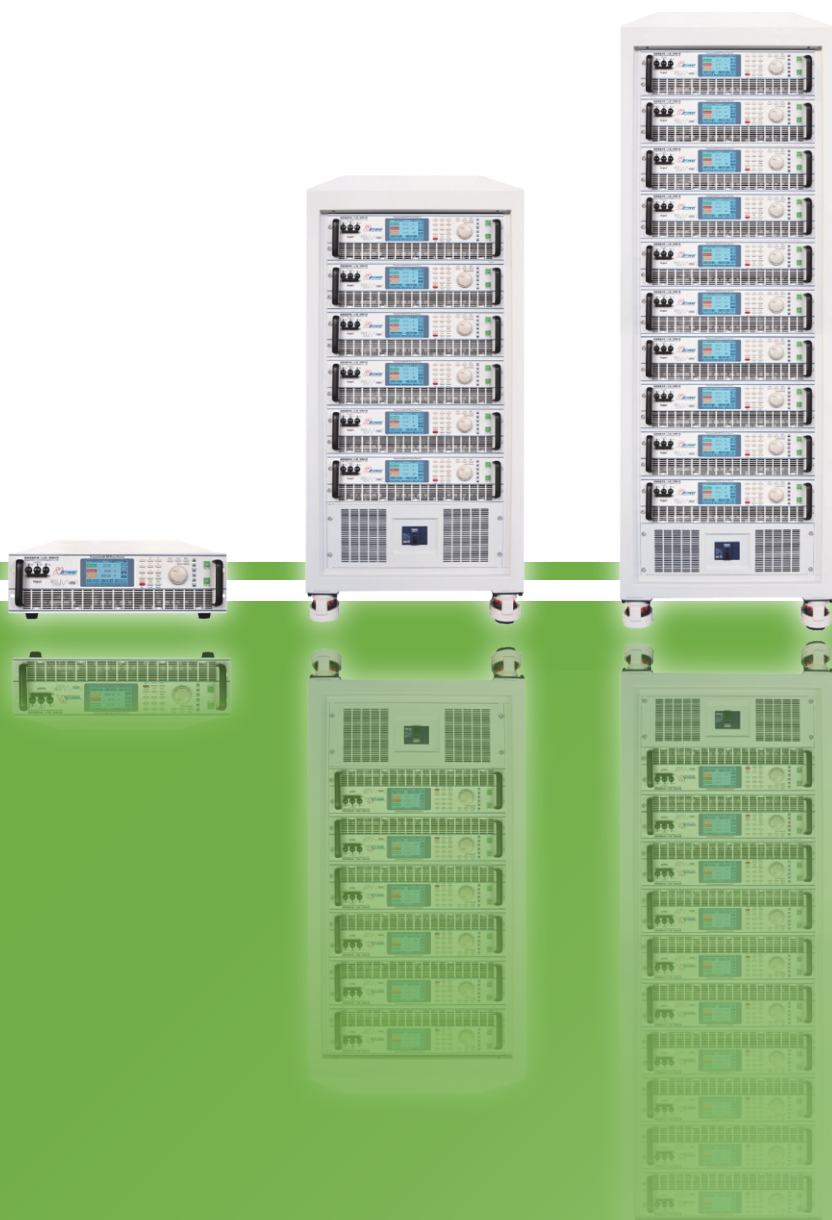




Hangyu Power System (Shanghai) Co., Ltd.

HY-PWSU Series

Programmable Wide-Range DC Power Supply



High Stability High Power Density

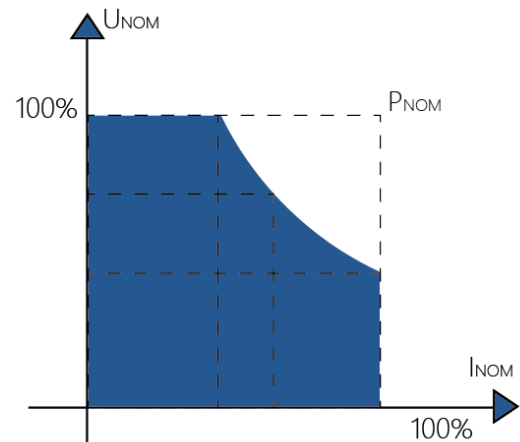
Military quality power supply expert
To provide customers with accurate, intelligent and convenient test
power supply solutions



HY-PWSU Series Programmable Wide-Range DC Power Supply



Wide range, High power, High precision



This power supply has an ultra-wide voltage and current output range, covering various existing limits, and meeting various test requirements of high current and low voltage, or high current and low current.

