

E-464 PICA™ Piezo Driver / Amplifier

For Piezo Systems and Actuators, for up to 3 Axes



E-464.00 3-channel HVPZT amplifier

- **3 Powerful Channels**
- **Peak Power 3 x 25 W**
- **Output Voltage Range 0 to 1100 V**
- **3 LED Voltage Displays**
- **Precision DC-Offset Potentiometers for Input-Signal Bias & Manual Control**

The E-464 is a bench-top piezo driver/amplifier for PICA™ high-voltage PZTs. Its three low-noise, 4-quadrant amplifiers provide a gain of 100 and can output and sink a peak current of 25 mA and an average current of >3 mA each. If only 1 channel is operated, an average output power of 12 W can be achieved.

Three 3½-digit LED displays show the output voltage of each individual channel.

Analog Control

E-464 amplifiers are designed to provide precise control of open-loop piezo positioning systems. The amplifier output voltage is determined by the analog signal at the Control Input combined with the

DC-offset potentiometer setting.

Computer Control

Optionally digital control via a D/A converter is possible. For several D/A boards from National Instruments PI offers a corresponding LabVIEW™ driver set which is compatible with the PI General Command Set (GCS), the command set used by all PI controllers. A further option includes the patented HyperBit™ technology providing enhanced system resolution.

Ordering Information

E-464.00
HVPZT Piezo Amplifier,
3 Channels, 1100 V, Bench-Top

E-500.ACD
CD with Driver Set for Analog
Controllers

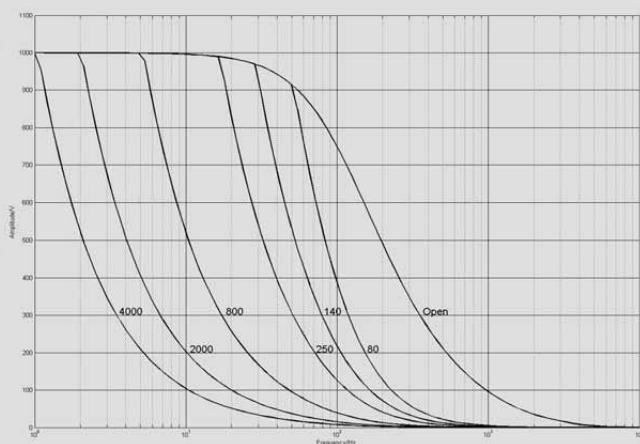
E-500.HCD
HyperBit™ Functionality for
Enhanced System Resolution
Supports certain D/A boards

Extension cables, adapters &
connectors: see in "Accessories"
(p. 2-168 ff)

Ask about custom designs!

Technical Data

Model	E-464.00
Function	Power amplifier for PICA™ high-voltage PZTs
Amplifier	
Output voltage	0 to +1100 V
Amplifier channels	3
Average output power per channel	>3.5 W (up to 12 W if 1 channel is operated)
Peak output power per channel, <5 ms	25 W
Average current per channel	>3.5 mA (up to 12 mA if 1 channel is operated)
Peak current per channel, <5 ms	25 mA
Amplifier bandwidth, small signal	1 kHz
Amplifier bandwidth, large signal	3.5 Hz (660 nF); 35 Hz (70 nF)
Ripple, noise 0 to 100 kHz	5 mV _{RMS} 50 mV _{P-P} (100 nF)
Current limitation	Short-circuit-proof
Voltage gain	+100 ±1
Control input voltage	0 to 11 V
Input impedance	100 kΩ
Interface and operation	
PZT voltage output socket	3 x LEMO EGG.0B.701.CJL1173
Control input socket	3 x BNC
DC Offset	3 x 10-turn pot, adds 0 to +10 V to Control IN
Display	3 x 3½-digit LED display for output voltages
Miscellaneous	
Operating voltage	100 to 120 or 220 to 240 VAC, selectable (fuse change required)
Operating temperature range	+5 to +50 °C (over 40 °C, max. av. power derated 10%)
Mass	4.3 kg
Dimensions	236 x 88 x 273 mm + handles



E-464: operating limits with various PZT loads, capacitance is measured in nanofarads