



Hangyu Power System (Shanghai) Co., Ltd.

HY-PSASU Series

Programmable Switching AC Power Source



High Power High Reliability

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



HY-PSASU Series Programmable Switching AC Power Source

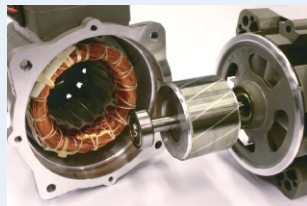


High Power, High Precision, High Reliability



Application Field

- Motor
- Household appliance industry
- Testing laboratory
- Industrial power supply
- Motor/Compressor
- IT manufactures electronics
- New energy
- Medical treatment
- Dock shore power/shipyard
- Defense military industry



Product Features

- Output frequency range 45Hz-70Hz
- Output power range 1kVA-900kVA
- Output voltage L-N 0-150 Vrms/300Vrms/1 kVrms
- Three-phase voltage independent adjustable, phase difference 0-359.99° adjustable
- Support front panel programming, without upper computer software control
- The voltage rise and fall slopes are adjustable
- Power output soft start function
- 16-bit D/A high precision converter for accurate output
- 16-bit A/D high precision converter, more accurate read back
- Multiple protection functions OVP, OCP, and OTP
- 19 inch standard rack size or floor type cabinet
- 7-inch ultra large LCD display screen
- Touch screen operation & digital key input
- Multi-stage adjustment knob
- The power input is controlled by circuit breaker, which is more secure
- Output the ON/OFF button
- Fan intelligent speed control design, reduce noise
- Support modbus protocol
- Standard interface: RS-485&RS-232
- Choose buy interface: LAN&CAN

GPIO

Analog quantity programming and monitoring

(Isolation type)

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HY-PSASU Series Product Selection Table

Product Model Naming Rules

Product Series	Input Phase Number	Output Phase Number	Output Capacity	Choose And Buy Function	Choose And Buy Function
HY-PSASU	1	3	003	- CF	
Series name	1: Input single phase 3: Input three phases	1: Output single phase 3: Output three phase	Output capacity 3kVA	The short for Choose And Buy Function, see Choose And Buy Function	
Selection example: Product model: HY-PSASU 13003-CF Input single-phase, output three-phase, output capacity 3kVA, Custom features that users choose to purchase					
					- T2 Operating temperature -20°C to 45°C - CF User defined features (please specify when ordering)

In the selection table, special specifications outside the voltage/frequency/output capacity range are accepted for customization

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Product Model	Output Capacity	Input	Output	Product Model	Output Capacity	Input	Output	Phase Voltage (L,Vrms)	Output Frequency
HY-PSASU 11001	1kVA	Single phase		HY-PSASU 1315L	1.5kVA	Single phase			
HY-PSASU 11002	2kVA								
HY-PSASU 11003	3kVA			HY-PSASU 13003	3kVA				
HY-PSASU 11005	5kVA			HY-PSASU 1345L	4.5KVA				
HY-PSASU 31010	10kVA	Three phase	Single phase	HY-PSASU 33010	10kVA	Three phase	Three phase	0-150V 0-300V High and low output 0-600V 0-1000V (optional)	45-70Hz
HY-PSASU 31015	15kVA			HY-PSASU 33015	15kVA				
HY-PSASU 31030	30kVA			HY-PSASU 33030	30kVA				
HY-PSASU 31045	45kVA			HY-PSASU 33045	45kVA				
HY-PSASU 31060	60kVA			HY-PSASU 33060	60kVA				
HY-PSASU 31075	75kVA			HY-PSASU 33075	75kVA				
HY-PSASU 31100	100kVA			HY-PSASU 33090	90kVA				
HY-PSASU 31120	120kVA			HY-PSASU 33120	120kVA				
HY-PSASU 31150	150kVA			HY-PSASU 33150	150kVA				
HY-PSASU 31180	180kVA			HY-PSASU 33180	180kVA				
HY-PSASU 31200	200kVA			HY-PSASU 33210	210kVA				
HY-PSASU 31250	250kVA			HY-PSASU 33240	240kVA				
HY-PSASU 31300	300kVA			HY-PSASU 33300	300kVA				
HY-PSASU 31450	450kVA			HY-PSASU 33450	450kVA				
HY-PSASU 31500	500kVA			HY-PSASU 33600	600kVA				
				HY-PSASU 33900	900kVA				

