ANPz101eXT12

Technical Specifications

Technology	
travel mechanism	inertial piezo drive
positioner type	linear
Size and Dimensions	
footprint; height	24x24; 32mm
max installation space	24x24; 44mm
weight	62 g
Materials	
positioner body	titanium (upgrade option: copper beryllium)
actuator	PZT ceramics
connecting wires	insulated twisted pair, copper
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	2 N
maximum dynamic force along the axis	5 N
Coarse Positioning Mode	
input voltage range	0 - 60 V
typical actuator capacitance @ 300 K	1.6 µF
typical actuator capacitance @ 4 K	0.22 µF
travel range (step mode)	12 mm
typical minimum step size @ 300 K	50 nm
typical minimum step size @ 4 K	10 nm
maximum drive velocity @ 300 K	approx. 3 mm/s
Fine Positioning Mode	
fine positioning range @ 300 K	7.5 µm
fine positioning range @ 4 K	1.2 µm
fine positioning resolution	sub-nm
input DC voltage range @ 300 K	0 - 100 V
input DC voltage range @ 4 K	0 - 150 V

Accuracy of Movement	
repeatability of step sizes	typically 5 % over full range
forward / backward step asymmetry	typically 5 - 10 % depending on load
Mounting	
no. of through holes at the top	2
diameter of through holes at the top	2.2 mm
type of screw at the top	M2
no. of threads at the bottom	2
type of screw at the bottom	M2.5 x 3.4 mm
no. of threads for load on top	10
type of screw for load on top	M2 x 3.3 mm
Working Conditions	
mounting orientation	axis vertical
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	
cable	30 cm cable with connector
Versions	
/RT version	1005140
/HV version	1005141
/UHV version	1005142
/LT version	1005143
/LT/HV version	1005144
/LT/UHV version	1005145

Technical Drawings