芯明天
COREMORROW

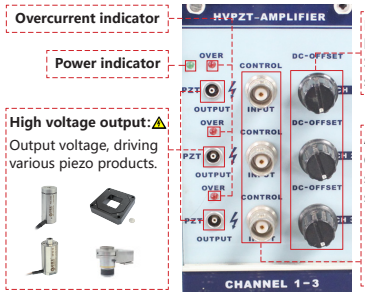
E00/E01 Piezo Controller

User Guide

- Modular design
- Output voltage optional
- Digital & Analog control
- Piezo servo controller

CoreMorrow Ltd. – Piezo Nano Motion

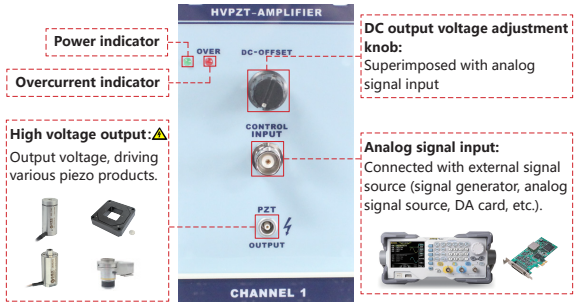
E03 Power Amplifier Module



Identifier	Model	Function
Power indicator	LED green	Light on: operating normally Light off: system is off
OVER	LED red	Light on: overcurrent state Light off: operating properly
PZT OUTPUT ⚠	ERA.00.250.CTL	Output voltage
CONTROL INPUT	BNC	Analog signal input terminal
DC-OFFSET	Potentiometer - 10 turns	Manually adjust the input superimposed on "CONTROL INPUT" signal input

Note: The CH3 of E03 can be selected as a constant voltage output, and it has no analog input interface and knob potentiometer.

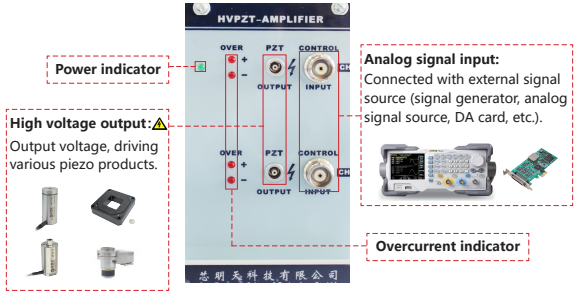
E05、E07 Power Amplifier Module



Identifier	Model	Function
Power indicator	LED green	Light on: operating normally Light off: system is off
OVER	LED red	Light on: overcurrent state Light off: operating properly
PZT OUTPUT ⚠	E05: ERA.00.250.CTL E07: ZRA.0S.116.CLL	Output voltage
CONTROL INPUT	BNC	Analog signal input terminal
DC-OFFSET	Potentiometer - 10 turns	Manually adjust the input superimposed on "CONTROL INPUT" signal input

Note: The constant voltage version of E05 has no analog input interface and DC-OFFSET knob. If PZT OUTPUT or both ends of cables are directly measured through an oscilloscope and other instruments, when the output voltage exceeds 300V, pay attention to the measuring voltage range of the instrument to avoid damage to the measuring instrument!

E06 Power Amplifier Module

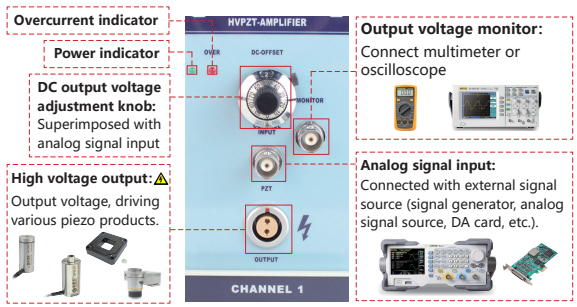


Overcurrent indicator: "+" positive, "-" Negative.

Identifier	Model	Function
Power indicator	LED green	Light on: operating normally Light off: system is off
OVER	LED red	Light on: overcurrent state Light off: operating properly
PZT OUTPUT ⚠	ERA.00.250.CTL	Output voltage
CONTROL INPUT	BNC	Analog signal input terminal

Note: If PZT OUTPUT or both ends of cables are directly measured through an oscilloscope and other instruments, when the output voltage exceeds 300V, pay attention to the measuring voltage range of the instrument to avoid damage to the measuring instrument!