HY-PSASU Series Technical Parameter

Single Phase Output

Single In Single Out					Three In Single Out						
Product model	PSASU 11001	PSASU 11002	PSASU 11003	PSASU 11005	PSASU 31010	PSASU 31015	PSASU 31030	PSASU 31045	PSASU 31060	PSASU 31075	PSASU 31100
power	1kVA	2kVA	3kVA	5kVA	10kVA	15kVA	30kVA	45kVA	60kVA	75kVA	100kVA
Model size	4U	4U	10U	10U	15U	18U	30U	404	405	405	405
	*1) 4U, standard 19-inch rack mount, or desktop (fixed foot mat);2) 10U, standard 19-inch rack type, or floor type (with movable universal casters and brakes); 3) 15U, 18U and above non-standard cabinets, floor type cabinets, with movable universal casters and brakes.										
Circuit mode	IGBT/PWM pulse width modulation mode										
Communication mode	Standard: RS-485 & RS-232 Options: LAN, CAN, GPIB, Analog quantity programming and monitoring (Isolation type)										

Input

Connection mode	Single-phase two-wire + Ground wire(LN+PE)	Three-phase three-wire + Ground wire & Three-phase four-wire + Ground wire (ABC+PE/ABCN+PE)
Input phase	Single phase 1Φ	Three-phase 3Φ
Input waveform	Sinusoidal wave	Sinusoidal wave
Input voltage	220Vrms±15%	380Vrms±15%
Input frequency	47Hz-63Hz	47Hz-63Hz

Output

Output phase		Single phase 1Φ										
Rated set voltage		L-N 0-300Vrms Continuously adjustable (high grade), L-N 0-150Vrms continuously adjustable (low grade) Max1000Vrms continuously adjustable (optional model, output current will be reduced proportionally)										
Rated current	High grade	3.34A	6.67A	10A	16.67A	33.34A	50A	100A	150A	200A	250A	333.34A
	Low grade	6.67A	13.34A	20A	33.34A	66.67A	100A	200A	300A	400A	500A	666.67A
	* Note	high-grade rated current calculated according to 300V voltage; The low rated current is calculated based on the 150V voltage.										
Maximum current	High grade	4.2A	8.4A	12.5A	20.84A	41.68A	62.5A	125A	187.5A	250A	312.5A	416.68A
	Low grade	8.4A	16.7A	25A	41.7A	83.34A	125A	250A	375A	500A	625A	833.34A
	* Note	high-grade rated current calculated according to 300V voltage; The low rated current is calculated based on the 150V voltage.										
Frequency		45Hz-70Hz continuously adjustable										

Property

Input adjustment rate	≤0.5%F.S. (Resistance test)
Load adjustment rate	≤1%F.S. (Resistance test)
Waveform distortion (THD)	Sinusoidal wave, THD≤3% below 100kVA, THD≤4% between 100kVA-300kVA, THD≤5% above 300kVA * Test when the output voltage is more than 50% of the rated voltage
Efficiency	≤150kVA model efficiency ≥90%; > 150kVA model efficiency ≥92%
Frequency stability	≤0.02%F.S.
Voltage stability	≤0.5%F.S.
Voltage crest coefficient	1.414±0.05
Noise	≤65dB(A), use 1m to weigh the measurement

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HY-PSASU Series Technical Parameter

