

X axis | P11.X200S/K

Piezo Nanopositioning Stages



Characteristics >>

- X motion
- Travel to 200 μ m
- Small size
- Fast response time
- Vacuum version available

Applications >>

- Laser interference
- Nano-measurement
- Nano imprint
- Scanning microscope
- Quality assurance test
- Micromachining / precision control
- Biotechnology
- Nanopositioning

Introduction

P11.X/Z200 is a small-volume 1 axis piezo nanopositioning stage, its travel range can reach 200 μ m, the movement direction can be chosen X direction or Z direction, and a closed-loop feedback sensor can be selected to obtain higher precision. Custom low temperature vacuum versions are available.



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Technical Data >>

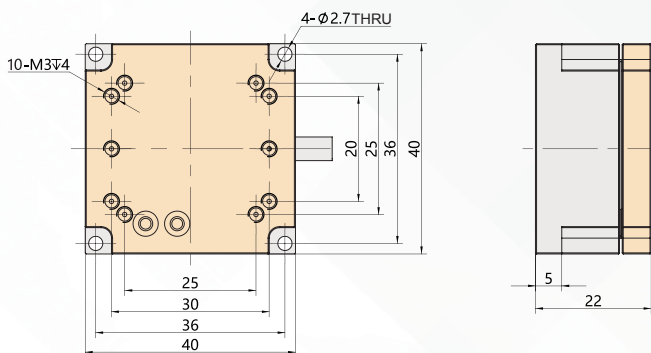
Type	S-Closed loop K-Open loop	P11.X200S	P11.X200K	Units
Active axes		X	X	
Travel range(0~120V)		160	160	$\mu\text{m}\pm 20\%$
Travel range(0~150V)		200	200	$\mu\text{m}\pm 20\%$
Sensor		SGS	-	
Closed/open loop resolution		10	4	nm
Linearity		0.05	-	%F.S.
Repeatability		0.02	-	%F.S.
Pitch/yaw/roll		<20	<20	μrad
Vacuum compatible		10^{-4}	10^{-4}	Pa
Unloaded resonant frequency		0.3	-	$\text{kHz}\pm 20\%$
Closed/open-loop unloaded step time		20	0.8	$\text{ms}\pm 20\%$
Load capacity		0.5	0.5	kg
El. capacitance		3.6	3.6	$\mu\text{F}\pm 20\%$
Operating temperature ^[1]		-20~80	-20~80	$^{\circ}\text{C}$
Material		Steel, Al	Steel, Al	
Size(L×W×H)		40×40×22	40×40×22	mm
Cable length ^[2]		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 μm , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

Drawing >>

Recommended Controllers >>


E01.D1
 LCD, membrane button, up to 625mA
 RS-232/RS-422/USB interface
 Software secondary development



E53
 Small size, 60mA
 RS-232/RS-422/USB interface
 Software secondary development



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