High Voltage Power Supply
AHVAC1KV2ABT



Figure 1. Physical Photo of AHVAC1KV2ABT

FEATURES

- Output Voltage: 0 ~ 1000V
- Output Current: 0 to 2A
- Voltage and Current Preset: The panel comes with preset buttons, allowing pre-setting of voltage and current values.
- Voltage and Current Stabilization: Voltage and current values can be continuously adjusted from 0 to rated value, with automatic switching between voltage and current stabilization.
- Overvoltage Protection: The machine locks itself after protection, and automatically unlocks upon restart.
- Overcurrent Protection: Overload protection for rated current output, short circuit protection (output shutdown after short circuit, optional).
- Short Circuit Protection: Allows for long-term short circuit or short circuit at startup in any state.
- Short Circuit Alarm: Audible and visual alarm when output is short-circuited.
- Output Display: Both voltage and current are displayed via LED.

APPLICATIONS

AHVAC1KV2ABT, is designed for achieving AC-DC conversion from AC voltage to high DC voltage. It can be used for:

- Research Institutions
- Aerospace Applications
- New Energy Vehicles
- Maritime and Railway Transportation
- Household Appliances
- Petrochemicals, Medical
- Centralized Water Supply Control Power Supplies for Water Authorities
- Equipment Support Power Supplies for Defense Research Institutions.

ELECTRICAL SAFETY

Although AHVAC1KV2ABT high voltage power supply comes with an over current protection circuit, a short circuit at the output should always be avoided. Make sure the high voltage wire for connecting VOUT node has sufficient insulation capability with its surrounding objects.

Non-professionals are not allowed to open the chassis. Only authorized maintenance personnel are permitted to operate.

1. Before powering on, please ensure proper

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grounding and check that the wiring connections are correct.

2. When the power supply needs to be moved or rewired, all electrical connections of this power supply should be disconnected to ensure that the power supply is completely shut down. Otherwise, there may still be electricity at the output end, posing a risk of electric shock.
3. Please use designated additional devices and accessories.
4. Beware of electric shock.

When maintaining equipment powered by this power supply, disconnect the equipment from this power supply. When maintaining and installing power input and output terminals, please turn off this power supply and disconnect all connections of this power supply.

OPERATION SAFETY

1. Before using this product, please carefully read the 'Safety Precautions' to ensure correct and safe usage, and please keep the manual properly.
2. During operation, pay attention to all warning signs and operate as required.
3. Avoid using this equipment in direct sunlight, rain, or in humid environments.
4. This product should not be installed near heat sources.
5. When placing this product, ensure a safe distance is maintained for ventilation. Follow the instructions for installation as stated in the manual.
6. When cleaning, as this machine has a frosted surface, please use dry items for wiping.

SPECIFICATIONS

Table 2. Characteristics. T_A = 25°C, unless otherwise noted.

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit/Note
AC Input Voltage		V_{VPS}		200	220	240	V_{AC}
Output Voltage		V_{OUT}	I_{OUT} = 0 ~ 2A	0		1000	V
Output Current		I_{OUTMAX}	V_{VPS} = 200V ~ 240V	0		2	A
Continuous Adjustable Range of Constant Voltage				0		1000	V
Continuous Adjustable Range of Constant Current				0		1	A
Output Ripple					⩽0.5		$\%V_{P-P}$
Display Error						1	%
Voltage Regulation Accuracy	Source Effect			≤0.5% of rated value (change in output voltage caused by input power voltage variation of ±10%).			
	Load Effect			≤0.5% (change in output voltage caused by variation in power supply output current from zero to rated value).			
Current Regulation Accuracy	Source Effect			≤0.5% of rated value (change in output voltage caused by input power voltage variation of ±10%).			

