Matsusada Precision

Ultra high speed HV amplifier

AMPS Series

NEW

Maximum slew rate 1200V/μs !

High speed high voltage/ large current amplifier

AMPS series

www.matsusada.com

AMPSseries

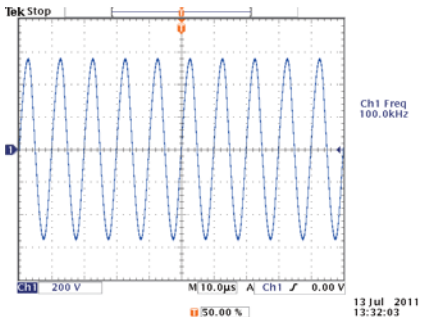
Ultra high speed HV amplifier

AMPS series is an ultra-high speed high voltage amplifier. It realized high voltage output of ±20kHz and very high slew rate 1200V/μs. The large current type of peak current 4A is also selectable.

Ultra high slew rate 1200V/μs

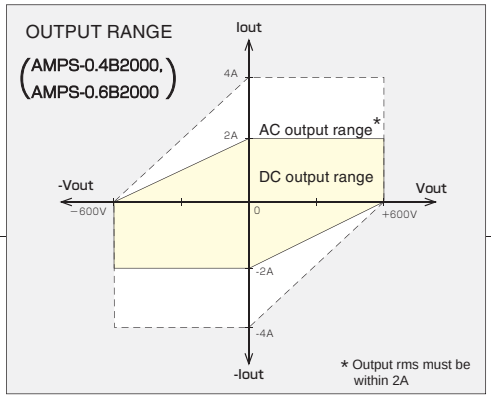
±10kV output model and ±20kV output model achieved the conventional double high-speed response of slew rate 1200V/μs. Laser modulation and beam deflection at unprecedented high speed are possible.

Voltage rise waveform (at ±600V, ±2A output)
Model: AMPS-0.6B2000 (at rated load)



High-speed response of frequency bandwidth 100kHz

Frequency bandwidth with actual load is as high as 100kHz, and solve the problem of "When actual operation with load, the response become slow." Ideal for higher speed printer or material evaluation testing.



For measuring voltage and / or current

When the voltage at load is lower than the rated maximum output of AMPS series, constant voltage and high speed operation is possible by sinking the output current with current sink feature. As example of the development of ceramic and electrophotography process, by current sink, it is possible to absorb the voltage of a capacitive load quickly or to perform diselectrification smoothly.

LINE UP

Output Voltage	Output Current	MODEL	Slew Rate	Frequency Response	
				Full scale(-1dB)*	Small bandwidth (10% of full scale)(-3dB)
−400 to +400Vdc	±2000mAmax or ±4000mApk 1mS	AMPS-0.4B2000	400V/μs	DC to 100kHz	DC to 200kHz
−600 to +600Vdc	±2000mAmax or ±4000mApk 1mS	AMPS-0.6B2000	500V/μs		
−2k to +2kV	±200mAmax or ±400mApk 1mS	AMPS-2B200	1000V/μs	DC to 80kHz	DC to 160kHz
−5k to +5kV	±80mAmax or ±160mApk 1mS	AMPS-5B80		DC to 50kHz	DC to 100kHz
−10k to +10kV	±40mAmax or ±120mApk 1mS	AMPS-10B40	1200V/μs	DC to 20kHz	DC to 40kHz
−20k to +20kV	±20mAmax or ±60mApk 1mS	AMPS-20B20		DC to 10kHz	DC to 20kHz

*At frequency of full scale, output voltage may be clipped by power limitation.

SPECIFICATIONS

Input voltage/current	230VAC±10% 50/60Hz single phase 8A typ.
Output voltage control	External control voltage Vcon-in = -10V to +10V *1 (Input Impedance greater than 10kΩ)
DC Bias	Front panel 10-turn potentiometer enables setting between −100% and +100%
Regulation	Line : ±0.05%(input voltage ±10% input change) Load : 0.05%(10% to 100% load change) *2
Ripple	Less than 0.02% +0.5Vp-p *2
Stability	0.02%/Hr typ *2
DC output voltage display	3.5-digit digital meter *3
Output voltage monitor	-10V to +10V from front panel BNC terminal (Output impedance 1kΩ)
Output current monitor	-10V to +10V(10Vpeak) from front panel BNC terminal (Output impedance 1kΩ)
Remote switch ON/OFF	Output ON/OFF with external contact signal (Short : ON, Open : OFF)
Protection	Over current protection with cut off, over voltage protection, output short circuit, arc protection and blackout protection.
Operating Temp.	0°C to +40°C
Storage Temp.	-20°C to +60°C
Humidity	20 to 75%RH(no condensation)
Accessories	Input AC cable flying lead 2.5m (1) Output HV cable flying lead 1.5m (1) Instruction Manual (1)

