

ANSxyz100hs

modular open loop xyz-scanner for 2" scanning probe applications, dedicated for tuning fork applications

travel mechanism piezo driven lever arm mechanism ANC300 piezo positioning controller ANX200, ANX300 (ANX300 piezo positioning controller ANX250 scan and readout controller ANX250 piezo positioning controller A				Compatibility with Electronics			
Size and Dimensions Frootprint; height 24 x 24; 10 mm yeight 19 g Accuracy of Movement repeat ability of step sizes scan repeatability of step sizes scan repeatability of step sizes scan repeatability forward / backward step asymmetry no coarse positioning capability typically 0.1 % rine positioning range (xyz) 0 60 V 0 150 V 0	ravel mechanism	,		, ,			
The Positioning Mode Gad Note				, , ,			
19 g				Analog voltage amplifier		ANC250	
Fine Positioning Mode @ 300 K		·		Accuracy of Movement			
Fine Positioning Mode	vergrit	19 g		-		no coarco nocit	ioning canability
fine positioning range (xyz)	ine Positioning Mode	@ 300 K	@ 4 K				
input voltage range (2) 0. 60 V 0. 150 V 0. 150 V 0. 10 F 100 nF typical actuator capacitance (xy) 2.5 µF 340 nF Materials (non-magnetic)					try		
typical actuator capacitance (xy) 0.6 µF 100 nF typical actuator capacitance (z) 2.5 µF 340 nF Materials (non-magnetic) wounting orientation magnetic field range (NT, /HV, /UHV) xy horizontally, z vertically magnetic field range (NT, /HV, /UHV) 031 T temperature range (NT, /HV, /UT/UHV) 031 T temperature range (NT, /HV, /UT/UHV) 150 °C Materials (non-magnetic) PZT ceramics insulated twisted pair, copper insulated twisted pair, copper insulated twisted pair, copper insulated twisted pair, copper insulated twisted pair (NT, /UT) 150 °C 15-8 mbar temperature (NHV, /UT/UHV) 15-8 mbar temperature (NHV, /U	nput voltage range (xy)	0 120 V	0 150 V	creep		typically 0.5 - (0.8 % per decade of time
Working Conditions sub-nm sub-nm Materials (non-magnetic) satuator positioner body satuator connecting wires insulated twisted pair, copper smaximum torque on the axis maximum torque on the axis maximum load 1 N (100 g) Mounting Mounting from the bottom from the bottom load on top 4 threads M2 x 3 mm Article Numbers //IT Version 1002588 //LI Versio	nput voltage range (z)	060V	0150 V	linearity		typically 5 - 10	%
mounting orientation sub-nm magnetic field range 0 0.31 T temperature range (/RT, /HV, /UHV) 0100 °C temperature range (/RT, /HV, /UHV) 10 mK 373 K max. bake out temperature (/UHV, /LT/UHV) 150 °C minimum pressure (/RT, /LT) 150 °C minimum pressure (/RT, /LT, /UHV) 150 °C minimum pressure	ypical actuator capacitance (xy)	0.6 μF	100 nF	,			
magnetic field range 031 T temperature range (/RT, /HV, /LT/UHV) 0100 °C temperature range (/RT, /LT/HV, /LT/UHV) 10 mK373 K max. bake out temperature range (/RT, /LT) 150 °C actuator PZT ceramics insulated twisted pair, copper minimum pressure (/RT, /LT) 150 °C minimum pressure (/RT, /	ypical actuator capacitance (z)	2.5 µF	340 nF	Working Conditions			
temperature range (/RT, /HV, /UHV) 0100 °C temperature range (/RT, /HV, /UHV) 10 mK 373 K positioner body titanium (upgrade option: beryllium copper) actuator PZT ceramics insulated twisted pair, copper minimum pressure (/HV, /LT/UHV) 150 °C minimum pressure (/HV, /LT/UHV) 15-4 mbar printing minimum pressure (/HV, /LT/UHV) 15-8 mbar minimum pressure (/HV, /LT/UHV) 5E-11 mbar	ine positioning resolution	sub-nm		mounting orientation		xy horizontally	, z vertically
temperature range (/LT, /LT/HV, /LT/UHV) 10 mK 373 K positioner body actuator PZT ceramics minimum pressure (/RT, /LT) 150 °C minimum pressure (/RT, /L				magnetic field range			
positioner body actuator PZT ceramics minimum pressure (/RT /LT) 150 °C minimum pressure (/RT /LT) 15-4 mbar minimum pressure (/RT /LT) 15-8 mbar minimum pressure (/RT /LT) 15-8 mbar minimum pressure (/RT /LT) 15-8 mbar minimum pressure (/HV /LT/HV) 15-11 mbar Load (@ ambient conditions) mounting orientation: axis horizontal maximum torque on the axis 20 Ncm Connector synchroly 150 °C minimum pressure (/RT /LT) 15-8 mbar minimum pressure (/HV /LT/HV) 15-11 mbar Load (@ ambient conditions) mounting orientation: axis horizontal maximum load 1 N (100 g) Connectors and Feedthroughs /RT /LT Versions all /HV /UHV Versions connector type three 2-pole pin plugs, 0.5 mm, d = 2 mm, 30 cm cable with connector electrical feedthrough solution VFT/LT VFT/UHV VFT				temperature range (/RT, /HV, /U	HV)	0100°C	
