ANPx321/NUM

closed loop, bearing based, linear, horizontal stepper positioner with optoelectronic encoder

Technical Specifications

Technology	
travel mechanism	inertial piezo drive

Size and Dimensions	
footprint; height	41.6 x 44; 11.5 mm
maximum size	49.1 x 44; 11.5 mm
weight	81 g

Coarse Positioning Mode	@ 300 K
input voltage range	0 .. 60 V
typical actuator capacitance	1.55 µF
travel range (step mode)	15 mm
typical minimum step size	100 nm
maximum drive velocity	≈ 3 mm/s

Fine Positioning Mode	@ 300 K
input voltage range	0 .. 100 V
fine positiong range	0 .. 7.5 µm
fine positioning resolution	sub-nm

Materials	
positioner body	titanium
actuator	PZT ceramics
connecting wires	insulated twisted pair, copper
bearings	ceramics

Load (@ ambient conditions)	mounting orientation: axis horizontal
maximum load	20 N (2 kg)
maximum dynamic force along the axis	2 N

Mounting	
from the top	4 through holes dia 2.2 mm, cntrbr. f. M2
from the bottom	4 threads M2.5 x 2 mm
load on top	10 threads M 2 x 3 mm

Article Numbers	
/RT Version	1005587
/HV Version	1005588
/UHV Version	1005589

Compatibility with Electronics	
ANC350 piezo positioning controller	ANC350/NUM

Working Conditions	
mounting orientation	axis horizontal
magnetic field range	0 .. 7 T
temperature range (/RT, /HV, /UHV)	0 ..100 °C
max. bake out temperature (/UHV)	150 °C
minimum pressure (/RT)	1E-4 mbar
minimum pressure (/HV)	1E-8 mbar
minimum pressure (/UHV)	5E-11 mbar

Position Encoder	
readout mechanism	optoelectronic sensor
sensor power (when measuring)	300 mW
encoded travel range	full travel
wavelength of illumination	870 nm
sensor resolution	10 nm
repeatability	50 nm
linearity (over full travel)	< 0.01 %
absolute accuracy	< 0.01 % of travel range

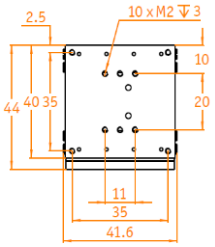
Connectors and Feedthroughs	/RT Versions	all /HV, /UHV Versions
connector type	14-pole connector	15-pin D-Sub connector
electrical feedthrough solution	---	VFT/HV, VFT/UHV

High Load Option (/HL)	mounting orientation: axis vertical
/HL/RT - ambient conditions	3 N
/HL/UHV - UHV conditions	2 N

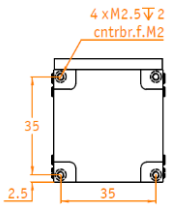
Article Numbers /HL Option	
/HL/RT Version	1008372
/HL/HV Version	1008373
/HL/UHV Version	1008374

Technical Drawings

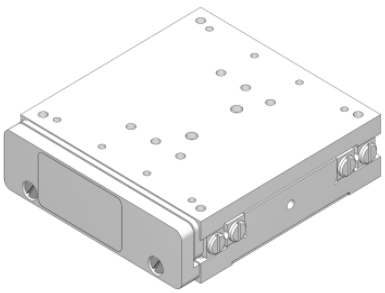
top view



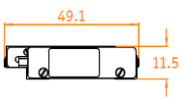
bottom view



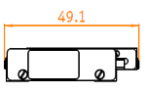
3D view



inner position



outer position



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