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Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit/Note
	Load Effect			≤0.5% (change in output current caused by variation in output voltage from zero to rated value).			
Temperature Coefficient		TCV_O	−20 ~ 55°C			0.05	%/°C
Time Drift	Long Time Drift					0.5	%/h
Insulation Resistance				20			MΩ
Withstand Voltage				AC1500V for 60 seconds			
Operating Temperature Range		T_{opr}		0		45	°C
Storage Temperature Range		T_{stg}		−25		75	°C
External Dimensions				430 × 350 × 133			mm
				16.92 × 13.77 × 5.23			inch
Weight					13		Kg
					28.66		lbs
					458.56		Oz

PANEL INSTRUCTIONS

Front Panel

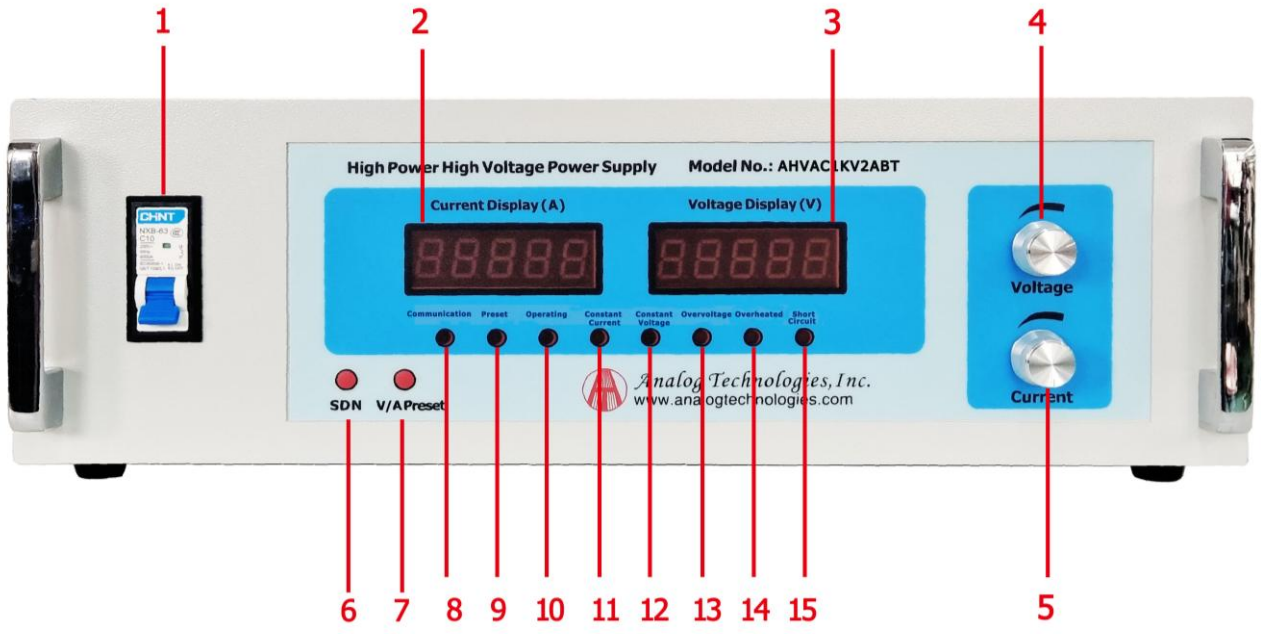


Figure 2. Front Panel

1. Power switch: ON and OFF indicate the power is on and off respectively;
2. Current Display: Display the actual current value;

