

E-461

HVPZT Amplifiers



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

The E-461.00 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.OA.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 Operation:** 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 operation:** 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 6-40).

The E-461.00 and E-461.OE are not equipped with active discharge circuitry but a 5 MΩ/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 p. 6-28 and p. 6-35).



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 < 5 ms	0.5 mA	0.5 mA
Average output current > 5 ms	0.3 mA	0.3 mA
Current limitation	Short-circuit proof	Short-circuit proof
Voltage gain	-100 ±1	-100 ±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	10 kΩ
Frequency response	Static and quasi static applications only	Static and quasi-static applications only
Control input socket	BNC (E-461.00 only)	Header pins
PZT voltage output socket	LEMO ERA.OA.250.CTL	LEMO ERA.OA.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	Not included (3.5 mm jack socket)	Not included

Ordering Information

E-461.00
HVPZT Amplifier
E-461.OE HVPZT Amplifier Module,
OEM Version
Custom Designs
for Volume Buyers