

Compact Piezo Driver with sensor amp.

PZJ-S Series

1132-01A-1



FEATURES

- Displacement control of high accuracy is possible by displacement sensor.
- Compact and handy type
- As peak current 3 time more than rating can be drawn, ideal for high-speed positioning.
- Constant voltage control is possible.

SUMMARY

PZJ-PS/BS series are compact, handy-type piezo drivers that are equipped with displacement control function. High-accuracy positioning in linear is possible by correcting hysteresis of piezo device. Also, these are peak-power increase type drivers that can output 3 times as much current as rating to enable high-speed displacement for such application as stage positioning, which requires pulse driving.

Micro displacement system can easily be completed with combination of piezo actuator with displacement sensor.

LINEUP

Output voltage (Vdc)	Rated output current I _p (mAave)	Peak output current I _p less than 10ms (mA)	MODEL	Frequency response				Output resistor (Ω)
				sine wave (-3dB)		rise time (approx. value with 1μF load) *2		
				RL resistive load	1μF load	ΔV=100V	0 to Max V	
-20 to +120	100	300	PZJ-0.12BS100	DC to 50kHz	DC to 300Hz	0.4ms	0.5ms	30
-20 to +120	300	900	PZJ-0.12BS300	DC to 150kHz	DC to 900Hz	0.2ms	0.2ms	10
0 to +150	100	300	PZJ-0.15PS	DC to 50kHz	DC to 300Hz	0.4ms	0.5ms	30
0 to +300	50	150	PZJ-0.3PS	DC to 20kHz	DC to 75Hz	0.8ms	2ms	100

*1: Output current at DC is 50% of rating current.

*2: Calculated from peak output current value (10ms or less can be output) (Tr=C·V_p-p/I_p).

Calculated from Tr=Tr·I_p/I_{ave} when calculated value of Tr exceeds the time in which peak current can be output (10ms).

SPECIFICATIONS

Input voltage current 115VAC±10%, 50/60Hz, 3Atyp. (PZJ-0.12BS300), 1Atyp. (other models)

Constant voltage amplifier mode (VOLTAGE)

Output voltage control External control voltage BS:-2V to +12V Note 1
Vcon-in PS:0V to +10V Note 1
(Input impedance more than 10kΩ)

DC bias 0% to 100%, by 10-turn potentiometer on front panel

Line regulation ±0.1% (for input 100V±10%) Note 2

Ripple Less than 0.02%p-p
(when 50nF load at maximum output voltage)

Stability Less than 0.02%/H Note 2

Temperature coefficient Less than 0.02%/°C Note 2

DC output voltage display Digital meter 3½ digits, displays average output voltage

Output voltage monitor BS: -2V to +12V PS: 0V to +10V
(output impedance 1kΩ, accuracy: ±1% F.S.)

Protection Output over current, over voltage and output short-circuit by dropping the output voltage when over current.

Adjustable OVP setting 10% to 100%, by adjusting volume on front panel

Note 1 Off-set voltage when Vcon-in=0V is less than ±0.5% of rating output
Note 2 Value at max rating voltage with resistive load in DC operation.

Displacement control mode (DISPLACEMENT)

Corresponding displacement sensor 700Ω strain gauge (2-gauge type)
(can be changed by option)

Response speed 1μm/ms or more

Displacement control External control voltage Vcon-in 0V to +10V
(Input impedance more than 10kΩ)

Bias adjustment 10-turn potentiometer on front panel

Repeatability Less than 0.1%F.S. Note 3

Linearity Less than 0.1%F.S. Note 3

Displacement display Digital meter 3½ digits(100.0μm)

Monitor output 0V to +10V (output impedance 1kΩ, accuracy: ±1% F.S.)

Zero adjusting function Setting original point of displacement

Gain adjusting function 0μm to 10μm/V

Note 3 At a constant temperature. It is a pure specification value of actuator and driver when conditions that affect other displacement are excluded.

*The above specification shows representative values and can vary depending on the condition of piezo device and displacement sensor. Displacement control, displacement displays etc. do not operate if there is no connection of displacement sensor.

