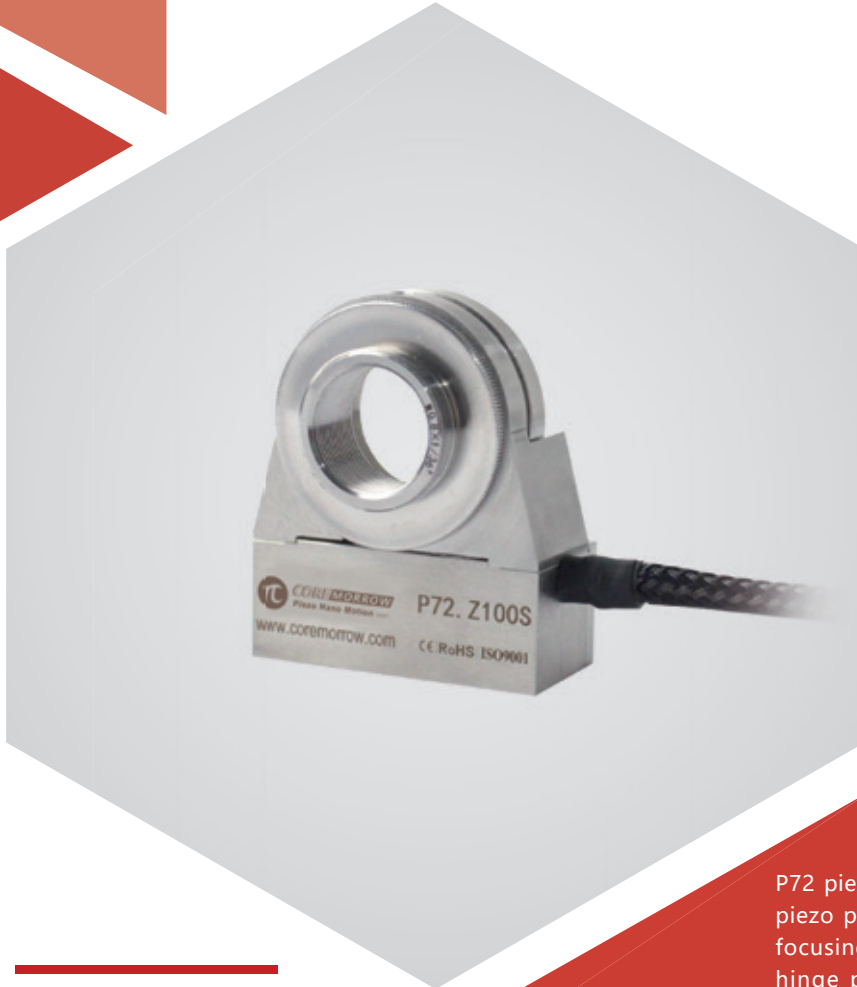


## Z axis | P72.Z100S/K

### Piezo Objective Scanner



#### Characteristics >>

- Active axes Z
- Travel to 100μm
- Load capacity to 0.2kg
- Millisecond response time
- Closed loop for high repeatability

#### Applications >>

- 3D imaging
- Surface structure analysis
- Biotechnology
- Interference/metering
- Confocal microscope
- Semiconductor test

## Introduction

P72 piezoelectric objective scanner is a Z-axis motion piezo positioner specially designed for objective lens focusing microscopy. It adopts a frictionless flexible hinge parallel guiding mechanism, with ultra-high focusing stability. The objective positioner is loaded with a microscopic detection/measurement or observation device to improve accuracy.



