ANSx150

open loop x-scanner with large cryogenic scan range

Technical Specifications

Technology	
travel mechanism	piezo driven lever arm mechanism

Size and Dimensions	
footprint; height	24 x 24; 9 mm
weight	18 g

Fine Positioning Mode	@ 300 K	@ 4 K
fine positiong range	80 µm	125 µm
input voltage range	0 .. 60 V	+/- 120V
typical actuator capacitance	11.1 µF	2.6 µF
fine positioning resolution	sub-nm	

Materials (non-magnetic)	
positioner body	titanium (upgrade option: beryllium copper)
actuator	PZT ceramics
connecting wires	insulated twisted pair, copper

Load (@ ambient conditions)	mounting orientation: axis horizontal
maximum torque on the axis	10 Ncm
maximum load	1 N (100g)

Mounting	
from the top	2 through holes M2 x 5 mm
from the bottom	2 threads M2.5 x 5 mm
load on top	6 threads M2 x 2 mm

Article Numbers	
/RT Version	1006868
/HV Version	1006869
/UHV Version	1006870
/LT Version	1006871
/LT/HV Version	1006872
/LT/UHV Version	1006873

Compatibility with Electronics	
Analog voltage amplifier	ANC250

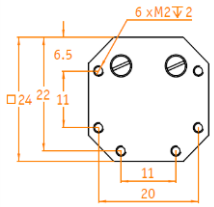
Accuracy of Movement	
repeatability of step sizes	no coarse positioning capability
scan repeatability	typically 0.1 %
forward / backward step asymmetry	no coarse positioning capability
creep	typically 0.5 - 0.8 % per decade of time
linearity	typically 5 - 10 %

Working Conditions	
mounting orientation	scanner moving horizontally
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

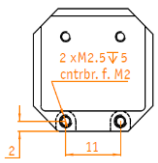
Connectors and Feedthroughs	/RT, /LT Versions	all /HV, /UHV Versions
connector type	2-pole pin plug, ø 0.5 mm, d = 2 mm, 30 cm cable with connector	2-pole pin plug (PEEK), ø 0.5 mm, d = 2 mm, 30 cm cable with connector
electrical feedthrough solution	VFT/LT	VFT/HV, VFT/UHV

Technical Drawings

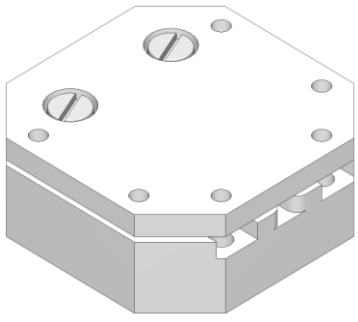
top view



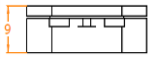
bottom view



3D view



side view



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