

# PZJE series

## Compact Bipolar Piezo Driver



### Feature

- High power and broadband piezo driver
- High speed drive large-capacity piezo elements! Drive 10  $\mu$ F piezo with 100 Hz
- Bipolar output
- DC bias function as Standard Equipment
- Damage prevention of piezo element by various Protective Function

### Outline

PZJE series are desktop type bipolar piezo drivers.

They are high power drivers which are able to drive large capacity piezo elements required large output current, to drive many elements in parallel and high speed drive of sine wave as excitation. And, high speed step response for positioning by large peak current is possible. It is possible to set easily the reference point of displacement as provided the amplifying function for input wave and also DC bias function. They are available to wide range application from the research and development required sufficient output to production facility with piezo drivers combined easy operation and high output power.

### Lineup

Output Voltage (Vdc)	Output Current		Models	Response Speed				Output Resistance (Ω)
	Rated I <sub>mean</sub> *1 (A <sub>mean</sub> )	Peak I <sub>p</sub> ≤10 ms (A)		Sine Wave(-3 dB)		Rising Time *2		
				RL Resistance Load	10 μF Load	△V=100 V	0 to Max. Voltage	
0 to ±150	0.75	2.0	PZJE-0.15B	DC to 100 kHz	DC to 100 Hz	0.50 ms	1.50 ms	1
0 to ±300	0.3	1.0	PZJE-0.3B	DC to 100 kHz	DC to 22 Hz	1.00 ms	6.00 ms	2

\*1 : Output Current for DC is 50 % of rated current.

\*2 : Approximate value at 10  $\mu$ F load. Calculated from the peak output current (possible to output within 10 ms) ( $T_r = C \cdot V_p - p / I_p$ )  
If calculated  $T_r$  is exceeds the maximum time (10 ms) to output the peak current, to be calculated from  $T_r = T_r \cdot I_p / I_{mean}$ .



### Specifications

Input Voltage-Current	100 VAC to 240 VAC $\pm 10$ %, 50 / 60 Hz Single phase, 4 A typ. @ 100 V
Output Voltage Control	External control voltage V <sub>con-in</sub> = -10 V to +10 V *1 (Input Impedance $\geq 10$ k $\Omega$ )
DC Bias	-100 % to +100 % adjustable by 10 rotatable dial at front panel
Regulation	$\pm 0.05$ % (for input change of 100 V $\pm 10$ %) *2
Ripple	$\leq 0.02$ % p-p (at 500 nF load under max. output voltage)
Stability	$\leq 0.02$ % / H *2
Temp. coefficient	$\leq 0.02$ % / $^{\circ}$ C *2
DC Output Volt. Indication	3.5 digits, digital indicator displayed average output voltage
Output Volt. Monitor	-10 V to +10 V *1 (Output Impedance 1 k $\Omega$ , Accuracy : $\pm 1$ % F.S)
Protection	Overcurrent protection by cutting off output, Overvoltage protection, Output short-circuit protection, Re-output prevention at power fail recovery
Operation Temperature	0 $^{\circ}$ C to +40 $^{\circ}$ C
Storage Temperature	-20 $^{\circ}$ C to +60 $^{\circ}$ C
Humidity	20 % to 80 %RH (No condensation)
Accessories	Input AC cable 2.5 m length (1) / Output cable (flying lead) 1.5 m length (1) / Instruction Manual (1)

\*1 : Offset voltage at V<sub>con-in</sub>=0 V is within  $\pm 0.5$  % or  $\pm 1$  V.

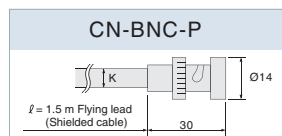
\*2 : This is the value at DC operation under rated voltage for maximum resistance load.

## Input cable

CABLE TYPE 8(standard) for 100 V input, 3-pin plug	CABLE TYPE 3(separate) for 200 V input, flying lead
125 V / 15 A 2.5 m	250 V / 10 A 2.5 m
	

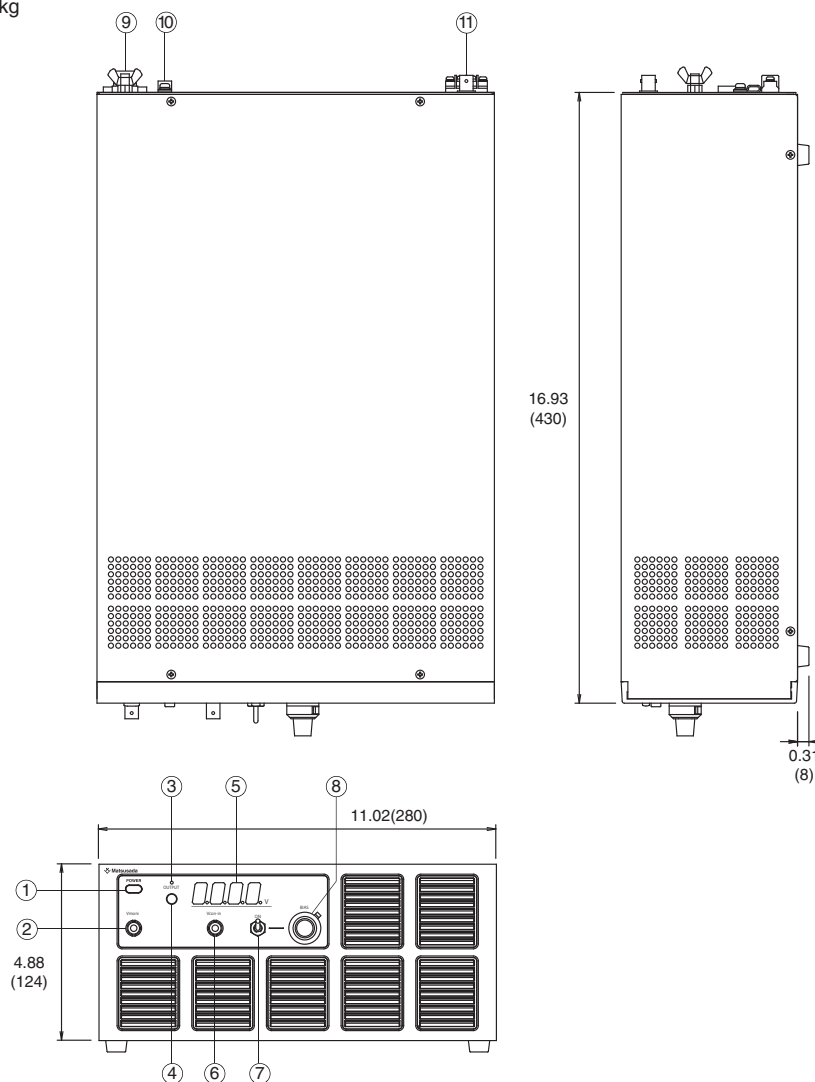
\* please use appropriate AC cable.

