

E-462 PICA™ Piezo Driver

Compact, Bench-Top or OEM Module



- Single-Channel Piezo Driver
- Output Voltage Range 10 to 1000 V
- 12 V Battery or External PS Operation
- For Static or Quasi-Static Operation
- DC-Offset Potentiometer for Input-Signal Bias & Manual Control

Technical Data

Model	E-462.00	E-462.OE
Function	Power amplifier for PICA™ high-voltage PZTs	Power amplifier for PICA™ high-voltage PZTs
Amplifier		
Channels	1	1
Output voltage	10 to 1000 V	10 to 1000 V
Average output power	0.3 W	0.3 W
Peak output power < 5ms	0.5 W	0.5 W
Max. average output current	0.3 mA	0.3 mA
Peak output current < 5 ms	0.5 mA	0.5 mA
Current limitation	Short-circuit-proof	Short-circuit-proof
Ripple, noise 0 to 100 kHz	50 mV _{RMS} 50 (100 nF) mV _{p,p}	
Voltage gain	100 ±1	200 ±1
Control input voltage	0 to +10 V	0 to +5 V
Input impedance	10 kΩ	10 kΩ
Frequency response	Static and quasi-static applications only	Static and quasi-static applications only
Interface and operation		
PZT voltage output socket	LEMO EGG.0B.701.CJL1173	LEMO PHG.0B.701.CJL1173 D42
Control input socket	BNC	Header pins
DC-Offset	1-turn pot., adds 0 to +10 V to Control input	–
Miscellaneous		
Dimensions	160 x 90 x 60 mm	67 x 41 x 20 mm
Mass	0.5 kg	0.25 kg
Operating voltage	10 to 15, stabilized VDC	10 to 15, stabilized VDC
Max. operating current	80 mA	80 mA
Operating temperature range	+5 to +50 °C (over 40 °C, max. av. power derated 10%)	+5 to +50 °C (over 40 °C, max. av. power derated 10%)
Power supply	Wall-plug unit	–

The E-462.00 piezo driver is a low-cost amplifier / driver for PICA™ high-voltage PZTs. It can output a peak current of 0.5 mA and is specially designed for static and quasi-static applications. Because the unit requires an operating current of only 80 mA @ 12 V, battery operation is possible.

Analog Control

E-462 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.

PCB-Mount Version for OEMs

The E-462.OE version is fully enclosed in a metal case and

Ordering Information

E-462.00
HVPZT Piezo Amplifier, 1000 V

E-462.OE
HVPZT Piezo Amplifier Module, 1000 V, OEM Version

E-500.ACD
LabVIEW™ Driver Set for Analog Controllers (Supports Certain D/A Boards)

E-500.HCD
HyperBit™ Functionality for Enhanced System Resolution

Extension cables, adapters & connectors: see in "Accessories" in the "Piezo Drivers / Servo Controllers" section (page 2-168 ff).

Ask about custom designs!

designed for mounting on circuit boards. All input connections are via 6 header pins located on the bottom. The HV output is via a coaxial cable with LEMO connector. This OEM module does not provide manual controls. If dynamic (>1 Hz) PZT operation is required, please consider the E-464 (see p. 2-139) (3-channel bench-top amplifier), E-470 (see p. 2-158) or E-508 (see p. 2-150) amplifiers (modular systems with sensor / servo option).

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.