AC&DC Power Source

Hangyu Power System (Shanghai) Co., Ltd.

HY-PSMSU Series

Programmable Switching AC Medium Frequency Power Source

Military Quality Power Supply Expert

HY-PSMSU Series Programmable Switching AC Medium Frequency Power Source

High Power,High Precis ion,High Reliability

Application Field

- Aviation military
- Testing laboratory
- Electric machine
- Electronic parts
- Nuclear magnetic experiment test
- Aircraft electronic test
- Maintenance station
- Hangar

Product Features

- Output frequency range 320Hz-480Hz/300Hz-800Hz
  Optional range 45Hz-1kHz
- Output capacity range 1kVA-900kVA
- Output voltage L-N 0-138Vrms/180Vrms/276Vrms/1kVrms
- Number of output phases Single-phase/three-phase
- 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
- Front/side air in, rear air out, saving heat dissipation space
- Support modbus protocol
- Standard interface：RS-485&RS-232
- Choose buy interface：LAN&CAN
  GPIB
  Analog quantity programming and monitoring (Isolation type)

PSMSU

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HY-PSMSU Series Product Selection Table

Product Model Naming Rules

Product Series	Input Phase Number	Output Phase Number	Output Capacity		Choose And Buy Function
HY-PSMSU	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-PSMSU 13003-CF

Input single-phase, output three-phase, output capacity 3kVA,Custom features that users choose to purchase

Choose And Buy Function

- T2	Operating temperature -20°C to 45°C
- CF	User defined features (please specify when ordering

PSMSU

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

Product Model	Output Capacity	Input	Output	Product Model	Output Capacity	Input	Output	Output Voltage	Output Frequency
HY-PSMSU 11001	1kVA	Single phase	Single phase	HY-PSMSU 1315L	1.5kVA	Single phase	Three phase	Standard: L-N 0-115Vrms L-N 0-138Vrms Choose and buy: L-N 0-180Vrms L-N 0-230Vrms L-N 0-276Vrms L-N 0-1kVrms Ships and warships: 220V±10% 230V±10% Boeing 787	Standard: 400Hz 320Hz-480Hz Choose and buy: 45Hz-500Hz 45Hz-1kHz 300Hz-500Hz 300 Hz-800Hz 300Hz-1000Hz
HY-PSMSU 11002	2kVA			HY-PSMSU 13003	3kVA				
HY-PSMSU 11003	3kVA			HY-PSMSU 1345L	4.5kVA				
HY-PSMSU 11005	5kVA			HY-PSMSU 13006	6kVA				
HY-PSMSU 31010	10kVA	Three phase		HY-PSMSU 33010	10kVA	Three phase			
HY-PSMSU 31015	15kVA			HY-PSMSU 33015	15kVA				
HY-PSMSU 31020	20kVA			HY-PSMSU 33020	20kVA				
HY-PSMSU 31030	30kVA			HY-PSMSU 33030	30kVA				
HY-PSMSU 31045	45kVA			HY-PSMSU 33045	45kVA				
HY-PSMSU 31060	60kVA			HY-PSMSU 33060	60kVA				
HY-PSMSU 31075	75kVA			HY-PSMSU 33075	75kVA				
HY-PSMSU 31100	100kVA			HY-PSMSU 33090	90kVA				
HY-PSMSU 31120	120kVA			HY-PSMSU 33120	120kVA				
HY-PSMSU 31150	150kVA			HY-PSMSU 33150	150kVA				
HY-PSMSU 31180	180kVA			HY-PSMSU 33180	180kVA				
HY-PSMSU 31200	200kVA			HY-PSMSU 33210	210kVA				
				HY-PSMSU 33240	240kVA				
				HY-PSMSU 33300	300kVA				
				HY-PSMSU 33450	450kVA				

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

Single Phase Input Single Phase Output

Product model	PSMSU 11001	PSMSU 11002	PSMSU 11003	PSMSU 11005
Power	1KVA	2KVA	3KVA	5KVAA
Model size	4U	4U	10U	10U
	*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);			
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)
Input phase	Single phase 1Φ
Input waveform	Sinusoidal wave
Input voltage	220Vrms±15%
Input frequency	47Hz-63Hz

