ANPx311/RES

Technical Specifications

Technology	
travel mechanism	inertial piezo drive
positioner type	linear
Size and Dimensions	
footprint; height	34x30; 10mm
max installation space	34x36; 10mm
weight	32 g
Materials	
positioner body	titanium
actuator	PZT ceramics
connecting wires	insulated twisted pair, copper
bearings	ceramics
Options	
environmental options	/HV, /LT, /LT/HV, /LT/UHV, /RT, /UHV
Compatibility with Electronics	
ANC300 piezo positioning controller	ANM150, ANM300
Load (@ ambient conditions)	
maximum torque on the axis	10 Ncm
maximum load	20 N
maximum dynamic force along the axis	2 N
Coarse Positioning Mode	
input voltage range	0 - 60 V
typical actuator capacitance @ 300 K	1.55 µF
typical actuator capacitance @ 4 K	0.22 µF
travel range (step mode)	6 mm
typical minimum step size @ 300 K	100 nm
typical minimum step size @ 4 K	20 nm
maximum drive velocity @ 300 K	approx. 3 mm/s
Fine Positioning Mode	
fine positioning range @ 300 K	0 - 7.5 µm
fine positioning range @ 4 K	0 - 1.2 µm
fine positioning resolution	sub-nm
typical actuator capacitance (z) @ 300 K	1.55 µF
Accuracy of Movement	
repeatability of step sizes	typically 5 % over full range
forward / backward step asymmetry	typically 5 %

Mounting	
no. of through holes at the top	4
diameter of through holes at the top	2.2 mm
type of screw at the top	f.M2
no. of threads at the bottom	4
type of screw at the bottom	M2.5 x 2 mm
no. of threads for load on top	12
type of screw for load on top	M 2 x 2 mm
Working Conditions	
mounting orientation	axis horizontal
magnetic field range	0 - 31 T
minimum pressure (/RT)	1E-4 mbar
minimum pressure (/HV)	1E-8 mbar
minimum pressure (/UHV)	5E-11 mbar
temperature range (/RT)	273K .. 373K
temperature range (/LT)	10mK .. 373K
Connectors and Feedthroughs	
connector type	2-pole pin plug, ø 0.5 mm, d = 2 mm
cable	30 cm cable with connector
electrical feedthrough solution	VFT/LT
Versions	
/RT version	1008596
/HV version	1008591
/UHV version	1008592
/LT version	1008593
/LT/HV version	1008594
/LT/UHV version	1008595
/HL/RT version	1008945
/HL/HV version	1008946
/HL/UHV version	1008947
/HL/LT version	1008948
/HL/LT/HV version	1008949
/HL/LT/UHV version	1008950

Technical Drawings