

# ANPx312/RES

## Technical Specifications

Technology	
travel mechanism	inertial piezo drive
positioner type	linear
Size and Dimensions	
footprint; height	34x30; 12mm
max installation space	34x36; 12mm
weight	44 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	
ANC350 piezo positioning controller	ANC350/RES
Load (@ ambient conditions)	
maximum load	20 N
maximum dynamic force along the axis	2 N
Coarse Positioning Mode	
input voltage range	0 - 60 V
travel range (step mode)	6 mm
maximum drive velocity @ 300 K	approx. 3 mm/s
Fine Positioning Mode	
fine positioning resolution	sub-nm
fine positioning range @ 300 K	0 - 7.5 $\mu$ m
fine positioning range @ 4 K	0 - 1.2 $\mu$ m
typical actuator capacitance fine (z) @ 300 K	1.55 $\mu$ F
Accuracy of Movement	
repeatability of step sizes	typically 5 % over full range
typ. forward / backward step asymmetry	typically 5 %

Position Encoder	
readout mechanism	resistive sensor
sensor power (when measuring)	0.1 - 1 mW
sensor resolution	approx. 200 nm
repeatability	1..2 $\mu$ m
linearity (over full travel)	< 1 %
Working Conditions	
mounting orientation	axis horizontal
magnetic field range	0 - 31 T
minimum pressure (/RT)	ambient
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
connector type	2-pole pin plug, $\varnothing$ 0.5 mm, d = 2 mm
electrical feedthrough solution	VFT/LT
encoder connector	additional 3-pole plug
High Load Option (/HL)	
/HL/RT - maximum dynamic force	2 N
Versions	
/RT version	1013513
/HV version	1013517
/UHV version	1013519
/LT version	1013515
/LT/HV version	1013521
/LT/UHV version	1013524

## Technical Drawings