



Hangyu Power System (Shanghai) Co., Ltd.

HY-BPCSU Series

Bipolar Constant Current Source



High Frequency High Current

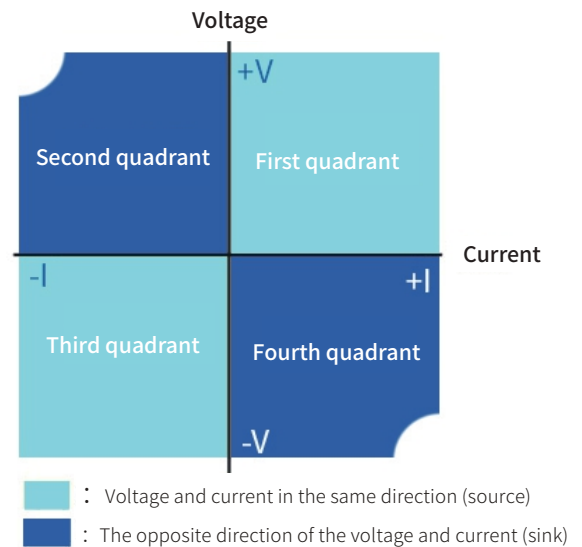
Military quality power supply expert
To provide customers with accurate, intelligent and convenient test
power supply solutions



High Precision, High Power Density



Applied to sensor frequency characteristic test, accurate degaussing test and semiconductor current pulse test, it can also be used as the current expansion function of electrochemical workstation, easily achieve the maximum current expansion of $\pm 1000A$.



Four-quadrant action concept map

Product Features

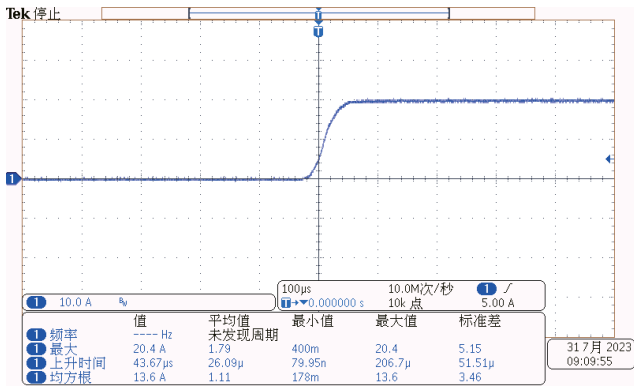
- Open circuit voltage: $\pm 2.5V/\pm 5V/\pm 10V/\pm 20V/\pm 30V/\pm 40V/\pm 60V/\pm 80V$ (optional)
- Output current: $0\sim\pm 1000A$ (optional)
- Output power: 125W~20kW
- Output frequency: DC~100Hz, DC~500Hz, DC~1kHz, DC~5kHz, DC~10kHz, DC~20kHz, DC~30kHz, DC~50kHz (-3dB) (optional)
- Output waveform: sinusoidal wave, triangular wave, square wave, steamed bun wave, sawtooth wave
- Using new linear technology, low ripple, low noise, ultra-low distortion rate
- High response speed, current response time $\leq 100\mu s$

Application Field

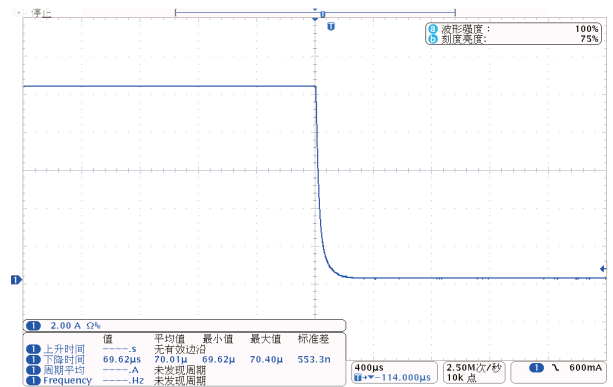
- Semiconductor device test: suitable for current pulse test to ensure stable performance of semiconductor devices
- Semiconductor pulse lasers: Perform accurate pulse testing to help optimize laser performance
- Current sensor calibration: Perform frequency characteristic test to improve the accuracy of current measurement
- Magnetic field degaussing application: Provide professional degaussing test to ensure that the magnetic field performance of the equipment is up to standard
- Electrochemical research: As an electrochemical workstation current expansion, support high current electrochemical impedance spectroscopy test
- Fuel cell analysis: In-depth electrochemical impedance analysis to help fuel cell performance improvement
- Battery comprehensive test: suitable for fuel cells, power batteries, lead storage batteries, super capacitors, etc., soft package high-frequency pulse and comprehensive electrical performance analysis

