

X axis | P92.X25S/K

Fast Tool Positioning Stages



Introduction

P92.X25S/K fast tool positioning stage is a fast tool microfeed stage designed for ultra-precision turning. It adopts direct-driving structure, features large load capacity, high frequency, and optional capacitive sensor with nano-scale positioning accuracy.

Characteristics >>

- Active axes X
- Open loop resolution 0.5nm
- Travel range to 22 μ m@120V
- Optional sensor
- Direct drive

Applications >>

- Diamond micro-feeding
- Precision processing
- High-speed tool control
- Workpiece positioning
- Light guide plate mold processing
- FTS fast tool servo turning system
- Precision machining and grinding
- Optical element processing
- Precise positioning of Large load workpiece



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Technical Data >>

Type	S-Closed loop K-Open loop	P92.X25S	P92.X25K	Units
Active axis		X	X	
Travel range (0~120V)		22	22	$\mu\text{m}\pm 10\%$
Travel range (0~150V)		28	28	$\mu\text{m}\pm 10\%$
Integrated sensor		SGS	-	
Resolution		1	0.5	nm
Unloaded resonant frequency		5000	5000	$\text{Hz}\pm 20\%$
Unloaded step time		0.3	0.3	ms
Stiffness		50	50	$\text{N}/\mu\text{m}\pm 20\%$
Blocking force		1000	1000	N
El. capacitance		7.2	7.2	$\mu\text{F}\pm 10\%$
Size(L×W×H)		99×80×25	99×80×25	mm
Mass		1080	1080	$\text{g}\pm 5\%$
Operating temperature ^[1]		-25~+80	-25~+80	°C
Material		Aluminium, steel	Aluminium, steel	
Cable length ^[2]		1.5m or longer	1.5m or longer	$\text{m}\pm 10\text{mm}$

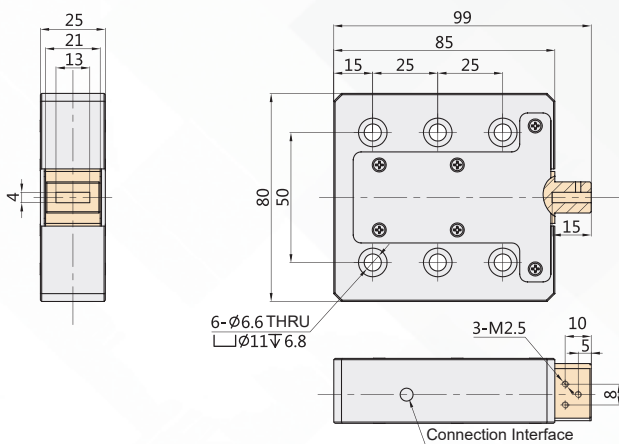
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25° C.

[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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