Electronic Supplies for Piezomechanics:

Technical Data
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PIEZOMECHANIK offers on request
High power analogue amplifiers 150V/200V up to 5 Amperes
### Analog Amplifiers SVR

Low voltage/high voltage types available  
Lowest noise levels  
Semibipolar operation  
for enhanced actuator stroke/force generation

#### SVR 150/1 (single channel)  
SVR 150/3 (3 independent channels)

**Voltage range:**  
–30 V thru +150 V (semibipolar)

**Manual setting of DC-Offset**  
(superimposed to external signal)

**Variable attenuation**

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#### Input:
- **Signal:** +/-5 V (+/-10 V with attenuation)
- **Impedance:** 5 kOhms
- **Connector:** BNC

#### Output:
- **Connector:** BNC
- **Voltage total:** –30 V thru +150 V
- **DC-Offset range:** –30 V thru +150 V
- **Gain:** 30 (without attenuation)
- **Max. current:** 60 mA
- **Noise:** 0.3 mVpp (for 4.7 µF load)
- **Display:** LCD

**Dimensions W x D x H (mm):**
- **single channel:** 165 x 200 x 65
- **3-channels:** 260 x 320 x 155

**Weight:**
- **single channel:** 1.75 kg
- **3-channels:** 4.7 kg

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#### Additional features of 3 channel SVR 150/3 amplifier:
- Monitor BNC output per channel:
  - shows 1:1000 piezo voltage
- LC-Display per channel

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![Graph showing frequency response and capacitance effect](image-url)
SVR 200/1 (single channel)
SVR 200/3 (3 independent channels)

Voltage range:
–50 V thru +200 V

Manual setting of DC-Offset
(superimposed to external signal)

Variable attenuation

Input:
Signal: +/- 5 V (+/-10 V with attenuation)
Impedance: 5 kOhms
Connector: BNC

Output:
Connector: BNC
Voltage total: –50 V thru +200 V
DC-Offset range: –50 V thru +200 V
Gain: 40 (without attenuation)
Max. current: 45 mA
Noise: 1 mVpp (for 4 µFarad load)
Display: LCD
Dimensions W x D x H (mm):
single channel: 165 x 200 x 65
3-channels: 260 x 320 x 155
Weight:
single channel: 1.75 kg
3-channels: 4.7 kg

Additional features of 3 channel SVR 200/3 amplifier:
Monitor BNC output per channel:
shows 1:1000 piezo voltage
LC-Display per channel
Bipolar Analog Amplifiers SVR

For operation of piezo bimorphs
Bipolar stacks
Shear elements
Other symmetric voltage activation

SVR 150bip/1 (single channel)
SVR 150bip/3 (3 independent channels)

Voltage range:
−150 V thru +150 V
Manual setting of DC-Offset
(superimposed to external signal)

### Input:
- **Signal:** +/−5 V (+/−10 V with attenuation)
- **Impedance:** 5 kOhms
- **Connector:** BNC

### Output:
- **Connector:** BNC
- **Voltage total:** −150 V thru +150 V
- **DC-Offset range:** −150 V thru +150 V
- **Gain:** 30 (without attenuation)
- **Max. current:** 30 mA
- **Noise:** 0.3 mVpp (for 4.7 µF load)
- **Display:** LCD

### Dimensions W x D x H (mm):
- **single channel:** 165 x 200 x 65
- **3-channels:** 260 x 320 x 155

### Weight:
- **single channel:** 1.75 kg
- **3-channels:** 4.7 kg

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### Additional features of 3 channel SVR 150bip/3 amplifier:
- Monitor BNC output per channel:
  - shows 1:1000 piezo voltage
- LC-Display per channel

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Analogue High Power Amplifiers LE
LE 150/100 EBW

Voltage range:
0 V+/150 V

Manual setting of DC-Offset
(superimposed to external signal)
Variable attenuation
70 kHz bandwidth (-3 dB)

Input:
Signal: +/-5 V (+/-10 V with attenuation)
Impedance: 5 kOhms
Connector: BNC

Output:
Connector: BNC
Voltage total: 0 V thru +150 V
DC-Offset range: 0 V thru +150 V
Gain: 30 (without attenuation)
Peak current: 1200 mA
Average current: 350 mA
Noise: 20 mVpp (for 4.7 µFarad load)
Display: LCD
Dimensions W x D x H (mm):
260 x 320 x 165
Weight: 6.8 kg
**LE 200/070 EBW**

**Voltage range:**  
0 V/+200 V

**Manual setting of DC-Offset**  
(superimposed to external signal)

**Variable attenuation**

70 kHz bandwidth (-3 dB)

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**Input:**

Signal:  +/–5 V (+/–10 V with attenuation)  
Impedance:  5 kOhms  
Connector:  BNC

**Output:**

Connector:  BNC  
Voltage total:  0 V thru +200 V  
DC-Offset range:  0 V thru +200 V  
Gain:  40 (without attenuation)  
Peak current:  700 mA  
Average current:  250 mA  
Noise:  20 mVpp (for 4.7 µF load)  
Display:  LCD  
Dimensions W x D x H (mm):  
320 x 260 x 165  
Weight:  7 kg
PIEZOMECHANIK supplies a wide range of connecting systems, adaptors, extension cable to make the installation and compatibility of components as easy as possible.

When a complete actuator/amplifier system is ordered, the actuators will be equipped with the plugs corresponding the amplifier’s connector.

Further adaptors are available for the combination of different connector systems.

### Adaptors:

<table>
<thead>
<tr>
<th>Plug</th>
<th>Coupler</th>
</tr>
</thead>
<tbody>
<tr>
<td>BNC</td>
<td>LEMOSA 0.250 (low voltage systems)</td>
</tr>
<tr>
<td>BNC</td>
<td>LEMOSA 0.250 (high voltage systems)</td>
</tr>
<tr>
<td>LEMOSA 0.250</td>
<td>BNC</td>
</tr>
<tr>
<td>LEMOSA 0.250</td>
<td>BNC</td>
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</tbody>
</table>

Coaxial cable RG 178 with plug – one end blunt, length 1.5 m standard, other lengths on request

- LEMOSA plug 0.250
- LEMOSA plug 0.250
- BNC

Extension cables with plug and coupling end, length standard 2 m, other lengths on request

- LEMOSA 0.250 system
- LEMOSA 0.250 system

Extension cables combining different connector systems e.g. BNC-LEMOSA on request.
Low voltage co-fired multilayer stacks, rings and chips for actuation

Piezomechanik GmbH

Low Voltage Piezo Actuators

Piezomechanik GmbH

Piezomechanik GmbH

Piezomechanik GmbH

Piezomechanik GmbH

Piezomechanik GmbH

First Steps towards Piezoaction

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