



Figure 1. Physical Photo of AHVAC1KV7ABT

FEATURES

- High precision
- High efficiency
- High output voltage stability
- Linear modulation of output voltage
- Over-current and Short Circuit Protections
- Short circuit protection
- Displays for Output Voltage and Current

APPLICATIONS

AHVAC1KV7ABT, is designed for achieving AC-DC conversion from AC voltage to high DC voltage. High voltage power supply is widely used in industrial measurement and control, energy spectrum analysis, and medical equipment such as: X-ray machine, vacuum/plasma processing, semiconductor fabrication equipment, analytical instrumentation, medical diagnostic and therapeutic systems, test equipment, and research and academic applications, etc.

DESCRIPTION

Connect to 230VAC input, and then power on. When the potentiometer is in “0”, turn on the high voltage switch, and then adjust the potentiometer clockwise. Observe the digital display readings.

SAFETY PRECAUTIONS

High voltage power supply must be connected to ground reliably.

Do not touch the high voltage wire, unless the high voltage power supply is powered off, and the load and internal capacitors are fully discharged.

When the high voltage power supply is powered off, wait for another 5 minutes for fully discharging all the capacitors inside the power supply.

Do not operate the power supply in humid environment, and do not connect the operator to ground.

The internal protection circuit is provided in the high voltage power supply, but the high voltage short circuit shall be avoided.

Make sure the circuit is insulated perfectly, especially between the high voltage output and the surroundings so as to avoid electronic shock.



SPECIFICATIONS

Table 1. Characteristics.

T_A = 25°C, unless otherwise noted

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit/Note
AC Input Voltage	V _{VPS}		220	230	240	V _{AC}
Input Voltage Regulation Ratio	$\Delta V_{OUT}/\Delta V_{VPS}$	V _{VPS} = 220V ~ 240V		0.05		%
Output Voltage	V _{OUT}	I _{OUT} = 0 ~ 7A	0		1000	V
Maximum Output Current	I _{OUTMAX}	V _{VPS} = 220V ~ 240V	0		7	A
Ripple				<0.02		%V _{P-P}
Load				143		Ω
Regulation Mode			0 ~ 10V or Potentiometer Adjustment			
Output Modulation Linearity				<0.05		%
Load Regulation Rate		I _{OUT} = 0 ~ 7A		≤0.05		%
Full Load Efficiency	η			≥86		%
Temperature Coefficient	TCV _O	-20 ~ 55°C		<0.01		%/°C
Time Drift	Short Time Drift	After 30 minute's warming up		<0.05		%/ min
	Long Time Drift			<0.05		%/h
Output Voltage Temperature Stability		-20 ~ 55°C		<±0.01		%
Operating Temperature Range	T _{opr}		-10		45	°C
Storage Temperature Range	T _{stg}		-40		70	°C
External Dimensions			430 × 550 × 220			mm
Weight				25		Kg
				55.12		lbs
				881.85		Oz



