

# XY axes | P66.XY60S/K

## Piezo Nanopositioning Stage



### Characteristics >>

- Active axes X
- Travel range to 60 $\mu$ m
- Max load to 4kg
- Fast response time
- Open/closed loop

### Applications >>

- Metering
- Nanometer positioning
- semiconductor technology
- Micro machining/precision control
- Interference / scanning
- CD disc test
- Quality assurance testing

## Introduction

P66.XY60 is a piezo nanopositioning stage with XY motion using direct-drive mechanism. It is nanopositioning system combining piezo and flexible hinges, which could reach millisecond response time, sub-nano accuracy, and optional highprecision sensors for closed-loop control. It is ideal for positioning applications such as optical path length correction in interference, sample positioning in microscopy or scanning applications, etc.



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## Technical Data >>

Type	S-Closed loop K-Open loop	P66.XY60S	P66.XY60K	Units
Active axis		XY	XY	
Travel range(0~120V)		48/axis	48/axis	$\mu\text{m}\pm 10\%$
Travel range(0~150V)		60/axis	60/axis	$\mu\text{m}\pm 10\%$
Sensor		SGS	-	
Resolution		2	0.5	nm
Closed-loop linearity		0.15	-	%F.S.
Repeatability		0.1	-	%F.S.
Pitch/yaw/roll		<20	<20	$\mu\text{rad}$
Push/pull force capacity		120/12	120/12	N
Stiffness		2.1	2.1	$\text{N}/\mu\text{m}\pm 20\%$
Unloaded resonant frequency		X0.9/Y1.2	X0.9/Y1.2	$\text{kHz}\pm 20\%$
Unloaded Step time		20	1.6	$\text{ms}\pm 20\%$
Load capacity		4	4	kg
El. capacitance		7.2/axis	7.2/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)		100×100×39	100×100×39	mm
Mass		450	450	$\text{g}\pm 5\%$
Cable length <sup>[2]</sup>		1.5	1.5	$\text{m}\pm 10\text{mm}$

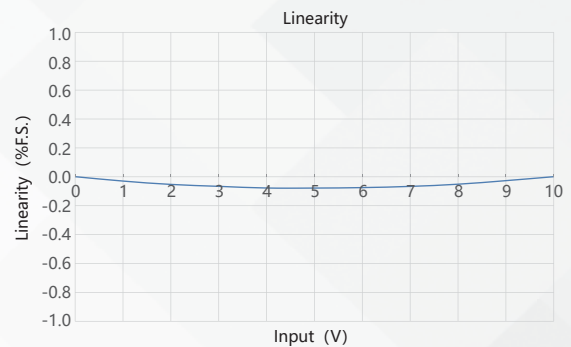
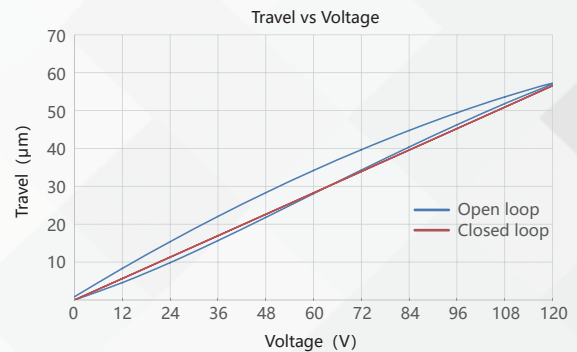
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25°C.

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

[2] Custom cable length and connector is available.

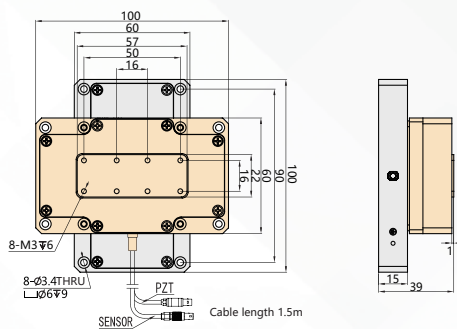
Note: The parallelism of the moving platform is about 20 $\mu\text{m}$ , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

## Curves >>



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

## Drawing >>



## Recommended Controllers >>



**E01.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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