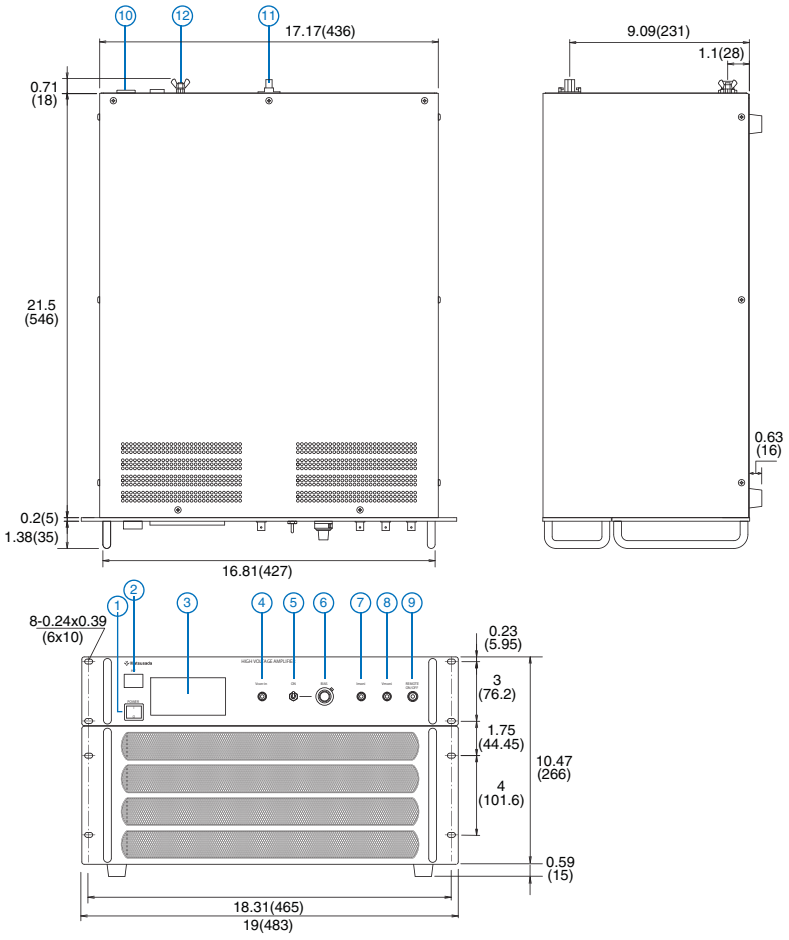
*1 Offset voltage at Vcon-in = 0V is less than 0.1% of rated output.
*2 At DC operation with resistive load maximum rated output.
*3 At DC output : DC voltage display. At more than 10Hz output : Average voltage display

APPLICATION

1. Beam deflection
2. Laser modulation
3. Ceramic materials testing
4. HV cable testing
5. Electrophotography process
6. Piezo drive
7. Evaluations of solar battery panel, secondary battery or display
8. Various electrostatic testing

DIMMENSIONS inch(mm)

Weight : approx. 45kg



① **POWER ON/OFF switch**	Have priority to all other operations for safety reason.
② **HV ON/OFF switch**	To be also used to reset output cutoff status due to output over load, output short circuit protection or black out protection. Remote switch operation is possible only when output switch is on.
③ **OUTPUT voltage meter**	
④ **External control voltage (Vcon-in)input connector**	BNC receptacle
⑤ **Bias ON/OFF switch**	
⑥ **Bias setting dial**	10-turn potentiometer
⑦ **OUTPUT current monitor terminal**	BNC receptacle
⑧ **OUTPUT voltage monitor terminal**	BNC receptacle
⑨ **Remote ON/OFF terminal**	BNC receptacle
⑩ **AC inlet**	
⑪ **OUTPUT terminal board**	
⑫ **Ground terminal**	M6

OPTION

-LC Current limit
Limit the current with voltage drop down.

*When ordering, suffix -L mark(option mark) to the model number.
<e.g.> AMPS-0.6B2000-LC

FAX

USA/canada : +1-888-652-8651

other countries : +81-6-6150-5089

Customer Inquiry Sheet (AMPS 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:	

Warranty

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.If any Product is showed to be defective as satisfactory to us, 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. Regarding RoHS compliance, Matsusada Precision Inc. does not intentionally use objectionable substances in the products listed within this catalog. Matsusada Precision Inc. manufactures products using components which, according to our suppliers, are “RoHS compliant parts”. However, Matsusada Precision does not analyze each and every unit to confirm. Therefore, there may be some customized products which do not comply to RoHS. Please contact your nearby sales office for confirmation.

Matsusada Precision Inc.

For products www.matsusada.com/product For contact www.matsusada.com/contact

San Jose Office : 2570 N.First Street Suite 200 San Jose, CA 95131
Tel: +1-408-273-4573 Fax: +1-408-273-4673

New York Office : 80 Orville Drive Suite 100 Bohemia, NY 11716
Tel: +1-631-244-1407 Fax: +1-631-244-1496

Dallas Office : 5430 LBJ Freeway, Suite 1200 Dallas, TX 75240
Tel: +1-972-663-9336 Fax: +1-972-663-9337

Boston Office : 859 Willard St. One Adams Place, Suite 418 Quincy, MA 02169
Tel: +1-781-353-6407 Fax: +1-781-353-6476

International Office : Osaka-City, Osaka Japan
Tel: +81-6-6150-5088 Fax: +81-6-6150-5089

Headquarters : 745 Aoji-cho Kusatsu Shiga 525-0041 Japan
Tel: +81-77-561-2111 Fax: +81-77-561-2112