

# ANPx311/RES

closed loop, bearing based, linear, horizontal stepper positioner with resistive encoder

## Technical Specifications

<b>Technology</b>		<b>Compatibility with Electronics</b>	
travel mechanism	inertial piezo drive	ANC350 piezo positioning controller	ANC350/RES
<b>Size and Dimensions</b>		<b>Working Conditions</b>	
footprint; height	30 x 34; 10 mm	mounting orientation	axis horizontal
maximum size	36 x 34; 10 mm	magnetic field range	0 .. 31 T
weight	32 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>Position Encoder</b>	
	<b>@ 300 K</b>	<b>@ 4 K</b>	readout mechanism
input voltage range	0 .. 60 V	0 .. 60 V	resistive sensor
typical actuator capacitance	1.60 µF	220 nF	sensor power (when measuring)
travel range (step mode)	6 mm	6 mm	1 µW .. 1 mW
typical minimum step size	100 nm	20 nm	encoded travel range
maximum drive velocity	≈ 3 mm/s		full travel
			sensor resolution
			≈ 200 nm
			repeatability
			1..2 µm
			linearity (over full travel)
			< 1%
			absolute accuracy
			typically < 1 % 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	connector type	2-pole pin plug, Ø 0.5 mm, d = 2 mm, 30 cm cable with connector
fine positioning range	0 .. 7.5 µm	encoder connector	additional 3-pole plug
fine positioning resolution	sub-nm	electrical feedthrough solution	VFT/LT
			VFT/HV, VFT/UHV
<b>Materials</b>		<b>High Load Option (/HL)</b>	
positioner body	titanium		<b>mounting orientation: axis vertical</b>
actuator	PZT ceramics	/HL/RT - ambient conditions	2 N
connecting wires	insulated twisted pair, copper	/HL/UHV - UHV conditions	1 N
bearings	ceramics	/HL/LT - cryogenic temperature conditions	0.75 N
<b>Load (@ ambient conditions)</b>		<b>Article Numbers /HL Option</b>	
maximum load	20 N (2 kg)	/HL/RT version	1008945
maximum dynamic force along the axis	2 N	/HL/HV version	1008946
		/HL/UHV version	1008947
		/HL/LT version	1008948
		/HL/LT/HV version	1008949
		/HL/LT/UHV version	1008950
<b>Mounting</b>			
from the top	4 through holes dia 2.2 mm, cntrbr. f. M2		
from the bottom	4 threads M2.5 x 2 mm		
load on top	12 threads M 2 x 2.5 mm		
<b>Article Numbers</b>			
/RT version	1008059		
/HV version	1008058		
/UHV version	1008057		
/LT version	1008056		
/LT/HV version	1007437		
/LT/UHV version	1008060		

## Technical Drawings

