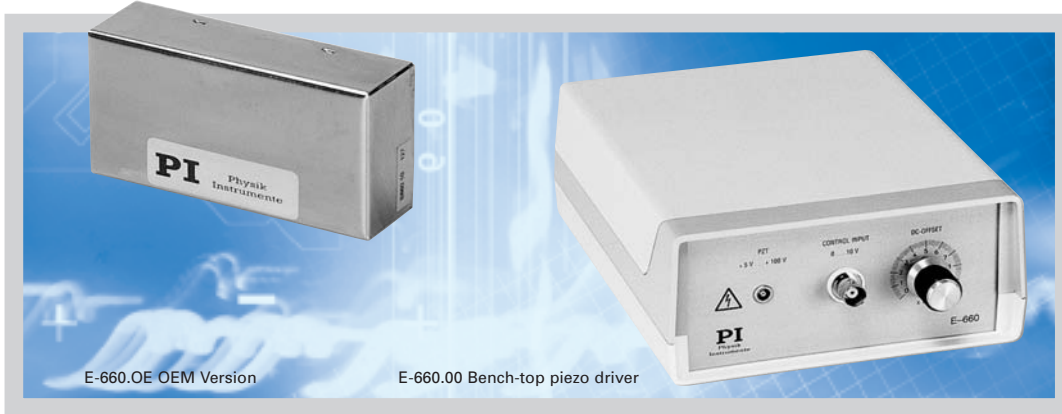


E-660 Piezo Driver

OEM Module / Bench-Top



- Compact Single-Channel Piezo Driver
- Output Voltage Range 5 to 110 V
- 12 V Battery or External PS Operation

The E-660.00 piezo driver is a low-cost amplifier for low-voltage piezo actuators and positioning stages. It can output and sink a peak current of 20 mA and an average current of 10 mA. The E-660 is designed for static and low-level dynamics applications. The low operating current of only

150 mA @ 12 V makes the unit suitable for battery operation.

Voltage-Controlled Piezo Operation

This precision piezo driver is designed for voltage-controlled piezo operation in both dynamic and static mode. Its output voltage is determined by the analog control signal at the BNC Control Input socket, optionally combined with the DC-offset potentiometer. Voltage-controlled operation (in contrast to position-controlled operation) is used in applications where the fastest possible response and very high resolution with maximum bandwidth are essential, and/or when commanding and reading the target position in absolute values is either not important or accomplished with external position feedback.

Ordering Information

- E-660.00**
Piezo Amplifier, 5 to 110 V,
Bench-Top
- E-660.OE**
Amplifier Module, 5 to 110 V,
OEM Version

The precision 10-turn potentiometer can also be used alone to set the output voltage manually.

Compact OEM Version

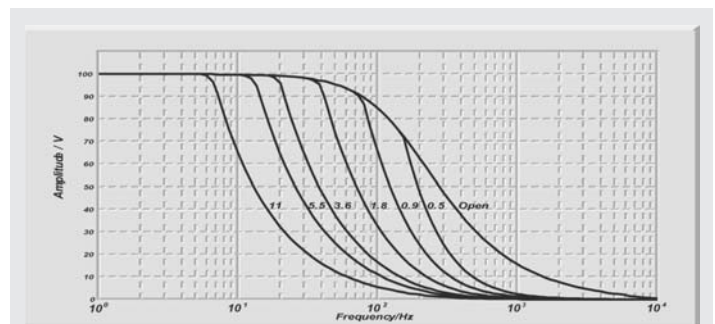
The E-660.OE version is fully enclosed in a metal case and designed for mounting on circuit boards. All inputs and outputs are via 8 header pins located on the bottom of the module. This OEM module does not provide manual controls.

Remote Control via Computer Interface

Optionally, digital control via an external 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.

Technical Data

Model	E-660.00	E-660.OE	Unit
Function	Power amplifier	Power amplifier	
Channels	1	1	
Amplifier			
Input voltage	0 to +11	0 to +11	V
Output voltage	5 to 110	5 to 110	V
Peak output power	2	2	W
Average output power	1	1	W
Peak current, < 5 ms	20	20	mA
Average current, >5 ms	10	10	mA
Current limitation	Short-circuit-proof	Short-circuit-proof	
Voltage gain	10 ±0.1	10 ±0.1	
Ripple, noise, 0 to 10 kHz	5 mV _{RMS} / <10 kHz <20 mV _{pp} / 1 μF	5 mV _{RMS} / <10 kHz <20 mV _{pp} / 1 μF	
Input impedance	100	10	kΩ
Interfaces and operation			
Piezo connector	LEMO ERA.00.250.CTL	Header pins	
Control Input sockets	BNC	Header pins	
DC-Offset	1-turn pot., adds 10 to 0 V to Control In	–	
Miscellaneous			
Operating temperature range	5 to +50	5 to +50	°C
Dimensions	160 x 90 x 60	67 x 41 x 20	mm
Mass	0.5	0.25	kg
Operating voltage	10 to 15 VDC, stabilized	10 to 15 VDC, stabilized	V
Max. power consumption	3	3	W



E-660: operating limits with various PZT loads (open-loop), capacitance is measured in μF