

3 Channels | E51.B3S-I

Piezo Servo Controller



Introduction

E51.B ultra-small 3-channel servo controller designed for driving fast steering mirror, differential drive and other systems, uses a dedicated operational amplifier circuit to ensure high voltage and high-current output, and the power supply part adopts switching power supply technology. Reliable circuit optimization and antiinterference design ensure high bandwidth.

Characteristics >>

- 3 channels output, with one constant output
- Servo control
- Analog signal control
- Small size
- Output -20~120V or 150V

Applications >>

- Driving piezo actuator
- Driving piezo nanopositioning stage
- Driving piezo objective scanner
- Driving piezo shifter
- Driving FTS fast tool positioner
- Driving piezo scanning platform
- Driving capacitive load



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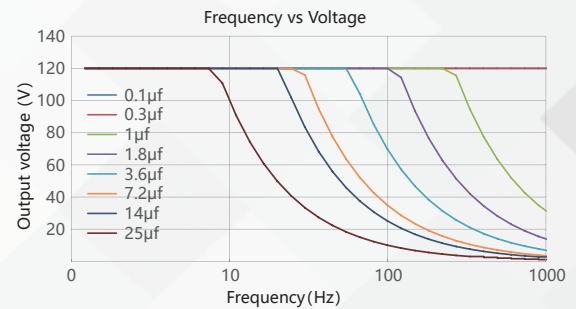
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Technical Data >>

Type	E51.B3S-I
Functions	Analog servo controller
Control mode	Analog signal
Channels	3
Analog input(V)	±10
Output voltage(V)	-20~120, with one constant voltage
Peak current(mA)	185/ channel
Ave. current(mA)	25/ channel
Input power(W)	15
Bandwidth(kHz)	1
Output voltage ripple(mV)	5 (1.8μF)
Sensor type	SGS
Servo characteristics	Analog P-I
Servo ripple(mV)	10
Input connector (PWR&CTL)	HDB15 (needle)
Output connector (PZT&Sensor)	HDB15 (hole)
Power interface	HDB15(needle)
Protection	Over-current protection
Static power(W)	3.6
Operating temperature(° C)	0~50
Heat dissipation	Nature heat dissipation
Size(mm)	110×36×60
Mass(g)	270
Power supply(V DC)	24
Communication interface	-

Curves >>



Disclaimer: The data here are typical, only for reference. Some variations will occur for different batch.

Pin Definition >>



Drive output and sensor input

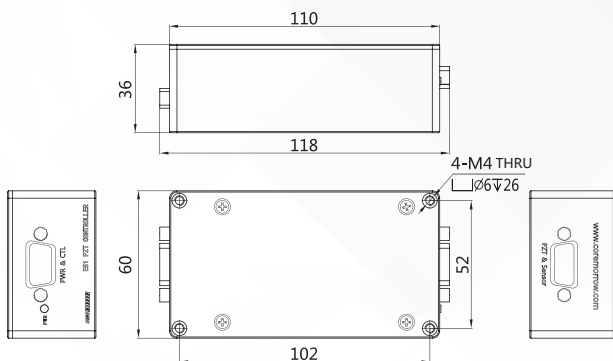
No.	Pin definition
1	CH 2 drive output
2	CH 3 constant output
3	Null
4	Null
5	Sensor power supply: DC 10V
6	CH 1 drive output
7	Drive output ground
8	Sensor power supply: DC 10V
9	Sensor power supply ground
10	Sensing power supply ground
11	Drive output ground
12	CH 2 sensor input -
13	CH 2 sensor input +
14	CH 1 sensor input +
15	CH 1 sensor input -

Power supply and control

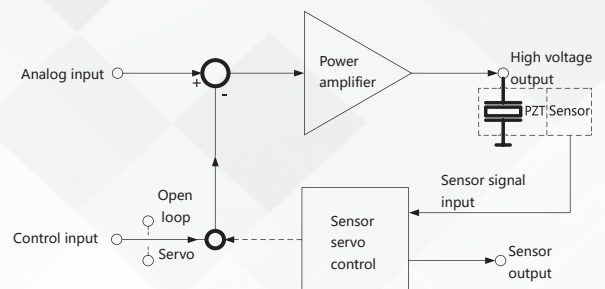
No.	Pin definition
1	+24V power supply ground
2	CH 2 sensor control switch
3	AGND
4	AGND
5	AGND
6	+24V power supply
7	Null
8	CH 1 sensor control switch
9	CH 1 analog input
10	CH 2 analog input
11	Null
12	CH 2 sensor output
13	CH 1 sensor output
14	AGND
15	Null

Note: E51.B3S adopts high and low level signals for open loop and servo control adjustment. The low level for open loop, high for servo control.

Drawing >>



Driving Principle >>



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