Product Features

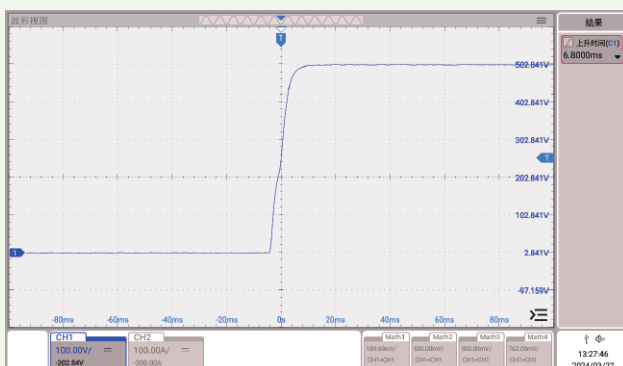
- Maximum output voltage 2250V
- Maximum output current 510A
- High power density, single machine maximum 15kW
- Master-slave parallel can be extended to 1.5MW
- Input standard PFC, power factor up to 0.99
- 16-bit D/A high precision converter, accurate output
- 20-bit A/D high precision converter, more accurate read back
- Working mode: CC, CV, CP

Application Field

This power supply is widely used and plays an important role in industrial (motor), server power supply, high-voltage UPS, aerospace, national defense and military industries.

- Design and test of server power supply, UPS and inverter
- Fuel cell, power battery, lead battery, super capacitor test
- Power supply environment simulation of vehicle, airborne and shipboard electronic equipment
- DC charger, charging pile design and test system integration
- Drones, lasers, sensors
- Power Electronics
- New energy

Actual Test Waveform



HY-PWSU Series power output voltage rise time $\leq 15\text{ms}$

HY-PWSU Series Accessories Selective Purchasing

Product Model Naming Rules

Product Series	Output Voltage	Output Current	Choose And Buy Function	Choose And Buy Function
HY-PWSU	1000	- 30	- CF	- T1 : Operating temperature -10°C to 50°C - T2 : Operating temperature -20°C to 50°C - CF :User defined features (please specify when ordering)
Example of model selection: Product Model: HY-PWSU 1000-30-CF Output voltage 0-1000V, output current 0-30A, Custom features that users choose to purchase				
Communication Protocol		Standard Communication Interface		Optional Communication Interface
Modbus		RS-485		- CAN :CAN communication interface
SCPI		RS-232		- GPIB :GPIB communication interface
		Digital I/O		- IA :Analog quantity programming and monitoring interface (isolated type)
		LAN		

* All technical indicators can only be guaranteed when the equipment runs continuously for more than 30 minutes at the specified operating temperature.

HY-PWSU Series Product Model Selection And Parameters

Special specifications outside the voltage/current/power range in the selection table can be customized.

5kW Series Power Supply Model Selection

Models	Output Voltage	Output Current	Output Power
HY-PWSU 80-170	80V	170A	5kW
HY-PWSU 200-70	200V	70A	5kW
HY-PWSU 360-40	360V	40A	5kW

Models	Output Voltage	Output Current	Output Power
HY-PWSU 500-30	500V	30A	5kW
HY-PWSU 750-20	750V	20A	5kW

10kW Series Power Supply Model Selection

Models	Output Voltage	Output Current	Output Power
HY-PWSU 80-340	80V	340A	10kW
HY-PWSU 200-140	200V	140A	10kW
HY-PWSU 360-80	360V	80A	10kW
HY-PWSU 500-60	500V	60A	10kW
HY-PWSU 750-40	750V	40A	10kW
HY-PWSU 1000-30	1000V	30A	10kW
HY-PWSU 1500-20	1500V	20A	10kW

