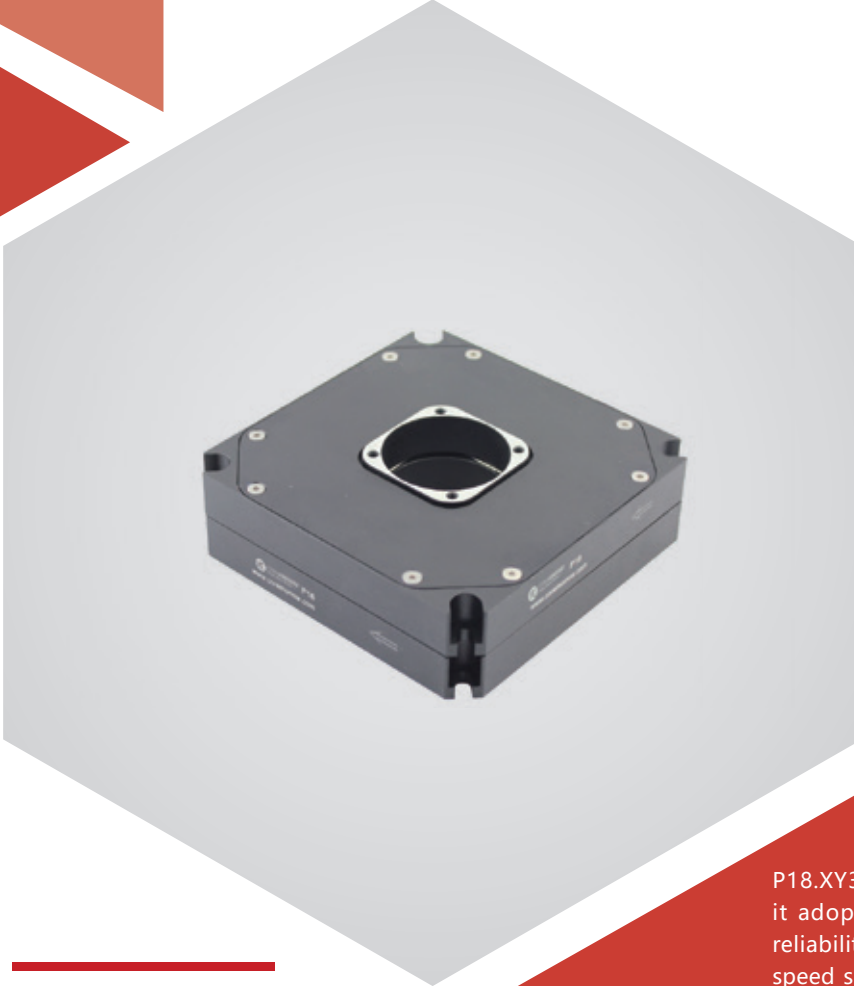


XY axes | P18.XY300S/K

Piezo Nanopositioning Stage



Characteristics >>

- Active axes XY
- Stroke to $\pm 187.5\mu\text{m}/\text{axis}$
- Load to 3kg
- Aperture: $\varnothing 35\text{mm}$
- Fast response time

Applications >>

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

Introduction

P18.XY300 is XY axes motion piezo linear scanner, it adopts amplified mechanism and built-in high-reliability piezo actuators, which could realize high-speed scanning up to $\pm 187.5\mu\text{m}/\text{axis}$. The aperture is $\varnothing 35\text{mm}$, 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.XY300S	P18.XY300K	Units
Active axis		XY	XY	
Driving channels		3	3	
Travel range(0~120V)		±150/axis	±150/axis	μm±10%
Travel range(0~150V)		±187.5/axis	±187.5/axis	μm±10%
Sensor		SGS	-	
Aperture		Ø35	Ø35	mm
Resolution		10	3	nm
Closed-loop linearity		0.2	-	%F.S.
Repeatability		0.15	-	%F.S.
Pitch/yaw/roll		<15	<15	μrad
Push/pull force capacity		150/150	150/150	N
Stiffness		0.5	0.5	N/μm±20%
Unloaded resonant frequency		X250/Y500	X250/Y500	Hz±20%
Unloaded Step time		50	10	ms±20%
Closed-loop operating frequency (-3dB)		10(@30g load)		Hz±20%
Load capacity		3	3	kg
El. capacitance		21.6/axis	21.6/axis	μF±20%
Operating temperature ^[1]		-20~80	-20~80	°C
Material		Aluminum	Aluminum	
Size(L×W×H)		100×100×29.5	100×100×29.5	mm
Mass		380	380	g±5%
Cable length ^[2]		1.5	1.5	m±10mm
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.

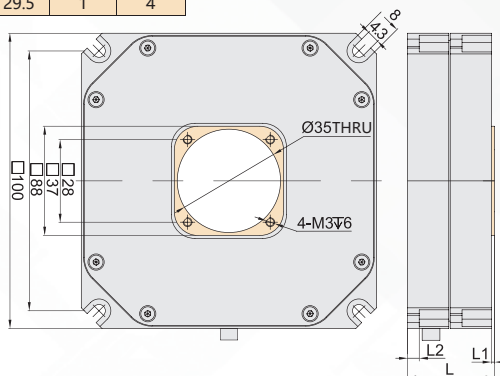
[1] Custom ultralow temperature and ultrahigh vacuum versions are available.

[2] Custom cable length and connector is available.

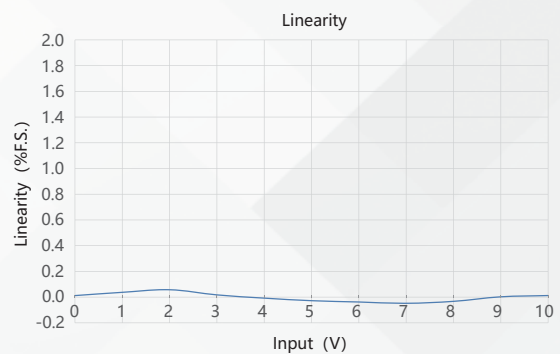
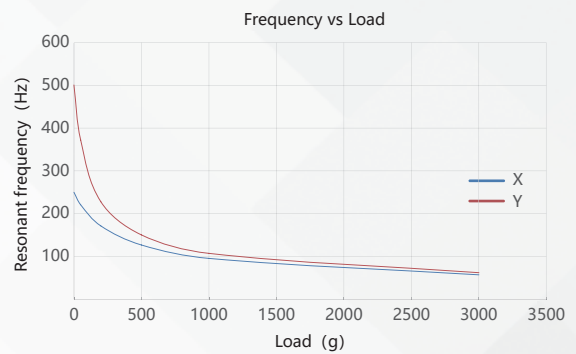
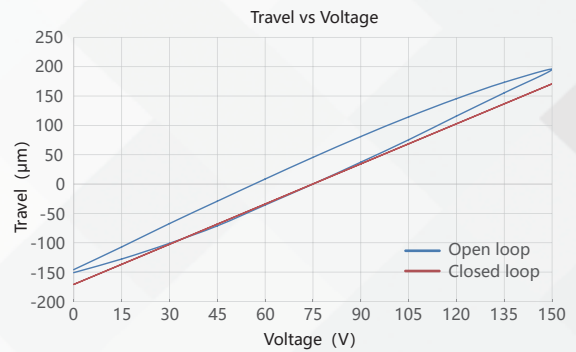
Note: The parallelism of the moving platform is about 20μm, and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

Drawing >>

Type	L(mm)	L1(mm)	L2(mm)
P18.XY	29.5	1	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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