HY-BPCSU Series Measured Waveform

HY-BPCSU Series Measured Waveform—Current Rise/Drop Time $\leq 100\mu\text{s}$

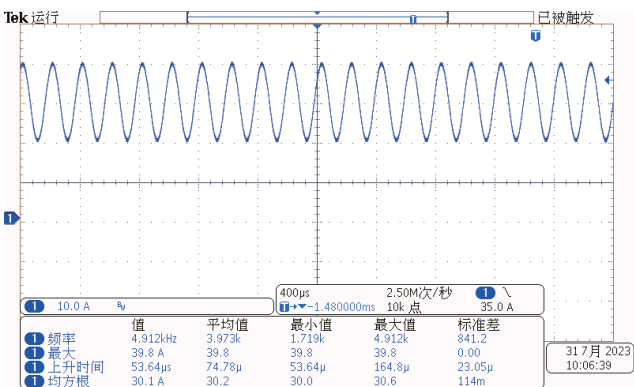


Actual test current rise time $\leq 100\mu\text{s}$

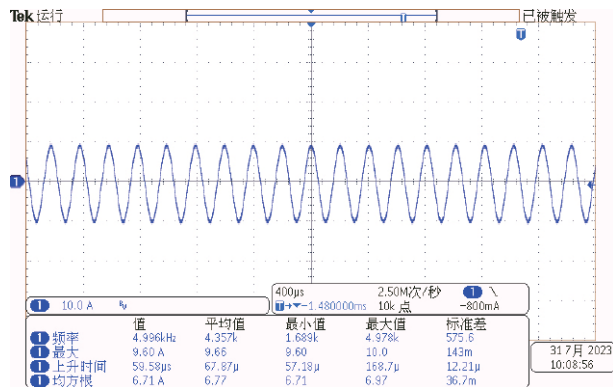


Actual test current drop time $\leq 100\mu\text{s}$

HY-BPCSU Series Measured Waveform—Sinusoidal Wave

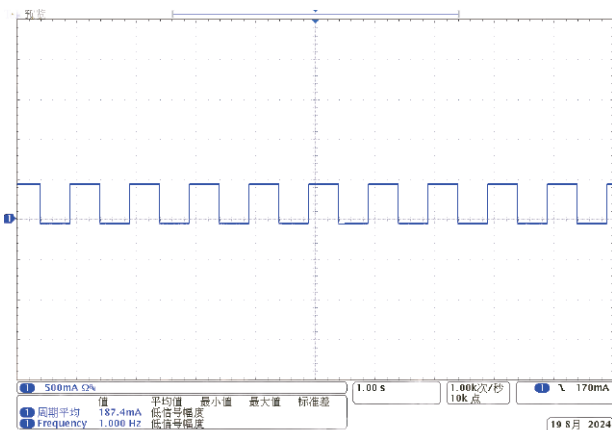


DC+AC Mode waveform

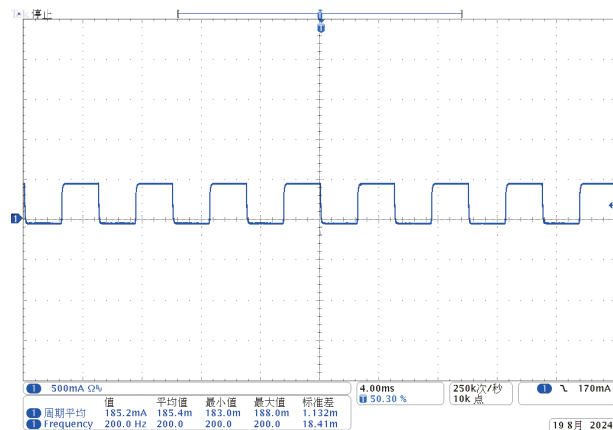


5kHz Frequency bandwidth waveform

HY-BPCSU Series Measured Waveform—Square Wave



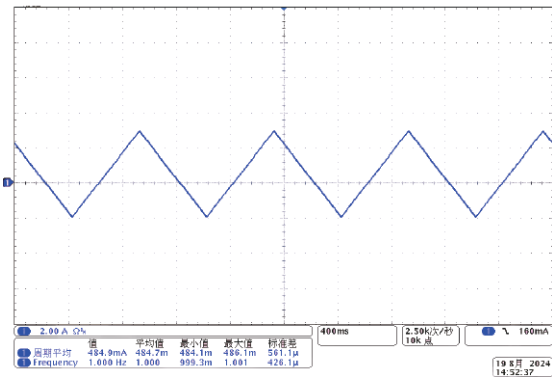
1Hz Frequency bandwidth waveform



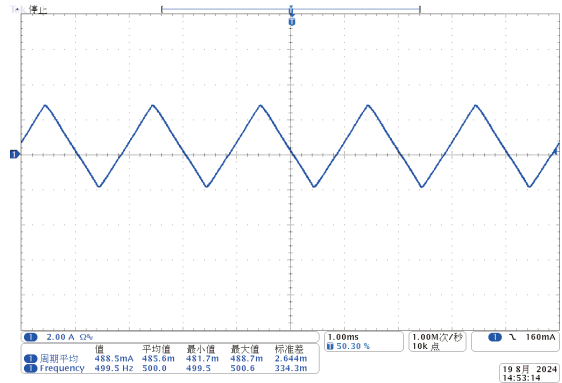
200Hz Frequency bandwidth waveform

HY-BPCSU Series Measured Waveform/Product Selection Table

HY-BPCSU Series Measured Waveform— Triangular Wave

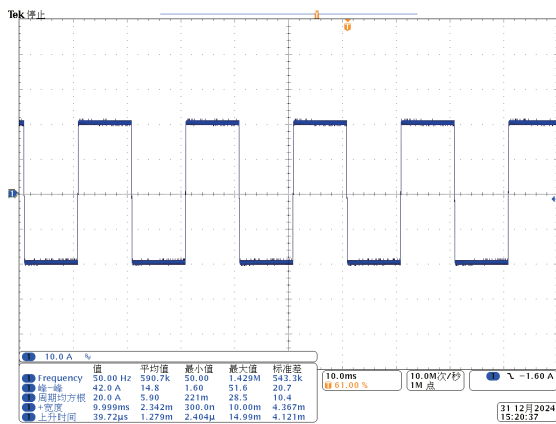


1Hz Frequency bandwidth waveform

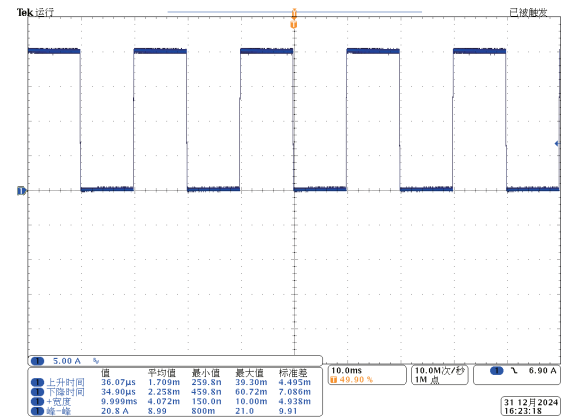


500Hz Frequency bandwidth waveform

HY-BPCSU Series Measured Waveform—Pulse Wave



Positive and negative dual pulse waveform



Positive pulse waveform

Choose And Buy Instructions For The Product

Product Series	Output Voltage	Output Current	Output Frequency	Choose And Buy Function	Choose And Buy Function
HY-BPCSU	2.5	-	500	-	10

Product model: HY-BPCSU 2.5-500-100-10
 The model information is: Open circuit voltage 2.5V, Output current 0~±500A,
 Output frequency 100Hz, Choose and buy high-speed response features, speed ≤10μs

Communication Protocol
Modbus
SCPI

Communication Interface Is Standard
RS-485
RS-232

Optional Communication Interface (Users Can Install Themselves)
- LAN : Ethernet communication interface
- CAN : CAN communication interface
- GPIB : GPIB communication interface
- IA : Analog quantity programming and monitoring interface (isolated type)

HY-BPCSU Series Product Selection Table

HY-BPCSU Series Model List

Special specifications outside the scope of the selection table are accepted for customization.
Wide frequency band > 1kHz, -3dB.