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## Technical Data >>

Type	S-Closed loop K-Open loop	P72.Z100S	P72.Z100K	Units
Active axis		Z	Z	
Travel range(0~120V)		80	80	$\mu\text{m} \pm 10\%$
Travel range(0~150V)		100	100	$\mu\text{m} \pm 10\%$
Integrated sensor		SGS	-	
Resolution		3	1	nm
Linearity		0.1	-	%F.S.
Repeatability		0.05	-	%F.S.
Push/pull force		110/15	110/15	N
Stiffness		1.4	1.4	$\text{N}/\mu\text{m} \pm 20\%$
Unloaded resonant frequency		350	350	$\text{Hz} \pm 20\%$
Closed-loop operating frequency (-3dB)		70(@100g load)	-	$\text{Hz} \pm 20\%$
Unloaded step time		10	3	$\text{ms} \pm 20\%$
Load capacity		0.2	0.2	kg
El. capacitance		3.6	3.6	$\mu\text{F} \pm 20\%$
Operating temperature <sup>[1]</sup>		-20~80	-20~80	°C
Material		Steel	Steel	
Mass		150	150	$\text{g} \pm 5\%$
Cable length <sup>[2]</sup>		1.5	1.5	$\text{m} \pm 10\text{mm}$
Sensor/voltage connector <sup>[2]</sup>		-	-	

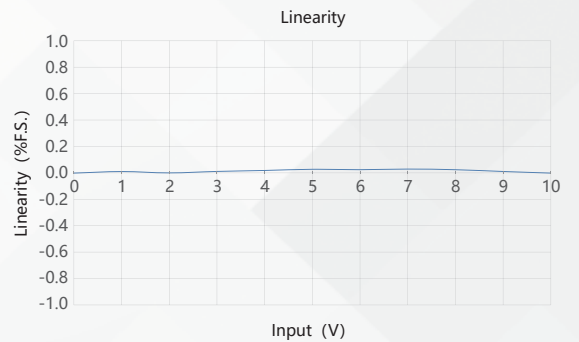
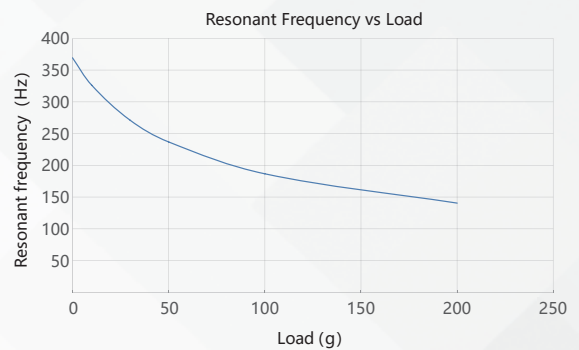
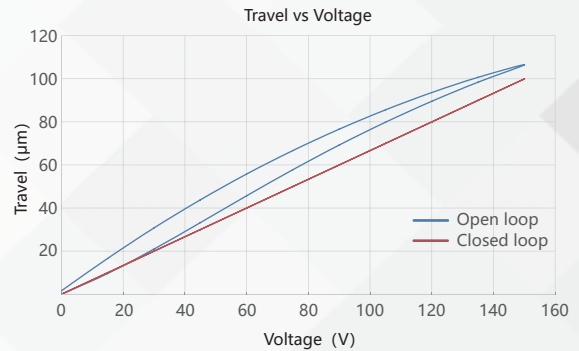
Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25°C.

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

[2] Custom cable length and connector is available.

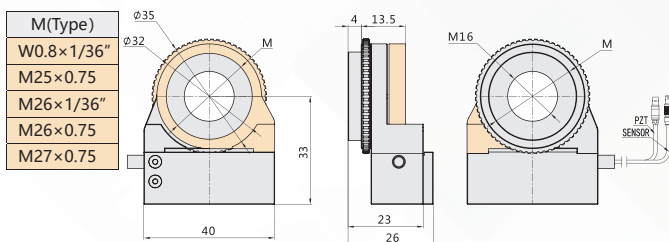
Note: The parallelism of the moving platform is about 20 $\mu\text{m}$ , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

## Curves >>

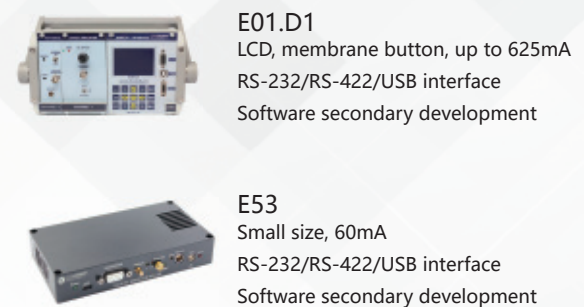


Disclaimer: The data here are typical, only for reference. Some variations will occur for different batch.

## Drawing >>



## Recommended Controllers >>



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