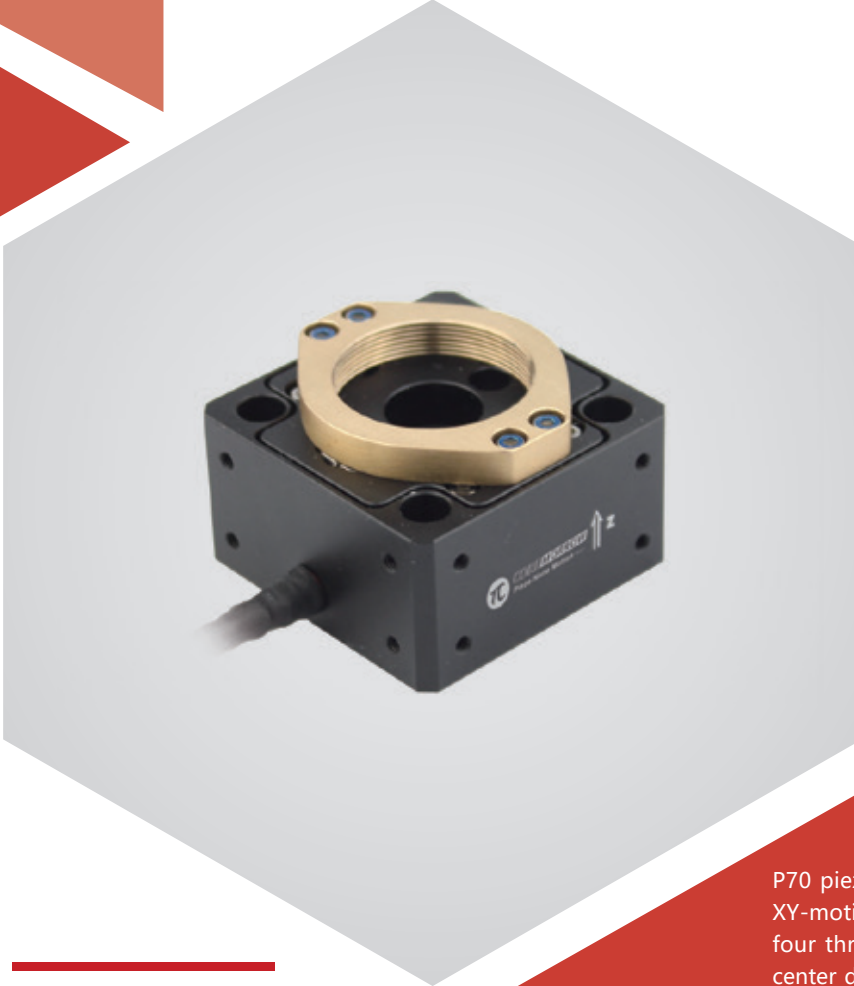


# Z axis | P70.Z8S/K

## Piezo Nanopositioning Stages



## Introduction

P70 piezo nanopositioning scanner has two versions, XY-motion and Z-motion version. Both versions have four through holes at the four corners, and the hole center distance is 30mm, which is very suitable for the installation of cage structures.

### Characteristics >>

- Motion in Z
- Travel to 8 $\mu$ m
- Load capacity up to 200g
- Suitable for XY scanning objective lens
- Flexure hinge construction

### 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](mailto:info@coremorrow.com)

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

Fax: +86-451-86267847

Web: [www.coremorrow.com](http://www.coremorrow.com)

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

## Technical Data >>

Type	S-Closed loop K-Open loop	P70.Z8S	P70.Z8K	Units
Active axes		Z	Z	
Driving channels		1	1	
Travel rang		6.4(@120V)	6.4(@120V)	$\mu\text{m}\pm 10\%$
Travel rang		8(@150V)	8(@150V)	$\mu\text{m}\pm 10\%$
Sensor		SGS	-	
Resolution		0.3	0.1	nm
Linearity		0.25	-	%F.S.
Repeatability		0.16	-	%F.S.
Pitch/yaw/roll		<10	<10	$\mu\text{rad}$
Load capacity		200	200	g
Closed-loop unloaded response		20	20	ms $\pm 20\%$
Unloaded resonant frequency		3.6	3.6	kHz $\pm 20\%$
Loaded resonance		1.5 (200g)	1.5 (200g)	kHz $\pm 20\%$
El. capacitance		1.6	1.6	$\mu\text{F}\pm 20\%$
Operating temperature <sup>[1]</sup>		-20~80	-20~80	$^{\circ}\text{C}$
Material		Steel, Al	Steel, Al	ms $\pm 20\%$
Size(L×W×H)		42×42×27	42×42×27	mm
Mass		128.5	128.5	g $\pm 5\%$
Cable length <sup>[2]</sup>		1.5	1.5	m $\pm 10\text{mm}$

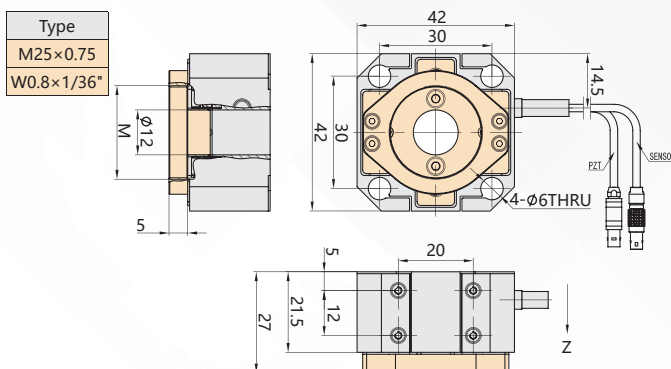
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25 $^{\circ}\text{C}$ .

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

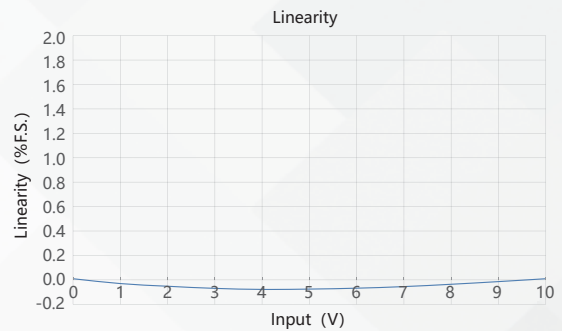
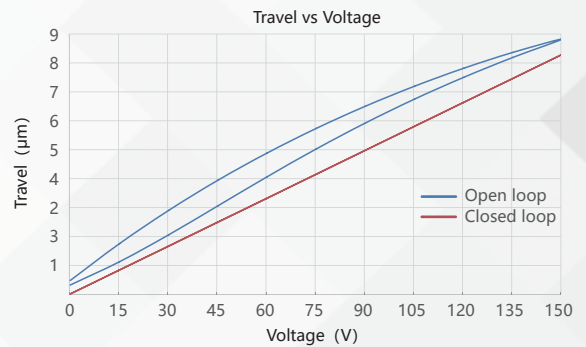
[2] Custom cable length and connector is available.

Note: The parallelism of the moving platform is about 20 $\mu\text{m}$ , 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.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



## 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