15kW Series Power Supply Model Selection

Models	Output Voltage	Output Current	Output Power
HY-PWSU 80-510	80V	510A	15kW
HY-PWSU 200-210	200V	210A	15kW
HY-PWSU 360-120	360V	120A	15kW
HY-PWSU 500-90	500V	90A	15kW
HY-PWSU 750-60	750V	60A	15kW
HY-PWSU 1000-40	1000V	40A	15kW
HY-PWSU 1500-30	1500V	30A	15kW
HY-PWSU 2250-20	2250V	20A	15kW

HY-PWSU Series Technical Parameters

HY-PWSU Series Technical Parameters | 5kW

Models		HY-PWSU 80-170	HY-PWSU 200-70	HY-PWSU 360-40	HY-PWSU 500-30	HY-PWSU 750-20
Rated Output Voltage	V	80	200	360	500	750
Rated Output Current	A	170	70	40	30	20
Rated Output Power	W	5kW				
Efficiency	%	93	95	93	95	94
Constant Pressure Mode (CV Mode)						
Output Range Can Be Set	V	0- Rated output value				
Input Adjustment Rate	mV	0.02%+0.02% (Range of measuring)				
Load Adjustment Rate	mV	0.05%+0.05% (Range of measuring)				
Maximum Compensation Voltage For Telemetry	V	8V (Can be customized according to demand)				
Ripple Effective Value rms (3Hz-300kHz)	mVrms	16	40	55	70	200
Noise Peak-To-Peak Value p-p (20Hz-20MHz)	mVpp	200	300	320	350	800
Output Voltage Rise Time 10-90%	ms	15 ms				
Transient Response Time	ms	2 ms				
Constant Current Mode (CC Mode)						
Output Range Can Be Set	A	0- Rated output value				
Input Adjustment Rate	mA	0.05%+0.05% (Range of measuring)				
Load Adjustment Rate	mA	0.15%+0.15% (Range of measuring)				
Ripple Effective Value rms (3Hz-300kHz)	mArms	80	22	18	16	16

HY-PWSU Series Technical Parameters | 10kW

Models		HY-PWSU 80-340	HY-PWSU 200-140	HY-PWSU 360-80	HY-PWSU 500-60	HY-PWSU 750-40	HY-PWSU 1000-30	HY-PWSU 1500-20
Rated Output Voltage	V	80	200	360	500	750	1000	1500
Rated Output Current	A	340	140	80	60	40	30	20
Rated Output Power	W	10kW						
Efficiency	%	93	95	93	95	94	95	95
Constant Pressure Mode (CV Mode)								
Output Range Can Be Set	V	0- Rated output value						
Input Adjustment Rate	mV	0.02%+0.02% (Range of measuring)						
Load Adjustment Rate	mV	0.05%+0.05% (Range of measuring)						
Maximum Compensation Voltage For Telemetry	V	8V (Can be customized according to demand)						
Ripple Effective Value rms (3Hz-300kHz)	mVrms	25	40	55	70	200	350	400
Noise Peak-To-Peak Value p-p (20Hz-20MHz)	mVpp	320	300	320	350	800	1600	2400
Output Voltage Rise Time 10-90%	ms	15 ms						
Transient Response Time	ms	2 ms						
Constant Current Mode (CC Mode)								
Output Range Can Be Set	A	0- Rated output value						
Input Adjustment Rate	mA	0.05%+0.05% (Range of measuring)						
Load Adjustment Rate	mA	0.15%+0.15% (Range of measuring)						
Ripple Effective Value rms (3Hz-300kHz)	mArms	160	44	35	32	32	22	16

