

E-500
E-501

Modular PZT Control Systems (HVPZT & LVPZT)



Configuration example: E-501 chassis with optional E-503 LVPZT amplifier, E-509.C3A PZT servo-controller for capacitive sensors and E-516.i3 20-bit DAC Interface/Display.

- For High- and Low-Voltage PZTs
- 19- and 9.5-Inch Chassis
- Optional Position Servo-Control Modules
- Optional Display and RS-232 & IEEE 488 Interface Module

The E-500 is a modular, 19" rackmount chassis for PZT amplifiers and position servo-controllers. An integrated multi-function power supply (E-530.00) provides operating voltages for all available modules. E-500 chassis are assembled to order and tested with all ordered modules installed.

A maximum of 3 amplifier/controller channels can be installed in one E-500 chassis.

The E-501.00 is the 9.5" version of the E-500 chassis. Note: only one amplifier module (1 or 3 channels) and only one sensor/servo-controller module (1 or 3 channels) can be installed in the E-501. A modified E-500 chassis for up to 6 channels is available on request.



Configuration example: E-500 chassis with three optional E-507 HVPZT Amplifiers, E-509.L3 PZT Servo-Controller for LVDT sensors and E-516.i3 20-bit DAC face/Display.

Ordering Information

E-500.00
PZT-Amplifier & Position-Servo-Controller, Up to 3 Channels, Basic Chassis, 19"

E-501.00
PZT-Amplifier & Position-Servo-Controller, Up to 3 Channels, Basic Chassis, 9.5"

Custom Designs
for Volume Buyers

Technical Data

Models	E-500.00	E-501.00
Function	19" chassis for PZT electronics: amplifier modules, sensor modules, position servo-control modules, display/interface modules	9.5" chassis for PZT electronics: amplifier modules, sensor modules, position servo-control modules, display/interface modules
Channels	1, 2, 3	1, 3
Dimensions	450 x 158 x 288 mm (see p. 6-7)	235 x 158 x 288 mm (see p. 6-7)
Integrated power supply	E-530.00	E-531.00
Operating voltage	90-264 VAC, 50-60 Hz, E-530.00 primary switching P/S;	90-120 / 220-264 VAC, 50-60 Hz, E-531.00 linear P/S

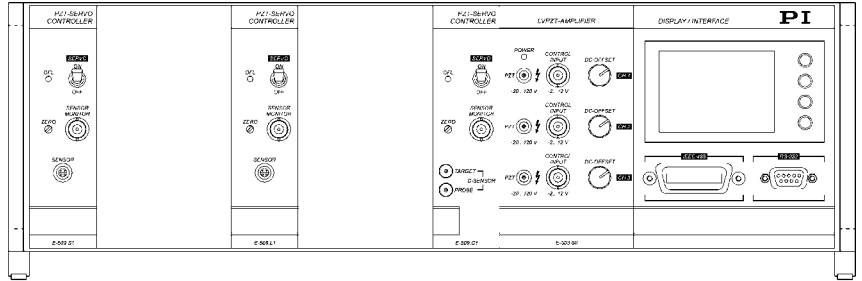
E-500 E-501

System Configuration

Ordering Information

For Ordering Examples and Module Survey see page 6-22.

*Configuration Example:
E-500 chassis with optional E-503 LVPZT amplifier,
3 channels, 3 x E-509 PZT servo-controller (E-509.S1:
strain gauges, E-509.L1: LVDTs, E-509.C1A: capacitive sensors)
and E-516.i3 20-bit DAC interface/display.*



E-500, E-501 System Configuration

	E-500, 19" Chassis Models				E-501, 9.5" Chassis		
	Contr. Slot 3	Amplifier Slot 3	Contr. Slot 2	Amplifier Slot 2	Contr. Slot 1	Amplifier Slot 1	Display / Interface Slot
Installable Amplifier Modules							
E-503.00 (LV, 3 ch)							
E-505.00 (LV, 1 ch)							
E-507.00 (HV, 1 ch)							
Installable Sensor & Position Servo-Control Modules							
E-509.C1A (Cap., 1 ch)							
E-509.L1 (LVDT, 1 ch)							
E-509.S1 (SGS, 1 ch)							
E-509.C2A (Cap., 2 ch)							
E-509.C3A (Cap., 3 ch)							
E-509.L3 (LVDT, 3 ch)							
E-509.S3 (SGS, 3 ch)							
Installable Display/Interface Modules							
E-515.01 (1 ch)							
E-515.03 (3 ch)							
E-516.i3 (3 ch)							
Minimal Configuration, PZT Amplifier Function only							
Extended Configuration, PZT Amplifier with additional Position Servo-Controller							
Extended Configuration, PZT Amplifier with additional Display (and Interface, no Servo-Controller)							
Extended Configuration, PZT Amplifier with additional Position Servo-Controller and Display (and Interface)							

Can be installed in E-500 Can be installed in E-501 or E-500

HV: High Voltage

LV: Low Voltage

The following modules can be installed in E-500 / E-501 chassis:

■ **Amplifier modules**
(see page 6-33 ff.)

