

θ_x, θ_y axes | S34.T2S/KF

Piezo Tip/Tilt Platform



Introduction

S34.T2S/KF features a deflection angle of up to 2.5mrad and can load $\Phi 110 \times 10$ mm len (approx. 245g). The response time to 0.2mrad deflection angle is about 2ms, and the operating frequency at a deflection angle of ± 0.1 mrad can reach 250Hz.

Characteristics >>

- θ_x, θ_y tilt
- Tilt angle: 2.5mrad
- Closed loop resolution to $< 0.07\mu\text{rad}$
- Optional closed-loop sensor

Applications >>

- Laser scanning
- Beam deflection
- Beam stabilization
- Light filter
- Image processing and stabilization
- Error correction for polygonal mirrors
- Optical switch
- Active and adaptive optics



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Technical Data >>

Type	S - closed loop K - open loop	S34.T2SF	S34.T2KF	Units
Active axes		θ_x, θ_y	θ_x, θ_y	
Driving channels		3	3	
Tilt angle(0~120V)		2	2	mrad \pm 10%,typ.
Tilt angle(0~150V)		2.5	2.5	mrad \pm 10%,max
Integrated sensor		SGS	-	
Resolution		0.07 (\approx 0.01")	0.02(< 0.01")	μ rad
Closed-loop linearity		0.2	-	%F.S.
Closed-loop repeatability		0.1	-	%F.S.
Unloaded resonant frequency		1700	1700	Hz \pm 20%
Loaded resonant frequency@245g		740	740	Hz \pm 20%
Close-loop response		2 (0.2mrad anglar travel)		ms \pm 20%
Operating frequency		250 (\pm 0.1mrad anglar travel)		Hz \pm 20%
El. capacitance		7.2	7.2	μ F/axis \pm 20%
Closed-loop operating frequency (-3dB)		300 (@245g load)		Hz \pm 20%
Load Capacity		245 (Φ 110 \times 10mm lens)		
Operating temperature ^[1]		-20~80	-20~80	$^{\circ}$ C
Material		Aluminum	Aluminum	
Mass		2000	2000	g \pm 5%
Cable length ^[2]		1.5	1.5	m \pm 10mm

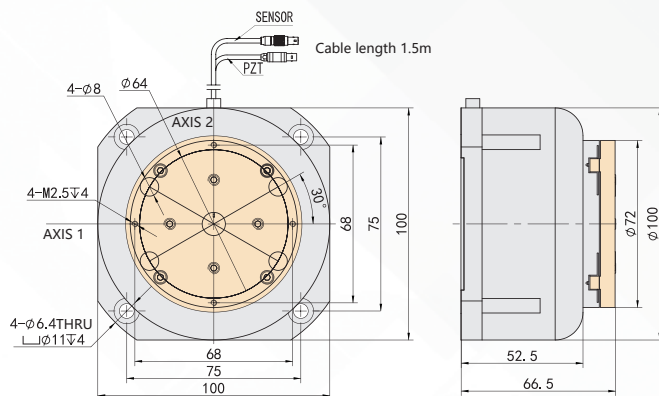
Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25 $^{\circ}$ C.

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

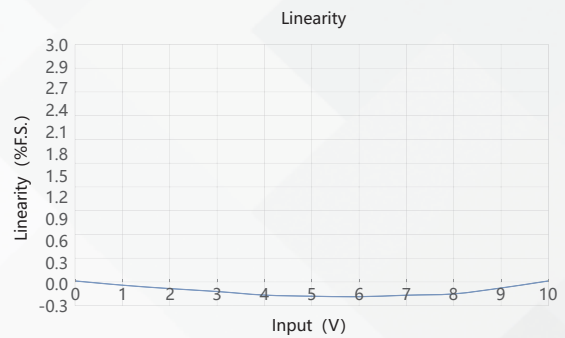
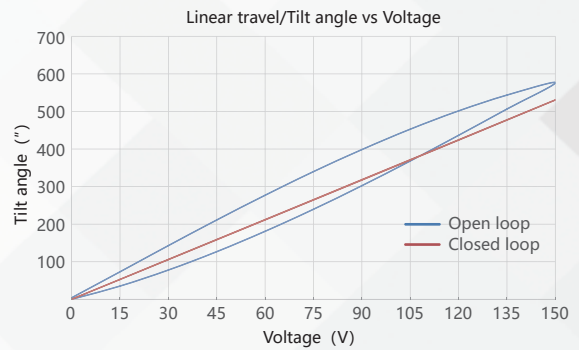
[2] Custom cable length and connector is available.

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

Drawing >>



Curves >>



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

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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