

Piezo Fine Adjustment Drive for Micrometer Screws

High-Resolution Piezo Drive for Micrometer Screws



P-855

- Travel range 20 μm
- Mounts inside micrometer tip
- Sub-ms response time
- Subnanometer resolution

Application fields

- Laser tuning
- Static and dynamic applications
- Positioning of small objects
- Fiber positioning

Outstanding lifetime thanks to PICMA® piezo actuators

The patented 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 polymer-insulated actuators. 100 billion cycles without a single failure are proven.

Motion	Unit	Tolerance	P-855.20
Active axes			X
Travel range in X, open loop, at -20 to 120 V	μm	$\pm 20\%$	20

Positioning	Unit	Tolerance	P-855.20
Resolution in X, open loop	nm	Typ.	0.2

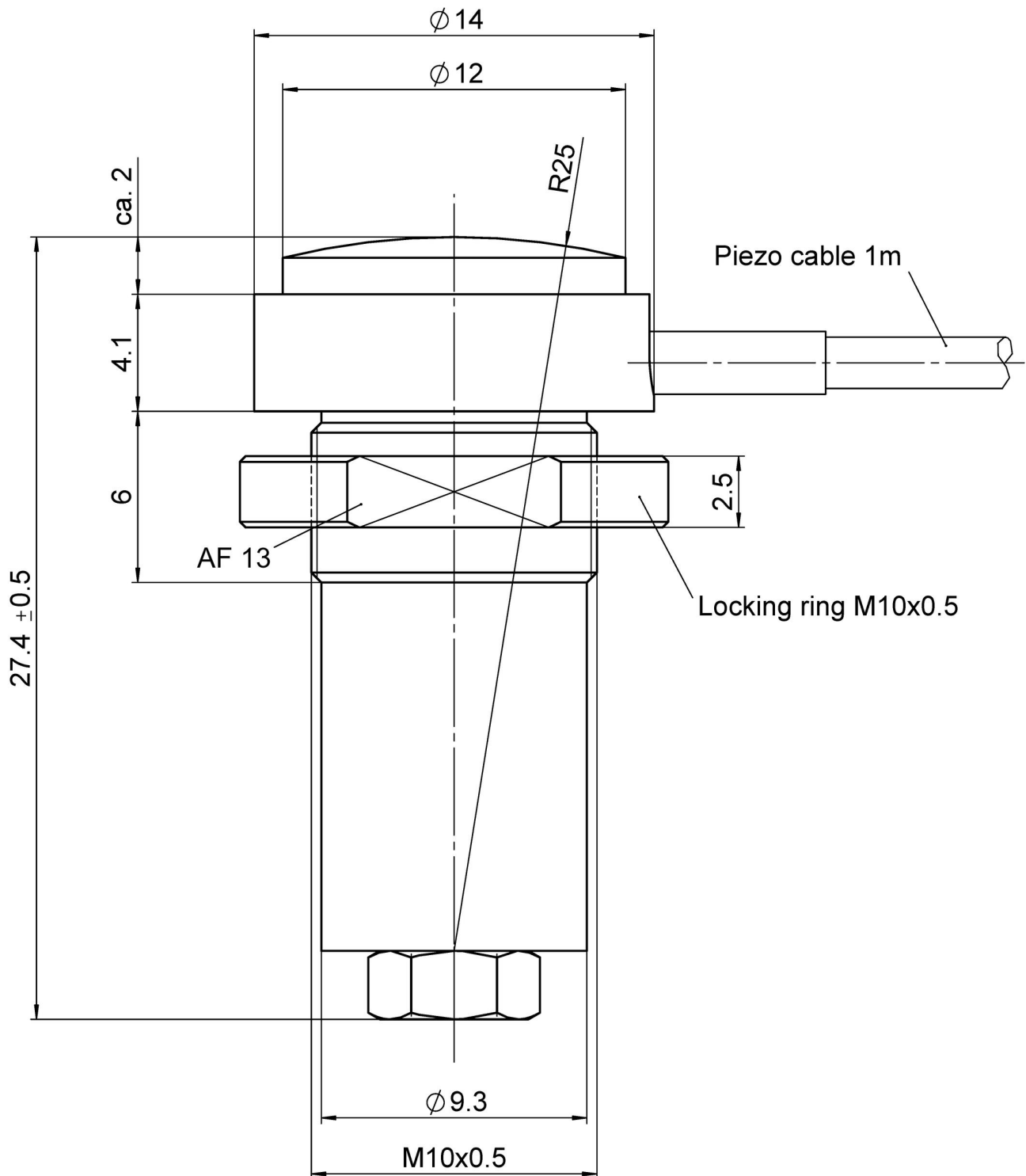
Drive Properties	Unit	Tolerance	P-855.20
Operating voltage	V	Max.	-20 to 120
Drive type			PICMA®
Electrical capacitance in X	μF	$\pm 20\%$	1.5

Mechanical Properties	Unit	Tolerance	P-855.20
Stiffness in X	N/ μm	$\pm 20\%$	48
Resonant frequency in X, unloaded	kHz	$\pm 20\%$	18
Permissible push force in X	N	Max.	100
Permissible pull force in X	N	Max.	5
Overall mass	g	$\pm 5\%$	28

Miscellaneous	Unit	Tolerance	P-855.20
Operating temperature range	°C		-40 to 80
Connector			LEMO FFS.00.250.CTCE24
Cable length	m	+50 / -0 mm	1
Recommended controllers / drivers			E-610, E-831, E-836

Stiffness in X: Static large-signal stiffness; dynamic small-signal stiffness is approx. 50 % higher.
 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.

Drawings / Images



P-855, dimensions in mm

Order Information

P-855.20

Piezo fine adjustment drive for micrometer screws; PICMA[®] piezo actuator drive; 20 µm travel range (open loop); LEMO LVPZT; 1 m cable length