Output

Output phase	Single phase 1Φ			
Rated settings voltage	L-N 0-138Vrms is continuously adjustable, L-L 0-240Vrms is continuously adjustable Optional L-N 0-180Vrms; L-N 0-230Vrms; L-N 0-276Vrms; Max1000Vrms Continuously adjustable			
Rated current	7.3A	14.5A	21.8A	36.3A
	* Rated current calculated based on 138V voltage. If other voltages are selected, rated current is calculated based on selected voltages.			
Maximum current	8.7A	17.4A	26.1A	43.5A
	* Calculate the maximum current based on the 138V voltage. If you choose other voltages, calculate the maximum current based on the selected voltage.			
Frequency	Rated 400Hz, adjustable range 320Hz-480Hz continuously adjustable Optional 45 Hz ~ 500 Hz, 45 Hz ~ 1KHz,300 Hz ~ 500 Hz,300 Hz ~ 800 Hz,300 Hz ~ 1000 Hz			

Property

Input adjustment rate	⩽0.5%F.S. (Resistance test)
Load adjustment rate	⩽1%F.S. (resistance test, 45Hz-500Hz output); ⩽2%F.S. (resistance test, > 500Hz output)
Waveform distortion (THD)	Sinusoidal wave, THD⩽3% below 100kVA, THD⩽4% between 100kVA-300kVA, THD⩽5% above 300kVA (400Hz output) * According to 400Hz, * 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

HY-PSMSU Series Technical Parameter

Programming And Readback Accuracy & Resolution

Settings	Voltage output programming accuracy	±0.5%F.S.
	Frequency output programming accuracy	±0.01%F.S.
	Voltage setting resolution	0.01V
	Frequency setting resolution	0.01Hz
Read back	Voltage output read back accuracy	±0.5%F.S.
	Current output read back accuracy	±0.5%F.S.
	Frequency output read back accuracy	±0.01%F.S.
	Voltage read back resolution	0.01V
	Current read back resolution	0.0001A (≤6A) ; 0.001A (≤60A) ; 0.01A＜600A (16-bit Resolution)
	Frequency read back resolution	0.01Hz

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	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

Three Phase Input,Single Phase Output

Product Model	PSMSU 31010	PSMSU 31015	PSMSU 31020	PSMSU 31030	PSMSU 31045	PSM 31060
Power	10kVA	15kVA	20kVA	30kVA	45kVA	60kVA
Model size	18U	18U	24U	30U	Non-standard cabinet	Non-standard cabinet
	*1) 18U and above, 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	Three phase three wire + ground wire & three phase four wire + ground wire (ABC+PE/ABCN+PE)
Input phase	Three phases 3Φ
Input waveform	Sinusoidal wave
Input voltage	380Vrms±15%
Input frequency	47Hz-63Hz

Output

Output phase	Single phase 1Φ					
Rated settings voltage	L-N 0-138Vrms is continuously adjustable, L-L 0-240Vrms is continuously adjustable Optional L-N 0-180Vrms; L-N 0-230Vrms; L-N 0-276Vrms; Max1000Vrms Continuously adjustable					
Rated current	72.5A	108.7A	144.9A	217.4A	326.1A	434.8A
	* Rated current calculated based on 138V voltage. If other voltages are selected, rated current is calculated based on selected voltages.					
Maximum current	87.0A	130.5A	174A	260.9A	391.4A	521.8A
	* Calculate the maximum current based on the 138V voltage. If you choose other voltages, calculate the maximum current based on the selected voltage.					
Frequency	Rated 400Hz, adjustable range 320Hz-480Hz continuously adjustable Optional 45 Hz ~ 500 Hz, 45 Hz ~ 1KHz,300 Hz ~ 500 Hz,300 Hz ~ 800 Hz,300 Hz ~ 1000 Hz					

Property

Input adjustment rate	⩽0.5%F.S. (Resistance test)
Load adjustment rate	⩽1%F.S. (resistance test, 45Hz-500Hz output); ⩽2%F.S. (resistance test, > 500Hz output)
Waveform distortion (THD)	Sinusoidal wave, THD⩽3% below 100kVA, THD⩽4% between 100kVA-300kVA, THD⩽5% above 300kVA (400Hz output) * According to 400Hz, * 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