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3. Voltage Display: Display the actual voltage value;
4. Offset Voltage: Set the output voltage value by rotating the knob;
5. Offset Current: Set the output current value by rotating the knob;
6. SDN: The switch between operating and standby;
7. V/A Preset: Pressing the V/A Preset once illuminates the operating, constant voltage, and constant current indicators simultaneously, indicating that the power supply is in voltage and current preset mode: Rotate the voltage adjustment knob to preset the output voltage, and turn the current adjustment knob to preset the output current. Press the V/A preset button again to exit the preset mode and enter the operating state, saving the preset values. Holding down the V/A preset for 5 seconds activates the constant voltage, constant current, and overvoltage indicators, signaling that the power supply is in overvoltage preset mode: Rotate the voltage adjustment knob to preset the output overvoltage protection value. Press the V/A preset button again to exit the preset mode and enter the working state, retaining the preset values;
8. Operating: Operating status indicator;
9. Fault: Fault indicator;
10. Constant Current: The system is in constant current mode, maintaining constant output current while adjusting voltage with load changes;
11. Constant Voltage: The system is in constant voltage mode, maintaining constant output voltage while adjusting current with load changes;
12. Over Current: Indicate over current;
13. Over Voltage: This indicates that the actual output voltage has exceeded the overvoltage protection threshold. Consequently, the power supply will cease operation, reducing the output value to zero, and triggering the buzzer. To resolve the overvoltage condition, the circuit air switch must be turned off. After restarting the system, the issue can be resolved;
14. Short Circuit: Indicate a short circuit in the power supply. Currently, the buzzer sounds;
15. Overheating: Indicate the overheating of the power supply, and the system is protecting itself by stopping the output.

Back Panel

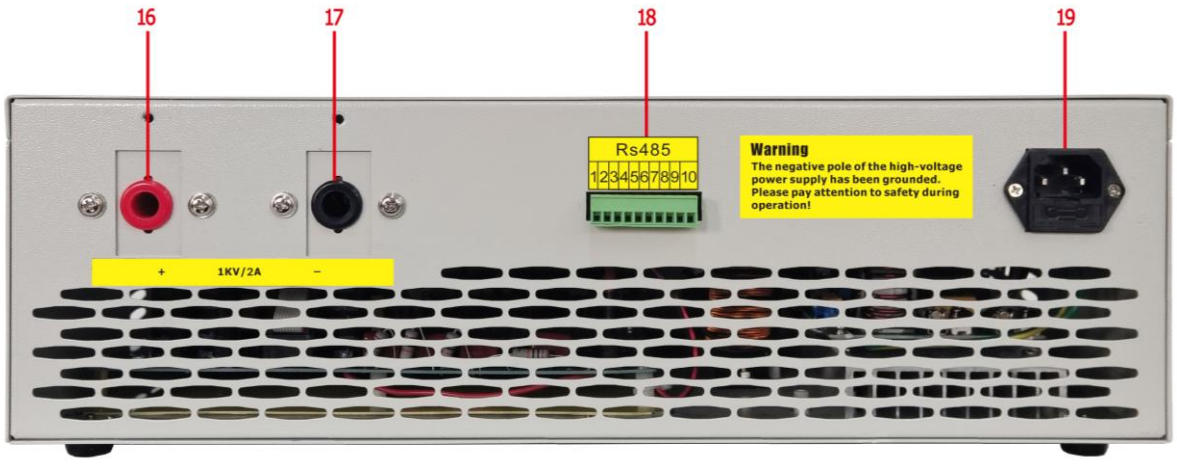


Figure 3. Back Panel

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16. HV output: High voltage output terminal;
17. Output ground: High voltage output ground terminal;
18. This function is only for manufacturers to debug;
19. Input connector: AC input 220V 60Hz connector.

