

XYZ axes | P11.XY200Z300S/K

Piezo Nanopositioning Stages



Introduction

P11.XY200Z300 is a 3 axes piezo nanopositioning stage, its stroke range X180/Y180/Z300 μ m.

Characteristics >>

- XYZ motion
- Stroke to X180/Y180/Z300 μ m
- Load capacity to 200g
- Open/closed-loop versions
- Vacuum version available

Applications >>

- Laser interference
- Nano-measurement
- Nano imprint
- Scanning microscope
- Quality assurance test
- Micromachining / precision control
- Biotechnology
- Nanopositioning



Harbin Core Tomorrow Science & Technology Co., Ltd.

Tel: +86-451-86268790

Email: info@coremorrow.com

Headquarters: Building I2, No.191 Xuefu Road, Nangang District, Harbin

Fax: +86-451-86267847

Web: www.coremorrow.com

Shanghai Office: Building 2, No.608 Shengxia Road, Pudong District, Shanghai

Technical Data >>

Type	S-Closed loop K-Open loop	P11.XY200Z300S	P11.XY200Z300K	Units
Active axes		X, Y, Z	X, Y, Z	
Travel range(0~120V)		X130/Y130/Z250	X130/Y130/Z250	$\mu\text{m}\pm 10\%$
Travel range(0~150V)		X180/Y180/Z300	X180/Y180/Z300	$\mu\text{m}\pm 10\%$
Sensor		SGS	-	
Resolution		XY4.5, Z8.5	XY1.5, Z2.5	nm
Linearity		0.4	-	%F.S.
Repeatability		0.1	-	%F.S.
Unloaded resonant frequency		X200/Y180/Z200	X200/Y180/Z200	Hz $\pm 20\%$
Closed-loop operating frequency (-3dB)		40 (@50g load)	-	Hz $\pm 20\%$
Load capacity		0.2	0.2	kg
El. capacitance		X2.2/Y2.2/Z7	X2.2/Y2.2/Z7	$\mu\text{F}\pm 20\%$
Operating temperature ^[1]		-20~80	-20~80	$^{\circ}\text{C}$
Material		Steel, Al	Steel, Al	
Size(L×W×H)		50×62×41	50×62×41	mm
Cable length ^[2]		1.5	1.5	m $\pm 10\text{mm}$
Connector ^[2]		-	-	

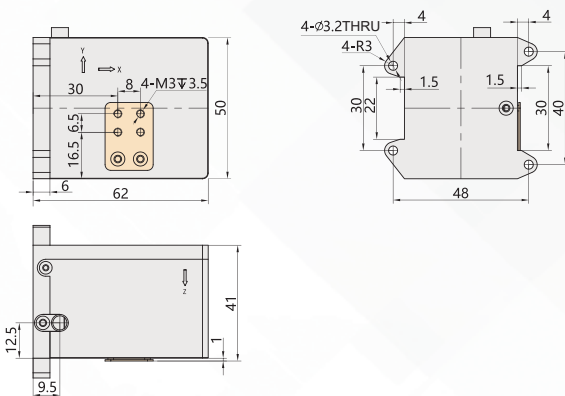
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25 $^{\circ}\text{C}$.

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

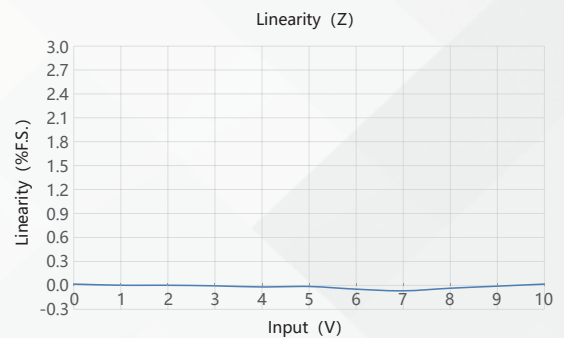
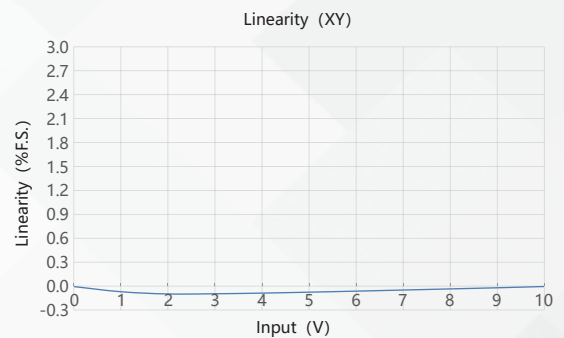
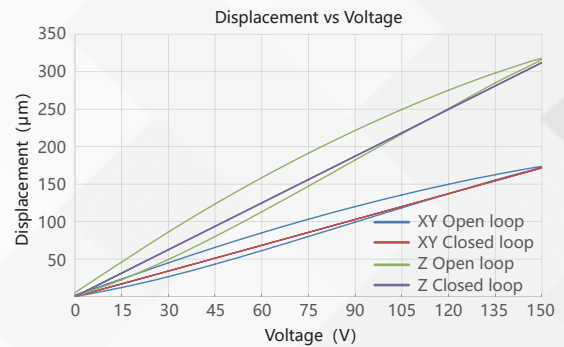
[2] Custom cable length and connector is available.

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.

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, 70mA/channel
 RS-232/RS-422/USB interface
 Software secondary development



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