HY-PWSU Series Technical Parameters

HY-PWSU Series Technical Parameters | 15kW

Models		HY-PWSU 80-510	HY-PWSU 200-210	HY-PWSU 360-120	HY-PWSU 500-90	HY-PWSU 750-60	HY-PWSU 1000-40	HY-PWSU 1500-30	HY-PWSU 2250-20
Rated Output Voltage	V	80	200	360	500	750	1000	1500	2250
Rated Output Current	A	510	210	120	90	60	40	30	20
Rated Output Power	W	15kW							
Efficiency	%	93	95	93	95	94	95	95	93
Constant Pressure Mode (CV Mode)									
Output Range Can Be Set	V	0- Rated output value							
Input Adjustment Rate	mV	0.02%+0.02% (Range of measuring)							
Load Adjustment Rate	mV	0.05%+0.05% (Range of measuring)							
Maximum Compensation Voltage For Telemetry	V	8V (can be customized according to demand)							
Ripple Effective Value rms (3Hz-300kHz)	mVrms	25	40	55	70	200	350	400	780
Noise Peak-To-Peak Value p-p (20Hz-20MHz)	mVpp	320	300	320	350	800	1600	2400	2800
Output Voltage Rise Time 10-90%	ms	15 ms							
Transient Response Time	ms	2 ms							
Constant Current Mode (CC Mode)									
Output Range Can Be Set	A	0- Rated output value							
Input Adjustment Rate	mA	0.05%+0.05% (Range of measuring)							
Load Adjustment Rate	mA	0.15%+0.15% (Range of measuring)							
Ripple Effective Value rms (3Hz-300kHz)	mArms	240	66	50	48	48	32	26	16

Stability And Temperature Coefficient

Stability (Rated Output Voltage/Current)	U:0.01% I:0.01% (After 30 minutes of power on at a certain input voltage and load ambient temperature, 8 hours)
Temperature Coefficient (Rated Output Voltage/Current)	U:50ppm/°C I: 70ppm/°C (30 minutes after power on)

Programming And Readback Accuracy & Resolution

Voltage Output Programming Accuracy	0.05% of the rated output voltage
Current Output Programming Accuracy	±0.1% of rated output current + ±0.1% of actual current
Voltage Setting Resolution	0.01V (≤600V) , 0.1V (>600V)
Current setting resolution	0.01A (≤600A) , 0.1A (>600A)
Voltage Output Read-Back Accuracy	±0.05% of rated output voltage + ±0.05% of actual voltage
Current Output Read-Back Accuracy	±0.1% of rated output current + ±0.1% of actual current
Voltage Read Back Resolution	0.0001V (≤100V), 0.001V (100V<U ≤ 1000V), 0.01V (>1000V)
Current Read Back Resolution	0.0001A (≤100A), 0.001A (100A< I ≤ 1000A)

HY-PWSU Series Technical Parameters

Protection Function

OVP Overvoltage Protection Setting Range	10-110%, beyond the limit output immediately off
OCP Overcurrent Protection Setting Range	0-115%, beyond the limit output immediately off
OTP Overtemperature Protection	Beyond the limit output immediately off
OPP Overpower Protection	10-110%, beyond the limit output immediately off

Environmental Condition

Environment	Indoor use; Installation overvoltage class: II; Pollution level: P2; Class II equipment
Operating Ambient Temperature	0°C to 50°C, optional -10°C to 50°C, -20°C to 50°C
Storage Ambient Temperature	-20°C to 65°C
Working Ambient Humidity	20%-90% RH, no dew formation, continuous operation
Storage Environment Humidity	10% - 95% RH, no dew formation
Altitude Above Sea Level	Above 2000 meters above sea level, every 100 meters up, the power will be reduced by 2%, or reduce the maximum working ambient temperature by 1°C per 100 meters; When not in operation, the altitude can reach 12,000 meters
Cooling	Forced air cooling, intelligent speed regulating fan, front/side air inlet, rear air outlet
Noise	≤ 65dB(A), use 1m to weighted measurement

Control Panel

Display	4 inch LCD display, touch screen
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)
Programming Function	Step, Ladder, Gradient

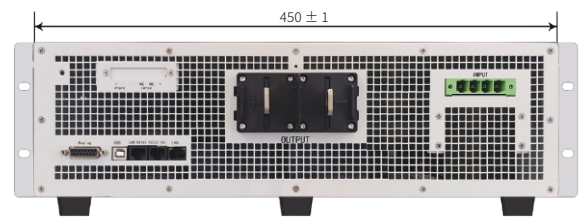
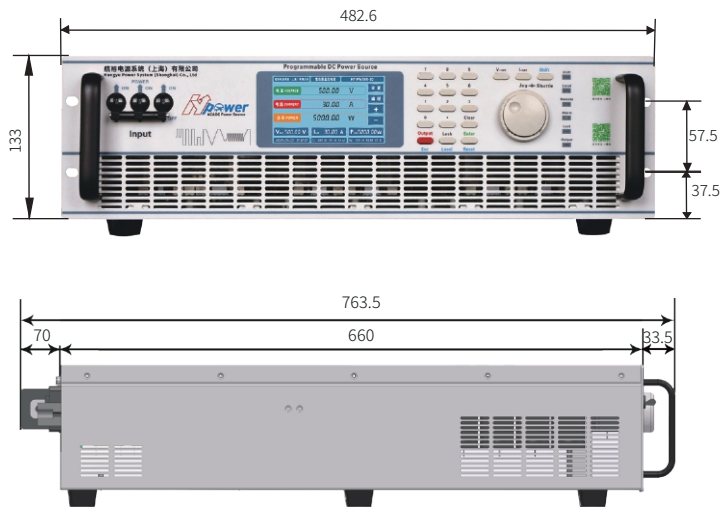
Input Power Supply

