

3 Channels | E51.B3S

Piezo Servo Controller



Characteristics >>

- 3 channels 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

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.



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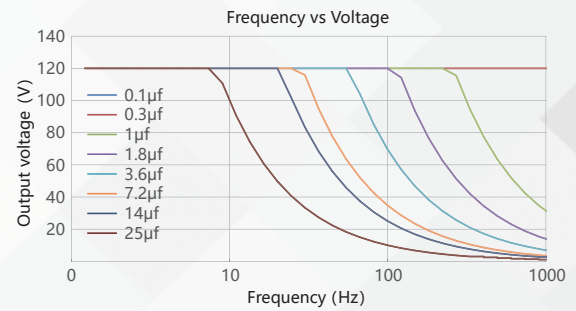
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Technical Data >>

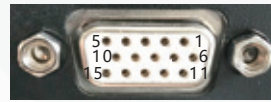
Type	E51.B3S
Functions	Analog servo controller
Control mode	Analog signal
Channels	3
Analog input(V)	-1.67~10
Output voltage(V)	-20~120
Peak current(mA)	185/ channel
Ave. current(mA)	25/ channel
Input power(W)	15
Bandwidth(kHz)	1
Output voltage ripple(mV)	5 (1.8μF)
Sensor type	SGS
Sensor output voltage(V)	0~10
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	Natural heat dissipation
Size(mm)	110×36×60
Mass(g)	270
Power supply(V DC)	24

Curves >>



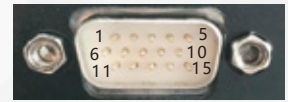
Disclaimer: The data here are typical, only for reference. Some variations will occur for different batch.

Pin Definition >>



Drive output and sensor input

No.	Pin definition
1	CH 2 drive output
2	CH 3 drive output
3	CH 3 sensor input -
4	CH 3 sensor input +
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 -

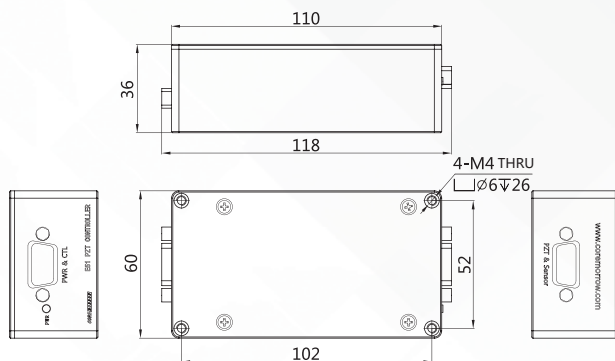


Power supply and control

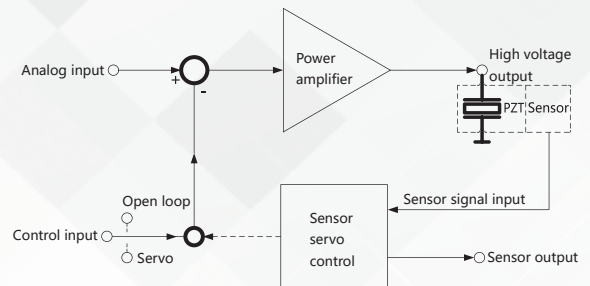
No.	Pin definition
1	+24V power supply ground
2	CH 2 sensor control switch
3	AGND
4	AGND
5	AGND
6	+24V power supply
7	CH 3 servo control switch
8	CH 1 sensor control switch
9	CH 1 analog input
10	CH 2 analog input
11	CH 3 sensor output
12	CH 2 sensor output
13	CH 1 sensor output
14	AGND
15	CH 3 analog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

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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