Z axis | P72.Z80S/K

Piezo Objective Scanner

Characteristics »

- Active axes Z
- Travel to 80μm
- Load capacity to 0.4kg
- Millisecond response time
- Closed loop for high repeatability

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.

Applications »

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

Technical Data »

Type	S-Closed loop K-Open loop	P72.Z80S	P72.Z80K	Units
Active axis		Z	Z	
Nominal travel range(0~120V)		64	64	μm±10%
Travel range(0~150V)		80	80	μm±10%
Integrated sensor		SGS	-	
Resolution		3	1	nm
Linearity		0.1	-	%F.S.
Repeatability		0.05	-	%F.S.
Push/pull force		160/20	160/20	N
Stiffness		2	2	N/μm±20%
Unloaded resonant frequency		700	700	Hz±20%
Loaded resonant frequency		300@400g	300@400g	Hz±20%
Unloaded step time		7	2.5	ms±20%
Load capacity		0.4	0.4	kg
El. capacitance		14	14	μF±20%
Operating temperature[1]		-20~80	-20~80	℃
Material		Steel	Steel	
Mass		360 (no cable)		g±5%
Cable length[2]		1.5	1.5	m±10mm
Sensor/voltage connector[2]		-	-	

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.

Curves »

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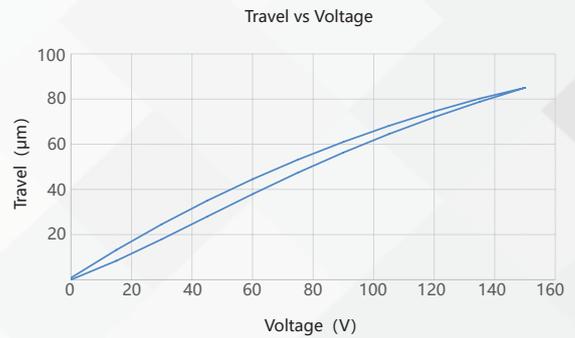
Disclaimer: The data here are typical, only for reference. Some variations will occur for different batch.

Drawing »
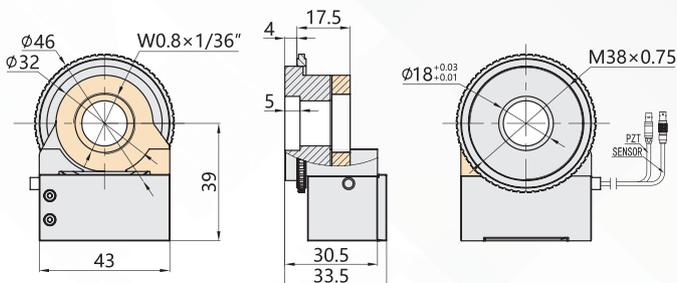
Recommended Controllers »

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