

# θx axis | S22.U3S/K

### Piezo Tilt Platform



## Introduction

S22 Piezo Tilt Platform is a θx deflection platform. The flexible hinge guiding design has zero friction and static resistance, high guiding precision, nanoradian resolution and excellent positioning stability. With a beam deflection range of up to 6mrad, it has an extremely fast response speed (milliseconds to microseconds) and is ideal for dynamic operation (eg. tracking, scanning, drift and vibration cancellation) and positioning of optics and samples.

#### Characteristics >>

- θx tilt
- Tilt angle up to 3mrad
- Sub-ms response time
- High closed loop positioning accuracy

#### Applications >>

- Image processing and stabilization
- · Laser scanning and beam deflection
- Light filter/optical switch
- Optical capture
- · Laser tuning
- Optics/beam stabilization





#### Technical Data >>

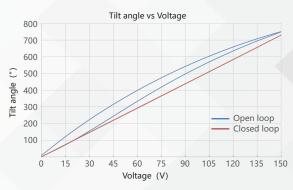
Туре	S-Closed loop K-Open loop	S22.U3S	S22.U3K	Units
Active axis		θх	θх	
Tilt angle(0~120V)		2.5( ≈ 520")	2.5( ≈ 520")	mrad±10%
Tilt angle(0~150V)		3( ≈ 600")	3( ≈ 600")	mrad±10%
Integrated sensor		SGS	-	
Resolution		0.08( ≈ 0.02")	0.03(<0.01")	μrad
Closed-loop linearity		0.2	-	%F.S.
Closed-loop repeatability		0.15	-	%F.S.
Unloaded resonant frequency		3	3	kHz±20%
Unloaded step time		3	0.8	ms±20%
El. capacitance		1.8	1.8	μF±20%
Operating temperature <sup>[1]</sup>		-20~80	-20~80	°C
Material		Steel	Steel	
Mass		80	80	g±5%
Cable length <sup>[2]</sup>		1.5	1.5	m±10mm
Sensor/voltage connector <sup>[2]</sup>		-	-	

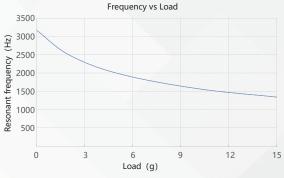
Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation.Unless otherwise specified, the above parameters are measured at room temperature about 25° C.

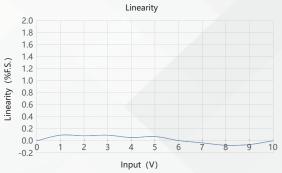
- $\label{eq:custom} \mbox{[1] Custom ultralow temperature and ultrahigh vacuum versions are available.}$
- [2] Custom cable length and connector is available.

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

#### Curves >>

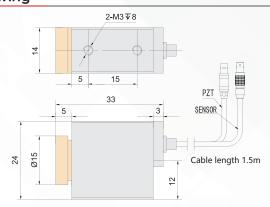






Disclaimer: The data here are typical, only for reference. Some variations will occur for different batch.

#### 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