Frequency	47Hz - 63Hz
Connection Mode	Three-phase three-wire + ground wire, 380V ± 15%
Power Factor (Typical Value)	0.94(Three-phase input)

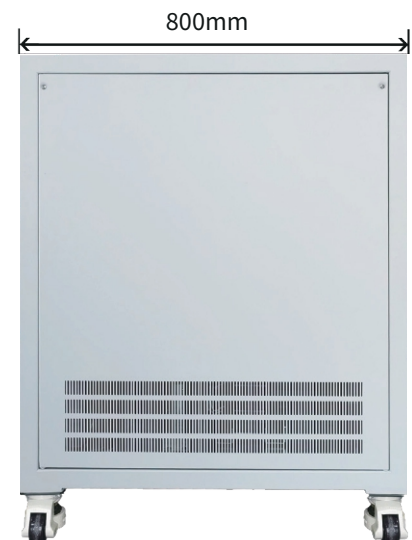
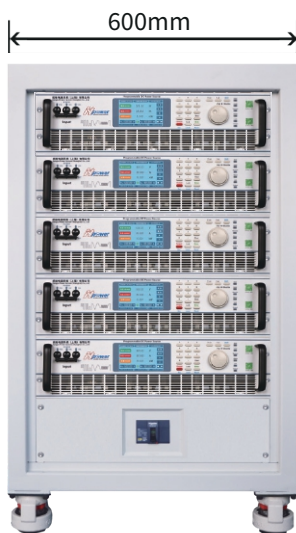
Size And Weight

Size	3U:450(W) * 660(D) * 133(H) mm
Weight	5kW:About 30kg/3U;10kW:About 35kg/3U;15kW:About 40kg/3U
Colour	RAL 7035

