

# ANSz100lr

open loop z-scanner for 2" scanning probe applications with large scan range

## Technical Specifications

<b>Technology</b>		travel mechanism		piezo driven lever arm mechanism	
<b>Size and Dimensions</b>		footprint; height		24 x 24; 12 mm	
		weight		19 g	
<b>Fine Positioning Mode</b>		@ 300 K		@ 4 K	
		fine positioning range		50 µm      30 µm	
		input voltage range		0 .. 60 V      0 .. 150 V	
		typical actuator capacitance		5.4 µF      750 nF	
		fine positioning resolution		sub-nm	
<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>		maximum torque on the axis		20 Ncm	
		maximum load		1 N (100 g)	
<b>Mounting</b>		from the top		2 through holes dia 2.2 mm, cntrbr. f. M2	
		from the bottom		2 threads M2.5 x 5 mm	
		load on top		6 threads M2 x 3 mm	
<b>Article Numbers</b>		/RT Version		1005227	
		/HV Version		1005228	
		/UHV Version		1005229	
		/LT Version		1005230	
		/LT/HV Version		1005231	
		/LT/UHV Version		1005232	
<b>Compatibility with Electronics</b>		ANC300 piezo positioning controller		ANM200, ANM300	
		ANC350 piezo positioning controller		ANC350 scan and readout controller	
		Analog voltage amplifier		ANC250	
<b>Accuracy of Movement</b>		repeatability of step sizes		no coarse positioning capability	
		scan repeatability		typically 0.1 %	
		forward / backward step asymmetry		no coarse positioning capability	
		creep		typically 0.5 - 0.8 % per decade of time	
		linearity		typically 5 - 10 %	
<b>Working Conditions</b>		mounting orientation		scanner moving vertically	
		magnetic field range		0 .. 31 T	
		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	
		minimum pressure (/RT, /LT)		1E-4 mbar	
		minimum pressure (/HV, /LT/HV)		1E-8 mbar	
		minimum pressure (/UHV, /LT/UHV)		5E-11 mbar	
<b>Connectors and Feedthroughs</b>		<b>/RT, /LT Versions</b>		<b>all /HV, /UHV Versions</b>	
		connector type		2-pole pin plug, PEEK	
				Ø 0.5 mm, d = 2 mm, 30 cm cable with connector	
		electrical feedthrough solution		VFT/LT      VFT/HV, VFT/UHV	

## Technical Drawings

