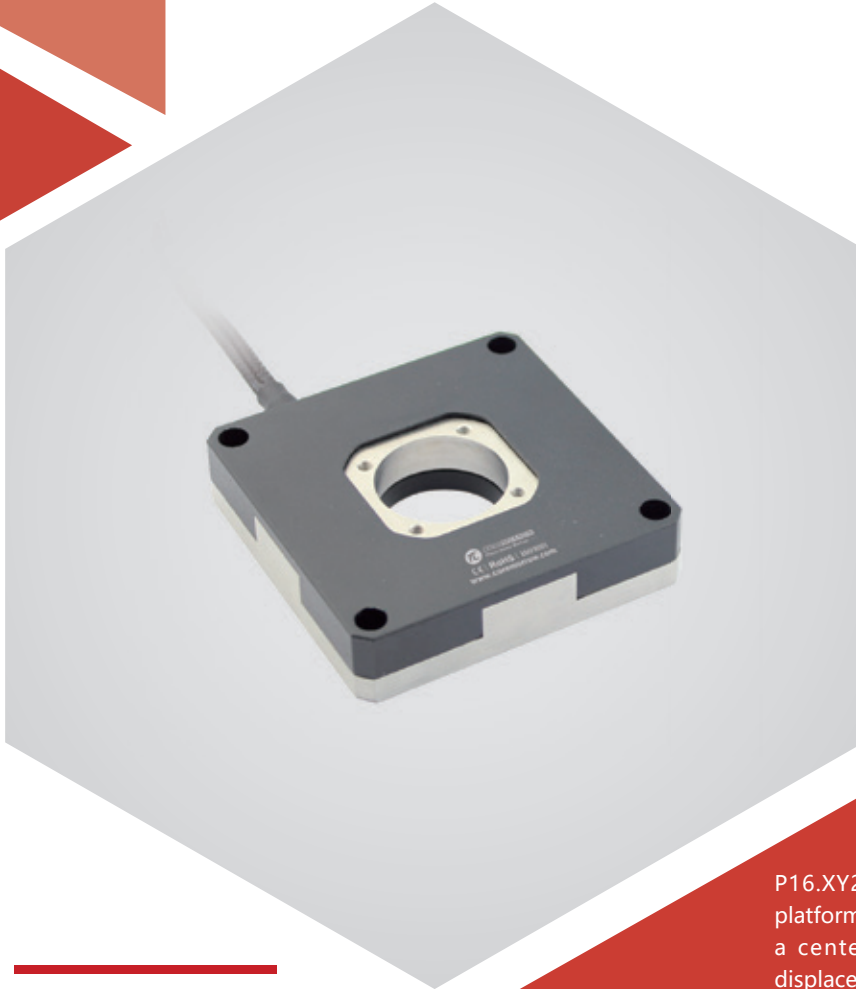


XY axis | P16.XY20S/K

Piezo Nanopositioning Scanner



Introduction

P16.XY20 piezo scanner is an XY motion scanning platform, adopting amplification mechanism. It features a center aperture diameter of 26mm and $\pm 8\mu\text{m}$ displacement in X and Y axes.

The product is very compact and easy to integrate.

Characteristics >>

- Motion in XY
- Travel to $\pm 8\mu\text{m}/\text{axis}$
- Load capacity to 1kg
- Aperture of $\varnothing 26\text{mm}$
- Closed-loop version for high accuracy

Applications >>

- Microscopic imaging
- Surface inspection
- Image stability
- Photoelectric aiming pod
- Interference/metering
- Precision positioning