## Output cable



## Dimensions inch (mm)

Weight : About. 3.7 kg



- |   |  |
|---|--|
| ① Power switch ON / OFF<br>This is prior to all actions for safety. | ⑥ Input connector for external control voltage(Vcon-in)  |
| ② Terminal for output volt. Monitor                                 | ⑦ Bias switch ON / OFF   |
| ③ Indicator for output lightened at output ON.                      | ⑧ Tuning dial for bias (rocked by 10 revolutions).<br>Please refer to page 23 for bias function. |
| ④ OUTPUT switch ON / OFF  | ⑨ Ground terminal  |
| ⑤ Indicator for output voltage                                      | ⑩ Clamp for cables   |
|   | ⑪ AC input terminal  |

## Options

- LC : Limit for current..... regulate output current with the drooping characteristics of voltage.
- LS : Remote switch ON / OFF ..... ON / OFF output voltage by remote signal. (short=ON, open=OFF)

**Naming of model** Please suffix above optional codes the tail of model number at ordering.  
(Example) PZJE-0.3B-LCS (alphabetically)



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## Customer Inquiry Sheet (HV modules)

Please copy this page and above fax number after filling out form below.

■ I would like

- ☐ A quotation    ☐ An explanation of product    ☐ A demonstration    ☐ To purchase
- ☐ Other ( )

■ Give us your requirement / comment

■ Please fill in below.

Address:	
Company:	
Dept.:	Title:
Name:	
Tel:	Fax:
E-mail:	

### Manufacturer warranty

We warrant the specification, unless otherwise specified, at max. rated output after warm up, and scope of application is between 10% and 100% of max. rated output. We warrant that products contained in this catalog (hereinafter, the "Products") are free from defects in material and workmanship under normal use for a period of one (1) year from the date of shipment thereof. However, the warranty period for X-ray detectors and X-ray source shall be either one (1) year from the date of shipment or 1,000 hours, whichever shorter. The above warranty shall not apply to any Product which, at our sole judgment, has been: i) Repaired or altered by persons unauthorized by us; or ii) Connected, installed, adjusted or used otherwise than in accordance with the instructions furnished by us (including being used in an inappropriate installation environment, such as in corrosive gas, high temperature and humidity). We are not liable for any loss, damage or failure of the Products after the shipment thereof caused by external factors such as disasters. We will not inspect, adjust or repair any of our power supply products in the field or at any customer site. If you suspect that there has been a power supply failure in the field, please inspect your whole unit by yourself in an effort to determine that the problem is, in fact, arising out of our power supply products. If it is found that the problem is arising out of such power supply product after inspection, please contact your local sales office for additional troubleshooting. A "Return Merchandise Authorization" is required in case the power supply must be sent back to the factory in Japan for inspection and repair. We, at our sole discretion repair or replace such defective products at no cost to the purchaser. We assume no liability to the purchaser or any third party for special, incidental, consequential, or other damages resulting from a breach of the foregoing warranty. This warranty excludes any and all other warranties not set forth herein, express or implied, including without limitation the implied warranties of merchantability or fitness for a particular purpose. The Products are not designed and produced for such applications as requiring extremely high reliability and safety, or involving human lives (such as nuclear power, aerospace, social infrastructure facility, medical equipment, etc.). The use under such environment is not covered by this warranty and may require additional design and manufacturing processes. No modification or supplement of this warranty shall be binding unless in writing and signed by a duly authorized officer of Matsusada. Matsusada reserves the right to make any changes in the contents of catalogs or specifications at any time without advance notice. Due to compelling reason such as unavailability of components used, products might be unavailable or unable to repair. The products specified in catalogs or specifications are designed for use by the person who has enough expertise or under the control of such person, and not for general consumers. Schematics of products shall not be submitted to users. Test result or test data for the products shall be available upon request with charge.

Make sure you read the specification in the latest catalog before you order. Contact nearby sales office for the latest catalog.

PLEASE SEE THE LINK BELOW FOR THE COMPLETE WARRANTY TERMS  
<http://www.matsusada.com/site/warranty.html>



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