

High-Power Piezo Amplifier / Servo Controller

High Currents, High Dynamics



E-618

- Peak current 20 A
- Rise times in the microsecond range
- 15 kHz bandwidth for high dynamics applications
- Overheat protection for piezo actuators with temperature sensor

Piezo amplifier module for particularly fast rise times

High peak current, 0.8 A continuous current. High bandwidth for high dynamics. Suitable for PICMA® piezo actuators with special contacts. Output voltage -30 to 130 V. Analog control. Evaluation of temperature sensor protects the piezo actuator against overheating.

Optional servo controller upgrade

Optional E-509 control module for strain gauge sensors. Optional E-518 interface module with wave generator, data recorder, digital interfaces. Optional accessories: NI LabVIEW driver set E-500.ACD for D/A converter boards from National Instruments

Application fields

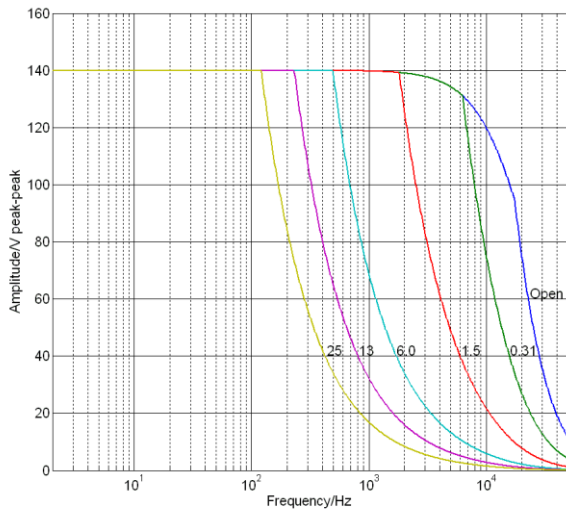
- Fast switching applications in valves or pumps
- Microstructure analysis
- Active vibration absorber

Specifications

	E-618.10 / E-618.10G / E-618.1G / E-618.20G
Function	Power amplifier / controller for PICMA® multilayer piezo actuators
Channels	E-618.10 / E-618.10G / E-618.1G: 1 E-618.20G: 2
Amplifier	E-618.10 / E-618.10G / E-618.1G / E-618.20G
Input voltage range	-2 to 12 V
Output voltage*	-30 to 130 V
Peak output power	>3200 W (<0.3 ms)
Average output power	100 W (>0.3 ms)
Peak current	>20 A (<0.3 ms)
Average output current	0.8 A (>0.3 ms)
Current limitation	Short-circuit proof
Voltage gain	10 ±0.1
Ripple, noise, 0 to 10 kHz	20 mV _{pp} / 2.4 mV _{rms} (no load) <2 mV _{rms} (1µF)
Input impedance	100 kΩ
Interfaces and operation	E-618.10 / E-618.10G / E-618.1G / E-618.20G
Piezo connection	LEMO EGG.1B.302.CLL, with security cover
Analog input	BNC
Temperature sensor (piezo actuator)	PT 1000;LEMO socket; automatic deactivation of high voltage output at max. 150°C
Display and indicators	LEDs for Power, Temp Overflow
DC offset setting	10-turn potentiometer, adds 0 to 10 V to the input voltage
Miscellaneous	E-618.10 / E-618.10G / E-618.1G / E-618.20G
Operating voltage	100 to 120 or 220 to 240 VAC, selectable
Max. power consumption	15 VA (no load), 160 VA (max. load)
Operating temperature range	5 to 50 °C (above 40 °C, power derated)
Mass	E-618.10: 2.65 kg E-618.10G: 5.6 kg E-618.1G: 7 kg E-618.20G: 9.5 kg
Dimensions	E-618.10: 215 mm × 123 mm × 185 mm (42 HP / 3 RU) E-618.10G: 9.5" chassis E-618.1G: 19" chassis E-618.20G: 19" chassis

*Deactivation of the voltage output at 85 °C internally (overheat protection)
Ask about customized versions.

Drawings / Images



E-618.10: Operating limits (open loop) with various capacitive loads, capacitance values in μF

Ordering Information

E-618.10

High-power piezo amplifier module, 1 channel, -30 to 130 V, 20 A

E-618.10G

High-power piezo amplifier, 1 channel, -30 to 130 V, 20 A, benchtop device

E-618.1G

High-performance piezo controller, 1 channel, -30 to 130 V, 20 A, prepared for servo controller and PC interface, 19"

E-618.20G

High-power piezo amplifier, 2 channels, -30 to 130 V, 20 A, 19"