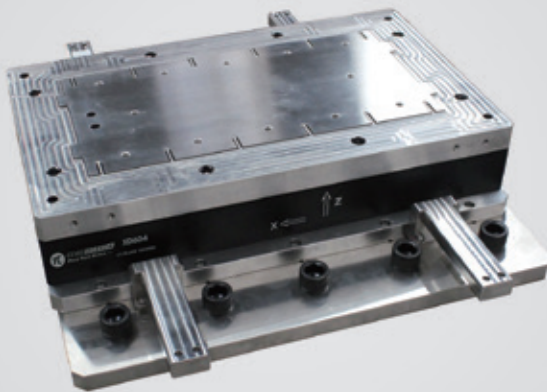


XZ axes | XD604.XZ8S/K

Piezo Nanopositioning Stages



Introduction

The XD604 large-load piezoelectric nanometer positioning platform has a carrying capacity of up to 80kg and can produce XZ two-dimensional motion with a single-axis stroke of 8 μ m/axis.

Characteristics >>

- X, Z motion
- 8 μ m/axis travel
- Load capacity up to 80kg
- 0~1000V drive

Applications >>

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



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Technical Data >>

Type	S-Closed loop K-Open loop	XD604.XZ8S	XD604.XZ8K	Units
Active axes		X, Z	X, Z	
Travel range in X(0~1000V)		8	8	$\mu\text{m}\pm 10\%$
Travel range in Z(0~1000V)		8	8	$\mu\text{m}\pm 10\%$
Sensor		SGS	-	
Resolution		0.5	0.1	nm
Linearity		0.19	0.19	%F.S.
Repeatability		0.13	0.13	%F.S.
Unloaded resonant frequency		560	560	Hz $\pm 20\%$
Resonant frequency@80kg load		340	340	Hz $\pm 20\%$
Resonant frequency@80kg load & 200nm travel		20	20	Hz $\pm 20\%$
Load step time		15	< 10	ms $\pm 20\%$
Load capacity		80	80	kg
El. capacitance		X0.44/Z1.33	X0.44/Z1.33	$\mu\text{F}\pm 20\%$
Operating temperature ^[1]		-40~+80	-40~+80	$^{\circ}\text{C}$
Material		Steel, Al	Steel, Al	
Mass		63	63	kg $\pm 5\%$
Size(L×W×H)		500×340×105	500×340×105	mm
Cable length ^[2]		1.5	1.5	m $\pm 10\text{mm}$
Connector ^[2]		-	-	

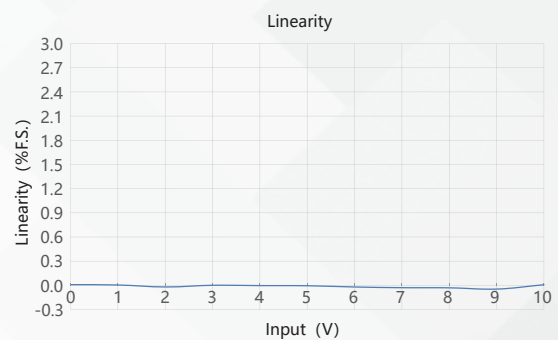
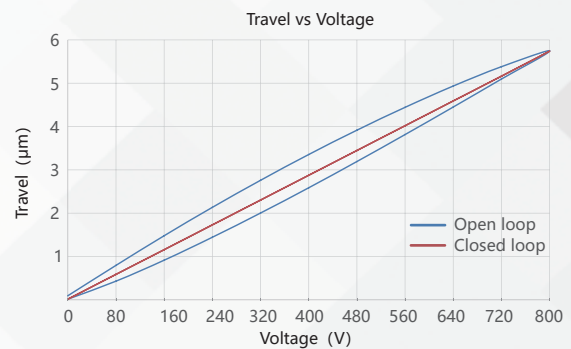
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25 $^{\circ}\text{C}$.

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

[2] Custom cable length and connector is available.

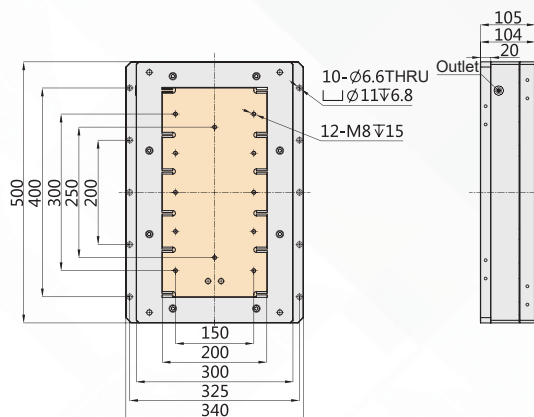
Note: The parallelism of the moving platform is about 20 μm , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

Curves >>



Disclaimer: The data here are typical, only for reference. Some variations will occur for different batch.

Drawing >>



Recommended Controllers >>



E01.D3

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



E70

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



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