capacitance	1.106µF	0.15 µF	typically 5 % over full range
travel range (step mode)	5 mm	5 mm	typically 5 - 10 % depending on load
typical minimum step size	50 nm	10 nm	
maximum drive velocity	≈ 3 mm/s		
<b>Fine Positioning Mode</b>		<b>Connectors and Feedthroughs</b>	
	<b>@ 300 K</b>	<b>/RT, /LT Versions</b>	<b>all /HV, /UHV Versions</b>
input voltage range	0 .. 100 V	connector type	2-pole pin plug, ø 0.5 mm, d = 2 mm, integrated connector
fine positioning range	0 .. 5 µm	electrical feedthrough solution	---
fine positioning resolution	sub-nm		2-pole pin plug (PEEK), ø 0.5 mm, d = 2 mm, 30 cm cable with connector VFT/HV, VFT/UHV
<b>Materials (non-magnetic)</b>		<b>High Load Option (/HL)</b>	
positioner body	titanium (upgrade option: copper beryllium)	/HL/RT - ambient conditions	7 N
actuator	PZT ceramics	/HL/UHV - UHV conditions	5 N
connecting wires	insulated twisted pair, copper	/HL/LT - cryogenic temperature conditions	3 N
<b>Load (@ ambient conditions)</b>		<b>Article Numbers /HL Option</b>	
	<b>mounting orientation: axis vertical</b>	/HL/RT version	1009658
maximum load	2 N (200 g)	/HL/HV version	1009659
maximum dynamic force along the axis	5 N	/HL/UHV version	1009660
		/HL/LT version	1009661
		/HL/LT/HV version	1009662
		/HL/LT/UHV version	1009664
<b>Mounting</b>		<b>Article Numbers</b>	
from the top	2 through holes dia 2.2 mm, cntrbr. f. M2	/RT version	1001485
from the bottom	2 threads M2.5 x 3.4 mm	/HV version	1001484
load on top	10 threads M2 x 3.3 mm	/UHV version	1001483
		/LT version	1001486
		/LT/HV version	1001487
		/LT/UHV version	1001488

## Technical Drawings

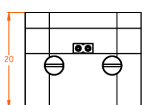
top view



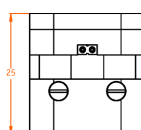
bottom view



inner position



outer position



3D view

