

# ANPz51/RES

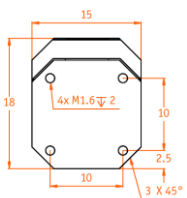
compact closed loop linear, vertical stepper positioner with resistive sensor

## Technical Specifications

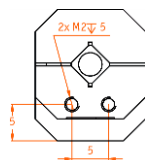
<b>Technology</b>		<b>Compatibility with Electronics</b>	
travel mechanism	inertial piezo drive	ANC350 piezo positioning controller	all versions
<b>Size and Dimensions</b>		<b>Working Conditions</b>	
footprint; height	15 x 18; 13.5 mm	mounting orientation	axis vertical
maximum size	15 x 18; 16 mm	magnetic field range	0 .. 31 T
weight	13 g	temperature range (/LT, /LT/HV, /LT/UHV)	10 mK .. 373 K
		max. bake out temperature (/UHV, /LT/UHV)	150 °C
		minimum pressure (/RT, /LT)	1E-4 mbar
		minimum pressure (/HV, /LT/HV)	1E-8 mbar
		minimum pressure (/UHV, /LT/UHV)	5E-11 mbar
<b>Coarse Positioning Mode</b>		<b>Position Encoder</b>	
	<b>@ 300 K</b>	<b>@ 4 K</b>	
input voltage range	0 .. 60 V	0 .. 60 V	readout mechanism
typical actuator capacitance	1.05 µF	0.15 µF	resistive sensor
travel range (step mode)	2.5 mm	2.5 mm	sensor power (when measuring)
typical minimum step size	0.025 µm	10 nm	1 µW .. 1 mW
maximum drive velocity	≈ 1 mm/s		encoded travel range
			full travel
			sensor resolution
			≈ 200 nm
			repeatability
			1..2 µm
			linearity (over full travel)
			< 1%
			absolute accuracy
			typically < 1.5 % of travel range
<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	0 .. 150 V	connector type
fine positioning range	0 .. 5 µm	0	2-pole pin plug, ø 0.5 mm, d = 2 mm, 30 cm cable with connector
fine positioning resolution	sub-nm	sub-nm	additional 3-pole plug
			30 cm cable with connector additional 3-pole plug (PEEK)
			VFT/HV, VFT/UHV
			encoder connector
			electrical feedthrough solution
			VFT/LT
<b>Materials (non-magnetic)</b>			
positioner body	titanium (other materials on request)		
actuator	PZT ceramics		
connecting wires	insulated twisted pair, copper		
<b>Load</b>		<b>mounting orientation: axis vertical (@ 300 K)</b>	
maximum load	0.25 N (25 g)		
maximum static force along the axis	1.5 N		
maximum dynamic force along the axis	1 N		
<b>Mounting</b>			
from the bottom	2 threads M2 x 5 mm		
load on top	4 threads M1.6 x 2 mm		
<b>Article Numbers</b>			
/RT Version	1003267		
/HV Version	1003269		
/UHV Version	1003270		
/LT Version	1003268		
/LT/HV Version	1003271		
/LT/UHV Version	1003272		

## Technical Drawings

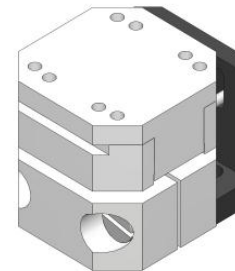
top view



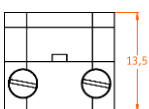
bottom view



3D view



inner position



outer position

