ANSxyz50

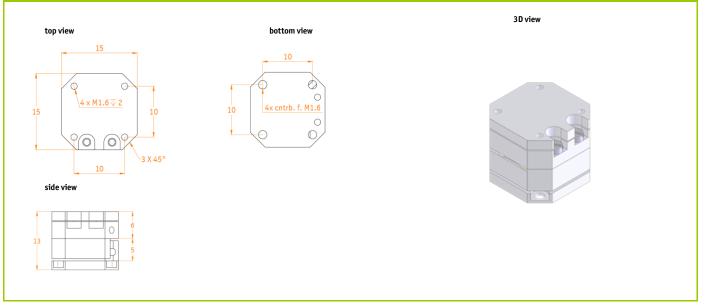
compact, modular open loop xyz-scanner for 1" scanning probe applications

Technical Specifications

travel mechanism	piezo driven lever arm mechanism		
Size and Dimensions			
footprint; height	15 x 15; 13 mm		
weight	11,5 g		
Fine Positioning Mode	@ 300 K	@ 4 K	
fine positioning range (xyz)	30 x 30 x 4.3 µm³	15 x 15 x 2 μm³	
input voltage range	060V	0150 V	
typical actuator capacitance (xy)	1.4 μF	0.2 µF	
typical actuator capacitance (z)	2.5 μF	0.35 µF	
fine positioning resolution	sub-nm		
Materials (non-magnetic)			
positioner body	titanium (upgrade option: beryllium copper)		
actuator	PZT ceramics		
connecting wires	insulated twisted pair, copper		
Load (@ ambient conditions)	mounting orientation: axis horizontal		
maximum torque on the axis	20 Ncm		
maximum load	1 N (100 g)		
Mounting			
from the top	2 through holes dia 1.7 mm, cntrbr. f. M1.6		
from the bottom	4 cntrbr. f. M1.6		
load on top	4 threads M1.6 x 2 mm		
Article Numbers			
/RT Version	1007598		
/HV Version	1007588		
/UHV Version	1007599	1007599	
/LT Version	1007600		
/LT/HV Version	1007601	1007601	
	1007602		

Compatibility with Electronics				
ANC300 piezo positioning controller		ANM200, ANM300		
ANC350 piezo positioning control	ler	ANC350 scan ar	ANC350 scan and readout controller	
Analog voltage amplifier		ANC250		
Accuracy of Movement				
repeatability of step sizes		no coarse positioning capability		
scan repeatability		typically 0.1 %		
forward / backward step asymmetry		no coarse positioning capability		
creep			.8 % per decade of time	
linearity		typically 5 - 10	%	
Working Conditions				
mounting orientation		xy horizontally, z vertically		
magnetic field range		031T		
temperature range (/RT, /HV, /UHV)		0100 °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/UI	IV)	5E-11 mbar		
Connectors and Feedthroughs	/RT, /LT Vers	sions	all /HV, /UHV Versions	
connector type	three 2-pole pin plugs,		three 2-pole pin plugs (PEEK),	
ø 0.5 mm, d =		= 2 mm,	ø 0.5 mm, d = 2 mm,	
	30 cm cable v	with connector	30 cm cable with connector	
electrical feedthrough solution	VFT/LT		VFT/HV, VFT/UHV	

Technical Drawings





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