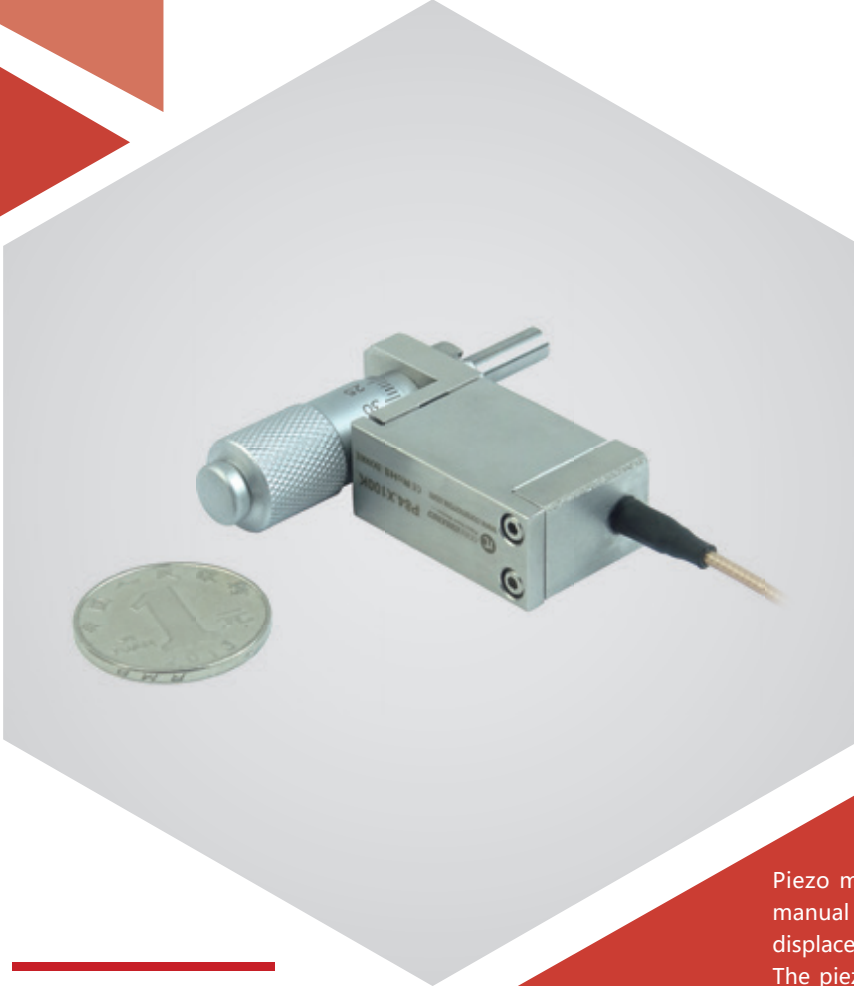


# X axis | P84.X100S/K

## Piezo Micrometers



### Characteristics >>

- Active axes X
- Selectable sensor
- Manual micrometer displacement to 13mm, resolution to 10 $\mu$ m
- Piezo displacement up to 25 $\mu$ m, 100 $\mu$ m or 250 $\mu$ m, resolution to 0.5nm

### Applications >>

- Optical alignment
- Cell manipulation
- Precision positioning of CCD camera focus lens
- Micromachining/precision control

## Introduction

Piezo micrometer refers to integrating piezo stage on manual micrometer. The manual micrometer has 13mm displacement.

The piezo stage features 25 $\mu$ m or 100 $\mu$ m displacement. The accuracy of micrometer is within the adjustment range of piezo stage, thus ensuring the accuracy and convenience of the adjustment.



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## Technical Data >>

Type	P84.X100S	P84.X100K	Units
Active axes	X	X	
Travel range	13+100	13+100	mm+ $\mu$ m
Material	Steel, Aluminum	Steel, Aluminum	
Manual Adjustment - Micrometer			
Travel range	13	13	mm
Resolution	10	10	$\mu$ m
Driving mode	Screw thread pair		
Sensitivity	<2	<2	$\mu$ m
Least count	10	10	$\mu$ m/div
Screw pitch	0.5	0.5	mm/rev.
Piezo Adjustment - Piezo			
Travel range	0~120V	80	$\mu$ m $\pm$ 20%
	0~15V	100	
Sensor	SGS	-	
Resolution	3	1	nm, typ.
Closed-loop linearity	0.1	-	%F.S.
Repeatability	0.05	-	%F.S.
Push force capacity	16	16	N
Stiffness	1	1	N/ $\mu$ m $\pm$ 20%
Unloaded resonant frequency	380	380	Hz $\pm$ 20%
Load ( Z axis )	500	500	g
Mass	100	100	g $\pm$ 5%
Electrical capacitance	1.8	1.8	$\mu$ F $\pm$ 20%
Operating temperature <sup>[1]</sup>	-20~80	-20~80	$^{\circ}$ C
Cable <sup>[2]</sup>	1.5	1.5	m $\pm$ 10mm
Connector <sup>[2]</sup>	LEMO	LEMO	

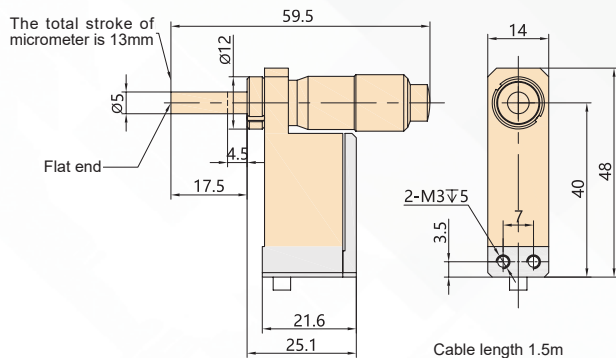
Note: Max driving voltage could be -20V~150V, recommended voltage 0~120V for long-term and high-reliable operation to extend lifetime. Technical data is measured by CoreMorrow E00/E01 series piezo controller.

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



[2] Custom cable length and connector is available.

Note: The parameters mentioned above are related to the test environment and test equipment.

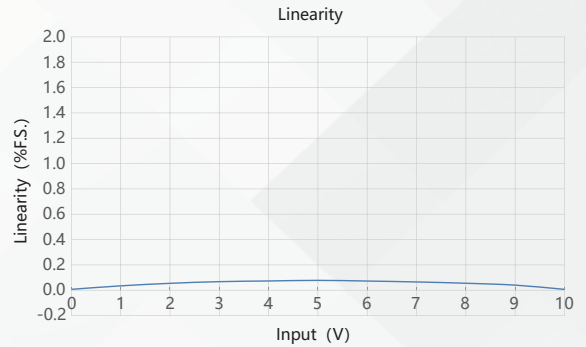
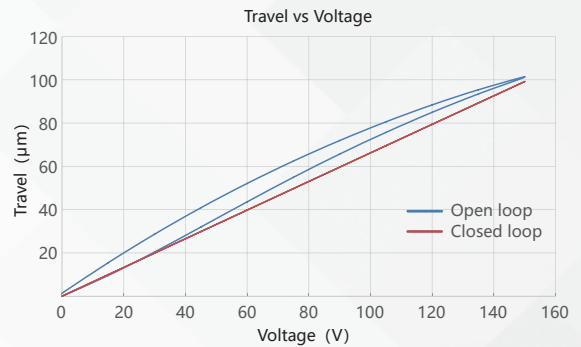
## Drawing >>



## Composition >>

Piezo stage	Micrometer
100 $\mu$ m Travel	13mm Travel
	

## 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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