

θ_x, θ_y axes | P33.T4S/KF/Y Piezo Tip/Tilt Platform



Introduction

P33.T4 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.

Characteristics >>

- θ_x, θ_y tilt
- Tilt range to ± 2.5 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



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.T4SF/Y	P33.T4KF/Y	Units
Active axes		θ_x, θ_y	θ_x, θ_y	
Driving channels		3	3	
Tilt angle (0~100V)		4/±2(≈ ±412")		mrad±10%
Tilt angle (0~120V)		5/±2.5(≈ ±515")		mrad±10%
Integrated sensor		SGS	-	
Resolution		0.15(≈ 0.03")	0.04(<0.01")	μrad
Closed-loop linearity		0.2	-	%F.S.
Closed-loop repeatability		0.02	-	%F.S.
Unloaded resonant frequency		3.4	3.4	kHz±20%
Unloaded step time		3	2	ms±20%
El. capacitance		7.2/axis	7.2/axis	μF±20%
Operating temperature ^[1]		-20~80	-20~80	°C
Material		Steel	Steel	
Platform Length L		55	55	mm
Mass		240	240	g±5%
Cable length ^[2]		1.5	1.5	m±10mm
Sensor/voltage connector ^[2]		-	-	

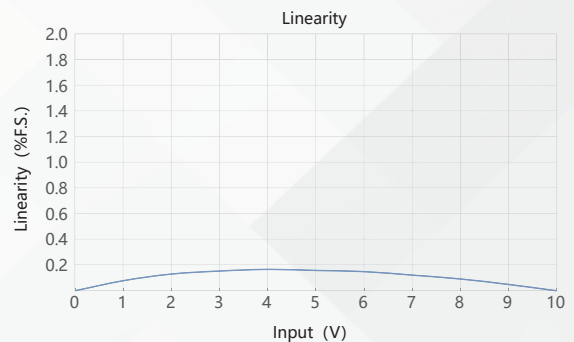
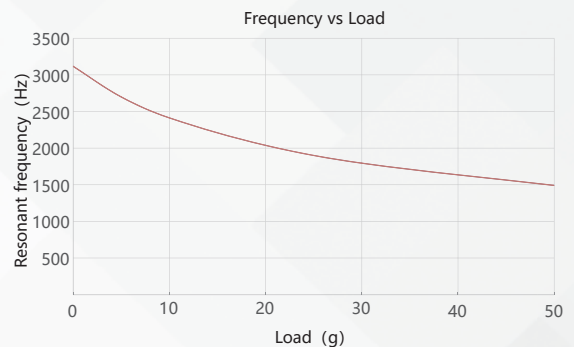
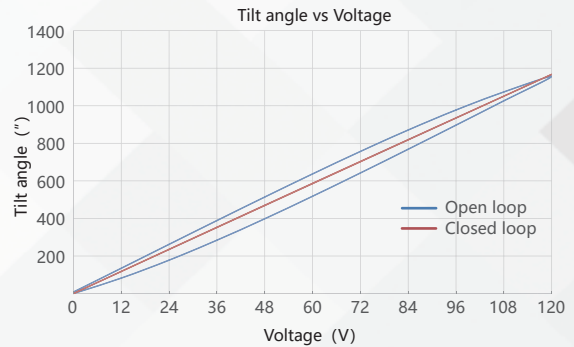
Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25°C.

[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 20μm, and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

Curves >>

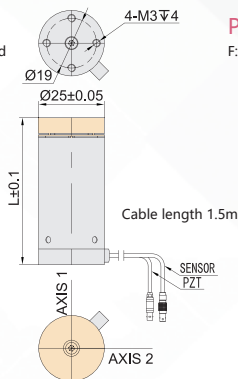


Disclaimer: The data here are typical, only for reference. Some variations will occur for different batch.

Drawing >>

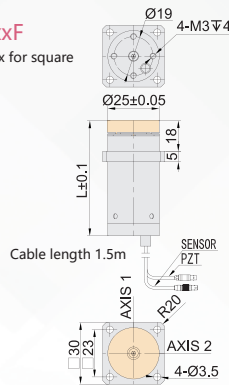
P33.xxxY

Y: Bottom fix for round



P33.xxxF

F: Waist fix for square



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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