



Figure 1. Physical Photo of AHVAC1KV1ABT

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

AHVAC1KV1ABT, 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 110VAC 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}		100	110	120	V _{AC}
Input Voltage Regulation Ratio	$\Delta V_{OUT}/\Delta V_{VPS}$	V _{VPS} = 110V ~ 120V		0.05		%
Output Voltage	V _{OUT}	I _{OUT} = 0 ~ 1A	0		1000	V
Maximum Output Current	I _{OUTMAX}	V _{VPS} = 110V ~ 120V	0		1	A
Ripple				<0.02		%V _{P.P}
Load				1		kΩ
Regulation Mode			Potentiometer Adjustment			
Output Modulation Linearity				<0.05		%
Load Regulation Rate		I _{OUT} = 0 ~ 1A		≤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
Voltage and Current Signal Readback (Optional)*	Provides 0-5V, 0-10V, 0-20mA, 4-20mA voltage and current signal readback, analog voltage and current signal sampling					
Communication and Program Control (Optional)*	Provides RS485/RS232 communication data interface, connecting with a computer, or with PLC					
Additional Output Functions (Optional)*	Provides 0-5V, 0-10V, 0-20mA, 4-20mA PLC analog signal to control voltage and current output					
Timer (Optional)*	Provides a timer switch. It can operate in a fixed time or circularly					
LCD Touch Screen (Optional)	Provides a LCD touch screen					
External Dimensions			430×500×133			mm
Weight				13		Kg
				28.66		lbs
				458.56		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. Over heating: Indicate the overheating of the power supply
7. Short circuit: Indicate a short circuit in the power supply
8. Over voltage: Indicate over voltage.
9. Over current: Indicate over current
10. Fault: Fault indicator
11. Work: Working status indicator
12. SDN: Standby and shutdown control.



Back Panel



Figure 3. Front Panel

- 9. HV output: High voltage output terminal
- 13. Input connector: AC input 110V 60Hz connector.
- 14. HV output: High voltage output terminal
- 15. Output ground: High voltage output ground terminal

TESTING DATA

High voltage power supply testing data (Test condition: the load is 1kΩ)

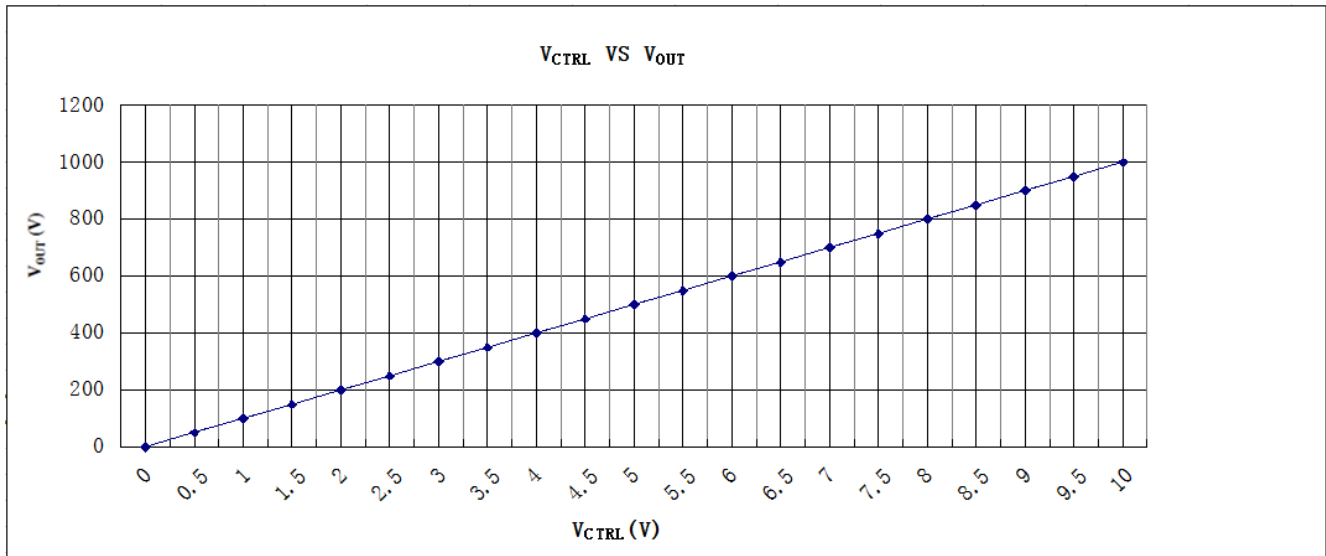


Figure 4. V_{CTRL} vs. V_{OUT}



BLOCK DIAGRAM

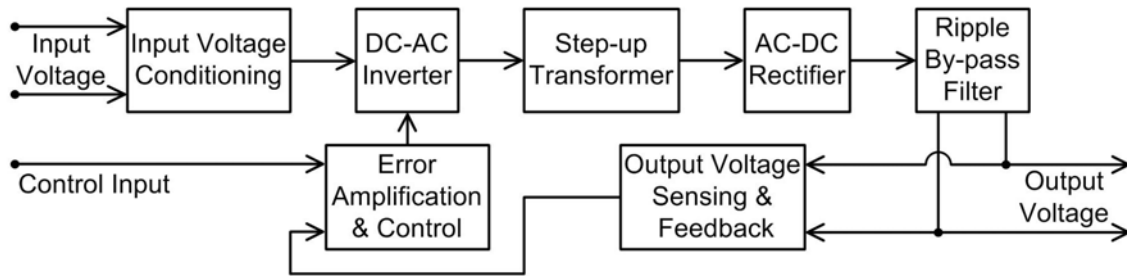


Figure 5. Block Diagram

NAMING INSTRUCTIONS

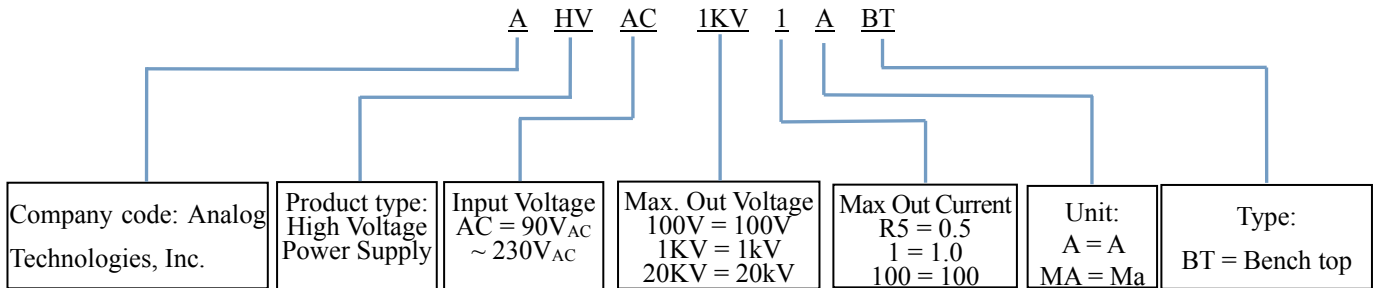


Figure 6. Naming Rules of AHVAC1KV1ABT



DIMENSIONS

I. Dimension of the leads.



Figure 7. Leads of AHVAC1KV1ABT

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

II. Dimension of AHVAC1KV1ABT.



Figure 8. Dimensions for AHVAC1KV1ABT



PRICES

Quantity (pcs)	1~9	10~49	50~99	≥100
AHVAC1KV1ABT	\$1399	\$1299	\$1199	\$1099

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