

X axis | N31.X50E/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.X50E/K linear piezoelectric motor adopts stick-slip principle, and piezo step direct drive. The linear motion range can be to 50mm, 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.X50E	N31.X50K	Units
Active axes		X	X	
Integrated sensor		Incremental encoder	-	
Travel range		50 or ± 25	50 or ± 25	mm ± 0.5 mm
Speed limit		5	5	mm/s
Resolution		< 50	1	nm
Linearity		1.5	-	μ m
Repeatability		1.5	-	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	$^{\circ}$ C
Mass with cable		590	590	g $\pm 5\%$
Material		Al, Steel	Al, Steel	
Size (L \times W \times H)		120 \times 55 \times 30	120 \times 55 \times 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.

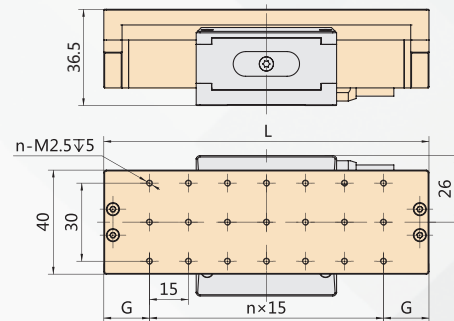
[2] Custom cable length and connector are available.

Optional Motion Platform >>



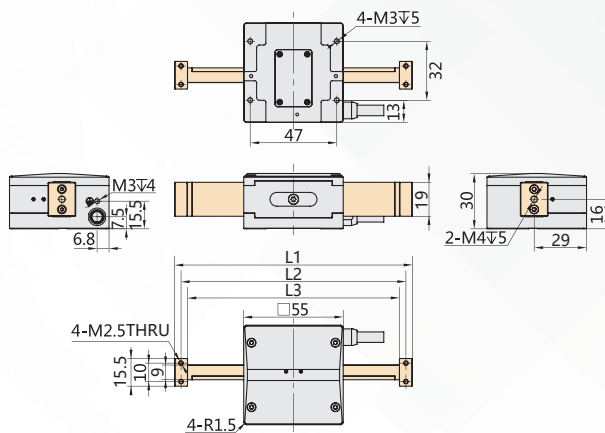
Drawing(With moving surface) >>

Type	L	G	n \times 15	n \times M2.5
N31.X50E/K	120	15	6 \times 15	21 \times M2.5



Drawing >>

Type	L	L1	L2
N31.X50E/K	120	113	106



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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