PANEL INSTRUCTIONS

Front Panel

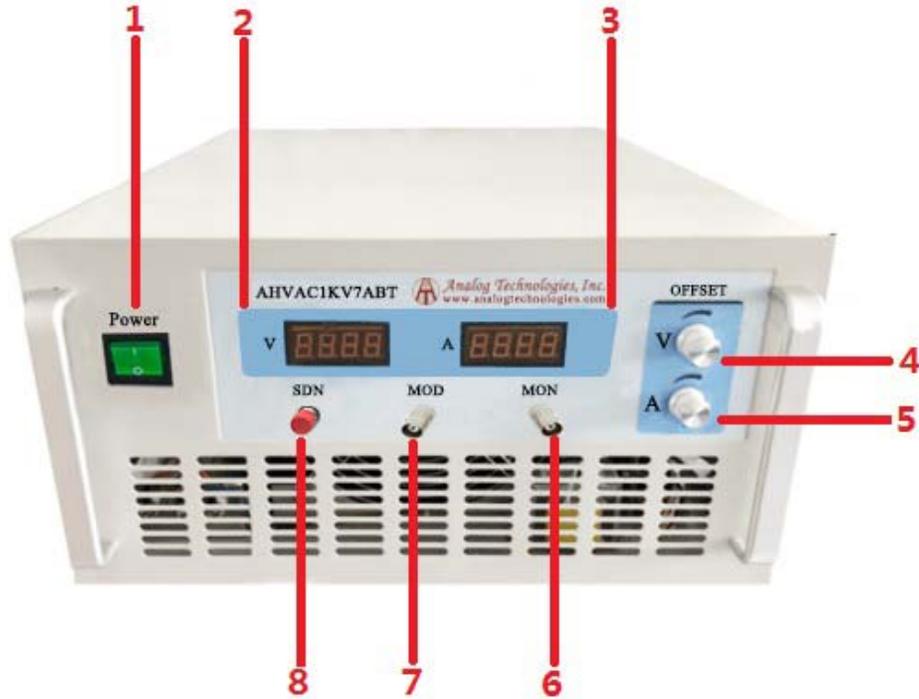


Figure 2. Front Panel

1. Power switch: ON and OFF indicate 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. Offset: Turn the switch to adjust the output current;
6. 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.
7. MOD: Modulation input. 0 ~ 10V external input control voltage indicates an output voltage of 0 ~ 1000V;
8. SDN: Enable or disable high voltage output



Back Panel

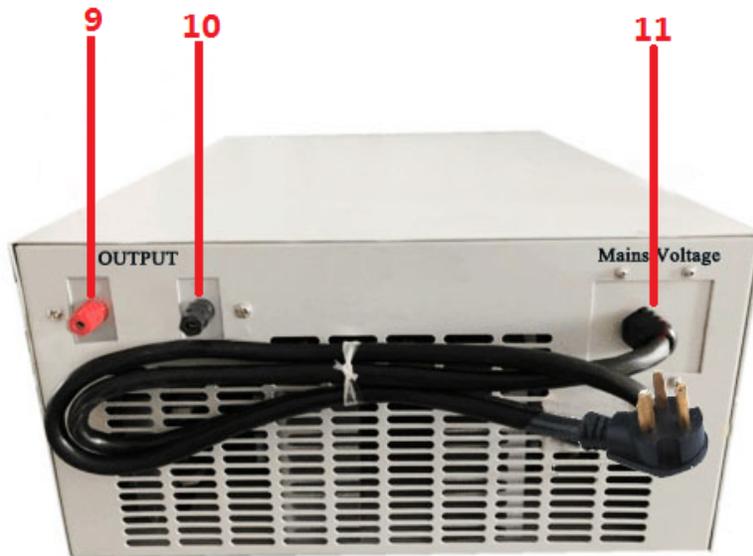


Figure 3. Front Panel

- 9. HV output: High voltage output terminal
- 10. Output ground: High voltage output ground terminal
- 11. Input connector: AC input 230V 50/60Hz connector.

TESTING DATA

High voltage power supply testing data (Test condition: the load is 143Ω)