Programming And Readback Accuracy & Resolution

Settings	Voltage output programming accuracy	$\pm 0.5\%F.S.$
	Frequency output programming accuracy	$\pm 0.01\%F.S.$
	Voltage setting resolution	0.01V
	Frequency setting resolution	0.01Hz
Read back	Voltage output read back accuracy	$\pm 0.5\%F.S.$
	Current output read back accuracy	$\pm 0.5\%F.S.$
	Frequency output read back accuracy	$\pm 0.01\%F.S.$
	Voltage read back resolution	0.01V
	Current read back resolution	0.01A
	Frequency read back resolution	0.01Hz

Protection Function

Protection function	Indoor use; Installation overvoltage class: II; Pollution level: P2; II equipment
Overload capacity	125% current 15s, 150% current 5s, 200% current 2s, 300% current Stop output immediately
Memory function	Parameters of the last run
Preset function	Adjust the output voltage and frequency online

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 -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 condition	Forced air cooling, intelligent speed regulating fan, front/side air inlet, rear air outlet
Transport condition	Road transport

Control Panel

Display	7 inches, LCD LCD display, touch screen
Display item	Voltage (set value & measured value), current measurement value, frequency set value , working time, cumulative working time, current time and date
Control function	Output ON/OFF/Lock keyboard and touch lock /Reset Restart/reset/setting/status indicator
Mode of operation	Key input/LCD input/Multi-stage adjustment knob (outer ring coarse adjustment/inner ring fine adjustment)
Control mode	Local control/remote control
Programming function	Step/ladder/gradient

HY-PSASU Series Technical Parameter

Three Phase Output

Single In Three Out				Three In Three Out						
Product model	PSASU 1315L	PSASU 13003	PSASU 1345L	PSASU 33010	PSASU 33015	PSASU 33030	PSASU 33045	PSASU 33060	PSASU 33075	PSASU 33090
Power	1.5kVA	3kVA	4.5kVA	10kVA	15kVA	30kVA	45kVA	60kVA	75kVA	90kVA
Model size	4U	10U	10U	18U	18U	30U	404	405	405	405
	*1) 4U, standard 19-inch rack mount, or desktop (fixed foot mat);2) 10U, standard 19-inch rack type, or floor type (with movable universal casters and brakes); 3) 15U, 18U and above non-standard cabinets, floor type cabinets, with movable universal casters and brakes.									
Circuit mode	IGBT/PWM pulse width modulation mode									
Communication mode	Standard: RS-485 & RS-232 Options: LAN, CAN, GPIB, Analog quantity programming and monitoring (Isolation type)									

Input

Connection mode	Single-phase two-wire + Ground wire(LN+PE)	Three-phase three-wire + Ground wire & Three-phase four-wire + Ground wire (ABC+PE/ABCN+PE)
Input phase	Single phase 1Φ	Three-phase 3Φ
Input waveform	Sinusoidal wave	Sinusoidal wave
Input voltage	220Vrms±15%	380Vrms±15%
Input frequency	47Hz-63Hz	47Hz-63Hz

Output

Output phase		Three-phase 3Φ									
Rated set voltage		L-N 0-300Vrms Continuously adjustable (high grade), L-N 0-150Vrms continuously adjustable (low grade) Max1000Vrms continuously adjustable (optional model, output current will be reduced proportionally)									
Rated current	High grade ²	1.67A ¹	3.34A	5A	11.1A	16.67A	33.34A	50A	66.67A	83.34A	100A
	Low grade ²		6.67A	10A	22.2A	33.34A	66.67A	100A	133.34A	166.67A	200A
	* Note		1.For HY-PSASU 1315L, the current is calculated based on the 300V voltage to determine the rated electric current, and there is no high - low grade 2.High grade maximum current calculated based on 300V voltage; The maximum low current is calculated based on the 150V voltage								
Maximum current	High grade ⁴	2.1A ³	4.2A	6.3A	13.9A	20.84A	41.68A	62.5A	83.34A	104.18A	125A
	Low grade ⁴		8.4A	12.5A	27.8A	41.68A	83.34A	125A	166.68A	208.34A	250A
	* Note		3.For HY-PSASU 1315L, the current is calculated based on the 300V voltage to determine the max electric current, , and there is no high - low grade 4.High grade maximum current calculated based on 300V voltage; The maximum low current is calculated based on the 150V voltage								
Frequency		45Hz-70Hz continuously adjustable									