actuator PZT ceramics minimum pressure (/RT,/LT) 1E-4 mbar minimum pressure (/RT,/LT) 1E-8 mbar minimum pressure (/HV,/LT/HV) 1E-8 mbar minimum pressure (/HV,/LT/HV) 5E-11 mbar Load (@ ambient conditions) mounting orientation: axis horizontal maximum torque on the axis 20 Ncm Connectors and Feedthroughs /RT,/LT Versions all /HV, /UHV Versions maximum load 1 N (100 g) Connector type three 2-pole pin plugs, #0.5 mm, d = 2 mm, 30 cm cable with connector go 0.	Materials (non-magnetic)			temperature range (/LT, /LT/HV,	/LT/UHV)	10 mK 373 K	
insulated twisted pair, copper minimum pressure (/HV, /LT/HV) 1E-8 mbar minimum pressure (/HV, /LT/HV) 5E-11 mbar Load (@ ambient conditions) mounting orientation: axis horizontal maximum torque on the axis 20 Ncm Mounting Tolerand Mounting Mounting Some three 2-pole pin plugs, pole on the edition of the pole of the pole on the bottom 2 threads M2.5 x 5 mm load on top 4 threads M2 x 3 mm Article Numbers Article Numbers Article Version 1002586 /UHV Version 1002587 /LT Version 1002588 /LT Version 1002588 /LT Version 1002589	oositioner body	titanium (upgrade o	ption: beryllium copper)	max. bake out temperature (/UH	V, /LT/UHV)	150 °C	
minimum pressure (/UHV, /LT/UHV) 5E-11 mbar maximum torque on the axis 20 Ncm maximum load 1 N (100 g) Connectors and Feedthroughs /RT, /LT Versions all /HV, /UHV Versions Mounting Mounting Mounting Tonnectors and Feedthroughs /RT, /LT Versions all /HV, /UHV Versions connector type three 2-pole pin plugs, where 2-pole pin plugs, wher	actuator	PZT ceramics		minimum pressure (/RT, /LT)		1E-4 mbar	
Load (@ ambient conditions) mounting orientation: axis horizontal maximum torque on the axis 20 Ncm Connectors and Feedthroughs ATT, LT Versions all /HV, /UHV Versions three 2-pole pin plugs,	connecting wires	insulated twisted pa	ir, copper	minimum pressure (/HV, /LT/HV)		1E-8 mbar	
maximum torque on the axis 20 Ncm properties 2 Ncm 20 Ncm				minimum pressure (/UHV, /LT/UI	HV)	5E-11 mbar	
maximum load 1 N (100 g) connector type three 2-pole pin plugs, Ø 0.5 mm, d = 2 mm, 30 cm cable with connector from the top from the bottom 1002585 /LT Version 1002586 /LT Version 1002588 /LT Version 1002588 /LT Version 1002589			ion: axis horizontal				
Mounting Solution ### 0.5 mm, d = 2 mm, 30 cm cable with connector of the top control to the top control to the bottom control to	naximum torque on the axis	20 Ncm		Connectors and Feedthroughs	/RT, /LT Ver	sions	all /HV, /UHV Versions
Mounting from the top 2 through holes M2 x 5 mm electrical feedthrough solution 7 threads M2.5 x 5 mm load on top 4 threads M2 x 3 mm Article Numbers /RT Version 1002585 /HV Version 1002587 /LT Version 1002588 /LT Version 1002589	naximum load	1 N (100 g)		connector type	,	, , , , ,	three 2-pole pin plugs (PEE
from the top 2 through holes M2 x 5 mm electrical feedthrough solution VFT/LT VFT/HV, VFT/UHV from the bottom 2 threads M2.5 x 5 mm load on top 4 threads M2 x 3 mm Article Numbers // RT Version 1002585 // UHV Version 1002587 // LT Version 1002588 // LT Version 1002589							
from the bottom 2 threads M2.5 x 5 mm load on top 4 threads M2 x 3 mm Article Numbers /						with connector	
Article Numbers /RT Version 1002585 /HV Version 1002586 /UHV Version 1002587 /LT Version 1002588 /LT/HV Version 1002589		•		electrical feedthrough solution	VFT/LT		VFT/HV, VFT/UHV
Article Numbers /RT Version 1002585 /HV Version 1002586 /UHV Version 1002587 /LT Version 1002588 /LT/HV Version 1002589							
/RT Version 1002585 /HV Version 1002586 /UHV Version 1002587 /LT Version 1002588 /LT/HV Version 1002589	oad on top	4 threads M2 x 3 mn	n				
/RT Version 1002585 /HV Version 1002586 /UHV Version 1002587 /LT Version 1002588 /LT/HV Version 1002589	Article Numbers						
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/LT Version 1002588 //LT/HV Version 1002589	'HV Version	1002586					
/LT/HV Version 1002589							
/LT/HV Version 1002589							
		1002589					
	LT/UHV Version	1002590					
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