Piezo Servo Controller

Benchtop Device, 1 Channel, for Capacitive or Strain Gauge Sensors, Fast USB Interface

E-625

- Integrated 24-bit USB interface
- Network capability with up to 12 channels
- Peak current 120 mA
- Position control for SGS and capacitive sensors
- Notch filter for higher bandwidth
- Additional broadband analog interface

Piezo servo controller with position control

Single channel piezo servo controller for capacitive sensors (E-625.CR and E-625.C0) or strain gauge sensors (E-625.SR and E-625.S0). Integrated sensor module for strain gauge sensor evaluation in the E-625.SR and .S0. Integrated servo controller module for limiting the slew rate of the output voltage, notch filter, and servo loop.

Functions and interfaces

The E-625.CR and E-625.SR models with the E-816 computer interface submodule and therefore, additional functions:

- Multi-axis network: Several E-625s can be controlled from one single interface. A special network cable establishes communication between the individual controllers.
- Waveform memory: The user can save any function values in an internal table and output them by triggering. This makes it possible to repeat control motion profiles simply and reliably.
- General Command Set (GCS): For uniform control of nano- and micropositioning systems, the universal command set from PI is used. With GCS, control is independent of the hardware so that various positioning systems can be controlled together or new systems can be used with minimum programming effort.

Specifications

	E-625.SR, E-625.S0 / E-625.CR, E-625.C0
Function	Piezo amplifier / servo controller
Channels	1

Sensor	E-625.SR, E-625.S0 / E-625.CR, E-625.C0
Controller type	P-I (analog), notch filter
Sensor type	SGS (.S) / capacitive (.C)

Amplifier	E-625.SR, E-625.S0 / E-625.CR, E-625.C0
Input voltage range	-2 to +12 V
Min. output voltage	-30 to +130 V
Peak current, < 50 ms	120 mA
Average output current	60 mA
Current limitation	Short-circuit proof
Noise, 0 to 100 kHz	0.8 mV_{rms}
Voltage gain	10 ±0.1
Input impedance	100 kΩ

Interfaces and operation	E-625.SR, E-625.S0 / E-625.CR, E-625.C0
Communication interfaces*	USB, RS-232 (D-sub 9 (m)), 24-bit A/D and 20-bit D/A
Piezo connection	LEMO ERA.00.250.CTL (.S) / D-sub special (.C)
Sensor connector	LEMO EPL.0S.304.HLN (.S) / D-sub special (.C)
Analog input socket	SMB
Sensor monitor socket	SMB
Controller network*	up to 12 channels
Command set*	PI General Command Set (GCS)
User software*	PIMikroMove
Software drivers*	NI LabVIEW driver, dynamic libraries for Windows (DLL) and Linux
Supported functions*	Wave table, 256 data points, external trigger, up to 16 macros

Miscellaneous	E-625.SR, E-625.S0 / E-625.CR, E-625.C0
Operating temperature range	5 to 50 °C
Overheat protection	Deactivation at 75 °C
Dimensions	205 mm × 105 mm × 60 mm
Mass	1.05 kg
Operating voltage	12 to 30 V DC, stabilized (in the scope of delivery: external power adapter)
Current consumption	2 A

* E-625.S0 and E-625.C0 without digital interface
Ask about customized versions.

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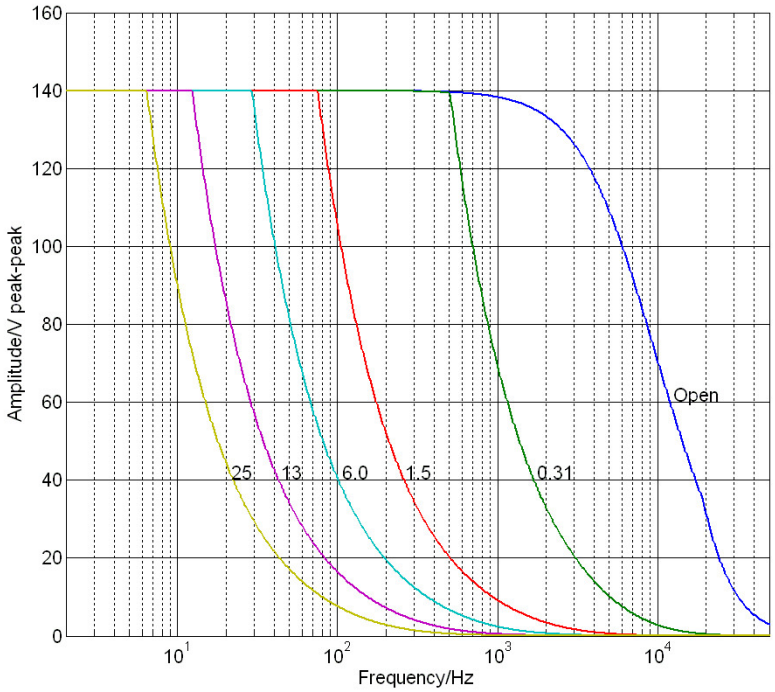
Drawings / Images



E-625: Operating limits (open loop) with various piezo loads, capacitance values in µF

Ordering Information

E-625.CR
Piezo amplifier / servo controller, 1 channel, -30 to 130 V, capacitive sensor, USB, RS-232

E-625.SR
Piezo amplifier / servo controller, 1 channel, -30 to 130 V, strain gauge sensor, USB, RS-232

E-625.C0
PIFOC Piezo amplifier / servo controller, 1 channel, -30 to 130 V, capacitive sensor

E-625.S0
PIFOC Piezo amplifier / servo controller, 1 channel, -30 to 130 V, strain gauge sensor