



# E63.A1K Series Piezo Controller

## User Manual

Version: V1.0



This document describes the following products:

- E63.A1K Open loop 1 channel

# DECLARATION

## Declaration!

This user manual is a integrated user manual of the E63.A1K series piezoelectric controller. Please read this user manual carefully before using this controller. Follow the instructions in the manual during use. If there is any problem, please contact us for technical support. If you do not follow this manual or disassemble and modify the product yourself, the company will not be liable for any consequences arising therefrom.

Please read the following to avoid personal injury and to prevent damage to this product or any other product connected to it. In order to avoid possible hazards, this product can only be used within the specified range.

## Notice!

Do not touch any exposed ends of the product and its accessories.

There is high voltage inside. Do not open the case without permission.

Do not connect or disconnect input, output, or sensor cables with power on.

Please keep surface of E63.A1K clean and dry, don't operate in humid or static environment.

After use, output voltage should be cleared to zero before turning off the controller switch, such as switching the servo state to the open-loop state.

## Danger!

The piezoelectric power amplifier described in this manual is a high-voltage device capable of outputting high currents, which can cause serious or even fatal damage if not used properly.

It is strongly recommended that you do not touch any parts that connect to the high voltage output.

Special Note: If you connect it with other products in addition to our company, please follow the general accident prevention procedures.

Operating the high-voltage amplification requires training professional operators.

## Warning!

If the voltage exceeds the PZT's tolerable range, it will cause permanent damage to the PZT. Before adding voltage to the PZT poles, it must be ensured that the positive and negative poles of the PZT are connected correctly and the operating voltage is within the allowable range of this PZT.

## Cautious!

E63.A1K housing should be installed on a horizontal surface in an area with a 3CM air flow area to prevent internal convection in the vertical direction.

Insufficient airflow can cause equipment to overheat or premature instrument damage.

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## 1. Introduction

### 1.1 Features

- ▶ Super small size
- ▶ Low power consumption
- ▶ 15V ( $\pm 0.5V$ ) power supply
- ▶ Peak current 100mA
- ▶ Ave current 12mA
- ▶ Unload bandwidth 1KHz
- ▶ Output short circuit protection

### 1.2 Applicaitons

- ▶ Driving piezo actuators

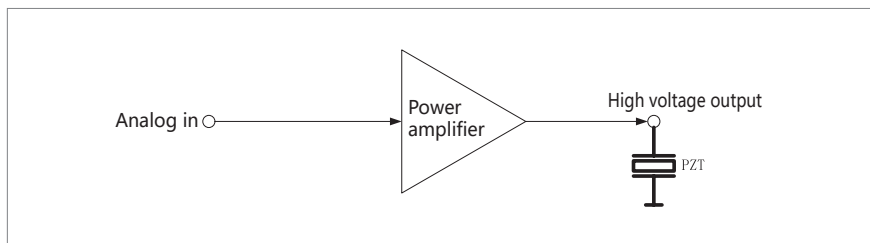
### 1.3 Order information

- ▶ E63.A1K——1Channel Open loop

Accept customized according to requirements:

- ① 12bit gain/-20 ~ 120V output voltage (default)
- ② 15bit gain/-20 ~ 150V output voltage

## 2. Driving Principle



### 3.Appearance



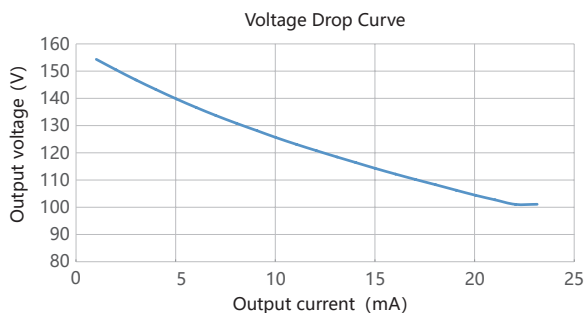
### 4.Pin Definition



Pin No.	Functions
1	Power supply: +15VDC/0.5A
2	Supply voltage ground and control input ground, AGND
3	Analog voltage input
4	Voltage output ground: SGND output
5	Analog voltage output
Housing	Shielding ground GND

### 5. Notes and suggestions >

- ▶ E63.A1K cannot be used to drive inductive loads. If the inductive loads are driven, the product may be damaged.
- ▶ The highest output voltage of E63.A1K will decrease with the increase of output current, so please pay attention to it when using. The drawdown curve is as follows:



### 6. Customer Service >

If you have any questions in use, please tell us the following information:

- ▶ Product model and relevant number
- ▶ The controller model
- ▶ Software driver version
- ▶ Supporting computer operating system

## 7.Contact us

**Harbin Core Tomorrow Science & Technology Co., Ltd.**

Tel: +86-451-86268790

Email: [info@coremorrow.com](mailto:info@coremorrow.com)

Website: [www.coremorrow.com](http://www.coremorrow.com)

Address: Building I2, No.191 Xuefu Road, Nangang District, Harbin, HLJ, China

**CoreMorrow Official and CTO WeChat are below:**