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

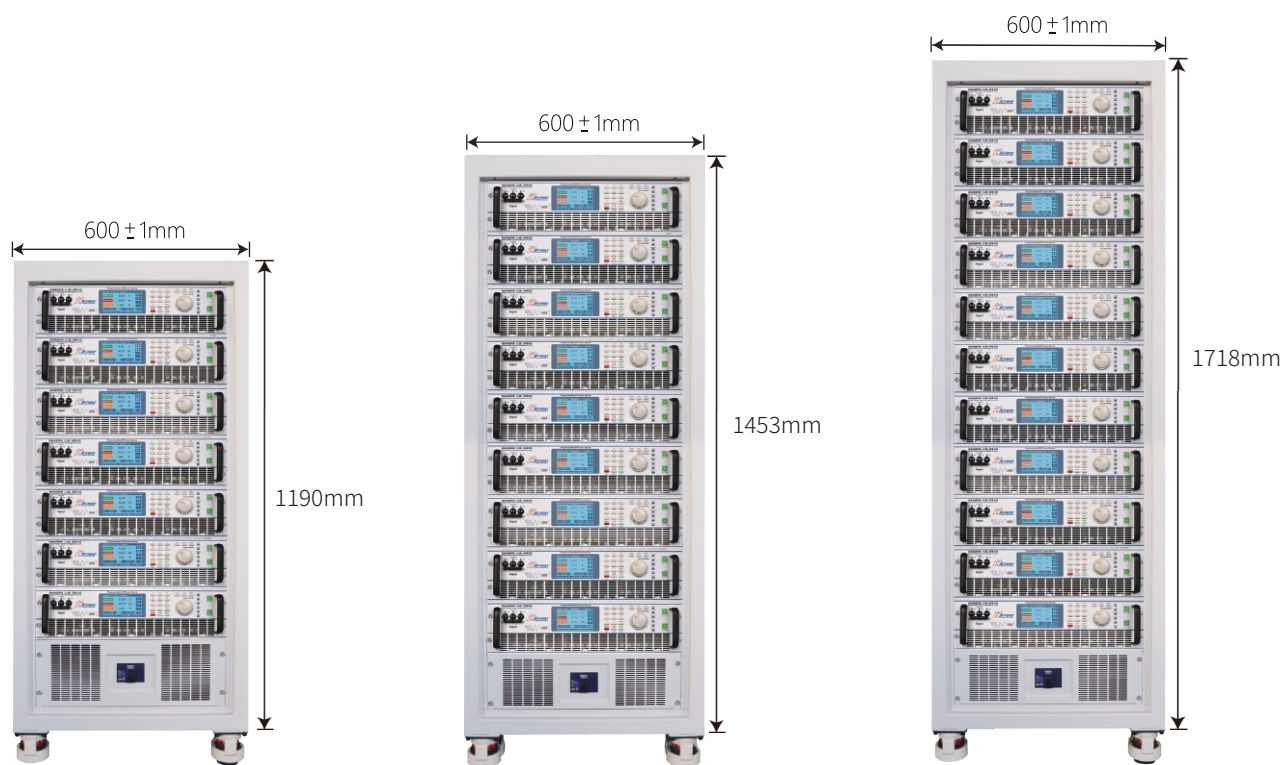


18U 600(W) * 800(D) * 920(H) mm



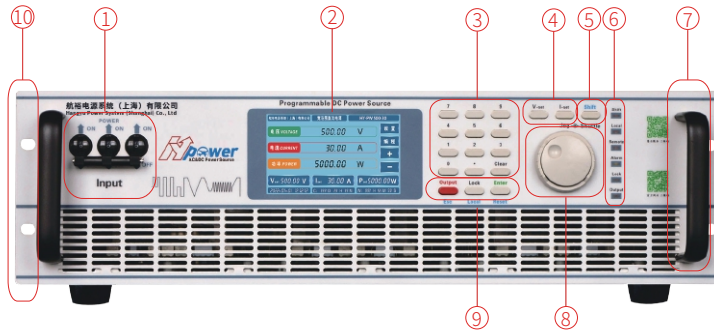
Appearance & Size

24U 600(W)*800(D)*1190(H)mm
30U 600(W)*800(D)*1453(H)mm
36U 600(W)*800(D)*1718(H)mm



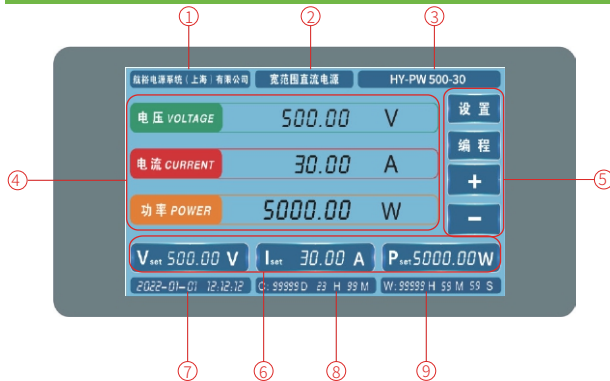
Display And Control Panel

Control Panel



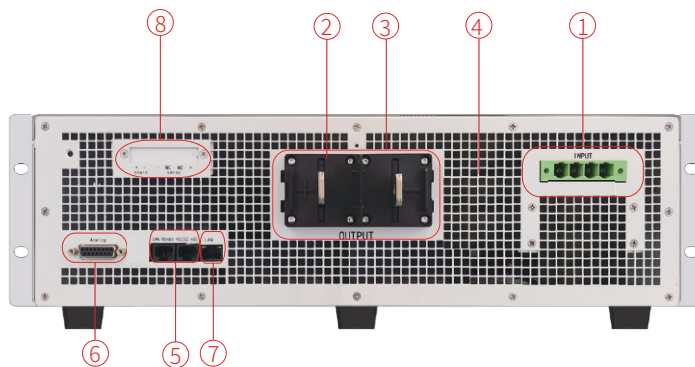
- ① Power input circuit breaker
- ② LCD display (4-inch, touch screen)
- ③ Number input keyboard
- ④ Voltage/current setting key
- ⑤ Shift Function reset key
- ⑥ Status indicator light
- ⑦ Chassis handle
- ⑧ Multi-stage adjustment knob (inner circle fine adjustment/outer circle coarse adjustment)
- ⑨ Lock, Enter, Esc, Local, Reset, Output ON/OFF
- ⑩ 19 inch standard rack mounting holes

