HY-PSM Series

Programmable Switching AC Medium Frequency Power Supply



Hangyu Power System (Shanghai) Co., LTD





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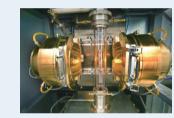
High Power High Precision High Reliability





Application Field

- Aviation military
- Testing laboratory
- Motor
- Electronic parts
- Nuclear magnetic
- experiment test
- Aircraft electronic testing
- Maintenance station
- Machine shed







Product Features

Output frequency range 320Hz-480Hz/300Hz-800Hz

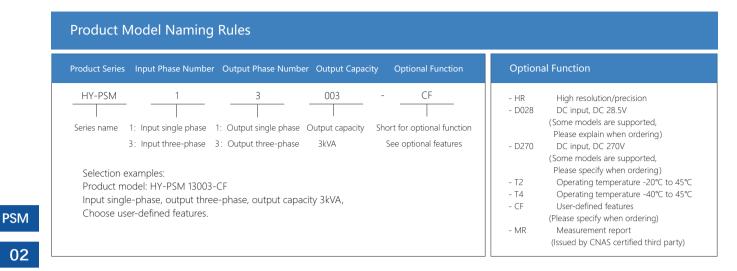
Optional range 45Hz-1kHz

- Output capacity range 1 KVA-900 kva
- Output voltage VRMS L N 0-138/180 VRMS / 276 VRMS KVRMS / 1
- Number of output phases Single-phase/three-phase
- Three-phase voltage independent adjustable, phase difference 0-359.99° adjustable
- Support front panel programming, without computer software control
- The voltage rise and fall slopes are adjustable
- Power output soft start function
- 16 bits D/A high precision converter for accurate output
- 16 bits A/D high precision converter, more accurate read back
- Multiple protection functions OVP, OCP, and OTP
- Standard 19-inch rack size, or floor-to-ceiling cabinet
- 7 inch LCD screen
- Touch screen operation & digital key input
- Multistage shuttle 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
- Optional interface: LAN&CAN

USB

GPIB

Analog programming and monitoring (isolated)



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

Product Model	Output Capacity	Input	Expor tation	Product Model	Output Capacity	Input	Expor tation	Output Voltage	Output Frequency
HY-PSM 11001	1kVA			HY-PSM 1315L	1.5kVA			Standard :	Standard :
HY-PSM 11002	2kVA	Circula.		HY-PSM 13003	3kVA	Cire el e		L-N 0-115Vrms	400Hz
HY-PSM 11003	3kVA	Single		HY-PSM 1345L	4.5kVA	Single phase		L-N 0-138Vrms	320Hz-480Hz
HY-PSM 11005	5kVA	priase		HY-PSM 13006	6kVA			Purchase:	
HY-PSM 31010	10kVA			HY-PSM 33010	10kVA			L-N 0-180Vrms	
HY-PSM 31015	15kVA			HY-PSM 33015	15kVA			L-N 0-230Vrms	
HY-PSM 31020	20kVA			HY-PSM 33020	20kVA			L-N 0-276Vrms L-N 0-1kVrms	Purchase: 45Hz-500Hz
HY-PSM 31030	30kVA			HY-PSM 33030	30kVA				45Hz-1kHz
HY-PSM 31045	45kVA			HY-PSM 33045	45kVA			Shipboard:	300Hz-500Hz
HY-PSM 31060	60kVA	-	Single	HY-PSM 33060	60kVA		Three	220V±10% 230V±10%	300 Hz-800Hz 300Hz-1000Hz
HY-PSM 31075	75kVA	-	phase	HY-PSM 33075	75kVA	'	phase		500112 1000112
HY-PSM 31100	100kVA	Three phase		HY-PSM 33090	90kVA	phase	Three		
HY-PSM 31120	120kVA	priase		HY-PSM 33120	120kVA	priase			
HY-PSM 31150	150kVA			HY-PSM 33150	150kVA				
HY-PSM 31180	180kVA			HY-PSM 33180	180kVA				
HY-PSM 31200	200kVA			HY-PSM 33210	210kVA				
				HY-PSM 33240	240kVA				
		1		HY-PSM 33300	300kVA				
				HY-PSM 33450	450kVA				

