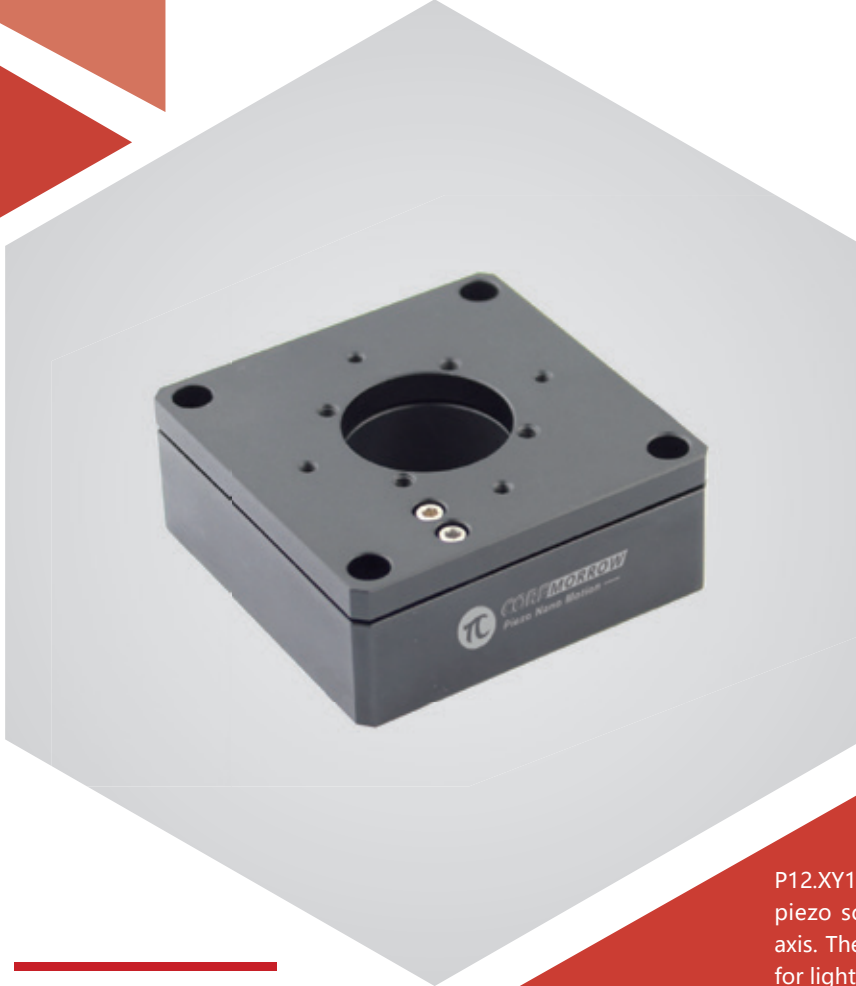


# XY axes | P12.XY100S/K

## Aperture Ø25mm | Piezo Nanopositioning Stages



## Introduction

P12.XY100 is XY axes motion piezo scanning stage. The piezo scanner could realize displacement of 100µm/axis. The aperture diameter as 25mm, which is suitable for lighttransmitted applications such as microscopy.

### Characteristics >>

- X, Y motion
- Travel to 100µm/axis
- Load capacity to 0.7kg
- Optional UHV compatible version
- Closed-loop version for high repeatability

### Applications >>

- Scanning interference
- Surface measurement
- Optical capture
- Confocal microscopy
- Wafer positioning
- Image processing and stabilization



