Encapsulated PICMA® Stack Piezo Actuators
For Harsh Industrial Environments

P-88x.x5
- Splash-resistant full encapsulation
- Superior lifetime
- High stiffness
- Microsecond response
- Subnanometer resolution
- UHV-compatible to $10^{-9}$ hPa

Encapsulated PICMA® Stack multilayer piezo actuators with inert gas filling
Operating voltage -20 to 120 V. UHV-compatible to $10^{-9}$ hPa. Version for operation in environments where exposure to splash water, high humidity or oil occurs.

Specifications

<table>
<thead>
<tr>
<th></th>
<th>P-885.55</th>
<th>P-885.95</th>
<th>P-888.55</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions OD × L</td>
<td>11.2 mm × 22.5 mm</td>
<td>11.2 mm × 40.5 mm</td>
<td>18.6 mm × 22.5 mm</td>
<td></td>
</tr>
<tr>
<td>Nominal travel range</td>
<td>14</td>
<td>30</td>
<td>14</td>
<td>µm</td>
</tr>
<tr>
<td>Maximum travel range</td>
<td>17</td>
<td>36</td>
<td>17</td>
<td>µm</td>
</tr>
<tr>
<td>Blocking force</td>
<td>850</td>
<td>900</td>
<td>3400</td>
<td>N</td>
</tr>
<tr>
<td>Stiffness</td>
<td>50</td>
<td>25</td>
<td>200</td>
<td>N/µm</td>
</tr>
<tr>
<td>Capacitance</td>
<td>1.5</td>
<td>3.1</td>
<td>6.0</td>
<td>µF</td>
</tr>
<tr>
<td>Resonant frequency</td>
<td>60</td>
<td>35</td>
<td>60</td>
<td>KHz</td>
</tr>
<tr>
<td>Mass</td>
<td>6.5</td>
<td>11.6</td>
<td>20.0</td>
<td>g</td>
</tr>
</tbody>
</table>

Nominal travel range: At 0 to 100 V, tolerance ±10 %.
Maximum travel range: At 0 to 120 V, tolerance ±10 %.
Blocking force: At 0 to 120 V.
Electrical capacitance: Measured at 1 $V_{pp}$, 1 kHz, RT, tolerance ±20 %.
Resonant frequency: Measured at 1 $V_{pp}$, unloaded, unclamped. The value is halved for unilateral clamping, tolerance ±20 %.
Piezo ceramic type: PIC252.
Standard connections: PTFE-insulated stranded wires, UHV compatible, 100 mm, AWG 30, Ø 0.61 mm.
Operating voltage range: -20 to 120 V.
Operating temperature range: -40 to 150 °C.
The operating temperature range does not apply to dynamic operation. If your application involves dynamic operation, contact our customer service department.
Ask about custom designs!
Encapsulated PICMA® actuators can also be used when the application environment is characterized by oil, splash water or continuously high humidity. The piezo actuators are surrounded by inert gas.
Ordering Information

P-885.55
Encapsulated PICMA® Piezo Actuator, 14 µm travel range, OD 11.2 mm × L 22.5 mm, stranded wires

P-885.95
Encapsulated PICMA® Piezo Actuator, 30 µm travel range, OD 11.2 mm × L 40.5 mm, stranded wires

P-888.55
Encapsulated PICMA® Piezo Actuator, 14 µm travel range, OD 18.6 mm × L 22.5 mm, stranded wires

Custom designs or different specifications on request.