

XY axes | P66.XY30S/K

Piezo Nanopositioning Stage



Characteristics >>

- Active axes XY
- Travel range to 30 μ m/axis
- Max load to 5kg
- 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.XY30 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.XY30S	P66.XY30K	Units
Active axis		XY	XY	
Travel range(0~120V)		24/axis	24/axis	$\mu\text{m} \pm 10\%$
Travel range(0~150V)		30/axis	30/axis	$\mu\text{m} \pm 10\%$
Sensor		SGS	-	
Resolution		1	0.5	nm
Closed-loop linearity		0.1	-	%F.S.
Repeatability		0.08	-	%F.S.
Pitch/yaw/roll		<15	<15	μrad
Push/pull force capacity		100/15	100/15	N
Stiffness		3.3	3.3	$\text{N}/\mu\text{m} \pm 20\%$
Unloaded resonant frequency		X0.9/Y1.6	X0.9/Y1.6	$\text{kHz} \pm 20\%$
Unloaded Step time		8	0.8	$\text{ms} \pm 20\%$
Load capacity		5	5	kg
El. capacitance		3.6/axis	3.6/axis	$\mu\text{F} \pm 20\%$
Operating temperature ^[1]		-20~80	-20~80	$^{\circ}\text{C}$
Material		Aluminum	Aluminum	
Size(L×W×H)		60×60×32	60×60×32	mm
Mass		260	260	$\text{g} \pm 5\%$
Cable length ^[2]		1.5	1.5	$\text{m} \pm 10\text{mm}$
Sensor/voltage connector ^[2]		-	-	

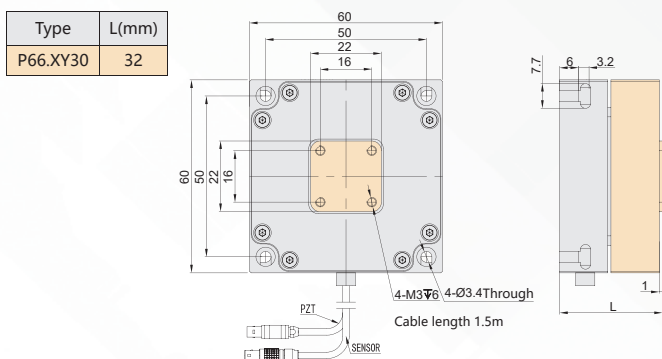
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25°C.

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

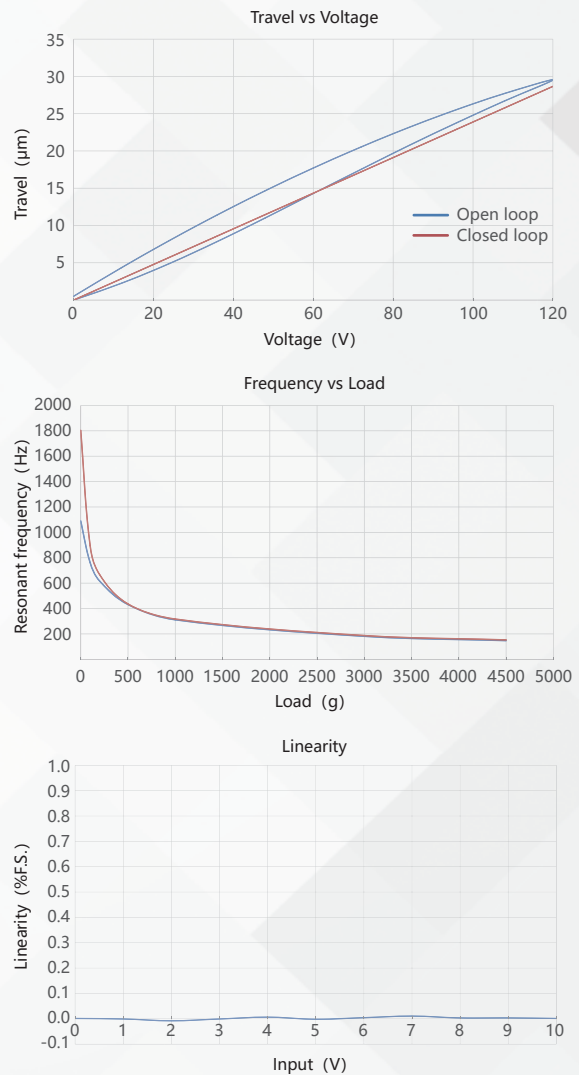
[2] Custom cable length and connector is available.

Note: The parallelism of the moving platform is about 20 μm , 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.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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