

# Z axis | XD700.100S/K-B

## Piezo Actuators



### Characteristics >>

- Z-direction motion
- High precision of closed loop positioning
- Fast response
- Custom cooling
- Customizable

### Applications >>

- 3D imaging
- Interference/metering
- Confocal microscopy
- Surface structure analysis
- Biological technology
- Semiconductor test

## Introduction

The XD700 series piezo actuators are piezoelectric actuators with a mechanically packaged shell and an air-cooled heat dissipation interface. It is easy to install and fix with the external mechanical structure, and is suitable for dynamic application scenarios.



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## Technical Data >>

Type	S-Closed loop K-Open loop	XD700.100S-B	XD700.100K-B	Units
Active axes		Z	Z	
Travel range(0~120V)		68	68	$\mu\text{m}\pm 10\%$
Travel range(0~150V)		85	85	$\mu\text{m}\pm 10\%$
Integrated sensor		SGS	-	
Resolution		2.5	1	nm
Closed-loop linearity		0.3	-	%F.S.
Repeatability		0.2	-	%F.S.
Push/pull force capacity		1200/200	1200/200	N
Stiffness		10	10	$\text{N}/\mu\text{m}\pm 20\%$
Unloaded resonant frequency		5000	5000	$\text{Hz}\pm 20\%$
El. capacitance		9	9	$\mu\text{F}\pm 10\%$
Operating temperature <sup>[1]</sup>		-20~80	-20~80	°C
Material		Steel	Steel	
Cable length <sup>[2]</sup>		1.5	1.5	$\text{m}\pm 10\text{mm}$
Connector <sup>[2]</sup>		-	-	

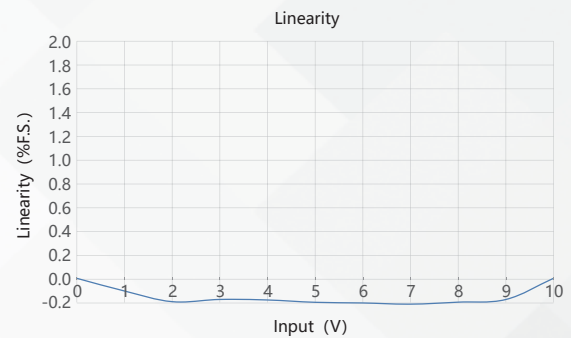
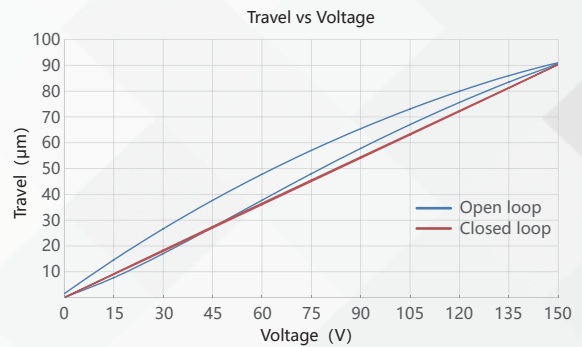
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25°C.

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

[2] Custom cable length and connector is available.

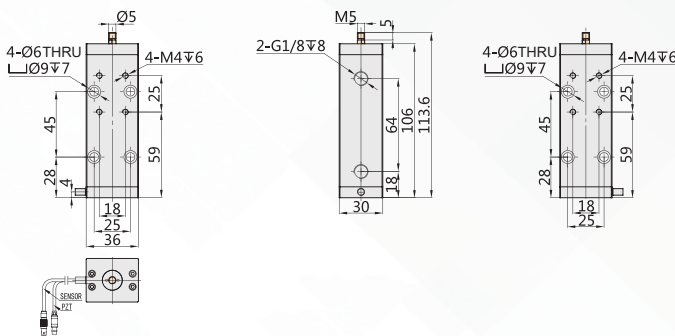
Note: The parallelism of the moving platform is about 20 $\mu\text{m}$ , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

## Curves >>



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

## Drawing >>



## Recommended Controllers >>



**E01.D1**  
 LCD, membrane button, up to 625mA  
 RS-232/RS-422/USB interface  
 Software secondary development



**E53**  
 Small size, 60mA  
 RS-232/RS-422/USB interface  
 Software secondary development



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