

X axis | XP-630.XS/K

Piezo Nanopositioning Stage



Characteristics >>

- Active axes X
- Max stroke to 15µm
- Load to 5kg
- Fast response time
- Repeatability 0.05%F.S.

Applications >>

- Biotechnology
- Precision positioning
- Nanometer positioning
- Fiber optic positioning/optical scanning
- Microimaging
- Micro machining/precision control
- Semiconductor technology
- Interferometry/scanning microscopy

Introduction

XP-630.X piezo nanopositioning stage adopts frictionless flexible hinge guiding mechanism and has the characteristics of high rigidity, high resolution and fast response time. XY, XYZ versions could be available through adapter.



Harbin Core Tomorrow Science & Technology Co., Ltd.

Tel: +86-451-86268790

Email: info@coremorrow.com

Headquarters: Building I2, No.191 Xuefu Road, Nangang District, Harbin

Fax: +86-451-86267847

Web: www.coremorrow.com

Shanghai Office: Building 2, No.608 Shengxia Road, Pudong District, Shanghai

Technical Data >>

Type	S-Closed loop K-Open loop	XP-630.XS	XP-630.XK	Units
Active axis		X	X	
Travel range(0~120V)		12	12	$\mu\text{m}\pm 10\%$
Travel range(0~150V)		15	15	$\mu\text{m}\pm 10\%$
Sensor		SGS	-	
Resolution		0.5	0.1	nm
Closed-loop linearity		0.1	-	%F.S.
Repeatability		0.05	-	%F.S.
Pitch/yaw/roll		<20	<20	μrad
Push/pull force capacity		480/80	480/80	N
Stiffness		40	40	$\text{N}/\mu\text{m}\pm 20\%$
Unloaded resonant frequency		3.2	3.2	$\text{kHz}\pm 20\%$
Unloaded Step time		1.5	0.8	$\text{ms}\pm 20\%$
Load capacity		5	5	kg
El. capacitance		1.8	1.8	$\mu\text{F}\pm 20\%$
Operating temperature ^[1]		-20~80	-20~80	$^{\circ}\text{C}$
Material		Aluminum	Aluminum	
Size(L×W×H)		60×45×18	60×45×18	mm
Mass		150	150	$\text{g}\pm 5\%$
Cable length ^[2]		1.5	1.5	$\text{m}\pm 10\text{mm}$
Sensor/voltage connector ^[2]		LEMO	LEMO	

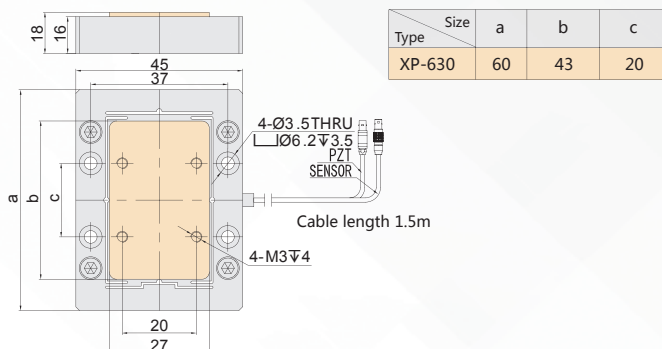
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25° C.

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

[2] Custom cable length and connector is available.

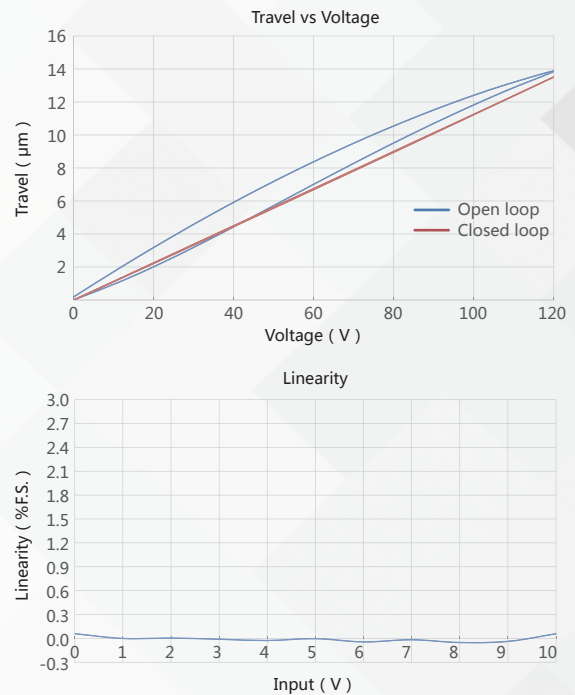
Note: The parallelism of the moving platform is about 20 μm , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

Drawing >>



Note: XP-63X.XY/XP-63X.XYZ, drawings, please refer to CoreMorrow website or consult sales engineer.

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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