Property

Input adjustment rate	≤0.5%F.S. (Resistance test)
Load adjustment rate	≤1%F.S. (Resistance test)
Waveform distortion (THD)	Sinusoidal wave, THD≤3% below 100kVA, THD≤4% between 100kVA-300kVA, THD≤5% above 300kVA * Test when the output voltage is more than 50% of the rated voltage
Efficiency	≥90%
Frequency stability	≤0.02%F.S.
Voltage stability	≤0.5%F.S.
Voltage crest coefficient	1.414±0.05
Voltage unbalance	Three-phase output ≤1Vrms (no load or balanced load)
Phase difference	Load three-phase balance or no-load ±2°
Three-phase voltage /phase difference	Three-phase voltage independent adjustable, phase difference 0-359.99° adjustable
Noise	≤65dB(A), use 1m to weigh the measurement

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HY-PSASU Series Technical Parameter

Programming And Readback Accuracy & Resolution

Settings	Voltage output programming accuracy	$\pm 0.5\%F.S.$
	Frequency output programming accuracy	$\pm 0.01\%F.S.$
	Voltage setting resolution	0.01V
	Frequency setting resolution	0.01Hz
Read back	Voltage output read back accuracy	$\pm 0.5\%F.S.$
	Current output read back accuracy	$\pm 0.5\%F.S.$
	Frequency output read back accuracy	$\pm 0.01\%F.S.$
	Voltage read back resolution	0.01V
	Current read back resolution	0.01A
	Frequency read back resolution	0.01Hz

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Protection Function

Protection function	Overvoltage, overcurrent, internal overheating, short circuit
Overload capacity	125% current 15s, 150% current 5s, 200% current 2s, 300% current Stop output immediately
Memory function	Parameters of the last run
Preset function	Adjust the output voltage and frequency online

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 -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 condition	Forced air cooling, intelligent speed regulating fan, front/side air inlet, rear air outlet
Transport condition	Road transport

Control Panel

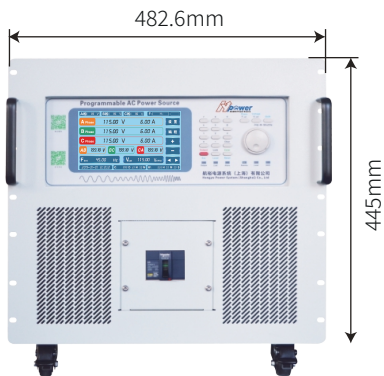
Display	7 inches, LCD LCD display, touch screen
Display item	Phase voltage/line voltage (set value & measured value), current measured value, frequency set value, working time, cumulative working time, current time and date
Control function	Output ON/OFF/Lock keyboard and touch lock /Reset Restart/reset/setting/status indicator
Mode of operation	Key input/LCD input/Multi-stage adjustment knob (outer ring coarse adjustment/inner ring fine adjustment)
Control mode	Local control/remote control
Programming function	Step/ladder/gradient

Appearance & Size

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



10U 440(W)*600(D)*445(H)mm



Size

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Appearance & Size

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



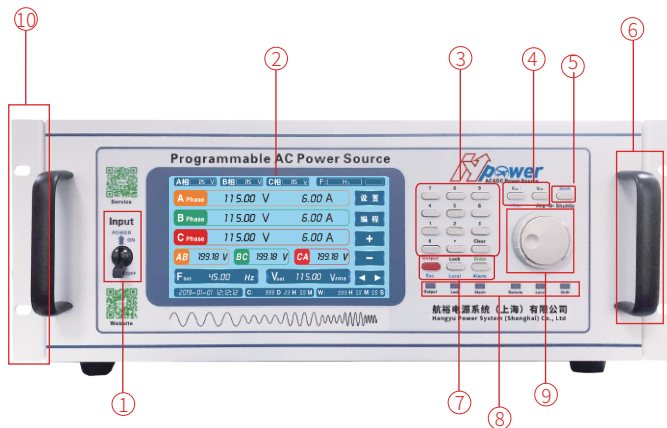
24U 600(W)*800(D)*1190(H)mm
 30U 600(W)*800(D)*1453(H)mm
 36U 600(W)*800(D)*1718(H)mm



