

Disk Translators

Bimorph Piezo Actuators with High Dynamics



P-286 · P-288 · P-289

- Travel range to 200 μm
- Sub-nm resolution
- Sub-ms response time
- Inexpensive
- Low profile

Fields of application

- Active vibration absorber
- Adaptive mechanics
- Precision mechanics / micromechanics
- Optics
- Measuring technology / interferometry
- Adaptive systems technology
- Switching
- Laser tuning
- Force generation / materials testing
- Nanotechnology

Specifications

	P-286.2x	P-288.00	P-289.20	Unit	Tolerance
Travel range*	100	50	200	µm	±20 %
Resolution**	1.0	0.5	2.0	nm	
Static large-signal stiffness***	0.3	0.2	0.15	N/µm	±20 %
Push/pull force capacity	20 / 10	10 / 5	20 / 10	N	
Max. torque limit (on tip)	0.003	0.003	0.003	Nm	
Max. operating voltage	-1000	-750	-1000	V	
Electrical capacitance	65	9	130	nF	±20 %
Resonant frequency f_0 (no load)	2.5	2	1.1	kHz	±20 %
Operating temperature range	-40 to +80	-40 to +80	-40 to +80	°C	
Voltage connection	Bare stranded wires (PTFE-insulated)	Bare stranded wires (PTFE-insulated)	Bare stranded wires (PTFE-insulated)		
Mass	42	8	56	g	±5 %
Housing/ tip material	Stainless steel	Brass	Stainless steel		
Recommended electronics	E 508	E 508	E 508		

* Travel range at 0 to -750 V (P-288) or 0 to -1000 V (P-286, P-289).

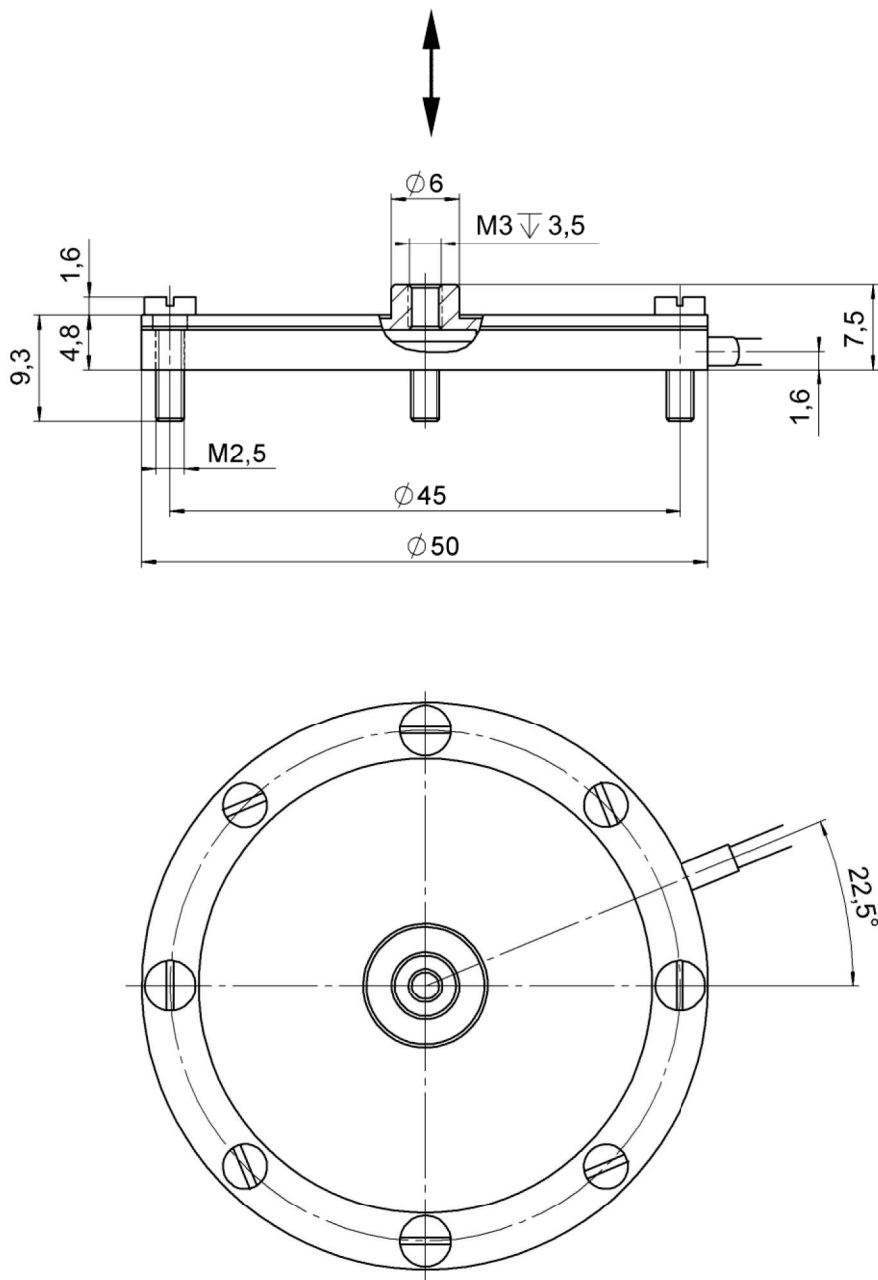
** The resolution of the system is only limited by the noise of the amplifier and measuring technology because PI piezo actuators are free of friction.