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## Technical Data >>

Type	S-Closed loop K-Open loop	P12.XY100S	P12.XY100K	Units
Active axes		X, Y	X, Y	
Travel range(0~120V)		80/axis	80/axis	$\mu\text{m}\pm 10\%$
Travel range(0~150V)		100/axis	100/axis	$\mu\text{m}\pm 10\%$
Sensor		SGS	-	
Aperture		$\varnothing 25$	$\varnothing 25$	mm
Closed/open loop resolution		3	1	nm
Linearity		0.1	-	%F.S.
Repeatability		0.05	-	%F.S.
Pitch/yaw/roll		<10	<10	$\mu\text{rad}$
Push/pull force		25/8	25/8	N
Stiffness		X0.25/Y0.3	X0.25/Y0.3	N/ $\mu\text{m}\pm 20\%$
Unloaded resonant frequency		X180/Y230	X180/Y230	Hz $\pm 20\%$
Closed/open-loop unloaded step time		15	0.8	ms $\pm 20\%$
Closed-loop operating frequency (-3dB)		50(unloaded)		Hz $\pm 20\%$
Load capacity		0.7	0.7	kg
El. capacitance		1.8/axis	1.8/axis	$\mu\text{F}\pm 20\%$
Operating temperature <sup>[1]</sup>		-20~80	-20~80	$^{\circ}\text{C}$
Material		Steel, Al	Steel, Al	
Size(L×W×H)		60×60×24	60×60×24	mm
Mass		200	200	g $\pm 5\%$
Cable length <sup>[2]</sup>		1.5	1.5	m $\pm 10\text{mm}$
Connector <sup>[2]</sup>		-	-	

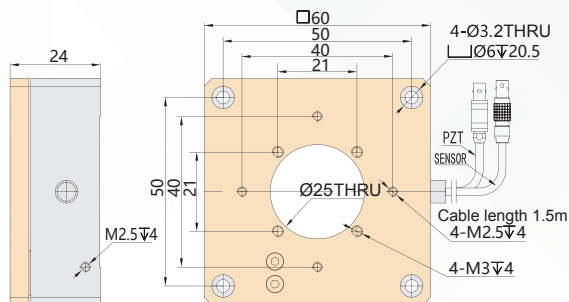
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25 $^{\circ}\text{C}$ .

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

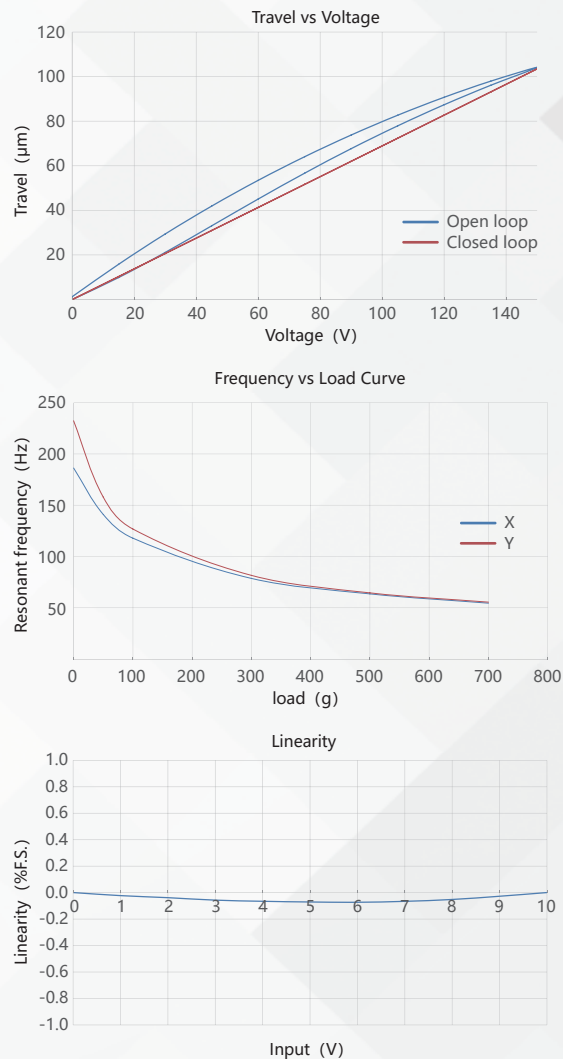
[2] Custom cable length and connector is available.

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.D3**  
 LCD, membrane button, up to 625mA  
 RS-232/RS-422/USB interface  
 Software secondary development



**E70**  
 Small size, 70mA  
 RS-232/RS-422/USB interface  
 Software secondary development



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