2.5V Series Power Supply Selection

Models	Output Voltage	Output Current	Output Power	Output Frequency
HY-BPCSU 2.5-50	2.5V	0~±50A	125W	Standard: DC~100Hz DC~500Hz DC~1kHz Choose And Buy: DC~5kHz DC~10kHz DC~20kHz DC~30kHz DC~50kHz
HY-BPCSU 2.5-100	2.5V	0~±100A	250W	
HY-BPCSU 2.5-150	2.5V	0~±150A	375W	
HY-BPCSU 2.5-200	2.5V	0~±200A	500W	
HY-BPCSU 2.5-250	2.5V	0~±250A	625W	
HY-BPCSU 2.5-300	2.5V	0~±300A	750W	
HY-BPCSU 2.5-400	2.5V	0~±400A	1000W	
HY-BPCSU 2.5-500	2.5V	0~±500A	1250W	

5V Series Power Supply Selection

Models	Output Voltage	Output Current	Output Power	Output Frequency
HY-BPCSU 5-50	5V	0~±50A	250W	Standard: DC~100Hz DC~500Hz DC~1kHz Choose And Buy: DC~5kHz DC~10kHz DC~20kHz DC~30kHz DC~50kHz
HY-BPCSU 5-100	5V	0~±100A	500W	
HY-BPCSU 5-150	5V	0~±150A	750W	
HY-BPCSU 5-200	5V	0~±200A	1000W	
HY-BPCSU 5-250	5V	0~±250A	1250W	
HY-BPCSU 5-300	5V	0~±300A	1500W	
HY-BPCSU 5-400	5V	0~±400A	2000W	
HY-BPCSU 5-500	5V	0~±500A	2500W	

10V Series Power Supply Selection

Models	Output Voltage	Output Current	Output Power	Output Frequency
HY-BPCSU 10-50	10V	0~±50A	500W	Standard: DC~100Hz DC~500Hz DC~1kHz Choose And Buy: DC~5kHz DC~10kHz DC~20kHz DC~30kHz DC~50kHz
HY-BPCSU 10-100	10V	0~±100A	1000W	
HY-BPCSU 10-150	10V	0~±150A	1500W	
HY-BPCSU 10-200	10V	0~±200A	2000W	
HY-BPCSU 10-250	10V	0~±250A	2500W	
HY-BPCSU 10-300	10V	0~±300A	3000W	
HY-BPCSU 10-400	10V	0~±400A	4000W	
HY-BPCSU 10-500	10V	0~±500A	5000W	

20V Series Power Supply Selection

Models	Output Voltage	Output Current	Output Power	Output Frequency
HY-BPCSU 20-50	20V	0~±50A	1000W	Standard: DC~100Hz DC~500Hz DC~1kHz Choose And Buy: DC~5kHz DC~10kHz DC~20kHz DC~30kHz DC~50kHz
HY-BPCSU 20-100	20V	0~±100A	2000W	
HY-BPCSU 20-150	20V	0~±150A	3000W	
HY-BPCSU 20-200	20V	0~±200A	4000W	
HY-BPCSU 20-250	20V	0~±250A	5000W	
HY-BPCSU 20-300	20V	0~±300A	6000W	
HY-BPCSU 20-400	20V	0~±400A	8000W	
HY-BPCSU 20-500	20V	0~±500A	10000W	

30V Series Power Supply Selection

Models	Output Voltage	Output Current	Output Power	Output Frequency
HY-BPCSU 30-50	30V	0~±50A	1500W	Standard: DC~100Hz DC~500Hz DC~1kHz Choose And Buy: DC~5kHz DC~10kHz DC~20kHz DC~30kHz DC~50kHz
HY-BPCSU 30-100	30V	0~±100A	3000W	
HY-BPCSU 30-150	30V	0~±150A	4500W	
HY-BPCSU 30-200	30V	0~±200A	6000W	
HY-BPCSU 30-250	30V	0~±250A	7500W	
HY-BPCSU 30-300	30V	0~±300A	9000W	
HY-BPCSU 30-400	30V	0~±400A	12000W	
HY-BPCSU 30-500	30V	0~±500A	15000W	

40V Series Power Supply Selection

Models	Output Voltage	Output Current	Output Power	Output Frequency
HY-BPCSU 40-50	40V	0~±50A	2000W	Standard: DC~100Hz DC~500Hz DC~1kHz Choose And Buy: DC~5kHz DC~10kHz DC~20kHz DC~30kHz DC~50kHz
HY-BPCSU 40-100	40V	0~±100A	4000W	
HY-BPCSU 40-150	40V	0~±150A	6000W	
HY-BPCSU 40-200	40V	0~±200A	8000W	
HY-BPCSU 40-250	40V	0~±250A	10000W	
HY-BPCSU 40-300	40V	0~±300A	12000W	
HY-BPCSU 40-400	40V	0~±400A	16000W	
HY-BPCSU 40-500	40V	0~±500A	20000W	

*When the equipment runs continuously for more than 30 minutes at the specified operating temperature, all technical indicators can be guaranteed.