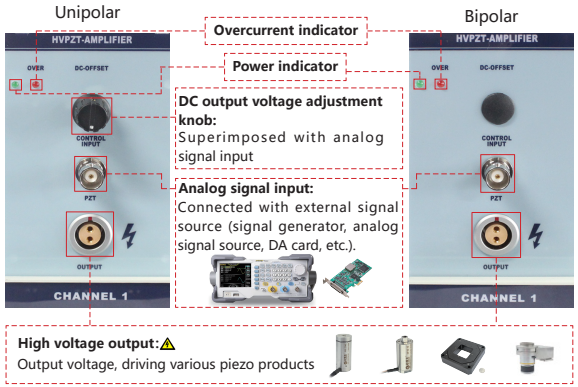
E08 Power Amplifier Module



Identifier	Model	Function
Power indicator	LED green	Light on: operating normally Light off: system is off
OVER	LED red	Light on: overcurrent state Light off: operating properly
PZT OUTPUT ⚠	ZGG.2B.302.CLL	Output voltage
CONTROL INPUT	BNC	Analog signal input terminal
Monitor	BNC	Monitoring PZT OUTPUT voltage same as analog input voltage
DC-OFFSET	Potentiometer - 10 turns	Manually adjust the input superimposed on "CONTROL INPUT" signal input.

Note: If PZT OUTPUT or both ends of cables are directly measured through an oscilloscope and other instruments, when the output voltage exceeds 300V, pay attention to the measuring voltage range of the instrument to avoid damage to the measuring instrument!

Combination Power Amplifier Module



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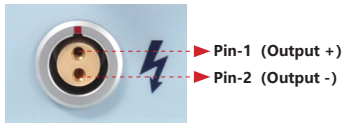
PZT OUTPUT ⚠	ZGG.2B.302.CLL	Output voltage
CONTROL INPUT	BNC	Analog signal input terminal
DC-OFFSET	Potentiometer - 10 turns	Manually adjust the input superimposed on "CONTROL INPUT" signal input.

Note: Bipolar module has DC-OFFSET knob. If PZT OUTPUT or both ends of cables are directly measured through an oscilloscope and other instruments, when the output voltage exceeds 300V, pay attention to the measuring voltage range of the instrument to avoid damage to the measuring instrument!

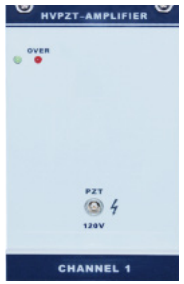
High Voltage Output Terminal



Other Module Appearances

For the interface description, please refer to the interface description of the corresponding model on this page.

E03 module
with constant output



E05 module
with constant output

E00/E01 Series Fault Fast Self-test

If there is an abnormal phenomenon in the use of the piezo controller, you can quickly troubleshoot the fault through the content below.

1、Check whether the light of the Power indicator(Power) is normal, and the green light is normal.

Processing: Please check whether 220V power supply and connection cable are normal; reen light still does not light normally after the check is correct, please contact CoreMorrow after-sales technician.

2、Send the max displacement command to check whether the red light(OVER) is always on.

Processing: If the red light is always on, please contact CoreMorrow after-sales technician.

3、Check whether the controller closed loop is normal (only valid for PZT Position Sensor Module)

Processing:

- Please check whether piezo prodcut matches piezo controller.

The back panel of piezo controller will paste the number of piezo controller and the number of the matching product. If not, please replace the corresponding matching product.

- Confirm whether piezo product is in closed loop state.

First check the state of servo dial switch, when the switch is ON, it is a forced closed-loop state, if the switch is OFF, it is a forced open-loop state.

- Zero correction

When it is in closed-loop state, please switch piezo controller to open-loop state and perform zero correction. The piezo controller and piezo products are connected normally in the open-loop state. In this state, please enter the max voltage signal, and then the 0V control signal is input (repeat this step more than 2 times). Use the multimeter to Monitor whether the Sensor Monitor output signal is between -0.5 and 0.5V. If it exceeds the deviation, the sensor output signal can be adjusted to a reasonable range through the Zero potentiometer of the panel. If it cannot be corrected or is still abnormal after correction, please contact CoreMorrow after-sales technician.

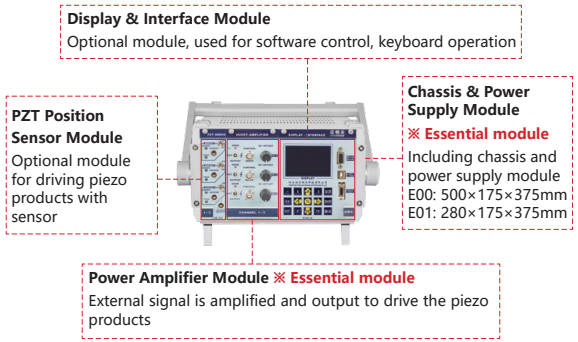
4、Confirm whether the control signal or control mode is normal (only valid for Display & Interface Module)

Processing: Confirm the control mode, this series piezo controller has analog control and digital control mode, please check the display control interface control mode, if the current analog control interface is forced analog control state (not controlled by the software), can only be controlled by analog signals and knobs (DC-OFFSET); If the state is digital on other interfaces (not controlled by analog signals and knobs), it can be controlled by the software. Please confirm the current control mode.

E00/E01 Modules Introductoin

E00/E01 is combined by 4 modules, and users can choose modules freely.

