

E-612 · E-661

High-Speed NanoAutomation® Piezo Controllers



E-501.10 chassis with four E-612.C0 modules.

- 10 μ s Parallel Command Port
- OEM Modules and Bench-Top Versions
- Controls LVPZT NanoPositioners with Capacitive Sensors
- Opto-Isolation for EMI Immunity
- Integrated PZT Power Amplifier

The E-612.C0 is a high-speed, parallel-command-port amplifier and position servo-controller module for closed-loop piezo-driven nano-mechanisms with integrated capacitive displacement sensors.

Notes
Important Calibration Information: Please read details on page 6-53.

Standard versions come with a 10 μ s/command, 16-bit, electrically isolated input port for enhanced EMI immunity.

An additional high-bandwidth 0 to 10 V control input is available for analog control.

The E-612.C0 controller module is also equipped with a PZT voltage amplifier, providing -20 to 120 V with 80 mA sink and source capability.

The E-661.CP module is the compact, bench-top, stand-alone version of the E-612.C0. It comes with a metal case for EMI protection and an external power supply.

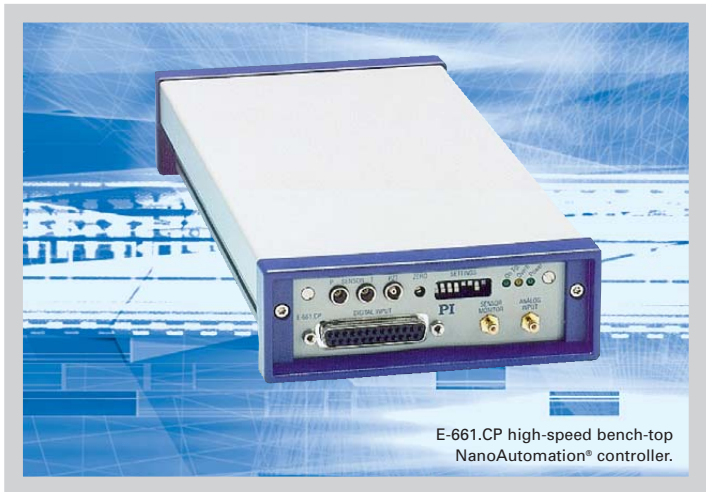
Ordering Information

E-612.C0
High-Speed NanoAutomation® Controller, Parallel Port, OEM Board

E-661.CP
High-Speed NanoAutomation® Controller, Parallel Port, Bench-Top

E-501.10
9.5" Bench-Top Chassis and Power Supply for 1 to 4 E-612.C0 Modules

Ask about custom designs!



E-661.CP high-speed bench-top NanoAutomation® controller.

Technical Data (Chassis & Power Supply)

Models	E-501.10
Function	Chassis for 1 - 4, E-612.C0, high speed NanoAutomation® controller modules
Operating voltage	90-120 VAC, 50-60 Hz; 220-264 VAC, 50-60 Hz
Power supply	linear regulated power supply, integrated
P/S Output voltages	+130 V, 0.2 A; -27 V, 0.2 A; +24 V, 1 A; \pm 15 V, 0.5 A; +5 V, 1 A
Max. power consumption	50 W
Primary fuse	0.63 A slow
Dimensions	W: 236, H: 132; D: 296 + handles



E-612 high-speed NanoAutomation® controller board.

Technical Data (Controller)

Models	E-612.C0	E-661.CP
Function	High-speed NanoAutomation® controller module	Bench-top high-speed NanoAutomation® controller
Channels	1	1
Capacitive Sensor Circuit		
Clock frequency	1.6 MHz	1.6 MHz
Bandwidth	1.5 kHz	1.5 kHz
Amplifier		
Output voltage range	-20 to +120 V	-20 to +120 V
Output power	8 W	8 W
Output current	80 mA	80 mA
Current limitation	Short-circuit proof (5 minutes, shut-down)	Short-circuit proof (5 minutes, shut-down)
Bandwidth (no load)	>500 Hz	>500 Hz
Digital Circuit		
Data	16-bit	16-bit
Input level	TTL	TTL
Timing	THmin 10 µs; TLmin 10 µs	THmin 10 µs; TLmin 10 µs
Input current	10 mA	10 mA
On-target indication	On: target position ±0.025 % to 0.2 %, jumper selectable	On: target position ±0.025 % to 0.2 %, jumper selectable
Analog Input / Output		
Control voltage range	0 to 10 V	0 to 10 V
Input impedance	10 kΩ, 1 nF	10 kΩ, 1 nF
Sensor Monitor Output		
Voltage range	-10 to +10 V (jumper selectable)	-10 to +10 V (jumper selectable)
Output resistance	10 kΩ	10 kΩ
Bandwidth	1.5 kHz	1.5 kHz
Connectors		
Digital interface	25-pin-sub-D	25-pin-sub-D
Piezo	LEMO ERA.00.250	LEMO ERA.00.250
Sensor	LEMO EPL.00.250	LEMO EPL.00.250
Sensor monitor	SMB	SMB
Analog input	SMB	SMB
Power Requirements	+5 V, 0.12 A, +/- 15 V, 0.16 A, +130 V, 80 mA max.; -27 V, 80 mA max	15 V, 2 A (external power supply included)
Dimensions	Euroboard (64-pin rear connector). Mating extender card: Mod. P-896.00)	125 x 50 x 262 mm

Piezo Actuators

Nanopositioning & Scanning Systems

Active Optics / Steering Mirrors

Tutorial: Piezo-electrics in Positioning

Capacitive Position Sensors

Piezo Drivers & Nanopositioning Controllers

Hexapods / Micropositioning

Photonics Alignment Solutions

Motion Controllers

Ceramic Linear Motors & Stages

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