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Technical Data >>

| Type | S-Closed loop K-Open loop | P16.XY20S | P16.XY20K | Units |
|--------------------------------------|------------------------------|-------------|-------------|----------|
| Active axes | | X, Y | X, Y | |
| Driving channels | | 3 | 3 | |
| Travel range (0~100V) | | ±6.6/axis | ±6.6/axis | μm±10% |
| Travel range (0~120V) | | ±8/axis | ±8/axis | μm±10% |
| Sensor | | SGS | - | |
| Aperture | | Ø26 | Ø26 | mm |
| Resolution | | 0.5 | 0.2 | nm |
| Linearity | | 0.3 | - | %F.S. |
| Repeatability | | 0.1 | - | %F.S. |
| Pitch/yaw/roll | | < 10 | < 10 | μrad |
| Push/pull force | | 44/44 | 44/44 | N |
| Unloaded resonant frequency | | X2000/Y2000 | X2000/Y2000 | Hz±20% |
| Stiffness in motion direction | | X2.2/Y2.2 | X2.2/Y2.2 | N/μm±20% |
| Unloaded step time | | 1.5 | 0.7 | ms±20% |
| Load capacity | | 1 | 1 | kg |
| El. capacitance | | 1.6/axis | 1.6/axis | μF±20% |
| Operating temperature ^[1] | | -20~80 | -20~80 | °C |
| Material | | Steel, Al | Steel, Al | |
| Size (L×W×H) | | 70×70×16 | 70×70×16 | mm |
| Mass | | 180 | 180 | g±5% |
| Cable length ^[2] | | 1.5 | 1.5 | m±10mm |

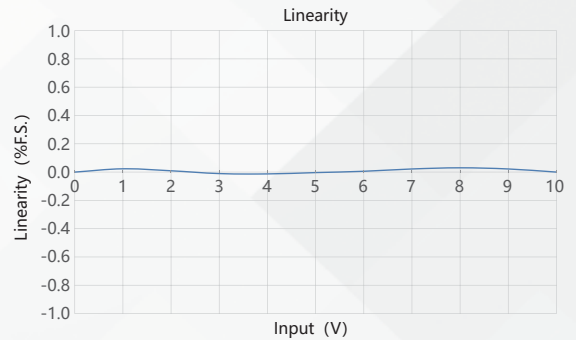
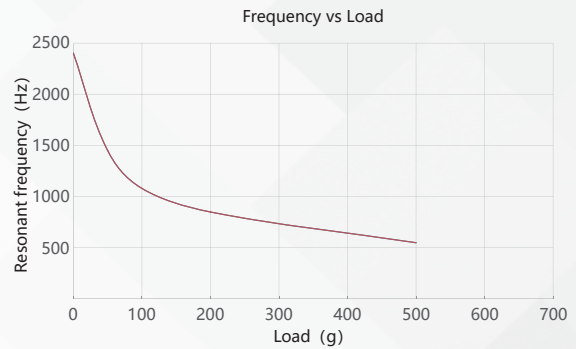
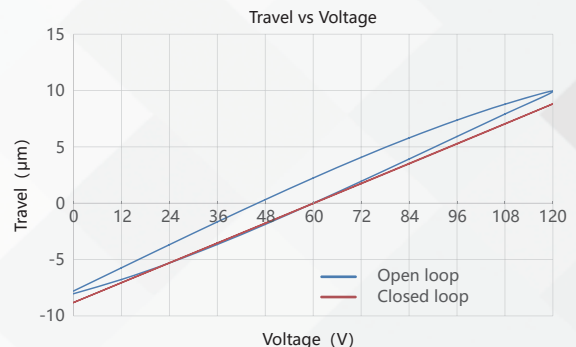
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25° C.

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

[2] Custom cable length and connector is available.

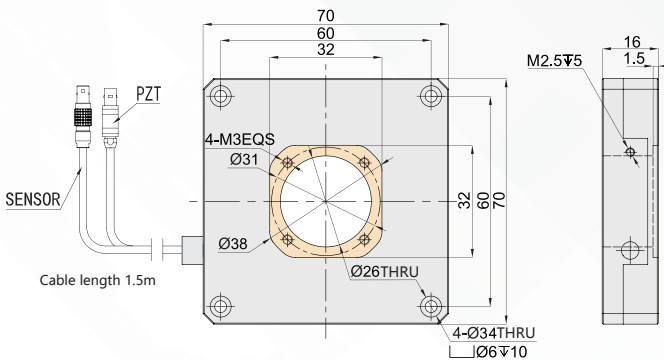
Note: The parallelism of the moving platform is about 20μm, and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

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
RS-232/RS-422/USB interface
Software secondary development



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