

# Z axis | XP-721.S/K

## Piezo Objective Scanner



## Introduction

XP-721 is a small-volume piezo objective positioner with a separate thread adapter design that can be used with a variety of microscopes.

### Characteristics >>

- Active axes Z
- Travel to 100 $\mu$ m
- Load capacity to 0.2kg
- Millisecond response time
- Closed loop for high repeatability

### Applications >>

- 3D imaging
- Surface structure analysis
- Biotechnology
- Interference/metering
- Confocal microscope
- Semiconductor test



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## Technical Data >>

Type	S-Closed loop K-Open loop	XP-721.S	XP-721.K	Units
Active axis		Z	Z	
Travel range(0~120V)		80	80	$\mu\text{m}\pm 10\%$
Travel range(0~150V)		100	100	$\mu\text{m}\pm 10\%$
Integrated sensor		SGS	-	
Resolution		3	1	nm
Linearity		0.2	-	%F.S.
Repeatability		0.1	-	%F.S.
Push/pull force		30/10	30/10	N
Stiffness		0.3	0.3	$\text{N}/\mu\text{m}\pm 20\%$
Unloaded resonant frequency		500	500	$\text{Hz}\pm 20\%$
Unloaded step time		10	2	$\text{ms}\pm 20\%$
Load capacity		0.2	0.2	kg
El. capacitance		3.6	3.6	$\mu\text{F}\pm 20\%$
Operating temperature <sup>[1]</sup>		-20~80	-20~80	$^{\circ}\text{C}$
Material		Steel, Al	Steel, Al	
Mass		250	250	$\text{g}\pm 5\%$
Cable length <sup>[2]</sup>		1.5	1.5	$\text{m}\pm 10\text{mm}$
Sensor/voltage connector <sup>[2]</sup>		-	-	

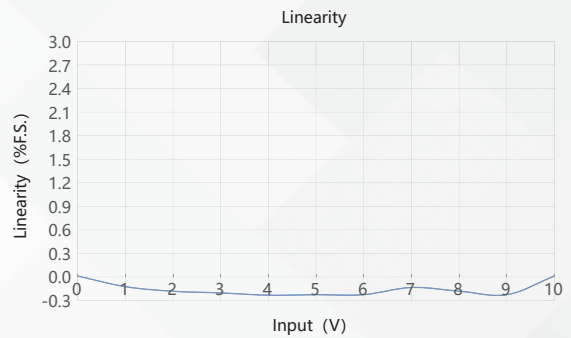
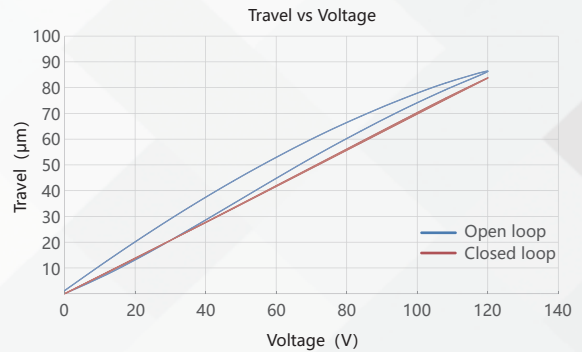
Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25°C.

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

[2] Custom cable length and connector is available.

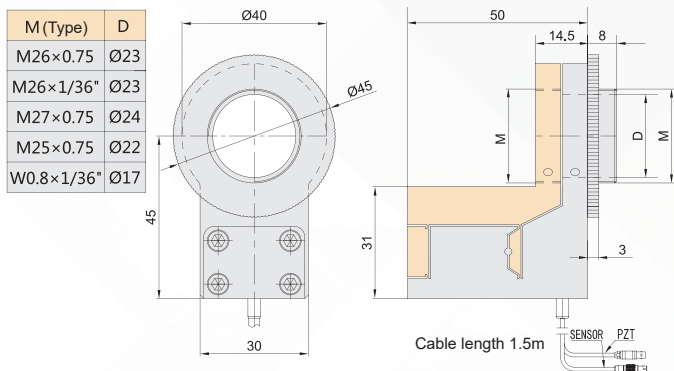
Note: The parallelism of the moving platform is about 20 $\mu\text{m}$ , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

## 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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