ANGt101

goniometer for high loads providing Θ-positioning

Technology	
travel mechanism	inertial piezo drive

Size and Dimensions	
footprint; height	24 x 24; 11 mm
maximum size (outer position)	24 x 26.4; 11.8 mm
distance center of rotation to bottom	51 mm (above center)

Coarse Positioning Mode	
travel (step mode)	6.6°
typical minimum step size	0.1 m° @ 300 K, 0.02 m° @ 4 K
maximum speed (@ 300 K, no load)	approx. 1 °/s

Fine Positioning Mode	
scan range	no fine positioning capability

Materials (non-magnetic)	
positioner body	Titanium (other materials on request)
actuator	PZT ceramics
connecting wires	insulated twisted pair, Cu
weight	18 g

Load	
maximum vertical load	100 g
maximum static forces along the axis	3 N
maximum dynamic force along the axis	2 N

Mounting	
frontside mounting	two through holes for M2
backside mounting	two threads M2.5 x 6 mm
load mounting	six threads M2 x 3 mm

Article Numbers			
/RT Version	1002732	/LT Version	1002735
/HV Version	1002733	/LT/HV Version	1002736
/UHV Version	1002734	/LT/UHV Version	1002737

Compatibility with Electronics	
ANC106 piezo step controller	/RT version only
ANC150 piezo step controller	all versions
ANC200 piezo scan controller	---
ANC300 piezo positioning controller	all versions

Working Conditions	
mounting orientation	axis perpendicular to gravity
magnetic field range	0 .. 31 T
temperature range (/RT, /HV, /UHV)	0 .. 100 °C
temperature range (/LT, /LT/HV, /LT/UHV)	10 mK .. 300 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, integrated connector	two female conn., for pin ø 1 mm, 30 cm cable with connector
electrical feedthrough solution	COC230/LT	COC230/HV, COC230/UHV

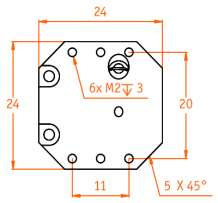
Temperature Dependent Data	@ 300K	@ 4K (only /LT versions)
input voltage range	0 .. +100 V	0 .. +100 V
typical actuator capacitance	1050 nF	150 nF
typical step size (min .. max)	0.1 .. 3 m°	0.02 .. 0.5 m°
fine positioning range	---	---

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

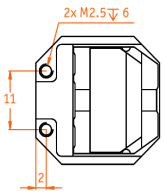
Position Encoder	
encoder options	/RES, /NUM

Drawings

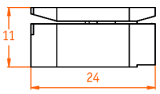
top view



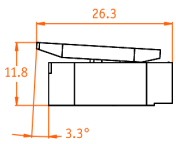
bottom view



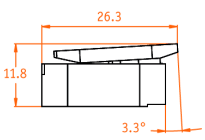
side view



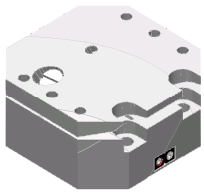
inner position



outer position



3D view



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