

θ_x/θ_z axes | S50.UR0C/K

Piezo Tilt/Rotation Stage



Characteristics >>

- θ_x , θ_z motion
- Tilt angular range to $\pm 0.25\text{mrad}$
- Load capacity to 40kg
- CAP sensor
- High response

Applications >>

- Optical beam scanning
- Light path adjustment
- Graphical stability
- Interference/metering
- Large loading tilt motion
- Space perturbation simulation system
- Calibration of acceleration sensor
- Calibration of angular velocity sensor

Introduction

S50.UR0C/K is a θ_x and θ_z axes tilt/rotation stage, with super large load capacity of up to 40kg and deflection angle of $\pm 0.25\text{mrad}$. It can work in dynamics with a 20kg load. The products are mainly used in large load tilt/rotation motion experiments, such as vibration simulation experiments.



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Technical Data >>

Type	C-Closed loop K-Open loop	S50.UR0C	S50.UR0K	Units
Active axes		θ_x, θ_z	θ_x, θ_z	
Driving channels		3	3	
Tilt angle(0~120V)		0.4/axis($\approx 80^\circ$)	0.4/axis($\approx 80^\circ$)	mrad $\pm 10\%$
Tilt angle(0~150V)		0.5axis($\approx 100^\circ$)	0.5axis($\approx 100^\circ$)	mrad $\pm 10\%$
Integrated sensor		CAP	-	
Closed/open loop resolution		0.02	0.01	μrad
Closed-loop linearity		0.3	-	%F.S.
Closed-loop repeatability		0.2	-	%F.S.
Unloaded resonant frequency		$\theta_x 500/\theta_z 750$	$\theta_x 500/\theta_z 750$	Hz $\pm 20\%$
Closed/open loop unloaded resonant frequency		30	15	ms $\pm 20\%$
Load capacity		40	40	kg
Operating temperature ^[1]		-20~80	-20~80	$^\circ\text{C}$
El. capacitance		30/axis	30/axis	$\mu\text{F}\pm 20\%$
Material		Al, Steel	Al, Steel	
Mass		16	16	kg $\pm 5\%$
Cable length ^[2]		1.5	1.5	m $\pm 10\text{mm}$
Sensor/voltage connector ^[2]		-	-	

Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25 $^\circ\text{C}$.

[1] Custom ultralow temperature and ultrahigh vacuum versions are available.

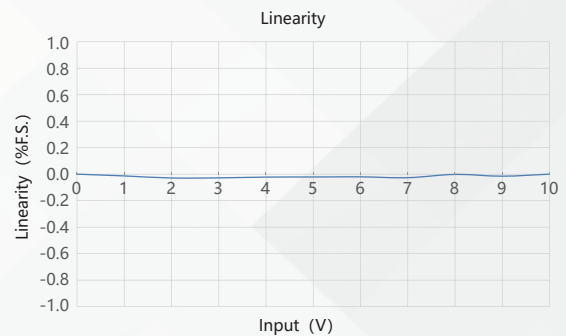
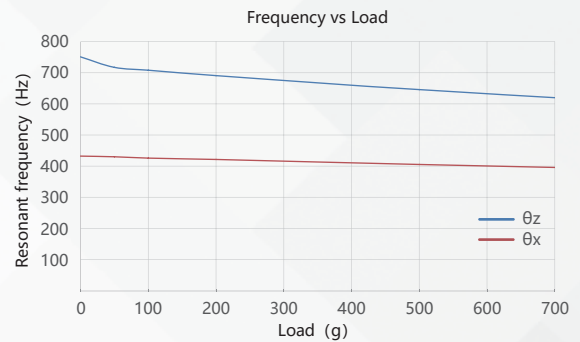
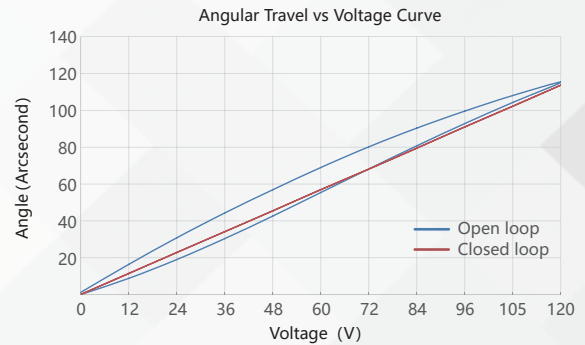
[2] Custom cable length and connector is available.

Note: The parallelism of the moving platform is about 20 μm , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

Operating frequency vs tilt angle @20kg load

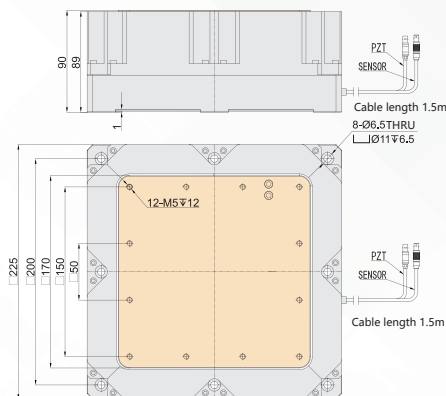
Angle	± 0.1	± 0.05	± 0.02	± 0.01	
Frequency θ_z	0~130	0~300	0~400	0~500	Hz $\pm 20\%$
Frequency θ_x	0~100	0~170	0~180	0~180	

Curves >>



Disclaimer: The data here are typical, only for reference. Some variations will occur for different batch.

Drawing >>



Recommended Controllers >>



E01.D3
 LCD, membrane button, up to 625mA
 RS-232/RS-422/USB interface
 Software secondary development



E70
 Small size, ave current 70mA/channel
 RS-232/RS-422/USB interface
 Software secondary development



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