HY-PSMSU Series Technical Parameter

Programming And Readback Accuracy & Resolution

Settings	Voltage output programming accuracy	±0.5%F.S.
	Frequency output programming accuracy	±0.01%F.S.
	Voltage setting resolution	0.01V
	Frequency setting resolution	0.01Hz
Read back	Voltage output read back accuracy	±0.5%F.S.
	Current output read back accuracy	±0.5%F.S.
	Frequency output read back accuracy	±0.01%F.S.
	Voltage read back resolution	0.01V
	Current read back resolution	0.0001A (≤6A) ;0.001A (≤60A) ;0.01A＜600A (16-bit Resolution)
	Frequency read back resolution	0.01Hz

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	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

Three Phase Input,Single Phase Output

Product Model	PSMSU 31075	PSMSU 31100	PSMSU 31120	PSMSU 31150	PSMSU 31180	PSM 31200
Power	75kVA	100kVA	120kVA	150kVA	180kVA	200kVA
Model size	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet
	*1) 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	Three phase three wire + ground wire & three phase four wire + ground wire (ABC+PE/ABCN+PE)
Input phase	Three phases 3Φ
Input waveform	Sinusoidal wave
Input voltage	380Vrms±15%
Input frequency	47Hz-63Hz

Output

Output phase	Single phase 1Φ					
Rated settings voltage	L-N 0-138Vrms is continuously adjustable, L-L 0-240Vrms is continuously adjustable Optional L-N 0-180Vrms; L-N 0-230Vrms; L-N 0-276Vrms; Max1000Vrms Continuously adjustable					
Rated current	543.5A	724.7A	869.6A	1087A	1304.4A	1449.3A
	* Rated current calculated based on 138V voltage. If other voltages are selected, rated current is calculated based on selected voltages.					
Maximum current	652.2A	869.6A	1043.5A	1304.4A	1565.3A	1739.2A
	* Calculate the maximum current based on the 138V voltage. If you choose other voltages, calculate the maximum current based on the selected voltage.					
Frequency	Rated 400Hz, adjustable range 320Hz-480Hz continuously adjustable Optional 45 Hz ~ 500 Hz, 45 Hz ~ 1KHz,300 Hz ~ 500 Hz,300 Hz ~ 800 Hz,300 Hz ~ 1000 Hz					

Property

Input adjustment rate	⩽0.5%F.S. (Resistance test)
Load adjustment rate	⩽1%F.S. (resistance test, 45Hz-500Hz output); ⩽2%F.S. (resistance test, > 500Hz output)
Waveform distortion (THD)	Sinusoidal wave, THD⩽3% below 100kVA, THD⩽4% between 100kVA-300kVA, THD⩽5% above 300kVA (400Hz output) * According to 400Hz, * 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

HY-PSMSU Series Technical Parameter

Programming And Readback Accuracy & Resolution

Settings	Voltage output programming accuracy	±0.5%F.S.
	Frequency output programming accuracy	±0.01%F.S.
	Voltage setting resolution	0.01V
	Frequency setting resolution	0.01Hz
Read back	Voltage output read back accuracy	±0.5%F.S.
	Current output read back accuracy	±0.5%F.S.
	Frequency output read back accuracy	±0.01%F.S.
	Voltage read back resolution	0.01V
	Current read back resolution	0.0001A (≤6A) ;0.001A (≤60A) ;0.01A＜600A (16-bit Resolution)
	Frequency read back resolution	0.01Hz

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	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

Single Phase Input Three Phase Output

Product Model	PSMSU 1315L	PSMSU 13003	PSMSU 1345L	PSMSU 13006
Power	1.5kVA	3kVA	4.5kVA	6kVA
Model size	4u	4U	10U	10U
	*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);			
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)
Input phase	Single phase 1Φ
Input waveform	Sinusoidal wave
Input voltage	220Vrms±15%
Input frequency	47Hz-63Hz

Output

Output phase	Three phases 3Φ			
Rated settings voltage	L-N 0-138Vrms is continuously adjustable, L-L 0-240Vrms is continuously adjustable Optional L-N 0-180Vrms; L-N 0-230Vrms; L-N 0-276Vrms; Max1000Vrms Continuously adjustable			
Rated current	3.7A	7.3A	10.9A	14.5A
	* Rated current calculated based on 138V voltage. If other voltages are selected, rated current is calculated based on selected voltages.			
Maximum current	4.4A	8.7A	13.1A	17.4A
	* Calculate the maximum current based on the 138V voltage. If you choose other voltages, calculate the maximum current based on the selected voltage.			
Frequency	Rated 400Hz, adjustable range 320Hz-480Hz continuously adjustable Optional 45 Hz ~ 500 Hz, 45 Hz ~ 1KHz,300 Hz ~ 500 Hz,300 Hz ~ 800 Hz,300 Hz ~ 1000 Hz			

Property

Input adjustment rate	⩽0.5%F.S. (Resistance test)
Load adjustment rate	⩽1%F.S. (resistance test, 45Hz-500Hz output); ⩽2%F.S. (resistance test, > 500Hz output)
Waveform distortion (THD)	Sinusoidal wave, THD⩽3% below 100kVA, THD⩽4% between 100kVA-300kVA, THD⩽5% above 300kVA (400Hz output) * According to 400Hz, * 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
Voltage unbalance	Three-phase output ⩽1Vrms (no load or balanced load)
Phase difference	Load three-phase balance or no load ⩽±2°
Noise	⩽65dB(A), use 1m to weigh the measurement
Three-phase voltage /phase difference	Three-phase voltage independent adjustable, phase difference 0-359.99° adjustable

HY-PSMSU Series Technical Parameter

Programming And Readback Accuracy & Resolution

Settings	Voltage output programming accuracy	±0.5%F.S.
	Frequency output programming accuracy	±0.01%F.S.
	Voltage setting resolution	0.01V
	Frequency setting resolution	0.01Hz
Read back	Voltage output read back accuracy	±0.5%F.S.
	Current output read back accuracy	±0.5%F.S.
	Frequency output read back accuracy	±0.01%F.S.
	Voltage read back resolution	0.01V
	Current read back resolution	0.0001A（≤6A）;0.001A（≤60A）;0.01A＜600A（16-bit Resolution）
	Frequency read back resolution	0.01Hz

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

Three Phase Input Three Phase Output

Product Model	PSMSU 33010	PSMSU 33015	PSMSU 33020	PSMSU 33030	PSMSU 33045	PSMSU 33060	PSMSU 33075	PSMSU 33090
Power	10kVA	15kVA	20kVA	30kVA	45kVA	60kVA	75kVA	90kVA
Model size	18U	18U	28U	30U	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet
	*1) 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	Three-phase three-wire + Ground wire & three-phase four-wire + ground wire (ABC+PE/ABCN+PE)
Input phase	Three phases 3Φ
Input waveform	Sinusoidal wave
Input voltage	380Vrms±15%
Input frequency	47Hz-63Hz

Output

Output phase	Three phases 3Φ							
Rated settings voltage	L-N 0-138Vrms is continuously adjustable, L-L 0-240Vrms is continuously adjustable Optional L-N 0-180Vrms; L-N 0-230Vrms; L-N 0-276Vrms; Max1000Vrms Continuously adjustable							
Rated current	24.2A	36.3A	48.3A	72.5A	108.7A	145A	181.2A	217.4A
	* Rated current calculated based on 138V voltage. If other voltages are selected, rated current is calculated based on selected voltages.							
Maximum current	29A	43.5A	58A	87A	130.5A	174A	217.4A	260.9A
	* Calculate the maximum current based on the 138V voltage. If you choose other voltages, calculate the maximum current based on the selected voltage.							
Frequency	Rated 400Hz, adjustable range 320Hz-480Hz continuously adjustable Optional 45 Hz ~ 500 Hz, 45 Hz ~ 1KHz,300 Hz ~ 500 Hz,300 Hz ~ 800 Hz,300 Hz ~ 1000 Hz							

Property

Input adjustment rate	⩽0.5%F.S. (Resistance test)
Load adjustment rate	⩽1%F.S. (resistance test, 45Hz-500Hz output); ⩽2%F.S. (resistance test, > 500Hz output)
Waveform distortion (THD)	Sinusoidal wave, THD⩽3% below 100kVA, THD⩽4% between 100kVA-300kVA, THD⩽5% above 300kVA (400Hz output) * According to 400Hz, * 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
Voltage unbalance	Three-phase output ⩽1Vrms (no load or balanced load)
Phase difference	Load three-phase balance or no load ⩽±2°
Noise	⩽65dB(A), use 1m to weigh the measurement
Three-phase voltage /phase difference	Three-phase voltage independent adjustable, phase difference 0-359.99° adjustable