Size

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Control Panel



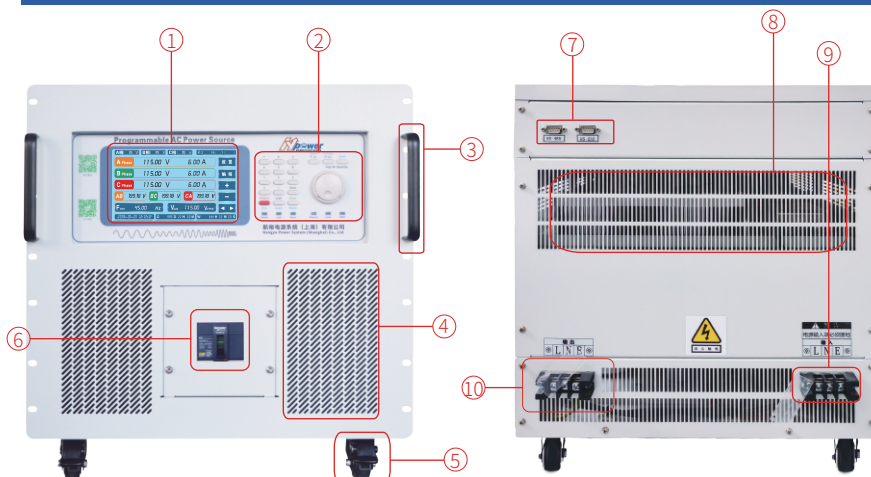
- ① Power input circuit breaker
- ② LCD display (7 inches, touch screen)
- ③ Numeric input keyboard
- ④ Frequency/voltage setting key
- ⑤ Shift function reuse key
- ⑥ Chassis handle
- ⑦ Lock、Enter、Esc、Local、Reset、Output ON/OFF
- ⑧ Status indicator light
- ⑨ Multi-stage adjustment knob (inner ring fine adjustment/outer ring coarse adjustment)
- ⑩ 19-inch standard rack mounting holes

Rear Panel



- ① AC output terminal
- ② RS-485 & RS-232 communication interface
- ③ AC input terminal
- ④ Heat dissipation air outlet

Front Panel & Rear Panel



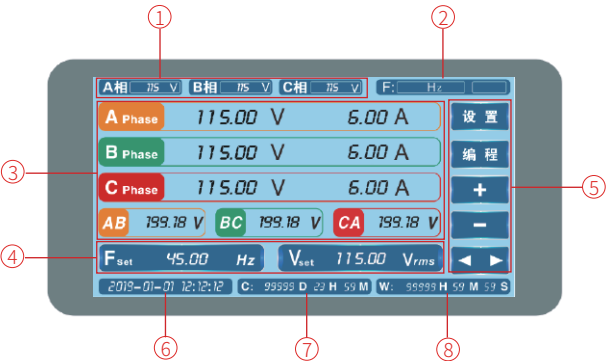
- ① LCD display (7 inches, touch screen)
- ② Control area
- ③ 19-inch standard rack handle
- ④ Heat dissipation air inlet
- ⑤ Caster wheel
- ⑥ Power input circuit breaker
- ⑦ Communication interface
- ⑧ Heat dissipation air outlet
- ⑨ AC input terminals
- ⑩ AC output terminal

