

X axis | XP-633.XS/K

Piezo Nanopositioning Stage



Characteristics >>

- Active axes X
- Max stroke to 60µm
- Load to 5kg
- Fast response time
- Repeatability 0.1%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-633.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.



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Technical Data >>

| Type | S-Closed loop K-Open loop | XP-633.XS | XP-633.XK | Units |
|---|------------------------------|-----------|-----------|----------|
| Active axis | | X | X | |
| Travel range(0~120V) | | 48 | 48 | μm±10% |
| Travel range(0~150V) | | 60 | 60 | μm±10% |
| Sensor | | SGS | - | |
| Resolution | | 2 | 0.3 | nm |
| Closed-loop linearity | | 0.15 | - | %F.S. |
| Repeatability | | 0.1 | - | %F.S. |
| Pitch/yaw/roll | | <30 | <30 | μrad |
| Push/pull force capacity | | 480/80 | 480/80 | N |
| Stiffness | | 10 | 10 | N/μm±20% |
| Unloaded resonant frequency | | 1.5 | 1.5 | kHz±20% |
| Unloaded Step time | | 5 | 3.2 | ms±20% |
| Load capacity | | 5 | 5 | kg |
| El. capacitance | | 7.2 | 7.2 | μF±20% |
| Operating temperature ^[1] | | -20~80 | -20~80 | °C |
| Material | | Aluminum | Aluminum | |
| Size(L×W×H) | | 114×45×18 | 114×45×18 | mm |
| Mass | | 450 | 450 | g±5% |
| Cable length ^[2] | | 1.5 | 1.5 | m±10mm |
| Sensor/voltage connector ^[2] | | LEMO | LEMO | |

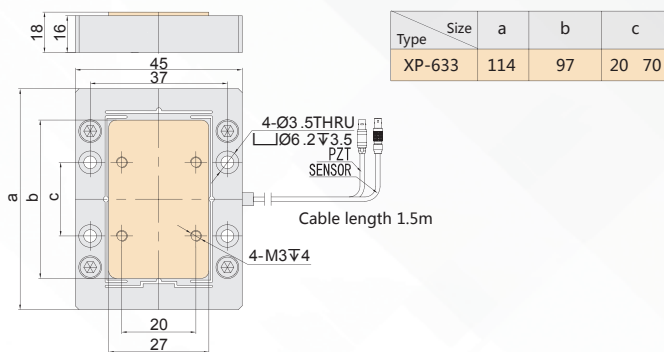
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25° C.

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

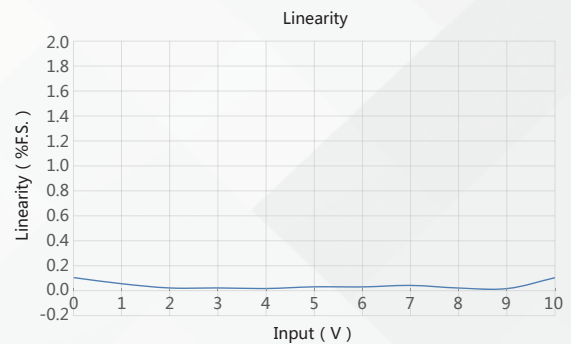
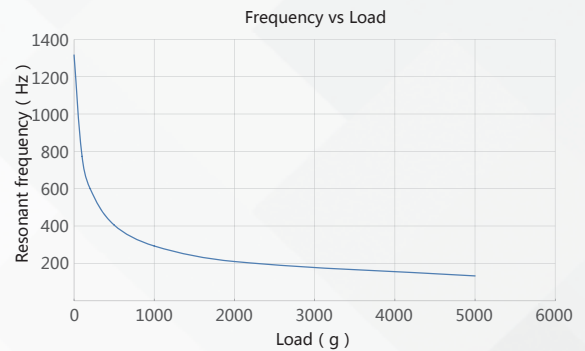
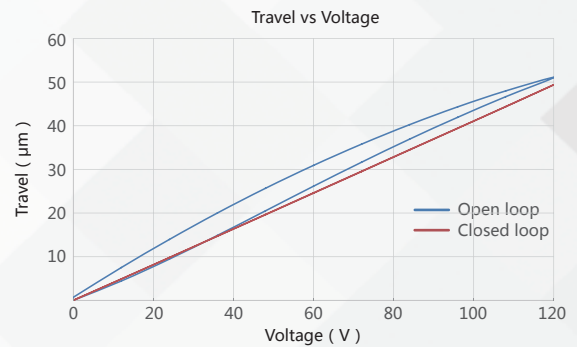
[2] Custom cable length and connector is available.

Note: The parallelism of the moving platform is about 20μm, 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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