ANRv101/RES

ANRv101 with resistive encoder for closed loop operation

Technology	
travel mechanism	inertial piezo drive

Size and Dimensions	
footprint; height	15.6 x 30; 33 mm
through hole in the middle of the axis	Ø 2 mm

Coarse Positioning Mode	
travel (step mode)	360° endless, both directions
typical minimum step size	1 m° @ 300 K, 0.5 m° @ 4 K
maximum speed (@ 300 K, no load)	approx. 30°/s

Fine Positioning Mode	
scan range	70 m° @ 300 K, 14 m° @ 4 K
scan resolution	µ° resolution

Materials (non-magnetic)	
positioner body	Titanium (other materials on request)
actuator	PZT ceramics
connecting wires	insulated twisted pair, Cu
weight	37 g

Load	
maximum vertical load	50g
maximum static torque around axis	1 Ncm
maximum dynamic torque around axis	0.8 Ncm
maximum torque perpendicular to axis	20 Ncm

Mounting	
frontside mounting	---
backside mounting	two threads M2.5 x 4 mm
load mounting	six threads M2 x 3 mm

Article Numbers			
/RT Version	1002261	/LT Version	1002257
/HV Version	1002256	/LT/HV Version	1002259
/UHV Version	1002262	/LT/UHV Version	1002260

Compatibility with Electronics	
ANC350 piezo positioning controller	all versions

Working Conditions	
mounting orientation	axis horizontal
magnetic field range	0 .. 31 T
temperature range (/RT, /HV, /UHV)	0 .. 100 °C
temperature range (/LT, /LT/HV, /LT/UHV)	10 mK .. 373 K
max. bake out temperature (/UHV, /LT/UHV)	150 °C
minimum pressure (/RT, /LT)	1E-4 mbar
minimum pressure (/HV, /LT/HV)	1E-8 mbar
minimum pressure (/UHV, /LT/UHV)	5E-11 mbar

Connectors and Feedthroughs	/RT, /LT Versions	all /HV, /UHV Versions
connector type	2-pole pin plug, ø 0.5 mm, d = 2 mm, 30 cm cable with connector	2-pole pin plug (PEEK), ø 0.5 mm, d = 2 mm, 30 cm cable with connector
electrical feedthrough solution	VFT/LT	VFT/HV, VFT/UHV
encoder connector	additional 3-pole plug	additional 3-pole plug (Peek)

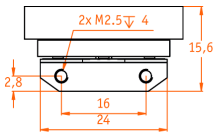
Temperature Dependent Data	@ 300K	@ 4K (only /LT versions)
input voltage range	0 .. +120 V	0 .. +120 V
typical actuator capacitance	1200 nF	200 nF
typical step size (min .. max)	1 .. 20 m°	0.5 .. 10 m°
fine positioning range	70 m°	14 m°

Accuracy of Movement	
repeatability of step sizes	typically 5 % over full range
forward / backward step asymmetry	typically 5 %

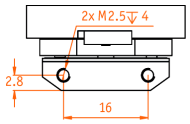
Position Encoder	
readout mechanism	resistive encoder, potentiometric measurement
sensor power (when measuring)	< 1 mW possible
encoded travel range	315°
sensor resolution	approx. 6 m°
repeatability	approx. 50 m°

Drawings

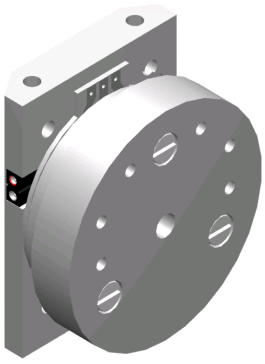
top view



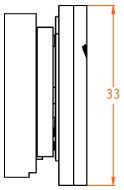
bottom view



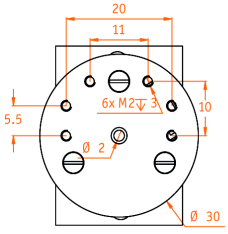
3D view



side view



front view



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