

# ANRv51/RES

compact, closed loop, rotary stepper positioner with horizontal rotation axis and 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	10 x 20; 21 mm	mounting orientation	axis horizontal
weight	10 g	magnetic field range	0 .. 31 T
through hole in the middle of the axis	Ø 1.5 mm	temperature range (/LT, /LT/HV, /LT/UHV)	10 mK .. 373 K
<b>Coarse Positioning Mode</b>		max. bake out temperature (/UHV, /LT/UHV)	150 °C
	<b>@ 300 K</b>	<b>@ 4 K</b>	
input voltage range	0 .. 60 V	0 .. 60 V	minimum pressure (/RT, /LT)
typical actuator capacitance	1.025 µF	0.2 µF	1E-4 mbar
travel range (step mode)	360° endless, both directions		minimum pressure (/HV, /LT/HV)
typical minimum step size	1 m°	0.5 m°	1E-8 mbar
maximum drive velocity	≈ 10 °/s		minimum pressure (/UHV, /LT/UHV)
			5E-11 mbar
<b>Fine Positioning Mode</b>		<b>Accuracy of Movement</b>	
	<b>@ 300 K</b>	<b>@ 4 K</b>	wobble
input voltage range	0 .. 60 V	0 .. 150 V	± 1 mrad
fine positioning range	0 .. 40 m°	0	
fine positioning resolution	µ°	µ°	
<b>Materials (non-magnetic)</b>		<b>Position Encoder</b>	
positioner body	titanium (other materials on request)		readout mechanism
actuator	PZT ceramics		resistive sensor
connecting wires	insulated twisted pair, copper		sensor power (when measuring)
			1 µW .. 1 mW
			encoded travel range
			315°
			sensor resolution
			≈ 6 m°
			repeatability
			≈ 50 m°
			linearity (over full travel)
			< 1%
			absolute accuracy
			typically < 1 % of travel range
<b>Load</b>		<b>Connectors and Feedthroughs</b>	
	<b>mounting orientation: axis horizontal (@ 300 K)</b>		
maximum load	0.2 N (20g)		
maximum static torque around axis	0.3 Ncm		
maximum dynamic torque around axis	0.2 Ncm		
<b>Mounting</b>		<b>/RT, /LT Versions</b>	<b>all /HV, /UHV Versions</b>
from the bottom	2 threads M2 x 3 mm		
from the top	2 threads M2 x 3 mm		
load on top	2 threads M1.6 x 1 mm		
<b>Article Numbers</b>		connector type	2-pole pin plug, Ø 0.5 mm, d = 2 mm, 30 cm cable with connector
/RT Version	1003303		
/HV Version	1003305		
/UHV Version	1003306		
/LT Version	1003304		
/LT/HV Version	1003307		
/LT/UHV Version	1003308		
		encoder connector	additional 3-pole plug
		electrical feedthrough solution	VFT/LT
			30 cm cable with connector
			additional 3-pole plug (PEEK)
			VFT/HV, VFT/UHV

## Technical Drawings