*** Dynamic small-signal stiffness is approx. 50 % higher.

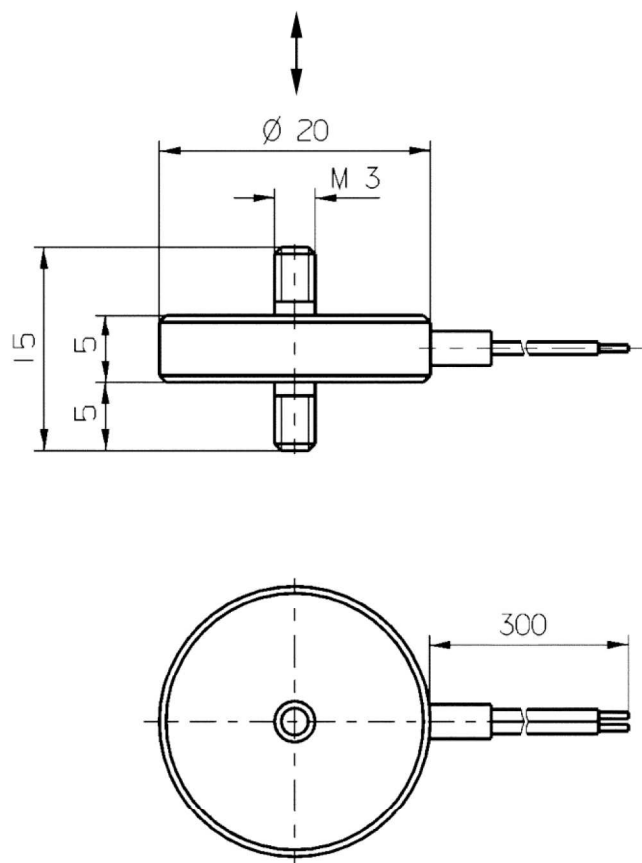
All specifications based on room temperature (22 °C ±3 °C).

Ask about customized versions.

