

PICA Piezo Controller

Modular High-Power Amplifier / Controller



E-470 • E-472 • E-421

- Peak power 550 W
- Output voltage range 3 to 1100 V or bipolar
- Position control (optional)
- Computer interface and display modules

PICA high-performance piezo amplifier

1- or 2-channel piezo amplifier for dynamic continuous operation of PICA high-voltage piezo actuators. Analog control. Output voltage to 1100 V, bipolar can be set.

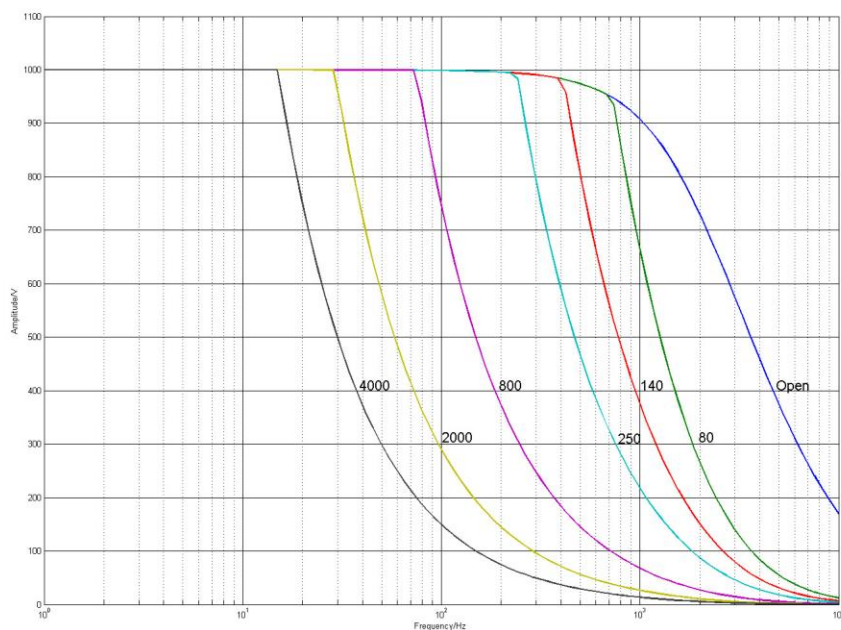
Fields of application

Industry and research. Active vibration absorber. Adaptive mechanics. Precision mechanics/machining. Optics. Metrology / measuring technology. Interferometry. Adaptive systems technology. Switching applications. Laser tuning. Force generation / material testing. Nanotechnology.

Specifications

E-470.20 / E-471.20 / E-472.20 / E-421.00	
Function	Power amplifier for PICA high-voltage piezo actuators (E-471: with servo controller and interface option)
Amplifier	
Output voltage	Default: 3 to 1100 V Can be set: -260 to +780 V, -550 to +550 V, +260 to -780 V, -3 to -1100 V
Amplifier channels	E-470, E-471, E-421: 1 E-472: 2
Average output power	110 W
Peak power, < 5 ms	550 W
Average output current	100 mA
Peak current, <5 ms	500 mA
Amplifier bandwidth, small signal	Static to 3 kHz
Amplifier bandwidth, large signal	Static to 3 kHz
Ripple, noise, 0 to 100 kHz	<25 mV _{rms} 100 mV _{pp} (200 nF)
Current limitation	Short-circuit proof
Voltage gain	100 ±1 (default), -100 ±1
Input impedance	100 kΩ
Input voltage range	Without servo: ±1/100 of selected output voltage range With servo: 0 to 10 V
Interfaces and operation	
Piezo connection	LEMO EGG.0B.701.CJL1173
Analog input	BNC socket
DC offset setting	10-turn potentiometer, adds 0 to 10 V to the input voltage
Miscellaneous	
Operating voltage	100 to 120 or 220 to 240 V AC, selectable (fuse change required)
Operating temperature range	5 to 50 °C (above 40 °C, power derated)
Mass	E-470: 5.2 kg E-471: 7.6 kg E-472: 10.1 kg E-421: 2.5 kg
Dimensions	E-470: 236 mm × 132 mm × 296 mm + handles E-471, E-472: 450 mm × 132 mm × 296 mm + handles E-421: 215 mm × 123 mm × 185 mm

Drawings / Images



E-421, E-470, E-471, E-472: Operating limits with various piezo loads, capacitance values in nF

Ordering Information

E-470.20

High-power piezo amplifier, 1 channel, 1100 V voltage range, 550 W, benchtop device

E-471.20

High-power piezo amplifier, 1 channel, 1100 V voltage range, 550 W, 19", prepared for servo controller and display / PC interface

E-472.20

2-channel high-power piezo amplifier, 1100 V voltage range, 550 W, 19"

E-421.00

High-power piezo amplifier module, without housing, 1 channel, 1100 V voltage range, 550 W, integrated power supply