

# P-250

## Micrometer-Mountable Open-Loop Piezo Translator (HVPZT)

>> Click <http://www.pi.ws/fwd/Piezo-Actuator> for the Latest Specs on these Products



- Displacement 20  $\mu\text{m}$
- Mounts Inside Micrometer Tip
- Sub-msec Response
- Sub-nm Resolution
- Option: Positive Polarity

P-250 piezo translators are high-resolution linear actuators specially designed for integration in micrometer tips. They fit the M-227 DC-Mike motorized actuators, the M-168 Stepper Mike actuators and the M-631 to M-633 manual micrometers (see p. 7-76, 7-84, 7-88). They provide sub-millisecond response and sub-nanometer resolution.

### Accessories

Extension cables & connectors: see page 6-56 in the "Piezo Drivers & Nanopositioning Controllers" section.

### Application Examples

- Laser tuning
- Static and dynamic positioning of small parts
- Fiber alignment

For more examples see page 1-5

### Ordering Information

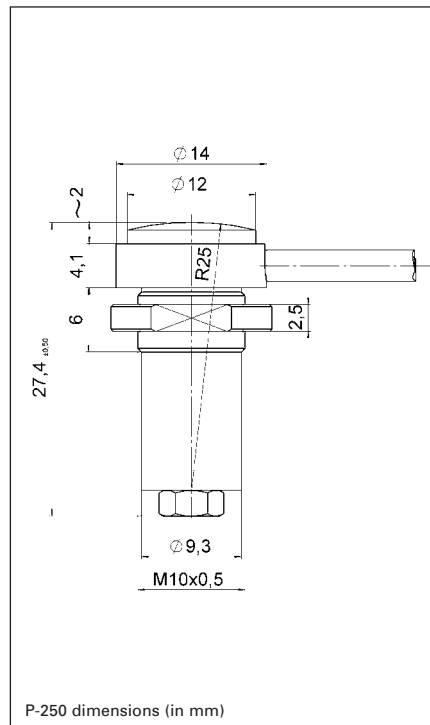
#### P-250.10

Micrometer-Mountable Open-Loop HVPZT Translator, 20  $\mu\text{m}$ , BNC Connector

#### P-250.20

Micrometer-Mountable Open-Loop HVPZT Translator, 20  $\mu\text{m}$ , Lemo Connector

Ask about custom designs!



### Notes

See the "Piezo Drivers & Nanopositioning Controllers" section for our comprehensive line of low-noise modular and OEM control electronics for computer and manual control.

### Technical Data

Models	P-250.10 P-250.20	Units	Notes see page 1-46
Open-loop travel @ 0 to -1000 V	20	$\mu\text{m} \pm 20\%$	A4
* Open-loop resolution	0.2	nm	C2
Static large-signal stiffness ***	20	$\text{N}/\mu\text{m} \pm 20\%$	D1
Push/pull force capacity	100 / 5	N	D3
Max. operating voltage range	0 to -1000	V	A7
Electrical capacitance	22	$\text{nF} \pm 20\%$	F1
Dynamic operating current coefficient (DOCC)	1.4	$\mu\text{A}/(\text{Hz} \times \mu\text{m})$	F2
Unloaded resonant frequency ( $f_0$ )	11	$\text{kHz} \pm 20\%$	G2
Standard operating temperature range	-40 to +80	$^{\circ}\text{C}$	
** Voltage connection	VH		J1
Weight	28	$\text{g} \pm 5\%$	K
Recommended amplifier (codes explained p. 1-3)	B, I		

\* Resolution of piezo actuators is not limited by friction or stiction. Noise equivalent motion with E-507 amplifier;  
 \*\* Model P-250.10 with BNC connector;  
 \*\*\* Dynamic small-signal stiffness ~50% higher

### Piezo Actuators

Nanopositioning & Scanning Systems

Active Optics / Steering Mirrors

Tutorial: Piezo-electrics in Positioning

Capacitive Position Sensors

Piezo Drivers & Nanopositioning Controllers

Hexapods / Micropositioning

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Ceramic Linear Motors & Stages

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