HY-BPCSU Series Technical Parameters

Technical Parameter

AC Output

Working mode	Constant current mode (CC Mode)
Output power	Optional range 125W-20kW
Output current	0~±1000A
Output current range can be set	0.5%-100%
Open-circuit voltage	±2.5V/±5V/±10V/±20V/±30V/±40V/±60V/±80V (Higher voltages can be customized)
Output frequency	DC~100Hz, DC~500Hz, DC~1kHz, DC~5kHz, DC~10kHz, DC~20kHz, DC~30kHz, DC~50kHz (-3dB)(optional)
Frequency stabilization accuracy	100ppm
Input adjustment rate	≤0.5%F.S. (Note: F.S. meaning full scale)
Waveform distortion (THD)	Sinusoidal wave, I-THD≤1%, resistance test(Sinusoidal wave and triangular wave do not have this parameter) * Test when the output voltage is more than 50% of the rated voltage
	Different current models have different distortion rates

Programming And Readback Accuracy & Resolution

Current output programming accuracy	0.5%F.S.
Current setting resolution	0.01A (≤600A) , 0.1A (>600A)
Frequency setting resolution	0.01Hz
Current output read back accuracy	0.5%F.S.
Current read back resolution	0.01A (≤600A) , 0.1A (>600A)

Protection Function

OVP Overvoltage protection setting range	10 - 110%, Output beyond the limit is turned off immediately
OCP Overcurrent protection setting range	0 - 105%, Output beyond the limit is turned off immediately
OTP Overtemperature protection	Output beyond the limit is turned off immediately

Environmental Condition

Environment	Indoor use; Installation overvoltage class: II; Pollution level: P2; Class II equipment
Operating ambient temperature	0°C to 45°C; Choose from -10°C to 45°C; -20°C to 45°C
Storage ambient temperature	-20°C to 65°C
Working ambient humidity	20%-90%RH, no condensation, continuous operation
Storage environment humidity	10%-95%RH, no condensation
Altitude	Above 2000 meters above sea level, the power is reduced by 2% per 100 meters, or the maximum working ambient temperature is reduced by 1°C per 100 meters;When not in operation, it can reach an altitude of 12,000 meters
Cooling	Forced air cooling, intelligent speed regulating fan, front/side air inlet, rear air outlet
Noise	≤ 65dB(A), use 1m to weigh the measurement

BPCSU

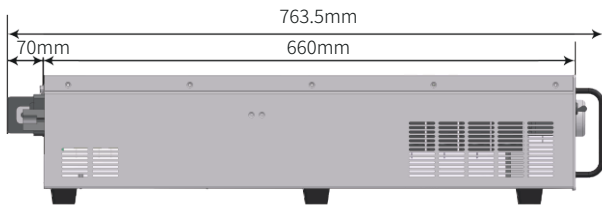
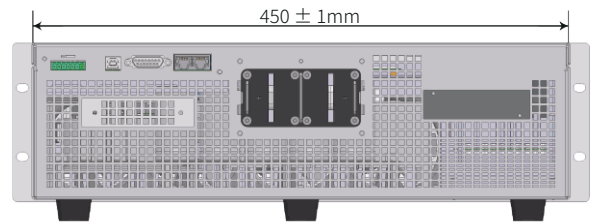
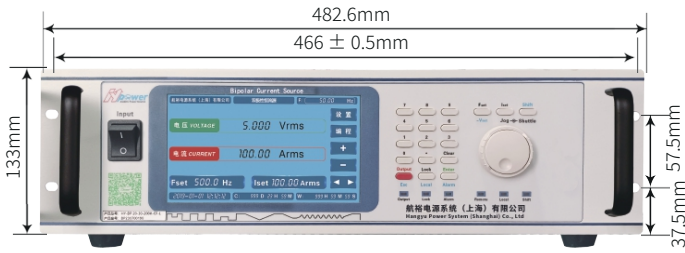
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Appearance & Size