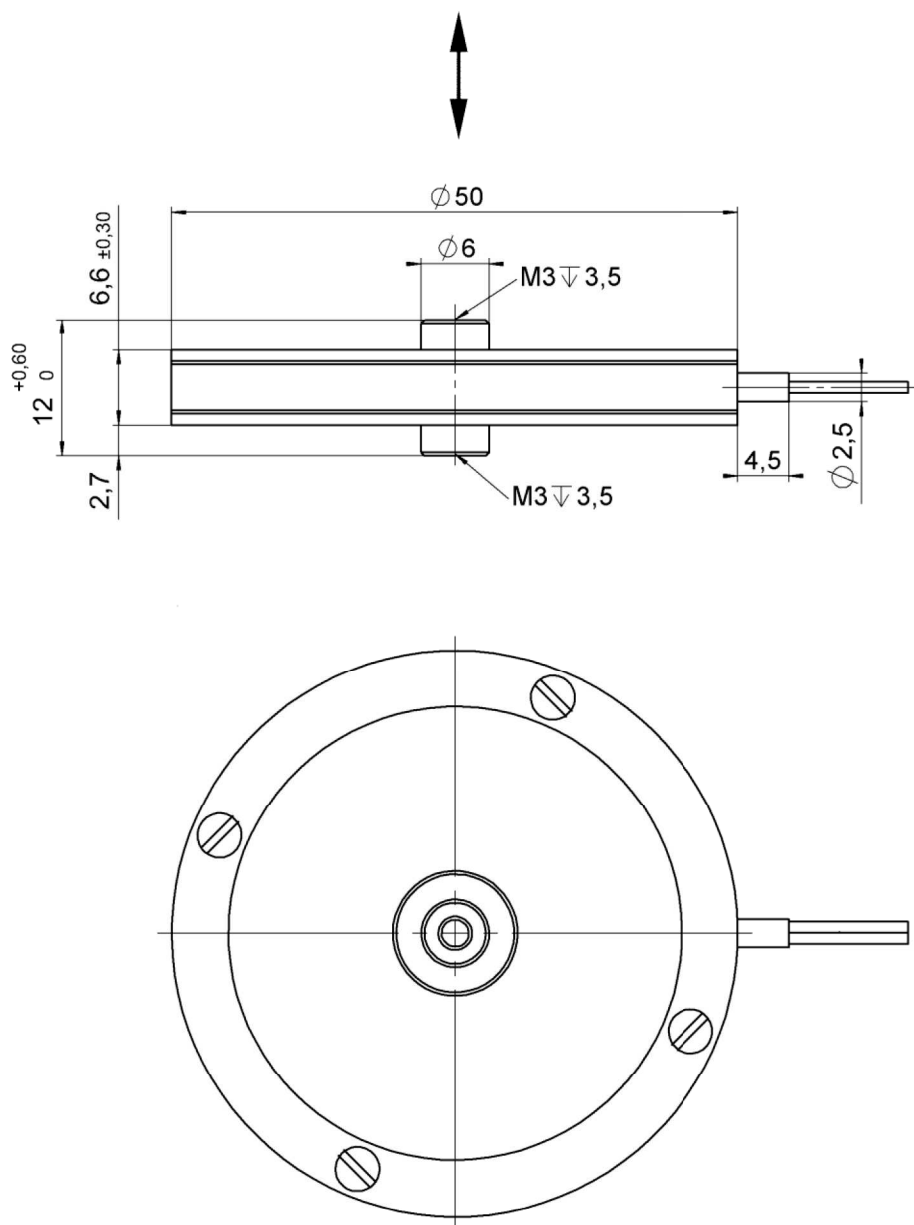
Drawings / Images



P-286, dimensions in mm



P-288, dimensions in mm



P-289, dimensions in mm

Ordering Information

P-286.20

Disk translator, 100 μ m, 300 mm PTFE-insulated stranded wires

P-286.23

Disk translator, 100 μ m, without tip and silicone insulation, 300 mm PTFE-insulated stranded wires

P-288.00

Mini disk translator, 50 μ m, 300 mm PTFE-insulated stranded wires

P-289.20

Double disk translator, 200 μ m, 300 mm PTFE-insulated stranded wires

All data are superseded by any new release.

The newest release for data sheets is available for download at www.pi.ws.

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02.05.2018