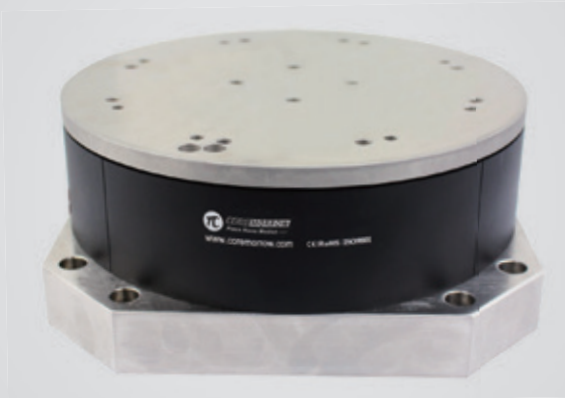


θ x axis | S50.U0C/K-D1

Piezo Tilt Stage



Characteristics >>

- θ x deflection
- Load to 60kg
- Tilt angle to 0.5mrad@150V
- Operating frequency to 210Hz@ ± 0.01 mrad

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.U0C/K is a 1-axis θ x piezo stage, featuring load capacity of 60kg, and tilt angle of ± 0.25 mrad. It uses capacitive closed-loop sensor with resolution of up to 10nrad and can work at high frequencies at load of 20kg. It is very suitable for large-load motion experiments.



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Technical Data >>

Type	C-Closed loop K-Open loop	S50.U0C-D1	S50.U0K-D1	Units
Active axis		θx	θx	
Driving channels		2	2	
Tilt angle(0~120V)		0.4($\approx 80^\circ$)	0.4($\approx 80^\circ$)	mrad $\pm 10\%$
Tilt angle(0~150V)		0.5($\approx 100^\circ$)	0.5($\approx 100^\circ$)	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		0.3	-	%F.S.
Unloaded resonant frequency		750	750	Hz $\pm 20\%$
Unloaded step time		30	15	ms $\pm 20\%$
Load capacity		60	60	kg $\pm 5\%$
Operating temperature ^[1]		-20~80	-20~80	$^\circ\text{C}$
El. capacitance		30	30	$\mu\text{F}\pm 20\%$
Material		Al, Steel	Al, Steel	
Cable length ^[2]		1.5	1.5	m $\pm 10\text{mm}$
Sensor/voltage connector ^[2]		-	-	

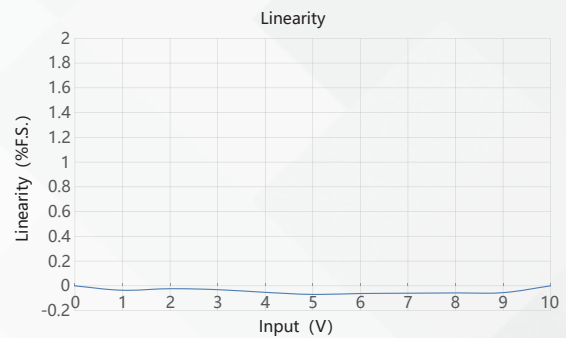
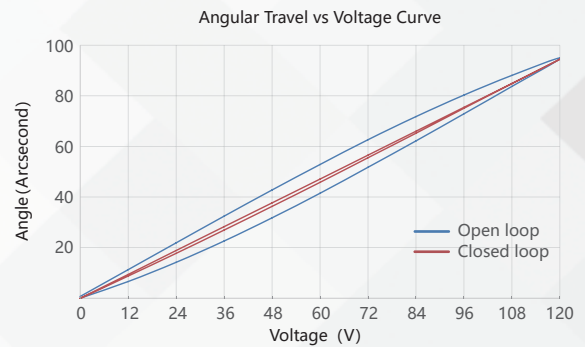
Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25 $^\circ\text{C}$.

[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.

Curves >>

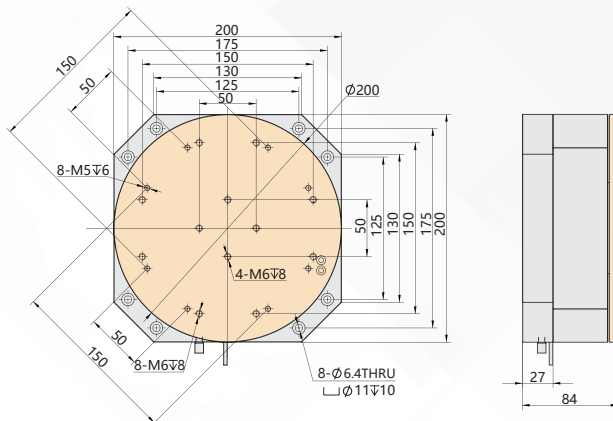


Disclaimer: The data here are typical, only for reference. Some variations will occur for different batch.

Tilt angle vs operating frequency @20kg load

Angle	± 0.1	± 0.05	± 0.02	± 0.01	mrad $\pm 20\%$
Frequency	0~120	0~180	0~200	0~210	Hz $\pm 20\%$

Drawing >>



Recommended Controllers >>



E01.D1
 LCD, membrane button, up to 625mA
 RS-232/RS-422/USB interface
 Software secondary development



E53
 Small size, 60mA
 RS-232/RS-422/USB interface
 Software secondary development



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