

ECR4040/NUM(+)

nanoprecise closed loop stepper rotator with integrated 1/2" aperture for endless rotation in both directions with optoelectronic sensor

Technical Specifications

Technology		Compatibility with Electronics	
travel mechanism	inertial piezo drive	ECC100 piezo positioning controller	all versions
Size and Dimensions		Working Conditions	
footprint; height	40 x 40; 14.5 mm	mounting orientation	arbitrary
aperture	1/2"	working conditions	ambient
weight	54 g		
Coarse Positioning Mode		Accuracy of Movement	
input voltage range	0 .. 60 V	repeatability of step sizes	typically 5 % over full range
typical actuator capacitance	1.11µF	forward / backward step asymmetry	10%
travel range (step mode)	360 ° endless	wobble	1 mrad
typical minimum step size	0.2 m°		
maximum drive velocity (@ 45 V)	10 °/s		
Fine Positioning Mode		Position Encoder	
input voltage range	0 .. 100 V	readout mechanism	optoelectronic sensor
fine positioning range	0 .. 6 m°	sensor power (when measuring)	300 mW
fine positioning resolution	µ°	encoded travel range	360 °
		wavelength of illumination	870 nm
		sensor resolution	0.04 m°
		repeatability	4 m°
		absolute accuracy	< 0.01% of travel range
Materials		Connectors and Feedthroughs	
positioner body	aluminum	/RT Versions	
actuator	PZT ceramics	connector type	14-pole connector
connecting wires	insulated twisted pair, copper	50 cm cable with connector	
bearings	stainless steel		
Load (@ ambient conditions)		mounting orientation: axis vertical	
maximum load	20 N		
maximum dynamic torque around axis	2 Ncm		
Mounting			
from the top	4 through holes dia 2.2 mm, cntrbr. f. M2		
from the bottom	4 threads for M2.5 x 2 mm		
load on top	8 threads M2 x 1.8 mm		
from the side	2 threads M2.5 x 4.5 mm		
aperture	SM05 x 6.5		
Article Numbers			
/RT version	1009637		

Technical Drawings

