

## Z axis | P63.Z8S/K Piezo Nanopositioning Stage



### Introduction

P63.Z8S/K is small-size piezo nanopositioning stage with direct drive mechanism inside. Its important characteristics are ultra-precision and very small size, which is very easy to integrate into any scanning instrument.

#### Characteristics >>

- Active axis Z
- Travel range: 8 $\mu$ m
- Load to 0.5kg
- Open/closed loop
- Optional UHV version

#### Applications >>

- Nano-imprinting
- Nanoscale
- Biotechnology
- Nanometer lithography
- Optical fiber end face detection
- Micro manipulation
- Semiconductor technology
- Micro machining/precision control



**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	P63.Z8S	P63.Z8K	Units
Active axis		Z	Z	
Travel range(0~120V)		6	6	$\mu\text{m}\pm 10\%$
Travel range(0~150V)		8	8	$\mu\text{m}\pm 10\%$
Sensor		SGS	-	
Resolution		0.2	0.1	nm
Closed-loop linearity		1	-	%F.S.
Repeatability		0.25	-	%F.S.
Pitch/yaw/roll		<15	<15	$\mu\text{rad}$
Unloaded resonant frequency		1	1	$\text{kHz}\pm 20\%$
Unloaded Step time		8	0.5	$\text{ms}\pm 20\%$
Load capacity		0.5	0.5	kg
El. capacitance		0.8	0.8	$\mu\text{F}\pm 20\%$
Operating temperature <sup>[1]</sup>		-20~80	-20~80	$^{\circ}\text{C}$
Material		Aluminum	Aluminum	
Size(L×W×H)		40×40×24	40×40×24	mm
Cable length <sup>[2]</sup>		1.5	1.5	$\text{m}\pm 10\text{mm}$
Mass		112	112	$\text{g}\pm 5\%$

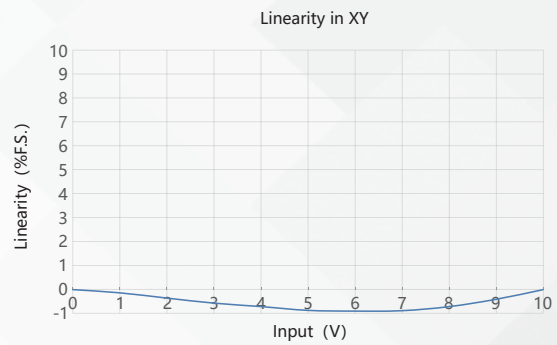
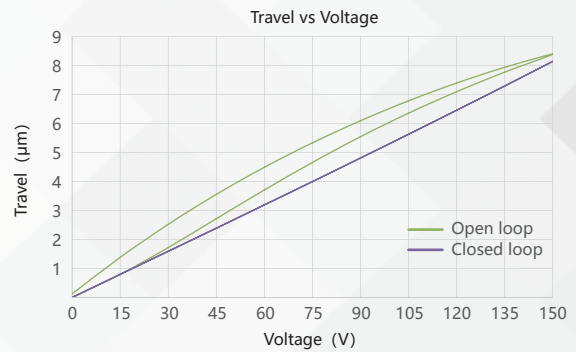
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25°C.

[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.

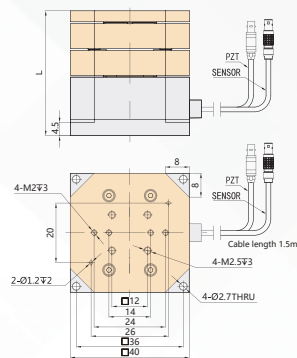
### Curves >>



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

### Drawing >>

Type	L(mm)
P63.Z8	24



### 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