

E-461

HVPZT Piezo Drivers

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E-461.00



E-461.OE

- Single Channel Piezo Driver
- 12 V Battery or P/S Operation
- Output Voltage Range -10 to -1000 V

The E-461.00 piezo driver is a low-cost amplifier for high-voltage PZTs. It can output a peak current of 0.5 mA and an average current of 0.3 mA. Because the unit requires an operating current of only 80 mA @ 12 V, battery operation is possible.

The E-461.OE is the OEM version of the E-461.00 amplifier. The OEM module does not provide manual controls. All input connections are via 6 header pins located on the bottom. The HV output is via a coaxial cable with LEMO connector (ERA.0A.250.CTL). The module is designed for mounting on circuit boards. The electronics are fully enclosed in a metal case. The E-461.00 and E-461.OE can be operated in 2 ways:

I. Manual Control:

Output voltage can be set by a DC-offset potentiometer (not supplied with E-461.OE) in the range of -10 to -1000 V.

II. External Control:

Output voltage is controlled by an analog signal in the range of

0 to 10 V, applied to the BNC input. Multiplying by the gain factor of -100, an output voltage range of -10 to -1000 V results. The DC-offset potentiometer adds a DC bias to the input, allowing continuous shifting of the input range between 0 V to +10 V and -10 V to 0 V (see page 6-52).

The E-461.00 and E-461.OE are not equipped with active discharge circuitry but a 5 Mh/3.9 nF RC network. Therefore, PZT discharge times will differ from charge times. If dynamic (>1 Hz) PZT operation is required, please consider the E-463 or E-507 amplifiers (see page 6-40 and see page 6-23).

Ordering Information

- E-461.00**
HVPZT Piezo Driver
- E-461.OE**
HVPZT Piezo Driver Module, OEM Version
- Ask about custom designs!**

Technical Data

Models	E-461.00	E-461.OE
Function	Power amplifier	Power amplifier
Channels	1	1
Maximum output power	0.5 W	0.5 W
Average output power	0.3 W	0.3 W
Peak output current	0.5 mA	0.5 mA
<5 ms		
Average output current	0.3 mA	0.3 mA
>5 ms		
Current limitation	Short-circuit proof	Short-circuit proof
Voltage gain	-100 ±1	-200 ±1
Polarity	negative	negative
Control input voltage	0 to +10 V	0 to +5 V
Output voltage	-10 to -1000 V	-10 to -1000 V
DC-offset setting	-10 to -1000 V at output with 1-turn pot.	-
Input impedance	10 kΩ	1 MΩ
Frequency response	Static and quasi static applications only	Static and quasi-static applications only
Control input socket	BNC	Header pins
PZT voltage output socket	LEMO ERA.0A.250.CTL	LEMO ERA.0A.250.CTL
Dimensions	160 x 90 x 60 mm	67 x 41 x 20 mm
Weight	0.5 kg	0.25 kg
Operating voltage	10 to 15 VDC, stabilized	10 to 15 VDC, stabilized
Max. operating current	80 mA	80 mA
Operating temperature range	0 to +60 °C	0 to +60 °C
Power supply	optional (3.5 mm jack socket)	-