E-503.00

LVPZT Amplifier Module,
3 Channels, -20 to +120 V,
3 x 6 W

E-505.00

LVPZT Amplifier Module,
-20 to +120 V, 30 W,
1 Channel

E-507.00

HVPZT Amplifier Module,
-3 to -1100 V, 13 W,
1 Channel

■ **Display & DAC-Interface**
Modules (see page 6-37)

E-516.i3

20-bit DAC Interface/
Display Module, IEEE
488/RS-232, 3 Channels

E-515.01

Display Module for PZT
Voltage/Displacement

E-515.03

Display Module for PZT
Voltage/Displacement,
3 Channels

■ **Sensor & Controller**
Modules (see page 6-36)

E-509.C1A

PZT Sensor/Controller
Module,
Capacitive Sensor

E-509.L1

PZT Sensor/Controller
Module, LVDT Sensor

E-509.S1

PZT Sensor/Controller
Module, Strain Gauge
Sensor

E-509.C2A

PZT Sensor/Controller
Module, Capacitive Sensor,
2 Channels

E-509.C3A

PZT Sensor/Controller
Module, Capacitive Sensor,
3 Channels

E-509.L3

PZT Sensor/Controller
Module, LVDT Sensor,
3 Channels

E-509.S3

PZT Sensor/Controller
Module, Strain Gauge
Sensor, 3 Channels

Configuration Examples

- **LVPZT Amplifier, 3 Channels, (6 W) without Display:**
 - 1 x E-500.00 (E-501.00)**
Modular PZT Control System, 19" Basic Chassis
 - 1 x E-503.00**
LVPZT Amplifier Module, 3 Channels, -20 to +120 V, 3 x 6 W
- **HVPZT Amplifier, 3 Channels, with DAC Interface & Display:**
 - 1 x E-500.00**
Modular PZT Control System, 19" Basic Chassis
 - 3 x E-507.00**{bk xtx6149}
HVPZT Amplifier Module, -3 to -1100 V, 13 W
 - 1 x E-516.i3**
DAC Interface/Display Module, IEEE 488/RS-232, 3 Channels
- **HVPZT Amplifier & Position Servo-Controller (LVDT Sensors), 3 Channels, with Display & DAC Interface:**
 - 1 x E-500.00**
Modular PZT Control System, 19" Basic Chassis
 - 3 x E-507.00**
HVPZT Amplifier Module, -3 to -1100 V, 13 W
 - 1 x E-509.L3**
PZT Sensor/Controller Module, LVDT Sensor, 3 Channels
 - 1 x E-516.i3**
DAC Interface/Display Module, IEEE 488/RS-232, 3 Channels
- **Closed-loop operation of P-733.2CL XY PZT stage (capacitive sensors) shortest possible step response, computer control:**
 - 1 x E-500.00**
Modular PZT Control System, 19" Basic Chassis
 - 2 x E-505.00**
LVPZT Amplifier Module, -20 to +120 V, 30 W
 - 1 x E-509.C2A**
PZT Sensor/Controller Module, Capacitive Sensor, 2 Channels
 - 1 x E-516.i3**
20-bit DAC Interface/Display Module, IEEE 488/RS-232, 3 Channels
- **Closed-loop operation of the P-733.2CL XY PZT stage (capacitive sensors) and P-721.20 PIFOC objective positioner (capacitive sensor), static and slow operation, computer control, 9.5" chassis:**
 - 1 x E-501.00**
Modular PZT Control System, 9.5" Basic Chassis
 - 1 x E-503.00**
LVPZT Amplifier Module, 3 Channels, -20 to +120 V, 3 x 6 W
 - 1 x E-509.C3A**
PZT Sensor/Controller Module, Capacitive Sensor, 3 Channels
 - 1 x E-516.i3**
20-bit DAC Interface/Display Module, IEEE 488/RS-232, 3 Channels
- **Closed-loop operation of S-340 tip/tilt platform (LVDT sensors), shortest possible step response, external analog control:**
 - 1 x E-500.00**
Modular PZT Control System, 19" Basic Chassis
 - 3 x E-505.00**
LVPZT Amplifier Module, -20 to +120 V, 30 W
 - 1 x E-509.L3**
PZT Sensor/Controller Module, LVDT Sensor, 3 Channels
- **Closed-loop operation of P-733.2CL XY stage (capacitive sensors) and P-721.10 PIFOC objective positioner (LVDT sensor), shortest possible step response, computer control:**
 - 1 x E-500.00**
Modular PZT Control System, 19" Basic Chassis
 - 3 x E-505.00**
LVPZT Amplifier Module, -20 to +120 V, 30 W
 - 2 x E-509.C1A**
PZT Sensor/Controller Module, Capacitive Sensor
 - 1 x E-509.L1**
PZT Sensor/Controller Module, LVDT Sensor
 - 1 x E-516.i3**
20-bit DAC Interface/Display Module, IEEE 488/RS-232, 3 Channels
- **Closed-loop operation of 3 P-841.10 LVPZT translators (strain gauge sensors) static and slow operation, external analog control, future upgrade for faster operation possible:**
 - 1 x E-500.00**
Modular PZT Control System, 19" Basic Chassis (can accommodate 3 x E-505, 30 W amplifiers)
 - 1 x E-503.00**
LVPZT Amplifier Module, 3 Channels, -20 to +120 V, 3 x 6 W
 - 1 x E-509.S3**
PZT Sensor/Controller Module, Strain Gauge Sensor, 3 Channels
 - Optional:**
 - 1 x E-515.03**
Display Module for PZT Voltage / Displacement, 3 Channels