

X axis | XD002.200S

Piezo Clamps / Piezo Forceps



Introduction

According to the requirements of automatic wire bonding machine, CoreMorrow produces piezo clamp, which is designed and developed for clamping wire. It features a simple structure, fast response and high resolution.

Characteristics >>

- X axis motion
- Displacement to $\pm 100\mu\text{m}$
- Sub-millisecond response time
- Resonant frequency to 0.4kHz
- Small size

Applications >>

- Probe scanning
- Fiber stretching
- Micro-scanning
- Flow measurement technology
- Optical mirrors positioning
- Diamond turning
- laser cavity tuning
- Inkjet technology



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Technical Data >>

Type	XD002.X200S	Units
Active axes	X(Closed-loop)	
Travel range(0~120V)	±80	μm±20%
Travel range(0~150V)	±100	μm±20%
Push/pull force capacity	4/-	N
Stiffness	0.04	N/μm±20%
Unloaded resonant frequency	400	Hz±20%
Load capacity	0.05	kg
El. capacitance	7.2	μF±20%
Material	Steel	
Mass	305	g±5%
Power-on jaw status	Close	
Operating temperature ^[1]	-20~80	°C
Cable length ^[2]	0.15	m±10mm
Voltage connector ^[2]	Bare wire	

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.

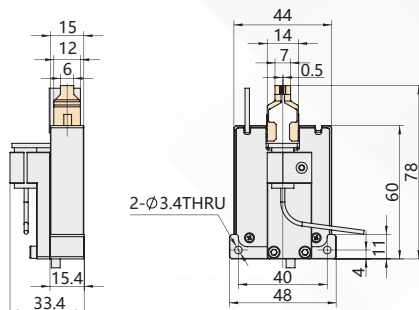
[2] Custom cable length and connector is available.

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

Principle >>

The structure of piezo clamp is composed of piezo stack, flexible mechanical structure, fixed jaw and adjustable jaw. Piezo stack is installed between clamping jaw and the base. When voltage is applied to piezo stack, the output displacement of the piezo stack is amplified by the lever arm of the clamping jaw and outputed in the top end of the clamp. Clamp closed. After the voltage is removed, the of clamp jaws return to initial position, and the clamp is opened to allow the lead to pass freely.

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



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