Front Panel



Rear Panel

※ If the piezo controller you purchased does not have the corresponding module, there is no corresponding function.

※ This manual only introduces Power Amplifier Module. Please refer to the corresponding operation manual for PZT Position Sensor Module, Display & Interface Module. The Chassis & Power Supply Module are not introduced separately.

More+

Please scan and follow the QR code on the right for more information

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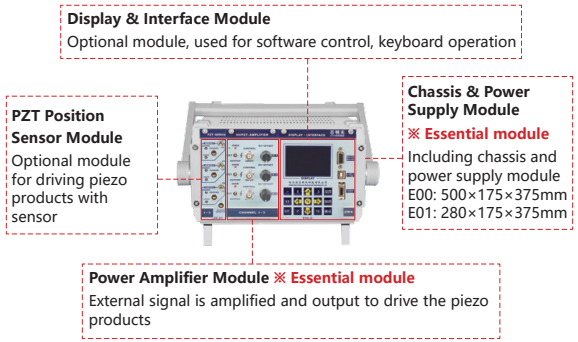

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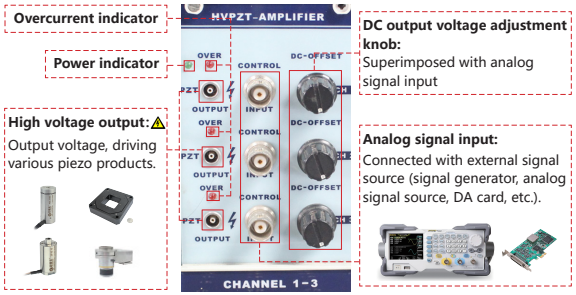

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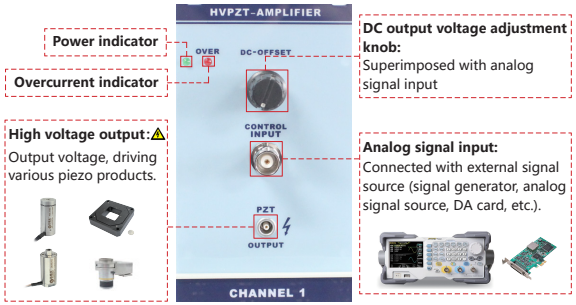

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CONTROL INPUT	BNC	Analog signal input terminal
DC-OFFSET	Potentiometer - 10 turns	Manually adjust the input superimposed on "CONTROL INPUT" signal input

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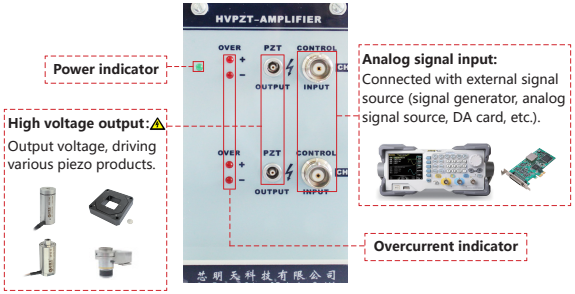

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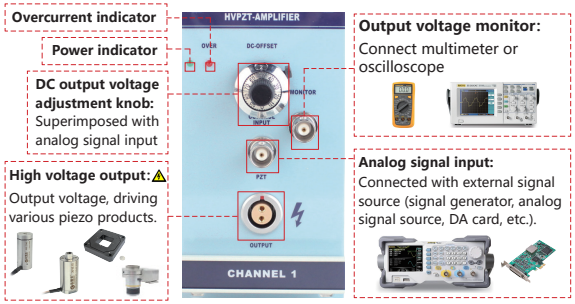

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PZT OUTPUT ⚠	ZGG.2B.302.CLL	Output voltage
CONTROL INPUT	BNC	Analog signal input terminal
Monitor	BNC	Monitoring PZT OUTPUT voltage same as analog input voltage
DC-OFFSET	Potentiometer - 10 turns	Manually adjust the input superimposed on "CONTROL INPUT" signal input.

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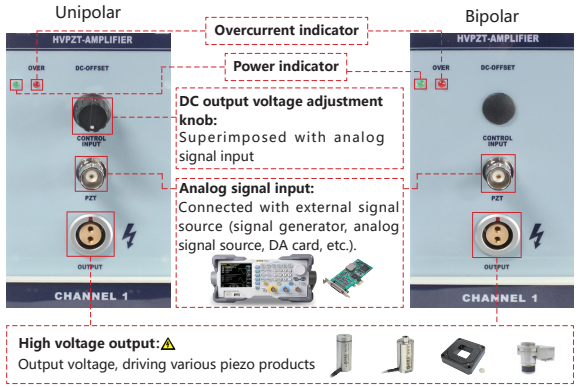

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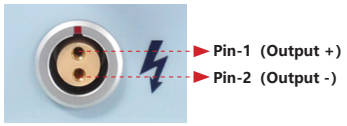
High Voltage Output Terminal



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with constant output

E05 module
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