Size

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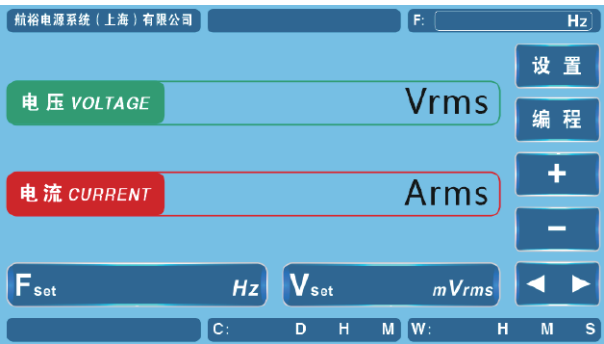
Display And Control Panel

Display Interface



- ① Three-phase voltage set value
- ② Frequency display area
- ③ Phase voltage, line voltage, current display area
- ④ Frequency/voltage setting value
- ⑤ Function setting area
- ⑥ Current time
- ⑦ Cumulative running time
- ⑧ This run time

Display Interface



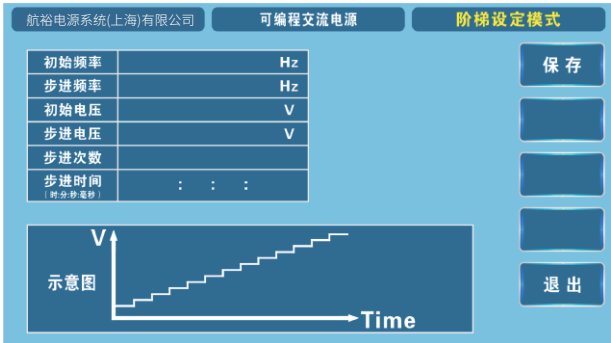
Main interface of single-phase power supply



Main interface of three-phase power supply



Step setting page can set the required frequency, voltage, Run time, initial step, end step, and number of cycles

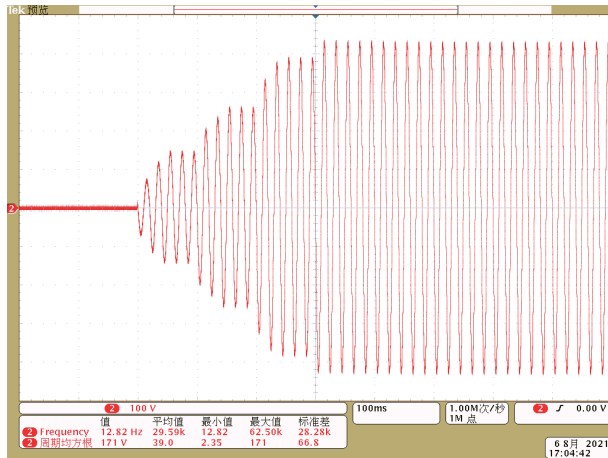


Ladder setting page can set the required initial frequency, Step frequency, initial voltage, step voltage, step number and step time

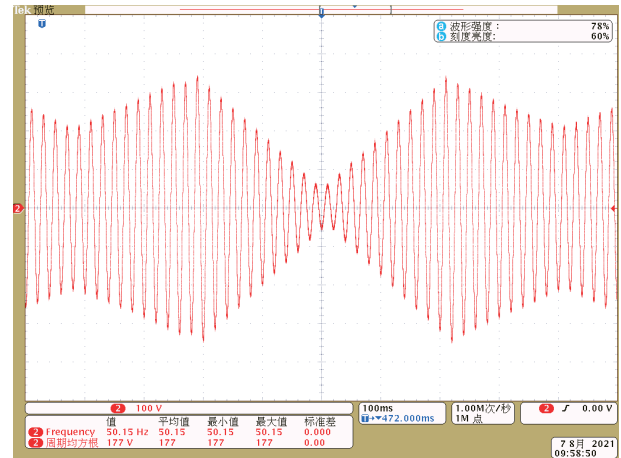


Gradient Setting page can set the required voltage and frequency, Run time, initial step, end step