Display Interface



- ① Manufacturer's name
- ② Product name
- ③ Product series
- ④ Voltage/current/power read back display area
- ⑤ Function setting area
- ⑥ Voltage/Current Setpoints
- ⑦ Current time
- ⑧ Accumulated running time
- ⑨ This run time

Rear Panel



- ① AC input terminal
- ② Output copper bar
- ③ Output protection cover
- ④ Heat dissipation air outlet
- ⑤ RS-485 & RS-232 communication interface
- ⑥ Digital I/O communication interface
- ⑦ LAN communication interface
- ⑧ Distal compensation measuring terminal

Programmable Functions Are Introduced

步阶设定模式 起始步 结束步

步号	电压 (V)	电流 (A)	运行时间 (时:分:秒:毫秒)	循环次数
			: : :	
			: : :	
			: : :	
			: : :	
			: : :	
			: : :	

保存 退出 上一页 下一页

The step setting page allows you to set the required voltage, current, run time, initial step, end step, and number of cycles.

阶梯设定模式

初始电压	V
步进电压	V
步进次数	
步进时间 (时:分:秒:毫秒)	: : :
循环次数 (0为无次数)	

示意图

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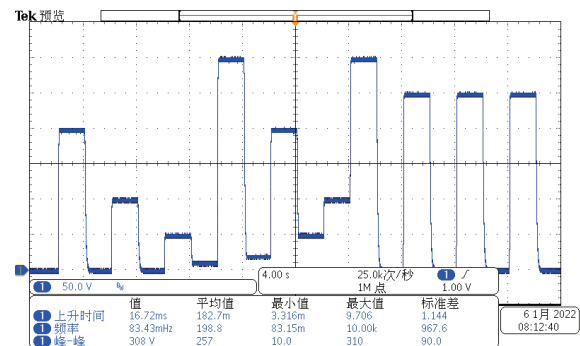
The ladder setting page can set the required initial voltage, stepping voltage, stepping times and stepping time.

渐变设定模式 起始步 结束步

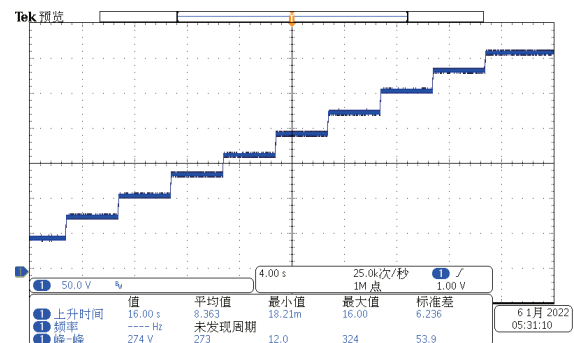
步号	电压 (V)	电流 (A)	运行时间 (时:分:秒:毫秒)	循环次数
			: : :	
			: : :	
			: : :	

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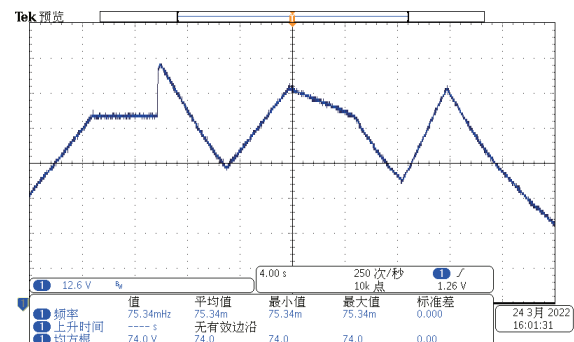
Gradient Settings page can set the required voltage, current, running time, initial step, end step



Step



Ladder



Gradient



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HY-PWSU Series Product Manual, Version 08.12, May 2025

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:

