

θ_x, θ_y axes | P33.T8S/KF/Y Piezo Tip/Tilt Platform



Characteristics >>

- θ_x, θ_y tilt
- Tilt range to ± 5 mrad/axis
- Sub-ms response time
- High closed-loop positioning accuracy
- High temperature stability

Applications >>

- Laser scanning
- Image processing and stabilization
- Beam deflection
- Interlacing scanning, dithering
- Interference
- Light filter/optical switch
- Laser micromachine
- Active and adaptive optics

Introduction

P33.T8 Piezo Tip/Tilt Platform is a deflection platform with fast response and compact size. It provides high-precision angular motion of the top platform. Compared with other actuators, the flexible hinge-guided piezoelectric deflection platform provides higher acceleration.



Harbin Core Tomorrow Science & Technology Co., Ltd.

Tel: +86-451-86268790 Email: info@coremorrow.com
Fax: +86-451-86267847 Web: www.coremorrow.com

Headquarters: Building I2, No.191 Xuefu Road, Nangang District, Harbin
Shanghai Office: Building 2, No.608 Shengxia Road, Pudong District, Shanghai

Technical Data >>

Type	S - closed loop K - open loop	P33.T8SF/Y	P33.T8KF/Y	Units
Active axes		θ_x, θ_y	θ_x, θ_y	
Driving channels		3	3	
Tilt angle (0~100V)		$8.2/\pm 4.1 (\approx \pm 845^\circ)$		mrad $\pm 10\%$
Tilt angle (0~120V)		$10/\pm 5 (\approx \pm 1031^\circ)$		mrad $\pm 10\%$
Integrated sensor		SGS	-	
Resolution		$0.3 (\approx 0.06^\circ)$	$0.1 (\approx 0.02^\circ)$	μrad
Closed-loop linearity		0.25	-	%F.S.
Closed-loop repeatability		0.02	-	%F.S.
Unloaded resonant frequency		3.1	3.1	kHz $\pm 20\%$
Unloaded step time		8	4	ms $\pm 20\%$
El. capacitance		14.5/axis	14.5/axis	$\mu\text{F} \pm 20\%$
Operating temperature ^[1]		-20~80	-20~80	$^\circ\text{C}$
Material		Steel	Steel	
Platform Length L		91	91	mm
Mass		340	340	g $\pm 5\%$
Cable length ^[2]		1.5	1.5	m $\pm 10\text{mm}$
Sensor/voltage connector ^[2]		-	-	

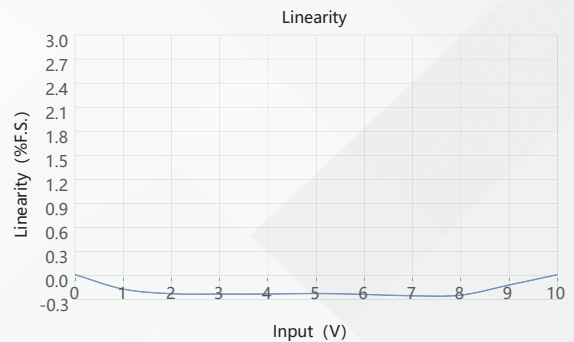
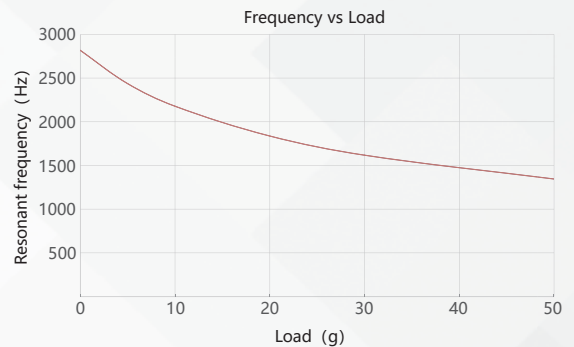
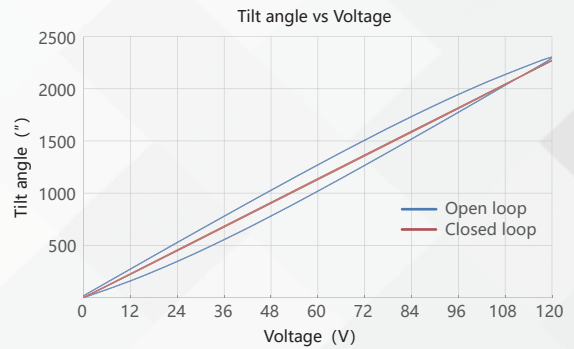
Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25°C.

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

[2] Custom cable length and connector is available.

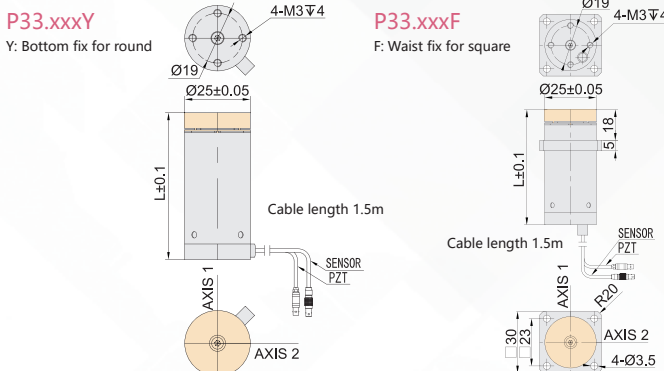
Note: The parallelism of the moving platform is about 20 μm , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

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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