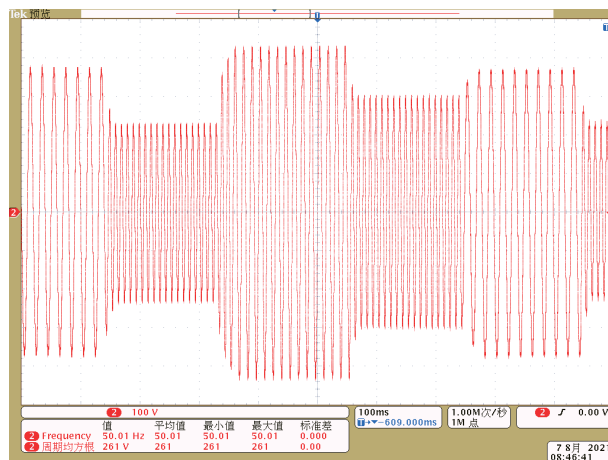
Output Voltage Waveform Of Single Phase Power Supply



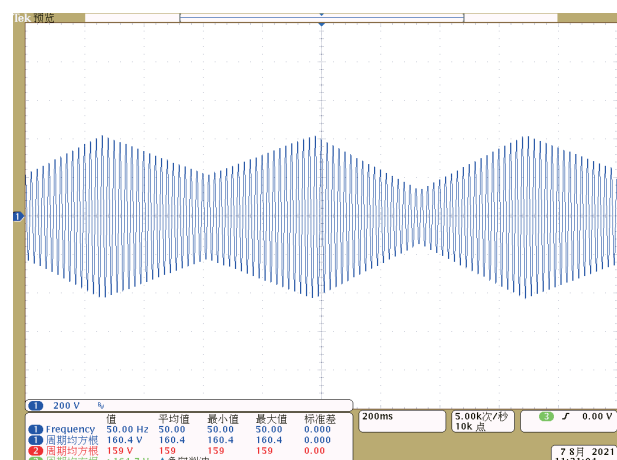
Step



Step

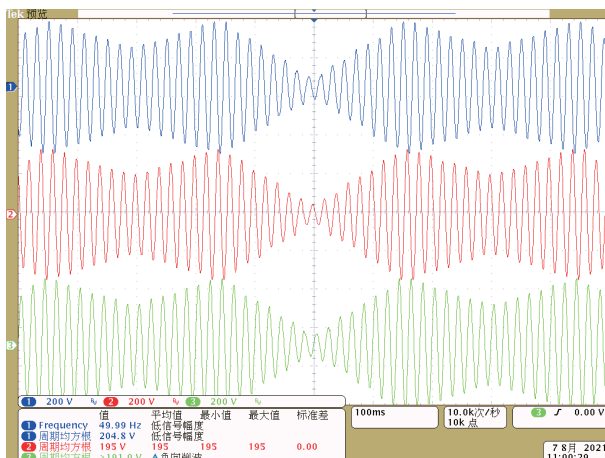


Ladder

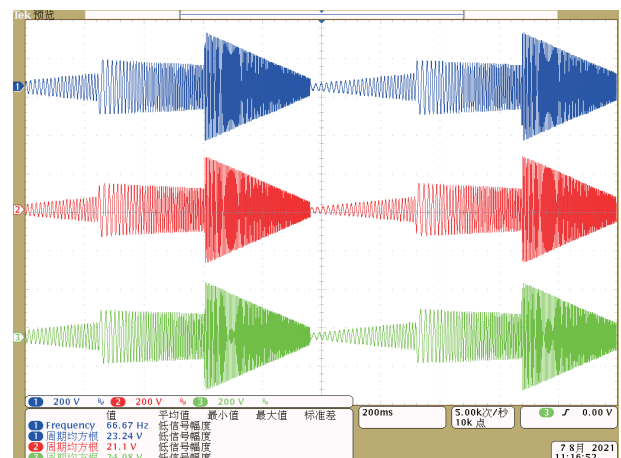


Gradation

Output Voltage Waveform Of Three Phase Power Supply



Three phase steps



Three-phase gradient



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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:

