

# XZ axes | P18.XZ200S/K

## Piezo Nanopositioning Stage



### Characteristics >>

- Active axes XZ
- Stroke to 200 $\mu$ m/axis
- Load to 1kg
- Aperture:  $\varnothing$ 35mm
- Fast response time

### Applications >>

- Scanning microscopy
- Surface inspection
- Optical metrology
- Quality assurance testing
- Image processing and stabilization
- Interference/metering
- Semiconductor measurement

## Introduction

P18.XZ200 is XZ axes motion piezo linear scanner, it adopts amplified mechanism and built-in high-reliability piezo actuators, which could realize high-speed scanning up to 200 $\mu$ m. The aperture is  $\varnothing$ 35mm, and various displacements and specifications are available for selection. It is suitable for long-travel multi-dimensional scanning applications.



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## Technical Data >>

Type	S-Closed loop K-Open loop	P18.XZ200S	P18.XZ200K	Units
Active axis		XZ	XZ	
Driving channels		2	2	
Travel range(0~120V)		160/axis	160/axis	$\mu\text{m}\pm 10\%$
Travel range(0~150V)		200/axis	200/axis	$\mu\text{m}\pm 10\%$
Sensor		SGS	-	
Aperture		$\varnothing 35$	$\varnothing 35$	mm
Resolution		7	2	nm
Closed-loop linearity		0.2	-	%F.S.
Repeatability		0.15	-	%F.S.
Pitch/yaw/roll		<20	<20	$\mu\text{rad}$
Push/pull force capacity		30/10	30/10	N
Stiffness		0.3	0.3	$\text{N}/\mu\text{m}\pm 20\%$
Unloaded resonant frequency		X200/Z300	X200/Z300	$\text{Hz}\pm 20\%$
Unloaded Step time		50	5	$\text{ms}\pm 20\%$
Load capacity		1	1	kg
El. capacitance		11/axis	11/axis	$\mu\text{F}\pm 20\%$
Operating temperature <sup>[1]</sup>		-20~80	-20~80	$^{\circ}\text{C}$
Material		Aluminum	Aluminum	
Size(L×W×H)		100×100×43	100×100×43	mm
Mass		550	550	$\text{g}\pm 5\%$
Cable length <sup>[2]</sup>		1.5	1.5	$\text{m}\pm 10\text{mm}$
Sensor/voltage connector <sup>[2]</sup>		-	-	

Note: 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.

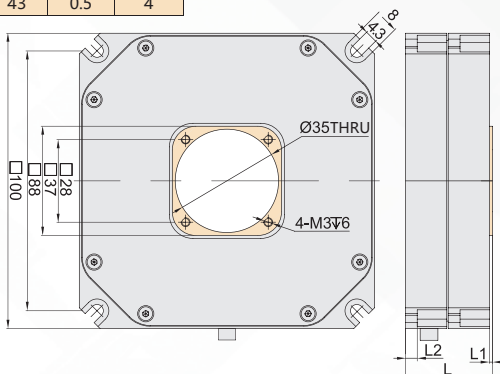
[1] Custom ultralow temperature and ultrahigh vacuum versions are available.

[2] Custom cable length and connector is available.

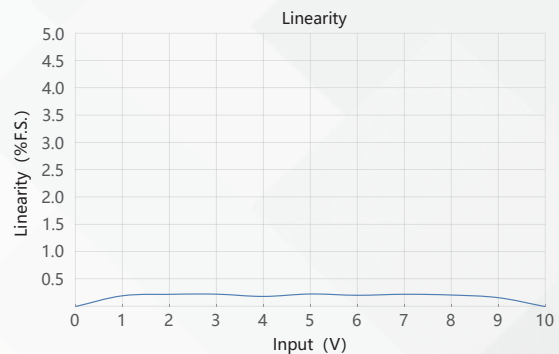
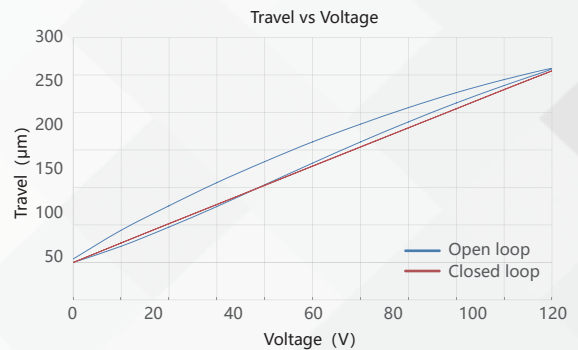
Note: The parallelism of the moving platform is about 20 $\mu\text{m}$ , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

## Drawing >>

Type	L(mm)	L1(mm)	L2(mm)
P18.XZ	43	0.5	4



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



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