Piezo Z Stage

COMPACT NANOPOSITIONER

P-611.Z

- Compact: Footprint only 44 mm × 44 mm
- Travel range 100 µm
- Resolution to 0.2 nm
- Cost- effective mechanics / electronics system configurations
- Frictionless, high- precision flexure guiding system
- Outstanding lifetime due to PICMA® piezo actuators
- X, XY, XZ and XYZ versions

Specifications

	P-611.ZS	P-611.Z0	Unit	Tolerance
Active axes	Z	Z		
Motion and positioning				
Integrated sensor	SGS	-		
Open- loop travel, -20 to +120 V	120	120	µm	min. (20 % / -0 %)
Closed- loop travel	100	-	µm	
Open- loop resolution	0.2	0.2	nm	typ.
Closed- loop resolution	2	-	nm	typ.
Linearity error	0.1	-	%	typ.
Repeatability	<10	-	nm	typ.
Runout θ_Z (Z motion)	±5	±5	µrad	typ.
Runout θ_X (Z motion)	±20	±20	µrad	typ.
Runout θ_Y (Z motion)	±5	±5	µrad	typ.
Mechanical properties				
Stiffness	0.45	0.45	N/ µm	±20 %
Unloaded resonant frequency	460	460	Hz	±20 %
Resonant frequency @ 30 g	375	375	Hz	±20 %
Resonant frequency @ 100 g	265	265	Hz	±20 %
Push / pull force capacity	15 / 10	15 / 10	N	max.
Drive properties				
Ceramic type	PICMA® P-885	PICMA® P-885		
Electrical capacitance	1.5	1.5	µF	±20 %
Dynamic operating current coefficient	1.9	1.9	µA/ (Hz × µm)	±20 %
Miscellaneous				
Operating temperature range	-20 to 80	-20 to 80	°C	
Material	Aluminum, steel	Aluminum, steel		
Dimensions	44 mm × 44 mm × 27 mm	44 mm × 44 mm × 27 mm		
Mass	176	176	g	±5 %
Cable length	1.5	1.5	m	±10 mm
Sensor connection	LEMO	LEMO		
Voltage connection	LEMO	LEMO		

Order Information

P-611.Z0
Vertical Nanopositioning Stage, 120 µm, Open- Loop
P-611.ZS
Vertical Nanopositioning Stage, 100 µm, SGS Sensor

Ask about custom designs!

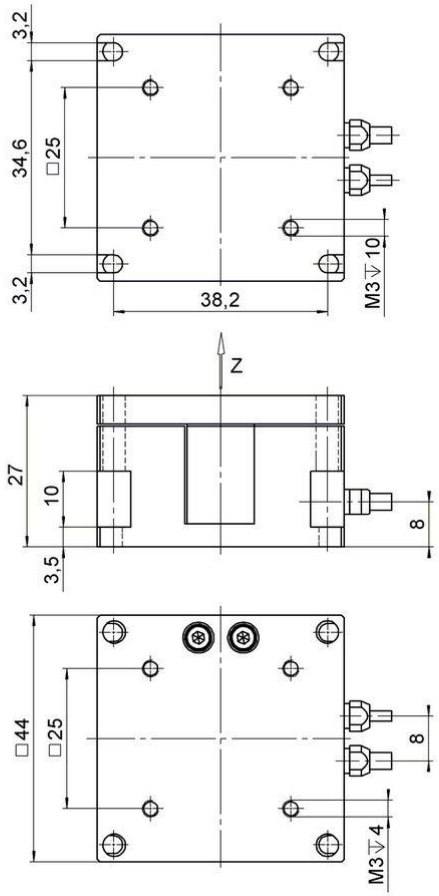
Controllers / Drivers / Amplifiers

E-610 Piezo Amplifier / Controller
E-625 Piezo Servo- Controller & Driver
E-836 Compact Piezo Amplifier / OEM Module
E-665 Piezo Amplifier / Servo Controller

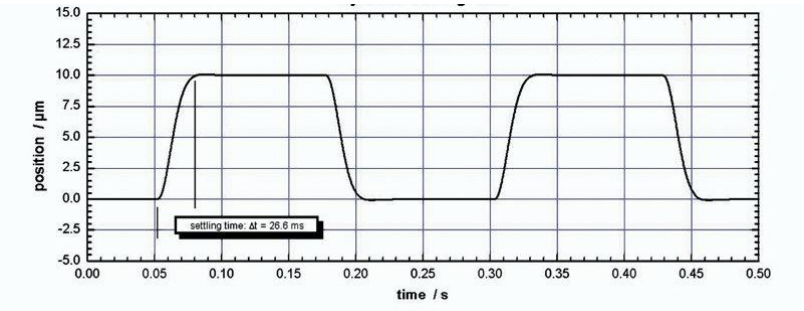
Related Products

P-611.1 Linear Piezo Positioning System
P-611.3 NanoCube® XYZ Piezo Stage
P-612.Z Piezo Z Stage

Drawings / Images



P-611.ZS dimensions in mm



The settling time of a P-611.Z with a load of 30 g is 26 ms for a 10 µm step. Measured with interferometer