HY-PSMSU Series Technical Parameter

Programming And Readback Accuracy & Resolution

Settings	Voltage output programming accuracy	±0.5%F.S.
	Frequency output programming accuracy	±0.01%F.S.
	Voltage setting resolution	0.01V
	Frequency setting resolution	0.01Hz
Read back	Voltage output read back accuracy	±0.5%F.S.
	Current output read back accuracy	±0.5%F.S.
	Frequency output read back accuracy	±0.01%F.S.
	Voltage read back resolution	0.01V
	Current read back resolution	0.0001A (≤6A) ;0.001A (≤60A) ;0.01A＜600A (16-bit resolution)
	Frequency read back resolution	0.01Hz

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

Evironment	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

Three Phase Input Three Phase Output

Product Model	PSMSU33120	PSMSU33150	PSMSU33180	PSMSU33210	PSMSU33240	PSMSU33300	PSMSU33450
Power	120kVA	150kVA	180kVA	210kVA	240kVA	300kVA	450kVA
Model size	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet
	*1) 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	Three phase three wire + ground wire & three phase four wire + ground wire (ABC+PE/ABCN+PE)
Input phase	Three phases 3Φ
Input waveform	Sinusoidal wave
Input voltage	380Vrms±15%
Input frequency	47Hz-63Hz

Output

Output phase	Three phases 3Φ						
Rated settings voltage	L-N 0-138Vrms is continuously adjustable, L-L 0-240Vrms is continuously adjustable Optional L-N 0-180Vrms; L-N 0-230Vrms; L-N 0-276Vrms; Max1000Vrms Continuously adjustable						
Rated current	289.9A	362.4A	434.8A	507.3A	579.8A	724.7A	1087A
	* Rated current calculated based on 138V voltage. If other voltages are selected, rated current is calculated based on selected voltages.						
Maximum current	347.9A	434.9A	521.8A	608.8A	695.8A	869.7A	1304A
	* Calculate the maximum current based on the 138V voltage. If you choose other voltages, calculate the maximum current based on the selected voltage.						
Frequency	Rated 400Hz, adjustable range 320Hz-480Hz continuously adjustable Optional 45 Hz ~ 500 Hz, 45 Hz ~ 1KHz,300 Hz ~ 500 Hz,300 Hz ~ 800 Hz,300 Hz ~ 1000 Hz						

Property

Input adjustment rate	⩽0.5%F.S. (Resistance test)
Load adjustment rate	⩽1%F.S. (resistance test, 45Hz-500Hz output); ⩽2%F.S. (resistance test, > 500Hz output)
Waveform distortion (THD)	Sinusoidal wave, THD⩽3% below 100kVA, THD⩽4% between 100kVA-300kVA, THD⩽5% above 300kVA (400Hz output) * According to 400Hz, * 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
Voltage unbalance	Three-phase output ⩽1Vrms (no load or balanced load)
Phase difference	Load three-phase balance or no load ⩽±2°
Noise	⩽65dB(A), use 1m to weigh the measurement
Three-phase voltage /phase difference	Three-phase voltage independent adjustable, phase difference 0-359.99° adjustable

HY-PSMSU Series Technical Parameter

Programming And Readback Accuracy & Resolution

Settings	Voltage output programming accuracy	±0.5%F.S.
	Frequency output programming accuracy	±0.01%F.S.
	Voltage setting resolution	0.01V
	Frequency setting resolution	0.01Hz
Read back	Voltage output read back accuracy	±0.5%F.S.
	Current output read back accuracy	±0.5%F.S.
	Frequency output read back accuracy	±0.01%F.S.
	Voltage read back resolution	0.01V
	Current read back resolution	0.0001A（≤6A）;0.001A（≤60A）;0.01A＜600A（16-bit Resolution）
	Frequency read back resolution	0.01Hz

