

θ_x, θ_y, Z axes | P32.ZT4S/K

Piezo Tip/Tilt/Z Platform



Characteristics >>

- θ_x, θ_y and Z motion
- Tilt angle to 6mrad
- 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

Introduction

P32 Piezo Tip/Tilt and Z Platform provides high-speed precision θ_x, θ_y tilt and Z linear motion. The resolution of linear motion can reach sub-nanometer level, deflection resolution reaches submicroradians, and response time can reach milliseconds. P32 piezoelectric deflection mirrors are compact, enabling up to 6mrad deflection and 37.5 μ m Z-axis linear motion.



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Technical Data >>

Type	S-Closed loop K-Open loop	P32.ZT4S	P32.ZT4K	Units
Active axes		θ_x, θ_y, Z	θ_x, θ_y, Z	
θ_x, θ_y Tilt angle(0~120V)		5($\approx 1030^\circ$)	5($\approx 1030^\circ$)	mrad $\pm 10\%$
Travel in Z(0~120V)		30	30	$\mu\text{m}\pm 10\%$
θ_x, θ_y tilt angle(0~150V)		6($\approx 1230^\circ$)	6($\approx 1230^\circ$)	mrad $\pm 10\%$
Travel in Z(0~150V)		37.5	37.5	$\mu\text{m}\pm 10\%$
Integrated sensor		SGS	-	
Resolution in θ_x, θ_y		0.2($\approx 0.04^\circ$)	0.05($\approx 0.01^\circ$)	μrad
Resolution in Z		1	0.5	nm
Closed-loop linearity		0.05	-	%F.S.
Closed-loop repeatability		0.02	-	%F.S.
Unloaded resonant frequency(θ_x, θ_y)		2	2	kHz $\pm 20\%$
Unloaded step time		5	2	ms $\pm 20\%$
El. capacitance		3.6/axis	3.6/axis	$\mu\text{F}\pm 20\%$
Operating temperature ^[1]		-20~80	-20~80	$^\circ\text{C}$
Material		Steel	Steel	
Mass		300	300	g $\pm 5\%$
Cable length ^[2]		1.5	1.5	m $\pm 10\text{mm}$
Sensor/voltage connector ^[2]		-	-	

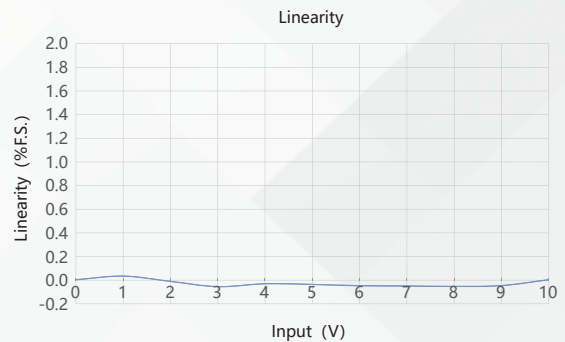
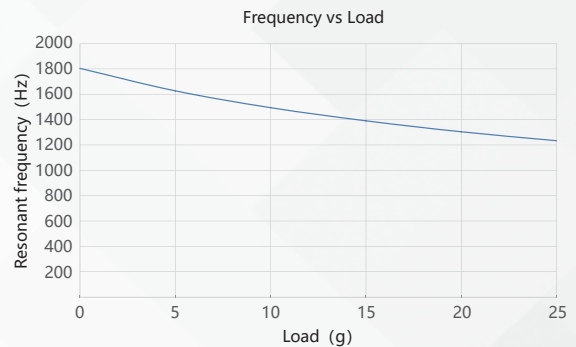
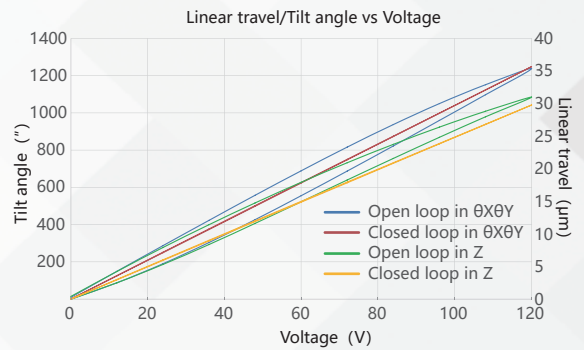
Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25°C.

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

[2] Custom cable length and connector is available.

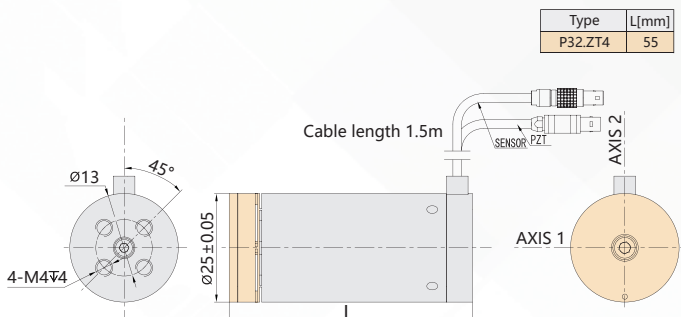
Note: The parallelism of the moving platform is about 20 μm , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

Curves >>



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

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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