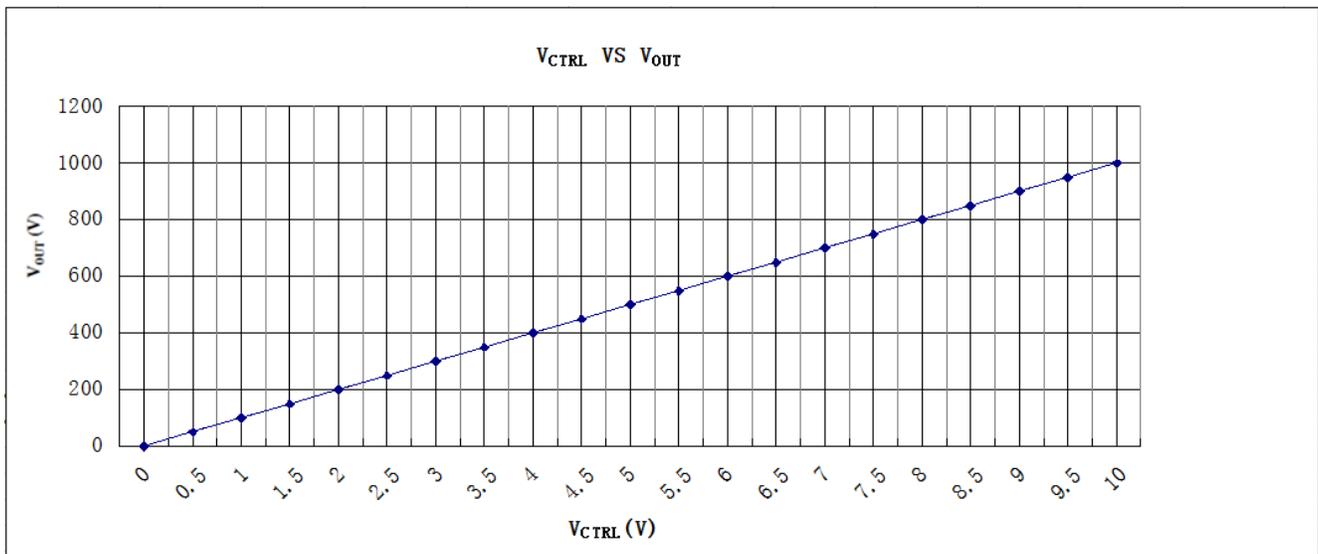


Figure 4. V_{CTRL} vs. V_{OUT}



BLOCK DIAGRAM

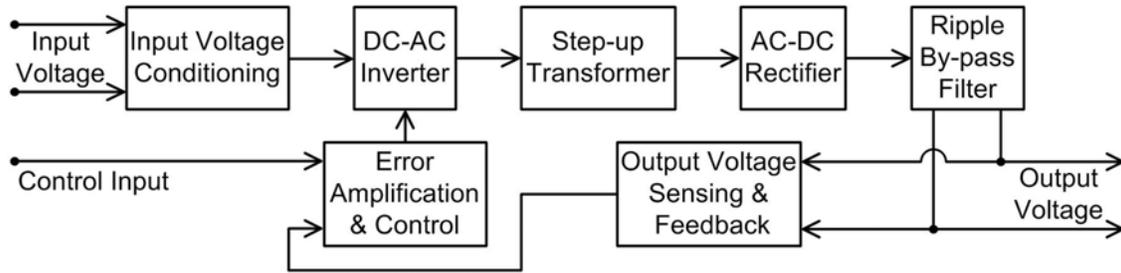


Figure 5. Block Diagram

NAMING INSTRUCTIONS

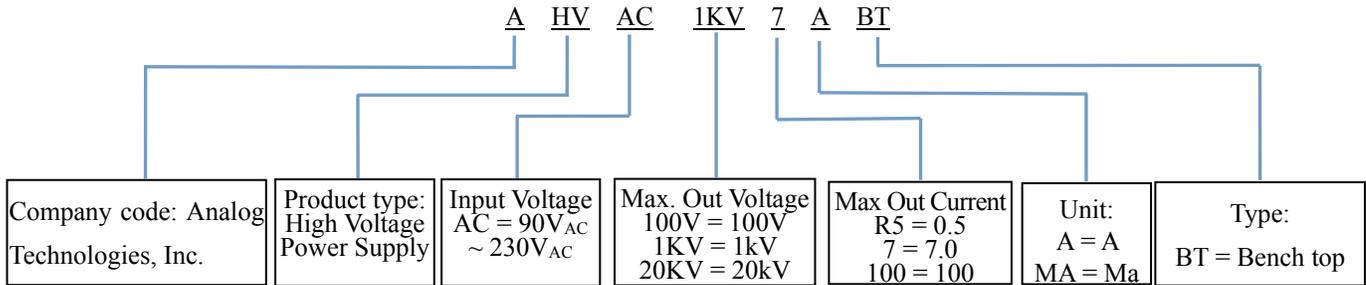


Figure 6. Naming Rules of AHVAC1KV7ABT



DIMENSIONS

I. Dimension of the leads.



Figure 7. Leads of AHVAC1KV7ABT

Leads	Diameter (mm)	Length (m)
Power cord	6.5	1.8

II. Dimension of AHVAC1KV7ABT.



Figure 8. Dimensions for AHVAC1KV7ABT



PRICES

Quantity (pcs)	1~9	10~49	50~99	≥100
AHVAC1KV7ABT	\$4999	\$4899	\$4799	\$4699

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