NAMING PRINCIPLE

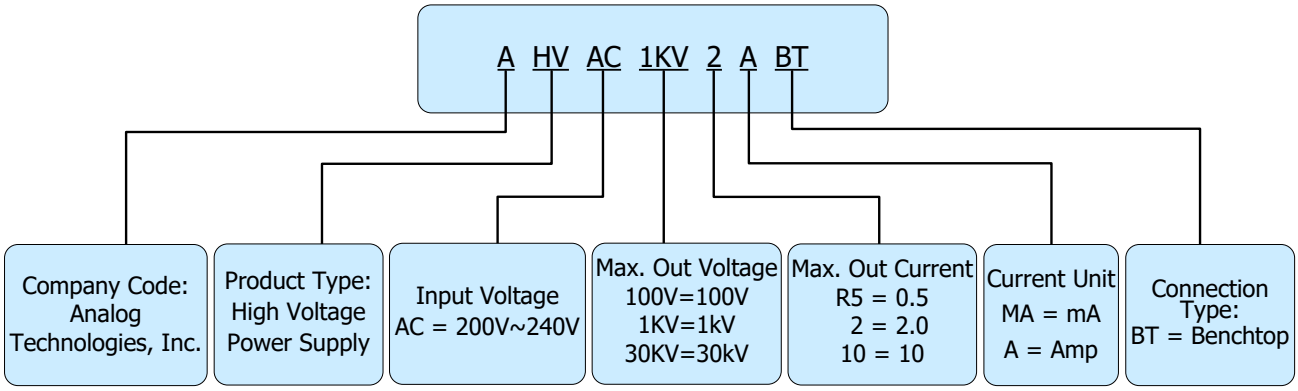


Figure 4. Naming Principle of AHVAC1KV2ABT

DIMENSIONS

I. Dimension of the leads.

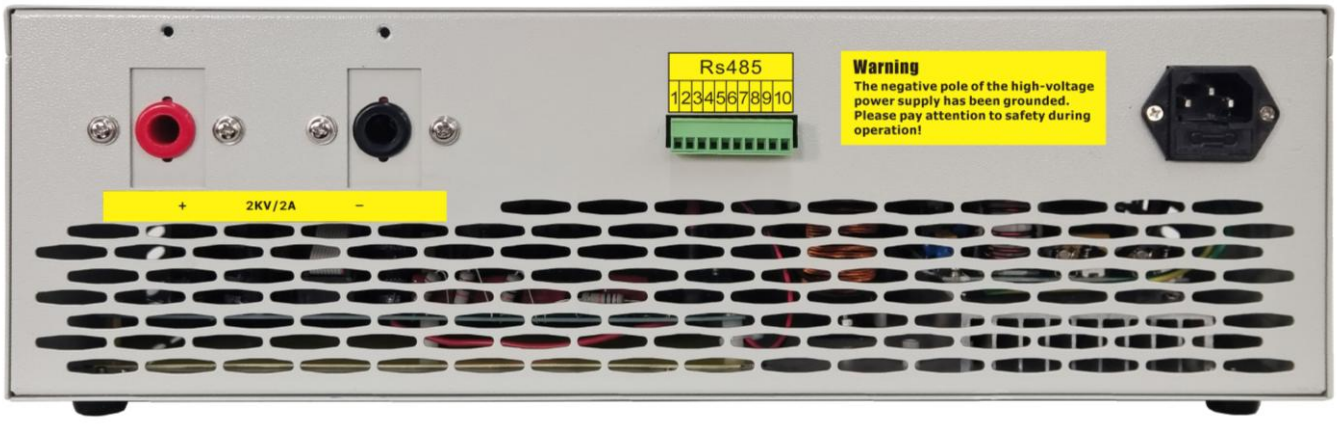


Figure 5. Leads of AHVAC1KV2ABT

Leads	Diameter		Length	
Power cord	0.256inch	6.5mm	70.78inch	1.8m

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II. Dimension of AHVAC1KV2ABT.



Figure 6. Dimensions for AHVAC1KV2ABT

ORDERING INFORMATION

Part Number	Buy Now
AHVAC1KV2ABT	* *

*: both and are our online store icons. Our products can be ordered from either one of them with the same pricing and delivery time.

NOTICE

1. It is important to carefully read and follow the warnings, cautions, and product-specific notes provided with electronic components. These instructions are designed to ensure the safe and proper use of the component and to prevent damage to the component or surrounding equipment. Failure to follow these instructions could result in malfunction or failure of the component, damage to surrounding equipment, or even injury or harm to individuals. Always take the necessary precautions and seek professional assistance if unsure about proper use or handling of electronic components.
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