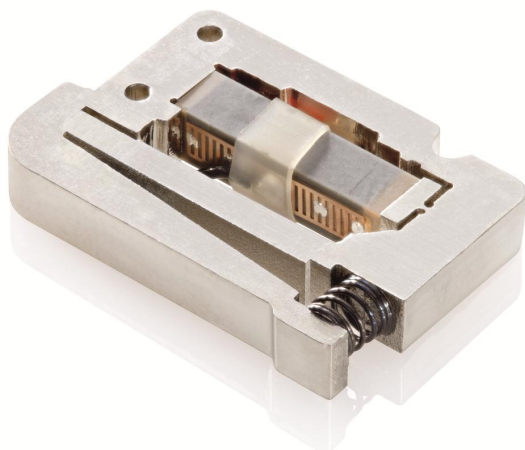


# Compact PiezoMove Linear Actuator

Inexpensive, with 300 µm Travel Range



## P-604

- Light and compact: 4 g and <13 mm × 20 mm surface
- Travel range 300 µm
- Optimized design for manufacturing in large quantities
- Customer-specific adaptations can be provided
- Outstanding lifetime due to PICMA® piezo actuators
- Ideal for OEM applications in optics, medical technology, biotechnology, and microfluidics

### Fields of application

- Nanopositioning
- High-speed switching
- Patch clamp
- Microdispensing
- Adaptive systems technology / automation
- Photonics / integrated optics
- Biotechnology

### Outstanding lifetime thanks to PICMA® piezo actuators

The PICMA® piezo actuators are all-ceramic insulated. This protects them against humidity and failure resulting from an increase in leakage current. PICMA® actuators offer an up to ten times longer lifetime than conventional polymerinsulated actuators. 100 billion cycles without a single failure are proven.

### High guiding accuracy due to zero-play flexure guides

Flexure guides are free of maintenance, friction, and wear, and do not require lubrication. Their stiffness allows high load capacity and they are insensitive to shock and vibration. They are 100% vacuum compatible and work in a wide temperature range.

Motion	Unit	Tolerance	P-604.300
Active axes			Z
Travel range in Z, open loop, at -20 to 120 V	µm	+20 / -0 %	300

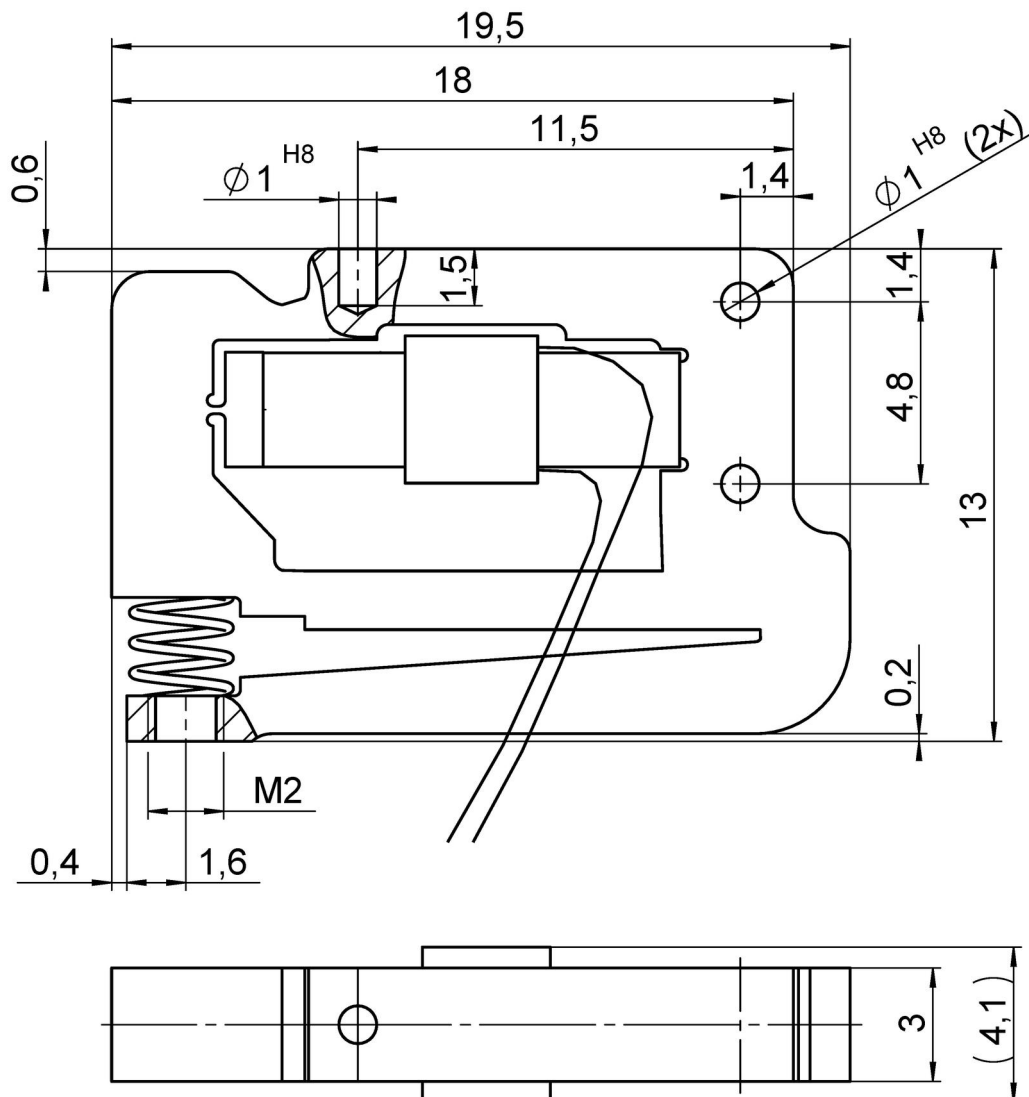
Positioning	Unit	Tolerance	P-604.300
Resolution in Z, open loop	nm	Typ.	0.5

Drive Properties	Unit	Tolerance	P-604.300
Drive type			Piezo actuator/PICMA®
Electrical capacitance	µF	±20%	0,27

Mechanical Properties	Unit	Tolerance	P-604.300
Stiffness in Z	N/ $\mu$ m	$\pm 20\%$	0.01
Resonant frequency in Z, unloaded	Hz	$\pm 20\%$	900
Permissible push force in Z	N	Max.	2
Permissible pull force in Z	N	Max.	1.5
Guide			Flexure guide/Flexure guide with lever amplification
Overall mass	g	$\pm 10\%$	4
Material			Steel

Miscellaneous	Unit	Tolerance	P-604.300
Operating temperature range	$^{\circ}\text{C}$		-20 to 80
Connector			Bare wire strands
Cable length	m	$\pm 10$ mm	0.1
Recommended controllers / drivers			E-610.00 amplifier, E-625, E-831 OEM amplifier module

The resolution of the system is only limited by the noise of the amplifier and measuring technology because PI piezo actuators are free of friction.  
Ask about customized versions.



P-604, dimensions in mm. Note that a comma is used in the drawings instead of a decimal point.

## Order Information

**P-604.300**

Compact PiezoMove linear actuator; PICMA<sup>®</sup> piezo actuator drive; 300  $\mu\text{m}$  travel range (open loop); push force capacity 2 N; pull force capacity 1.5 N; bare wire strands; 0.1 m cable length