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

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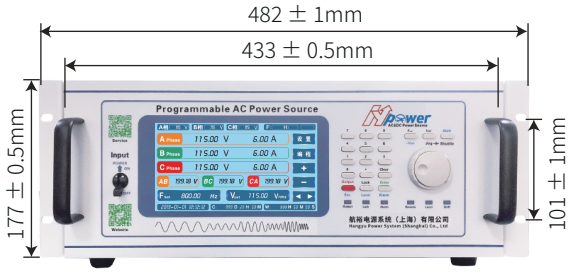
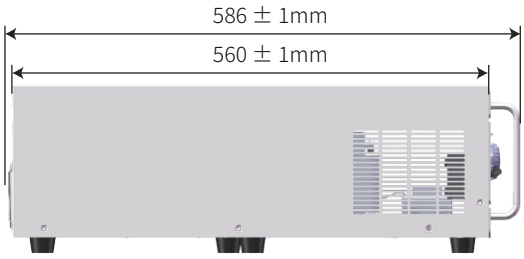
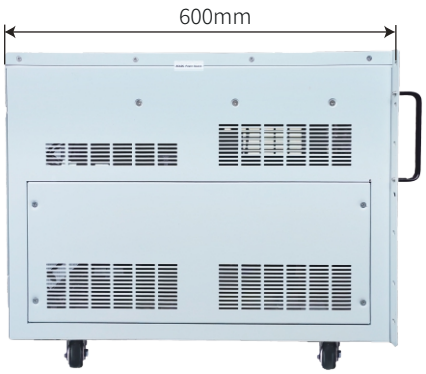
Control mode	Local control/remote control
Programming function	Step/ladder/gradient

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





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



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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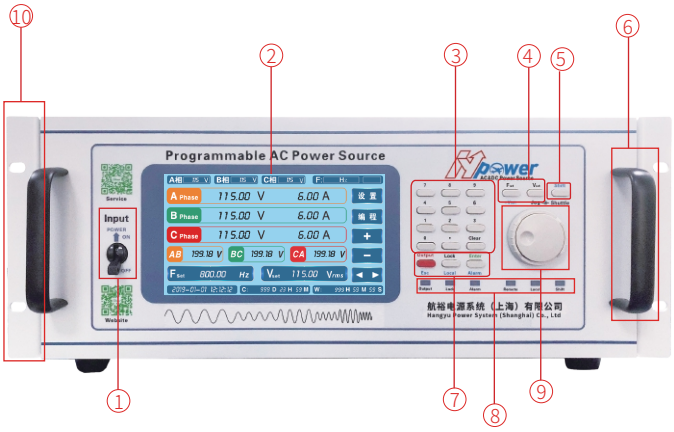
Control Panel

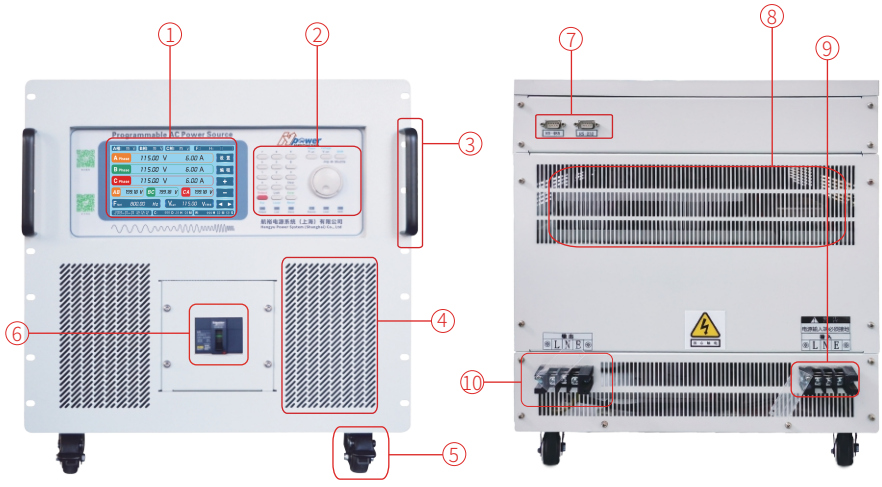


① Power input circuit breaker
② LCD display (7 inches, touch screen)
③ Numeric input keyboard
④ Frequency/voltage setting key
⑤ Shift function reuse key
⑥ Chassis handle
⑦ Lock、Enter、Esc、Local、Reset、Output ON/OFF
⑧ Status indicator light
⑨ Multi-stage adjustment knob (inner ring fine adjustment/outer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

