

ANR51

Technical Specifications

Technology	
travel mechanism	inertial piezo drive
positioner type	rotator
Size and Dimensions	
footprint; height	15x15; 9.5mm
aperture	1.5 mm
weight	10 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 load	0.3 N
maximum dynamic torque around axis	0.2 Ncm
maximum torque perpendicular to axis	5 Ncm
Coarse Positioning Mode	
input voltage range	0 - 60 V
typical actuator capacitance @ 300 K	1.9 μ F
typical actuator capacitance @ 4 K	0.4 μ F
travel range (step mode)	360 °
typical minimum step size @ 300 K	1 m°
typical minimum step size @ 4 K	0.5 m°
maximum drive velocity @ 300 K	approx. 10 °/s
Fine Positioning Mode	
fine positioning range @ 300 K	40 m°
fine positioning range @ 4 K	6 m°
fine positioning resolution	μ °
input DC voltage range @ 300 K	0 - 60 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 %
Mounting	
no. of threads at the bottom	2
type of screw at the bottom	M2 x 2.3 mm
no. of threads for load on top	2
type of screw for load on top	M1.6 x 1 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
electrical feedthrough solution	VFT/LT
Versions	
/RT version	1003285
/HV version	1003287
/UHV version	1003288
/LT version	1003286
/LT/HV version	1003289
/LT/UHV version	1003290

Technical Drawings