Control Panel

Display	7 inches, LCD LCD display, touch screen
Display item	Current (set value and measured value), voltage measurement value, frequency set value, working time, cumulative working time, current time and date
Control function	Digital key input, multi-stage adjustment knob (outer ring coarse adjustment/inner ring fine adjustment) Output ON/OFF switch, Lock keyboard and touch lock, Reset restart Status indicator (Shift/Local/Remote/Alarm/Lock/Output)

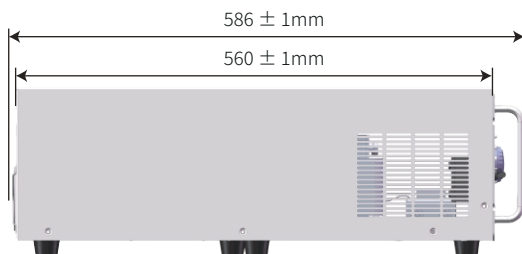
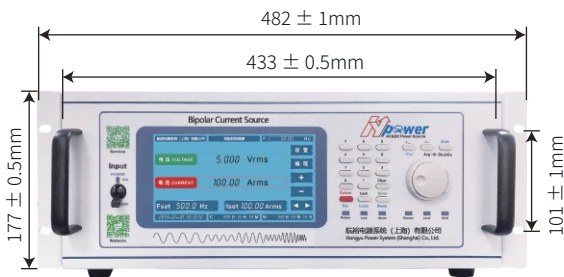
3U 482.6(W) * 660(D) * 133(H) mm



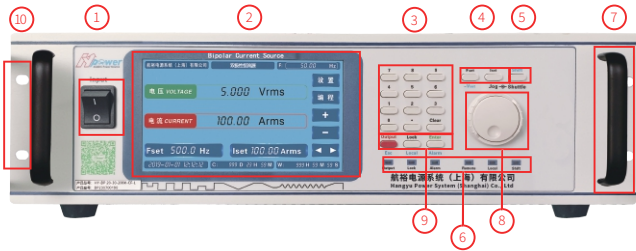
BPCSU

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4U 433(W)*560(D)*177(H)mm

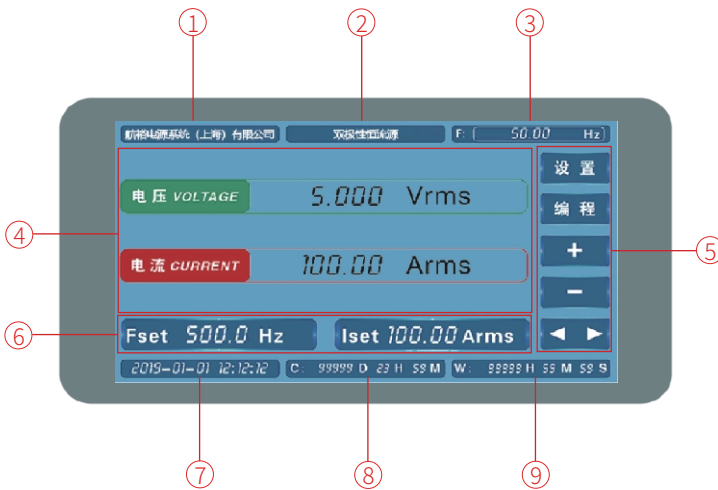


Control Panel



- ① Power input circuit breaker
- ② 7 inch LCD window displays: current setting value, voltage and current measurement value, function setting menu
- ③ Function keys: used for required value input and parameter setting;
- ④ Frequency/current setting key
- ⑤ ShiftFunction reuse key
- ⑥ Status indicator light
- ⑦ Chassis handle
- ⑧ Multi-stage adjustment knob, the inner ring is adjusted one word each time, the outer ring is divided into ± 8 segments can be adjusted
- ⑨ Lock,Enter,Esc Local,Reset,Alarm,Output ON/OFF
- ⑩ 19-inch standard rack mounting holes

Display Interface



- ① Manufacturer's name
- ② Product name
- ③ Frequency display area
- ④ Voltage and current display area
- ⑤ Set up, program, and digitally adjust areas
- ⑥ Frequency/current setting
- ⑦ Current time
- ⑧ Accumulated running time
- ⑨ This run time



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All technical data and instructions are based on the actual product

If there is any change, Hangyu Power has the final interpretation right

Authorized distributor:

