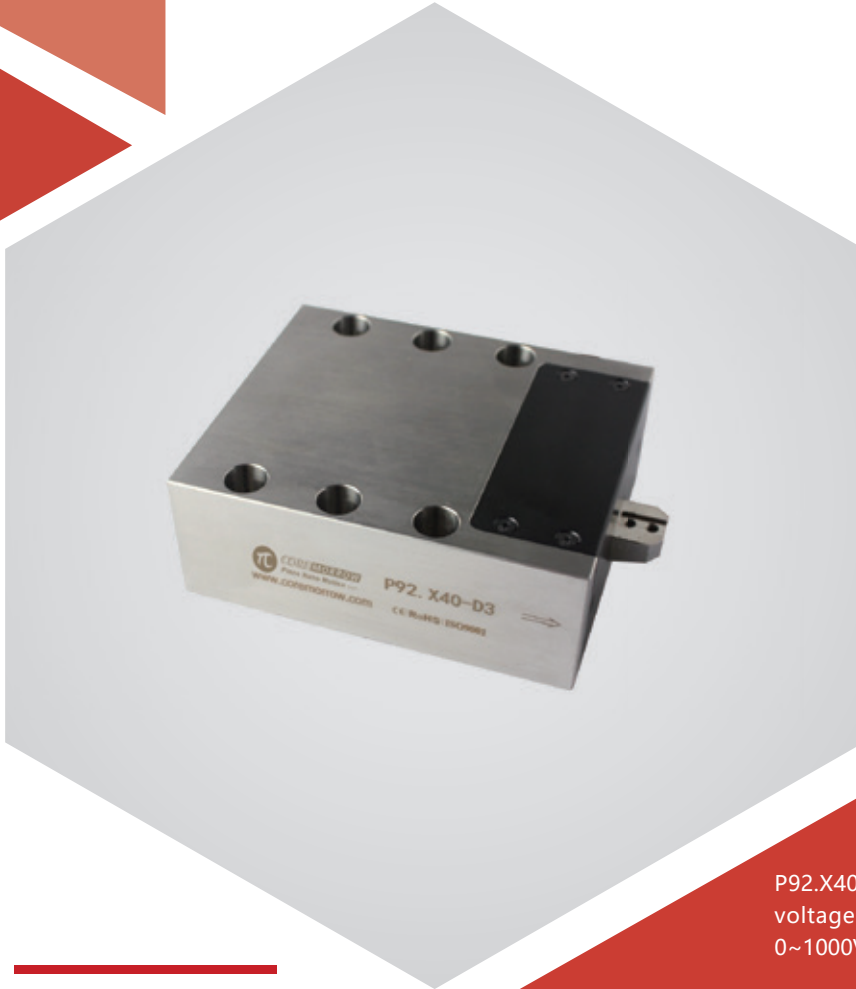


X axis | P92.X40S/K

Fast Tool Positioning Stages



Introduction

P92.X40 fast tool positioning stage is driven by high-voltage piezoelectric actuator, the driving voltage is 0~1000V, and the blocking force can reach 3000N.

Characteristics >>

- Active axes X
- Travel range to 40 μ m
- Driving voltage 0~1000V
- Blocking force to 3000N
- Closed loop resolution to 10nm

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.X40S	P92.X40K	Units
Active axis		X	X	
Travel range(0~800V)		32	32	$\mu\text{m}\pm 10\%$
Travel range(0~1000V)		40	40	$\mu\text{m}\pm 10\%$
Integrated sensor		SGS	-	
Lag phase(1 $\mu\text{m}/1\text{Khz}$)		<20	<20	$^\circ \pm 20\%$
Lag phase(5 $\mu\text{m}/500\text{hz}$)		<10	<10	$^\circ \pm 20\%$
Push force		3000	3000	N
Stiffness		100	100	$\text{N}/\mu\text{m}\pm 20\%$
Unloaded resonant frequency		3975	3975	$\text{Hz}\pm 20\%$
Resolution		1.5	0.5	nm
Closed-loop linearity		<0.1	-	%F.S.
Repeatability		<0.1	-	%F.S.
Load capacity		-	-	kg
El. capacitance		0.54	0.54	$\mu\text{F}\pm 20\%$
Operating temperature ^[1]		10~50	10~50	$^\circ\text{C}$
Material		Steel	Steel,	
Mass		2780	2780	$\text{g}\pm 5\%$
Cable length		1.5		$\text{m}\pm 10\text{mm}$
Sensor/voltage connector ^[2]		-	-	

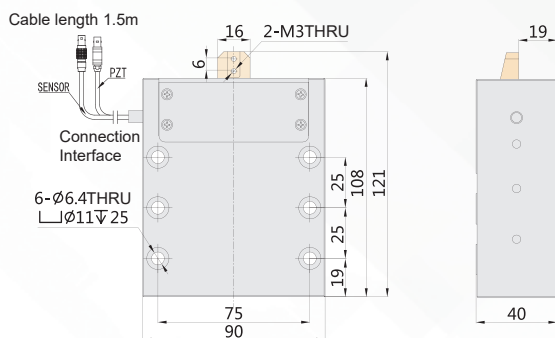
Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25 $^\circ\text{C}$.

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

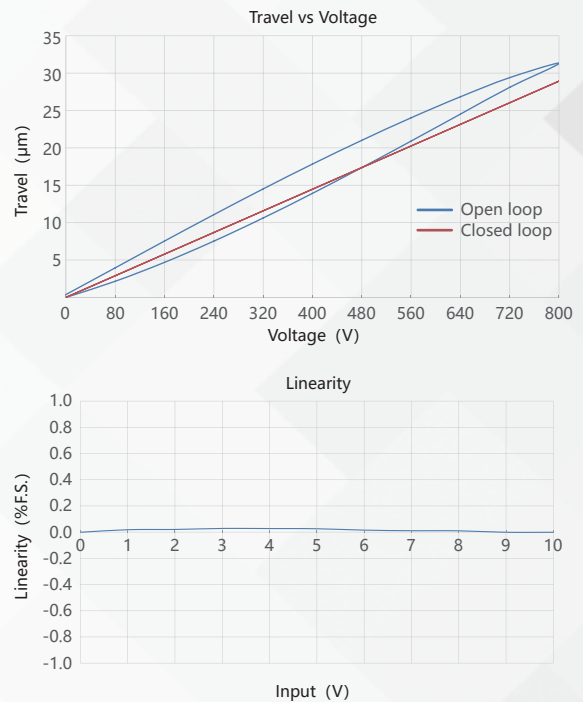
[2] Custom connector is available.

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.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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