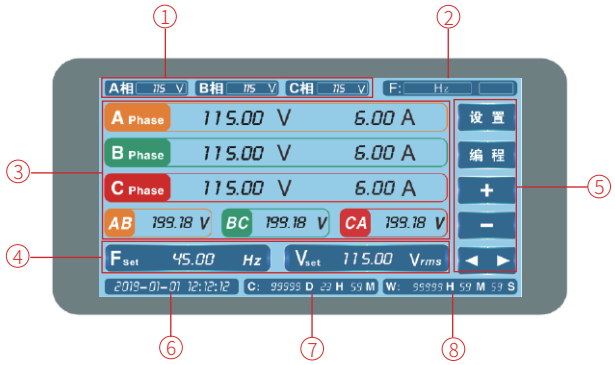
Front Panel & Rear Panel



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

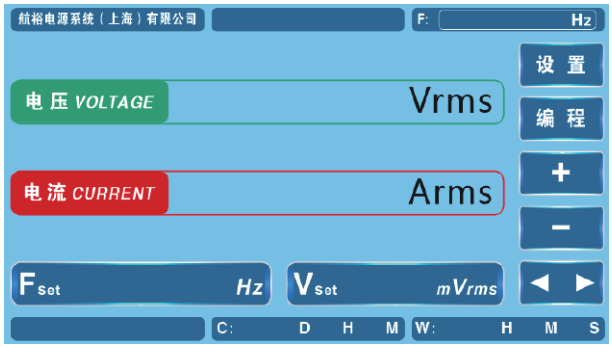
Display And Control Panel

Display Interface

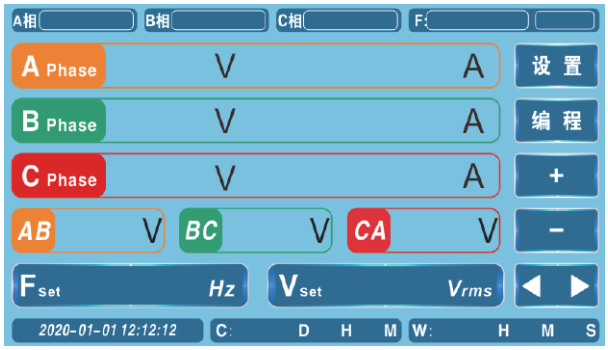


① Three phase phase voltage set value
② Frequency display area
③ Phase voltage, line voltage, current display area
④ Frequency/voltage setting value
⑤ Function setting area
⑥ Current time
⑦ Accumulated running time
⑧ This run time

Display Interface

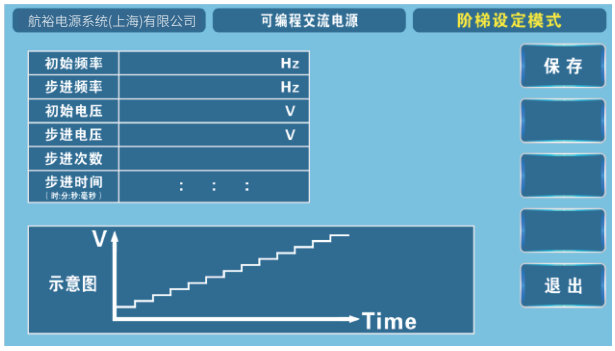


Main interface of single-phase power supply



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

Panel

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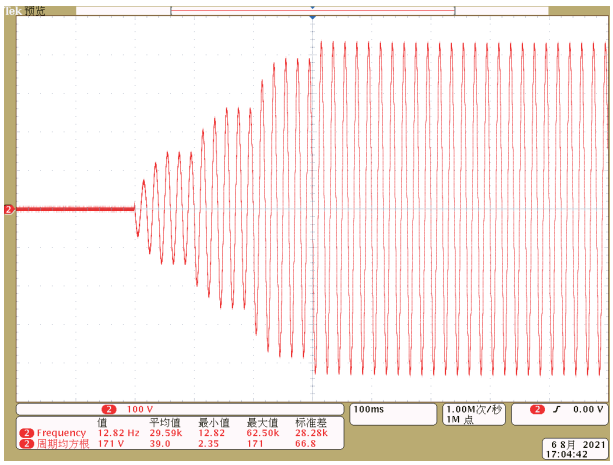
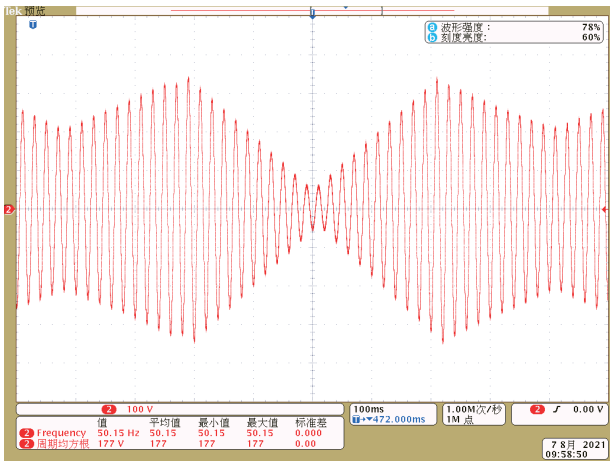
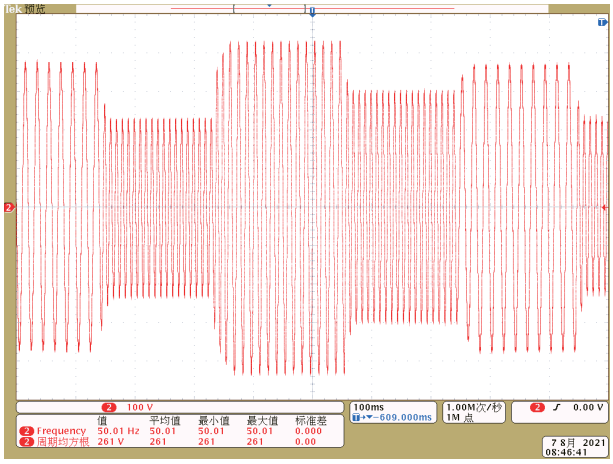
Output Voltage Waveform Of Single Phase Power Supply



