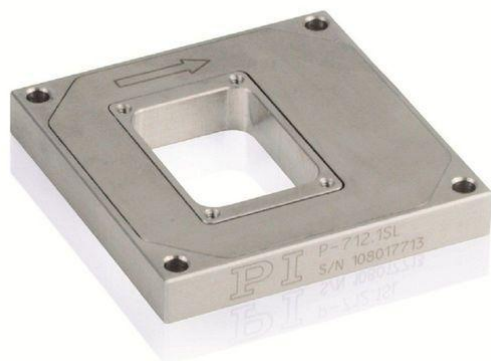


Linear Piezo Scanner

COMPACT OEM SYSTEM

P-712



- + High dynamics, to 5 ms settling time
- + Travel range up to 40 μm
- + Resolution to 0.2 nm
- + Compact design with low profile, 40 mm x 40 mm x 6 mm
- + Clear aperture 25 mm x 15 mm
- + PICMA[®] high- power actuators

Specifications

	P-712.1SL	P-712.10L	Unit	Tolerance
Active axes	X	X		
Motion and positioning				
Integrated sensor	SGS	-		
Open- loop travel, -20 to +120 V	40	40	μm	min. (20 % / -0 %)
Closed- loop travel	30	-	μm	
Closed- loop resolution	2	-	nm	typ.
Open- loop resolution	0.2	0.2	nm	typ.
Linearity, closed- loop	0.3	-	%	typ.
Repeatability	± 5	-	nm	typ.
Pitch	± 5	± 5	μrad	typ.
Yaw	± 20	± 20	μrad	typ.
Mechanical properties				
Stiffness in motion direction	0.6	0.6	N/ μm	± 20 %
Unloaded resonant frequency	1550	1550	Hz	± 20 %
Resonant frequency under load	1090 (20 g)	1090 (20 g)	Hz	± 20 %
Push / pull force capacity in motion direction	6	6	N	max.
Load capacity	5	5	N	max.
Lateral force	6	6	N	max.
Drive properties				
Ceramic type	PICMA [®] P-882	PICMA [®] P-882		
Electrical capacitance	0.3	0.3	μF	± 20 %
Dynamic operating current coefficient	1.3	1.3	$\mu\text{A}/ (\text{Hz} \times \mu\text{m})$	± 20 %
Miscellaneous				
Operating temperature range	-20 to 80	-20 to 80		
Material	Stainless steel	Stainless steel		
Dimensions	40 mm x 40 mm x 6 mm	40 mm x 40 mm x 6 mm		
Mass	0.095	0.095	kg	± 5 %
Cable length	1.7	1.5	m	± 10 mm
Voltage connection	LEMO	LEMO		
Sensor connection	LEMO	-		

Recommended controller / amplifier

Single- channel (1 per axis): E-610 servo controller / amplifier, E-625 servo controller, bench- top

Order Information

P-712.10L

Low- Profile OEM Nanoscanner, 40 µm, Open- Loop

P-712.1SL

Low- Profile OEM Nanoscanner, 30 µm, SGS Sensor

Ask about custom designs!

Controllers / Drivers / Amplifiers

[E-610 Piezo Amplifier / Controller](#)

[E-625 Piezo Servo- Controller & Driver](#)

Accessories

[P-895.3LDC Adapter Cable, Sub- D 7W2 \(f\) to LEMO Connectors \(m\)](#)

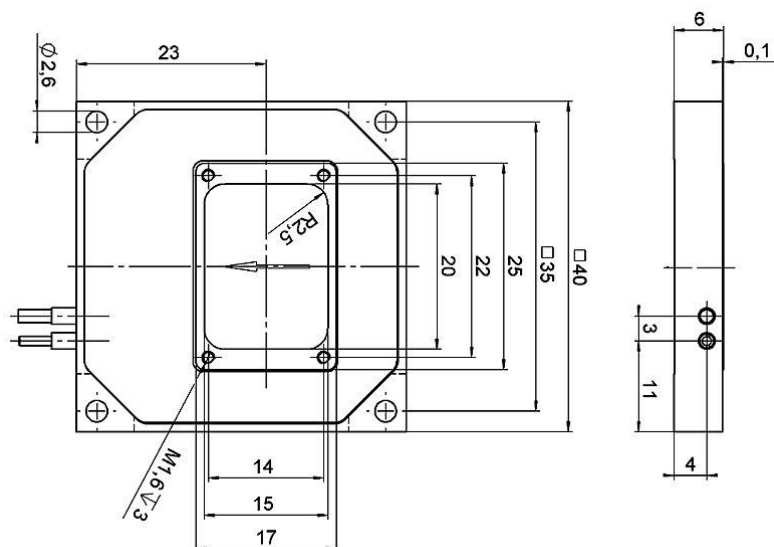
Related Products

[P-603 Cost- Efficient PiezoMove Linear Flexure Actuator](#)

[P-713 XY Piezo Scanner](#)

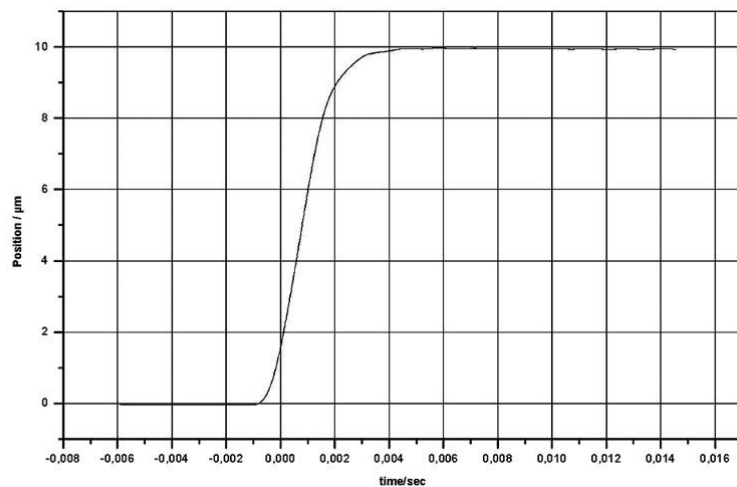
[P-752 High Precision Nanopositioning Stage](#)

Drawings / Images



P-712 dimensions in mm





Settling time for the P-712 at 30 μm is in the 5 ms range