

X axis | N31.X6E/K

Linear Piezo Motor



Characteristics >>

- Large blocking force
- Automatic zero position after power-on
- Automatic return after accidental touch for servo version
- Optional grating sensor
- Wear-resistant material, vacuum non-magnetic compatible

Applications >>

- Wafer inspection
- Profilometry
- Nano lithography
- Nanotechnology and metrology
- Microscopy
- Semiconductor technology
- Surface measurement technique
- Motion in strong magnetic fields or vacuum

Introduction

N31.X6E/K linear piezoelectric motor adopts stick-slip principle, and piezo step direct drive. The linear motion range can be to 6mm, and the resolution can reach sub-nanometer level. Optional servo sensors (incremental encoder) is for high positioning accuracy and motion platform are available.



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Technical Data >>

| Type | S-Closed loop K-Open loop | N31.X6E | N31.X6K | Units |
|--------------------------------------|------------------------------|---------------------|--------------|-----------------|
| Active axes | | X | X | |
| Integrated sensor | | Incremental encoder | - | |
| Travel range | | 6 or ± 3 | 6 or ± 3 | mm ± 0.5 mm |
| Speed limit | | 5 | 5 | mm/s |
| Resolution | | < 50 | 1 | nm |
| Linearity | | 1 | - | μ m |
| Repeatability | | 0.5 | - | μ m |
| Push/pull force(Active) | | 30 | 30 | N |
| Holding force(Passivity) | | 40 | 40 | N |
| Max load (horizontal direction) | | 5 | 5 | kg |
| Operating temperature ^[1] | | 0~50 | 0~50 | °C |
| Mass with cable | | 545 | 545 | g $\pm 5\%$ |
| Material | | Al, Steel | Al, Steel | |
| Size(L×W×H) | | 76×55×30 | 76×55×30 | mm |
| Cable length ^[2] | | 1.5 | 1.5 | m ± 10 mm |
| Sensor/voltage connector | | - | - | |
| Recommended controller | | E71.D4E/C4K-H | | |

Remarks:

[1] Custom is available.

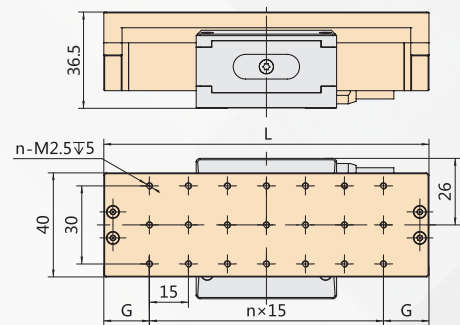
[2] Custom cable length and connector are available.

Optional Motion Platform >>



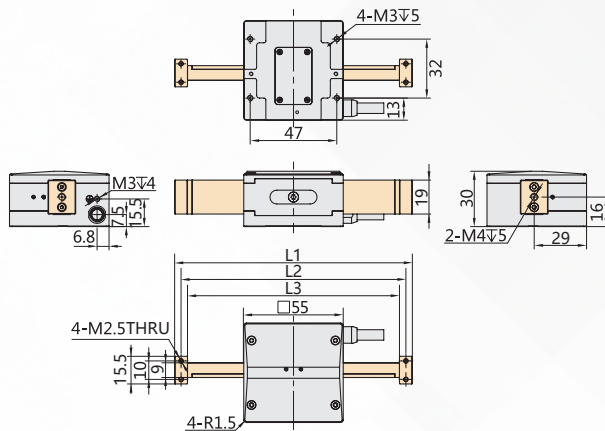
Drawing(With moving surface) >>

| Types | L | G | n×15 | n×M2.5 |
|-----------|----|---|------|---------|
| N31.X6E/K | 76 | 8 | 4×15 | 15×M2.5 |



Drawing >>

| Types | L | L1 | L2 |
|-----------|----|----|----|
| N31.X6E/K | 76 | 69 | 62 |



Recommended Controller >>



E71.D4E-H/E71.C4K-H

4 channels output, digital control

USB, RS-422, RS-232 communication

Ave.current to 75mA



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