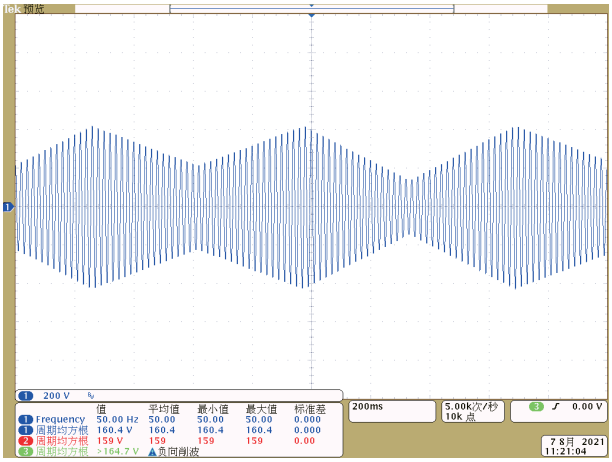
Step



Step

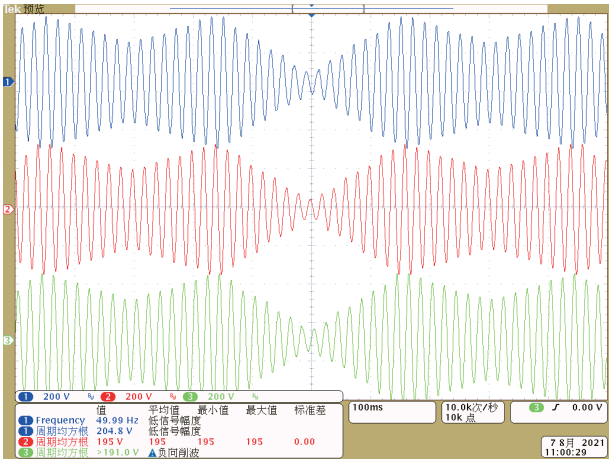


Ladder

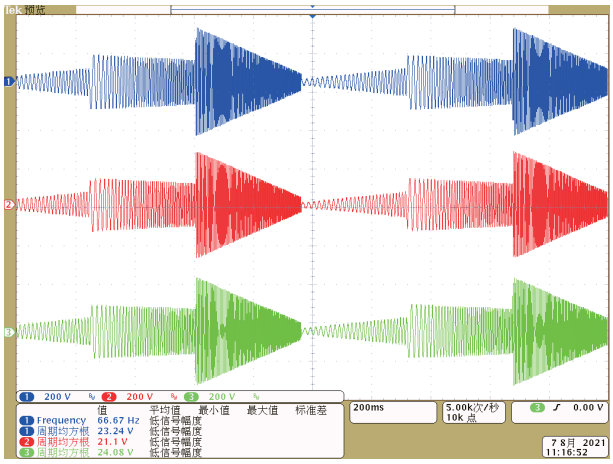


Gradation

Output Voltage Waveform Of Three Phase Power Supply



Three phase steps



Three-phase gradient

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HY-PSMSU Series Product Manual, Version 06.12, June 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：