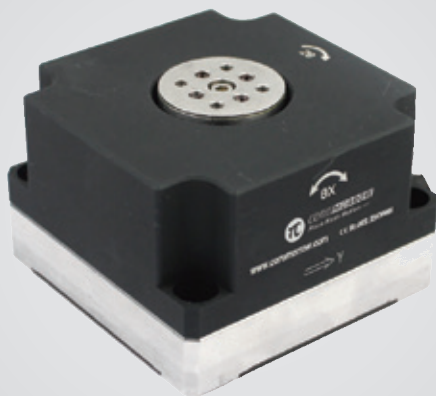


6 axes | H63.XYZTR1S/K

Piezo Z/Tip/Tilt/Rotation Stage



Characteristics >>

- Motion in X, Y, Z, θ_x , θ_y , θ_z
- Linear travel to 4.8 μ m@120V
- Deflection travel to 0.8mrad@120V
- Load capacity to 500g

Applications >>

- Optical beam scanning
- Light path adjustment
- Graphical stability
- Interference/metering
- Large loading tilt motion
- Space perturbation simulation system
- Calibration of acceleration sensor
- Calibration of angular velocity sensor

Introduction

H63 Piezo Hexapod is a piezo stage with 6-axis motion of θ_x , θ_y , θ_z , X, Y, and Z 6-axis movement in space is realized by the coordinated expansion and contraction of six piezoelectric actuators. The closed-loop model has high positioning accuracy. It is suited for applications such as microelectronics precision machining, test, etc.



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Technical Data >>

Type	S-Closed loop K-Open loop	H63.XYZTR1S	H63.XYZTR1K	Units
Active axes		X, Y, Z, θ_x , θ_y , θ_z		
Driving channels		7	7	
XYZ travel range (0~100V)		4/axis	4/axis	$\mu\text{m} \pm 10\%$
$\theta_x\theta_y\theta_z$ deflection angle (0~120V)		0.6/axis	0.6/axis	$\mu\text{m} \pm 10\%$
$\theta_x\theta_y\theta_z$ deflection angle(0~100V)		0.6/axis	0.6/axis	$\text{mrad} \pm 10\%$
$\theta_x\theta_y\theta_z$ deflection angle(0~120V)		0.8/axis	0.8/axis	$\text{mrad} \pm 10\%$
Integrated sensor		SGS	-	
Angular resolution		0.15	0.01	μrad
Linear resolution		1.5	0.1	nm
Closed-loop linearity		0.25	-	%F.S.
Closed-loop repeatability		0.2	-	%F.S.
Unloaded resonant frequency		X2330/Y895/Z1425/ θ_x 3485/ θ_y 5620/ θ_z 2300		$\text{Hz} \pm 20\%$
Unloaded step time		25		$\text{ms} \pm 20\%$
Load capacity		500		g
El. capacitance, XYZ		1.8		$\mu\text{F}/\text{axis} \pm 20\%$
El. capacitance, θ_x , θ_y , θ_z		3.6		$\mu\text{F}/\text{axis} \pm 20\%$
Material		Steel, Aluminum		
Operating temperature ^[1]		-20~80		$^{\circ}\text{C}$
Mass		440(Not include cable)		$\text{g} \pm 5\%$
Cable length ^[2]		1.5		$\text{m} \pm 10\text{mm}$
Sensor/voltage connector ^[2]		DB15-HD(Needle)		

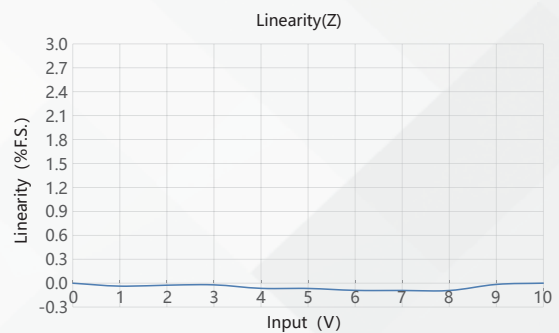
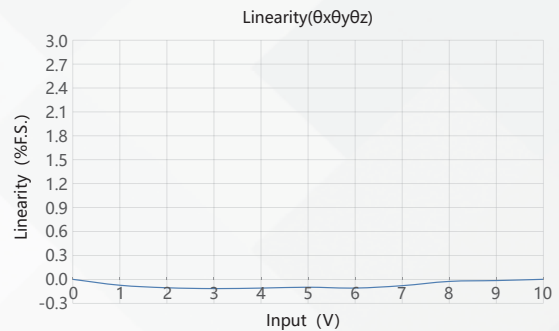
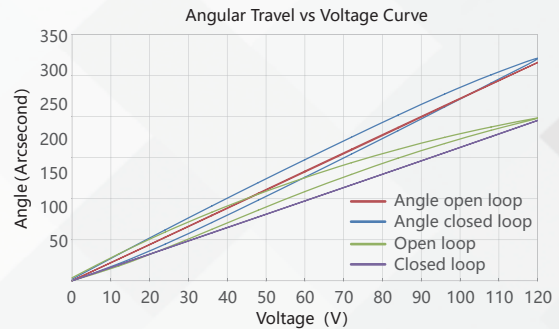
Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25°C.

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

[2] Custom cable length and connector is available.

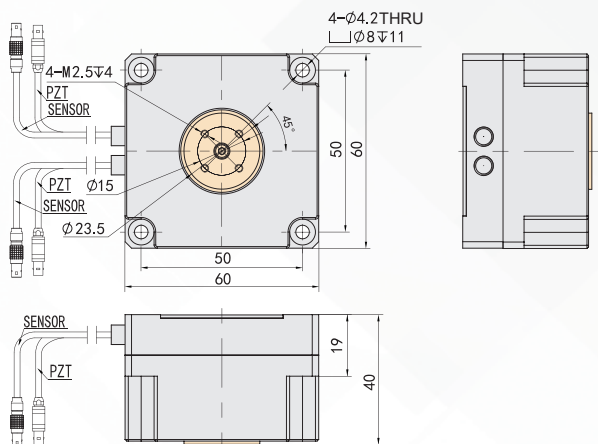
Note: The parallelism of the moving platform is about 20 μm , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

Curves >>



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

Drawing >>



Recommended Controllers >>



E51.D7S
 7 channels, output voltage 0~120V
 Driving 6-axis motion piezo stage
 Software control



E01.A9
 1~9 channels, Open loop
 Analog input/ Software control
 Ave current 291mA



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