

ANPz51/NUM(+)

Technical Specifications

travel mechanism inertial piezo drive positioner type linear Size and Dimensions footprint; height 19x15; 13.5mm max installation space 15x19; 16mm weight g Materials positioner body titanium (upgrade option: copper beryllium) actuator PZT ceramics connecting wires insulated twisted pair, copper Options environmental options /RT Load (@ ambient conditions) maximum load 0.5 N maximum dynamic force along the axis 1 N Coarse Positioning Mode input voltage range 0 - 60 V travel range (step mode) 2.5 mm maximum drive velocity @ 300 K approx. 1 mm/s typical minimum step size @ 300 K 50 nm Fine Positioning Mode fine positioning resolution sub-nm fine linear positioning range @ 300 K	Technology	
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Options environmental options /RT Load (@ ambient conditions) maximum load 0.5 N maximum dynamic force along the axis 1 N Coarse Positioning Mode input voltage range 0 - 60 V travel range (step mode) 2.5 mm maximum drive velocity @ 300 K approx. 1 mm/s typical minimum step size @ 300 K 50 nm Fine Positioning Mode fine positioning resolution sub-nm	actuator	PZT ceramics
environmental options /RT Load (@ ambient conditions) maximum load 0.5 N maximum dynamic force along the axis 1 N Coarse Positioning Mode input voltage range 0 - 60 V travel range (step mode) 2.5 mm maximum drive velocity @ 300 K approx. 1 mm/s typical minimum step size @ 300 K 50 nm Fine Positioning Mode fine positioning resolution sub-nm	connecting wires	insulated twisted pair, copper
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Coarse Positioning Mode input voltage range 0 - 60 V travel range (step mode) 2.5 mm maximum drive velocity @ 300 K approx. 1 mm/s typical minimum step size @ 300 K 50 nm Fine Positioning Mode fine positioning resolution sub-nm	maximum load	0.5 N
input voltage range 0 - 60 V travel range (step mode) 2.5 mm maximum drive velocity @ 300 K approx. 1 mm/s typical minimum step size @ 300 K 50 nm Fine Positioning Mode fine positioning resolution sub-nm	maximum dynamic force along the axis	1 N
travel range (step mode) maximum drive velocity @ 300 K typical minimum step size @ 300 K Fine Positioning Mode fine positioning resolution sub-nm	Coarse Positioning Mode	
maximum drive velocity @ 300 K approx. 1 mm/s typical minimum step size @ 300 K 50 nm Fine Positioning Mode fine positioning resolution sub-nm	input voltage range	0 - 60 V
typical minimum step size @ 300 K 50 nm Fine Positioning Mode fine positioning resolution sub-nm	travel range (step mode)	2.5 mm
Fine Positioning Mode fine positioning resolution sub-nm	maximum drive velocity @ 300 K	approx. 1 mm/s
fine positioning resolution sub-nm	typical minimum step size @ 300 K	50 nm
i	Fine Positioning Mode	
fine linear positioning range @ 300 K um	fine positioning resolution	sub-nm
	fine linear positioning range @ 300 K	μm
input DC voltage range @ 300 K 0 - 100 V	input DC voltage range @ 300 K	0 - 100 V

Accuracy of Movement	
repeatability of step sizes	typically 5 % over full range
typ. forward / backward step asymmetry	typically 5 - 10 % depending on load
Position Encoder	
readout mechanism	optoelectronic sensor
encoded travel range	
sensor power (when measuring)	50 mW
wavelength of illumination	870 nm
sensor resolution	1 nm
repeatability	150 nm
linearity (over full travel)	< 0.01 %
Working Conditions	
mounting orientation	axis horizontal
magnetic field range	0 - 7 T
minimum pressure (/RT)	ambient
temperature range (/RT)	273K 328K
Connectors and Feedthroughs	
cable	50 cm cable with connector
connector type	14-pole connector
connector type (/HV, /UHV)	15-pin D-Sub connector
Versions	
/RT version	1005053

Technical Drawings