*Please consult with us in advance if you wish to extend sensor cable.

*Component and driver require matching adjustment before use.

Others

Operation temperature 0°C to +40°C

Storage temperature -20°C to +60°C

Humidity 20 to 80%RH(no condensation)

Accessories 2.5m(8.2ft) AC cable (1)
1m output cable (terminal open) (1)
Sensor cable 4-pin LEMO 4-conductor shield (terminal open) 1m(3.3ft) (1)
Instruction manual (1)

■ OPTIONS

You can choose options suitable for the type of strain gauge you use. Please select resistance value and the number of gauges.

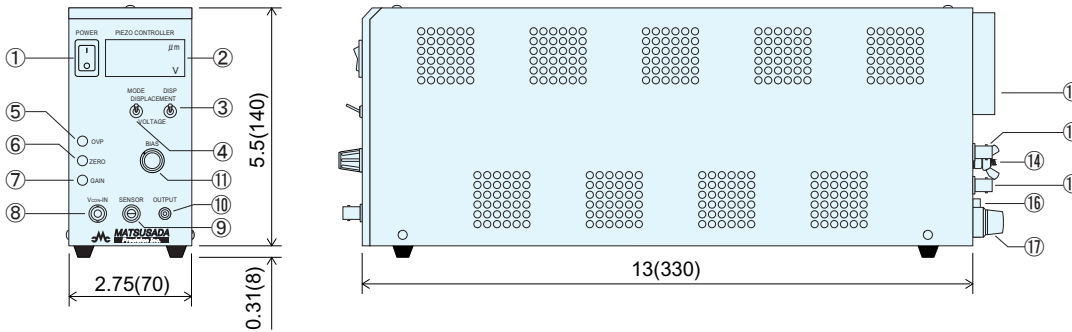
Add L mark to the model number when ordering
{e.g} PZJ-0.12BS100-L3×2 alphabetical order

L □ × □	
Resistance	Number of gauge
1 : 120Ω	1 : 1Number of gauge
3 : 350Ω	2 : 2Number of gauge
7 : 700Ω	4 : 4Number of gauge

■ DIMENSIONS inch(mm)

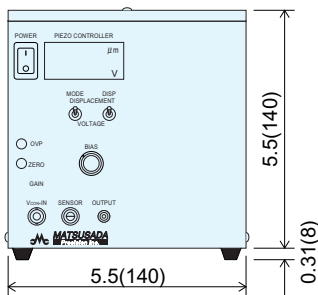
PZJ-0.12BS100
PZJ-0.15PS
PZJ-0.3PS

Weight : approx. 5.5lb



PZJ-0.12BS300

Weight : approx. 8.8lb



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| <ul style="list-style-type: none"> ① POWER ON/OFF switch ② Output voltage·displacement meter ③ Meter switching switch ④ Operation mode switching switch ⑤ O.V.P (over voltage protection) setting volume ⑥ Zero adjusting function volume ⑦ Gain adjusting function volume ⑧ External control voltage input connector ⑨ Sensor input connector ⑩ Output connector ⑪ Bias adjusting dial ⑫ Heat sink ⑬ Output voltage monitor terminal ⑭ Ground terminal ⑮ Displacement monitor terminal ⑯ AC inlet ⑰ FUSE | <p>This has priority over all operations for safety reason. Used for output ON/OFF.</p> <p>Output voltage / displacement</p> <p>Constant voltage control / displacement control</p> <p>Output voltage is limited in the range of 10% to maximum rated output.</p> <p>Setting the original point of displacement</p> <p>0μm to 10μm/V</p> <p>BNC receptacle</p> <p>4-pin LEMO receptacle</p> <p>1-pin LEMO receptacle</p> <p>10-turn potentiometer. Please refer to page 77 for bias functions.</p> <p>(PZJ-0.12BS300 comes with cooling fan instead)</p> <p>BNC receptacle</p> <p>M6</p> <p>BNC receptacle</p> |
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