

ANPz101/RES

Technical Specifications

Technology	
travel mechanism	inertial piezo drive
positioner type	linear
Size and Dimensions	
footprint; height	24x24; 20mm
max installation space	24x24; 25mm
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	2 N
maximum dynamic force along the axis	5 N
Coarse Positioning Mode	
input voltage range	0 - 60 V
travel range (step mode)	5 mm
maximum drive velocity @ 300 K	approx. 3 mm/s
typical minimum step size @ 300 K	50 nm
typical minimum step size @ 4 K	10 nm

Fine Positioning Mode	
fine positioning resolution	sub-nm
fine linear positioning range @ 300 K	3.5 μ m
fine linear positioning range @ 4 K	0.5 μ m
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
typ. forward / backward step asymmetry	typically 5 - 10 % depending on load
Position Encoder	
readout mechanism	resistive sensor
encoded travel range	
sensor power (when measuring)	0.01 - 1 mW
sensor resolution	approx. 200 nm
repeatability	1.2 μ m (unidirectional)
linearity (over full travel)	< 1 %
Working Conditions	
mounting orientation	axis vertical
magnetic field range	0 - 31 T
minimum pressure (/RT)	ambient
temperature range (/RT)	273K .. 373K
Connectors and Feedthroughs	
cable	30 cm cable with connector
connector type	2-pole pin plug, \varnothing 0.5 mm, d = 2 mm
encoder connector	additional 3-pole plug
High Load Option (/HL)	
/HL/RT - maximum dynamic force	7 N
/HL/(U)HV - maximum dynamic force	5 N
/HL/LT - maximum dynamic force	3 N
Versions	
/RT version	1002813

Technical Drawings

