



Figure 1. Physical Photo of AHVA1KV7A

FEATURES

High Efficiency

High Output Current: 7A

High Output Voltage Stability

Linear Modulation of Output Voltage

Wide Range of Capacitance Load: 2 μ F to 20 μ F

Over-current and Short Circuit Protections

Displays for Output Voltage and Current

Low Cost

APPLICATIONS

Driving piezos or other high voltage high current loads.

DESCRIPTION

AHVA1KV7A is a bench-top high voltage amplifier/piezo driver for amplifying an analog input voltage into a high voltage high current output. AHVA1KV7A has a built-in high

voltage high current AC-DC converter which converts the 240VAC input voltage into an output voltage adjustable from 0 to 1kVDC.

SAFETY PRECAUTIONS

To ensure the safety for using the high voltage amplifier, make sure that the input voltage value falls within the value range required, 220VAC to 240VAC, and the maximum current allowed is $\geq 40A$. All the connection harnesses must have sufficient current capacity and enough voltage insulation rating. Keep a distance of at least 1.2 ft (30cm) away from other objects or walls to provide sufficient cool air for the internal ventilation fan.



SPECIFICATIONS

Table 1. Characteristics.

T_A = 25°C, unless otherwise noted

Parameter	Value	Unit/Note
Mains Voltage	230 ±10 % @ 50/60 Hz	VAC
Output Voltage Range	0~1000	V
Max. Output Current	7	A
Input Modulation Voltage	0~10	V
Input Resistance	1	MΩ
Full Load Efficiency	≥86%	
Operating Temperature	-10~45	°C
Digital Display	Output voltage display accuracy: 0.1%; Output current display accuracy: 1%	
Ripple Noise	≤2%	
Temperature Coefficient	<0.4 × 10 ⁻⁴ °C (preheating for 30 min)	
Protection Temp. for Overheat	70~80	°C
High Voltage Output Port	D-Sub 5W1 connector	
External Control Port	BNC	
Dimensions	430 × 550 × 220	mm
Weight	25/55	kg/lbs

DIMENSIONS

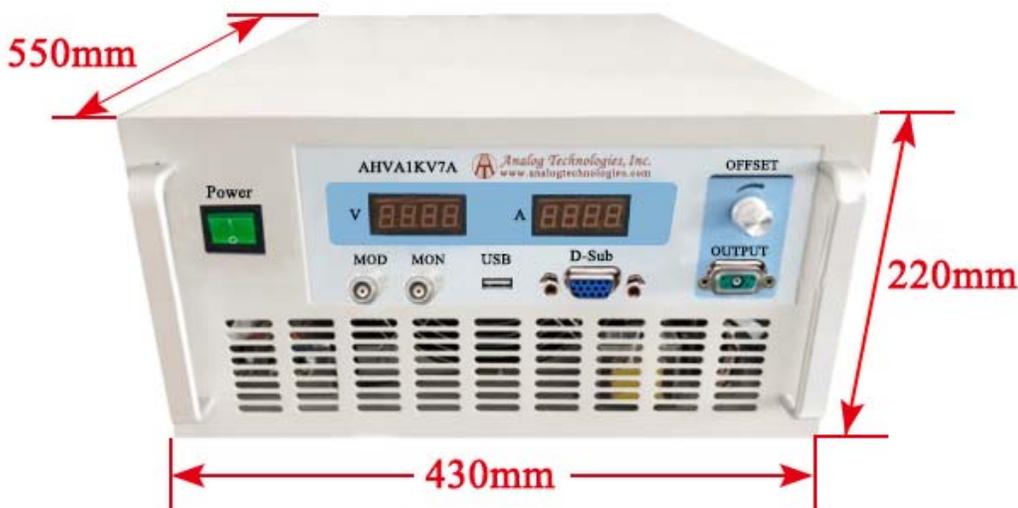


Figure 2. Dimensions of AHVA1KV7A



PANEL INSTRUCTIONS

Front panel

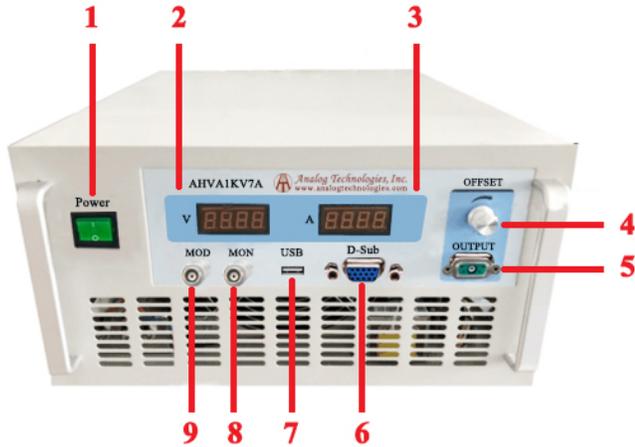


Figure 3. Front Panel

- 1. Power switch: ON and OFF indicate that the power is on and off respectively;
- 2. Display current: Display the actual current value;
- 3. Display voltage: Display the actual voltage value;
- 4. Offset: Turn the switch to adjust the output voltage;
- 5. OUT: The D-Sub 5W1 plug is the voltage output of the amplifier. The output voltage ranges from 0V to +1000 V; This is the [connector \(part #: 681M5W1203LYYY\)](#) used for the output, the pin locations in Figure 4; the cable [connector \(part #: 680M5W1103L201\)](#) can be used for mating with the output connector.

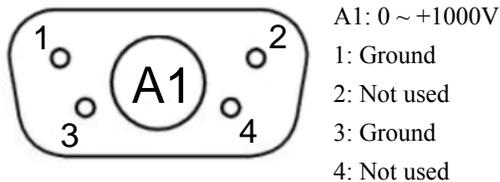


Figure 4. Pin Assignments for the Output Connector 5W1

- 6. D-Sub.
- 7. USB.
- 8. MON: Monitor output. Monitor the output voltage by a multimeter or an oscilloscope. The ratio of monitored voltage and output voltage is 1:100. The output signal ranges from 0V to +10V. The voltage can be set remotely when using both MOD and MON.
- 9. MOD: Modulation input. A 0 ~ 10V external input control voltage will be amplified to an output voltage of 0 ~ 1000V.

Back Panel



Figure 5. Back Panel

- 10. Input connector: A connector with 230VAC, 50/60Hz and up to 40A current.

Note: The plug on our piezo driver is NEMA 10-50.

NAMING INSTRUCTIONS

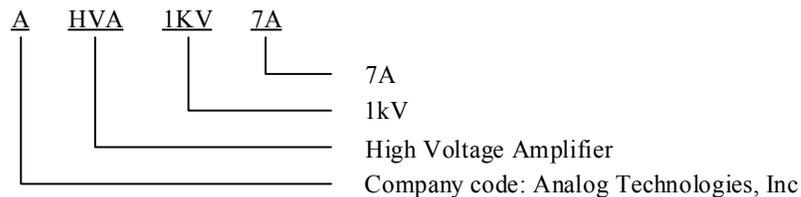


Figure 6. Naming Rules of AHVA1KV7A



ORDERING INFORMATION

Table 2. Unit Price

Quantity (pcs)	1 – 5	6 – 10	11 – 19	≥20
AHVA1KV7A	\$9600	\$9500	\$9400	\$9300

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