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

PSM

Product	t Model	PSI	M 11001	PSM 11002	PSM 11003	PSM 11005				
Power			1kVA	2kVA	3kVA	5kVA				
			4U	4U	10U	10U				
Model	size –		tandard 19-inch rack mount, or tabletop (fixed pads) standard 19-inch rack, or floor to floor table with movable cardan casters and brakes.							
Circuit	mode	IGBT/I	PWM pulse width	n modulation mode						
CommunicationStandard configuration:RS-485 & RS-232modeassorting:LAN、CAN、USB、GPIB, Analog programming and monitoring interface (isolated)										
Inp	ut									
Conne mode	ction	Single-p	hase two-wire + gr	ound wire(LN+PE)						
nput p	ohase	Single p	ohase 1Ф							
nput w	vaveform	Sinusoi	idal wave							
nput v	voltage	220Vrm	ıs±15%							
nput fr	requency	47Hz-6	3Hz							
Exp	ortation									
Outpu	t phase									
Rated Standard		L-N 0-1	38Vrms Continue	ously adjustable,L-L 0-240Vrm	s Continuously adjustable					
set voltage	e Purchase			sly adjustable;L-N 0-230Vrms C ly adjustable(Select the voltage		276Vrms Continuously adjustable; educed proportionally)				
Rated (current		7.3A 14.5A 21.8A 36.3A							
		*The rated	ated current is calculated based on the 138V voltage. If other voltages are selected, the rated current is calculated based on the selected voltage.							
Maximu ent	um curr-		8.7A 17.4A 26.1A 43.5A							
			ulate the maximum current based on the 138V voltage. For example, select other voltages to calculate the maximum current.							
-requ-	Standard	Rated 4	400Hz, adjustable range 320Hz-480Hz continuously adjustable							
ency	Custom	45Hz -	z - 500Hz, 45Hz-1kHz, 300Hz - 500Hz, 300Hz-800Hz, 300Hz-1000Hz							
Pro	perty									
nput a	adjustment	rate	≤0.5%F.S. (Resistance test)							
_oad a	adjustment	rate	≤1%F.S. (Resi	stance test, 45Hz-500Hz outpu	t) ; ≤2%F.S. (Resistance test	, > 500Hz output)				
Wavefo	orm distor	tion(THD)	Sinusoidal wave, 100kVA以下THD≤2%; 100kVA-300kVA THD≤3%; 300kVA以上THD≤5% (400Hz output) *Based on 400Hz test results.							
Efficier	псу		≤150kVA Model efficiency≥90%; > 150kVA Model efficiency ≥92%;							
reque	ency stabili	ty	≤0.02%F.S.							
Voltage	e stability		≤0.5%F.S.							
/oltage	e crest coe	efficient	1.414±0.05							
Noise			1.414±0.05 ≤65dB(A),The measurement is weighted with 1m							

Program	ming And Readback	Accuracy & Resolution				
	Voltage output progr	ramming accuracy	±0.5%F.S.			
Settings	Frequency output pro	ogramming accuracy	±0.01%F.S.			
Settings	Voltage setting resolu	ition	0.01V			
	Frequency setting res	olution	0.01Hz			
	Voltage output read-	back accuracy	±0.5%F.S.			
	Current output read	back accuracy	±0.5%F.S.			
Backward	Frequency output rea	ad-back accuracy	±0.01%F.S.			
read	Voltage read back res	solution	0.01V			
	Current read back re	solution	0.0001A (≤6A) ; 0.001A (≤60A) ; 0.01A < 600A (16Bits resolution)			
	Frequency read-back	resolution	0.01Hz			
Protectio	on Function					
Protection	function	Overvoltage, overcur	rent, internal overheating, short circuit			
Overload c	apacity	125% current 15s, 1509	% current 5s, 200% current 2s, 300% current Stop output immediately			
Memory function Preset function		Parameters of the last run				
		Adjust the output volt	tage and frequency online			
Environr	nental Condition					
Environme	nt	Indoor use; Installation overvoltage class: II; Pollution level: P2; II equipment				
Operating	ambient temperature	0°C to 45°C; Choose from -20°C to 45°C; -40°C to 45°C				
Storage an	nbient temperature	-20°C to 65°C				
Working ar	mbient humidity	20%-90%RH, no condensation, continuous operation				
Storage en	vironment humidity	10%-95%RH, no cond	lensation			
Altitude			ove sea level, the power is reduced by 2% per 100 meters, or the maximum working reduced by 1°C per 100 meters; When not in operation, it can reach an altitude of 12,000m			
Cooling cc	ondition	Forced air cooling, in	telligent speed control fan, both sides/front air, rear air			
Transport o	condition	Road transport				
Control	Panel					
Display		7 inches, LCD LCD dis	splay, touch screen			
Display item		Phase voltage (set va cumulative working t	ilue & measured value), current measured value, frequency set value, working ti time, current time and date			
Control fur	nction	Output ON/OFF/Loci	k keyboard and touch lock /Reset Restart/reset/setting/status indicator			
Mode of o	peration	Key input/LCD input/	shuttle knob input (outer ring coarse adjustment/inner ring fine adjustment)			
Control ma	ode	Local control/remote	control			
Programm	ing function	Step/ladder/gradient				

PSM

Product model	PSM 31	010	PSM 31015	PSM 31020	PSM 31030	PSM 31045	PSM 31060					
Power	10kV/	Ą	15kVA	20kVA	30kVA	45kVA	60kVA					
	18L	J	18U	24U	30U	Non-standard cabinet	Non-standard cabin					
Model size	*1) 18U	J and above, floor-to-ceiling cabinet with movable cardan casters and brakes。										
Circuit mode	IGBT/PW	/M pulse	width modulation	mode								
Communication mode		Standard configuration:RS-485 & RS-232 assorting:LAN、CAN、USB、GPIB, Analog programming and monitoring interface (isolated)										
Input												
Connection mode	Three-p	hase thre	e-wire + ground w	ire & three-phase fo	our-wire + ground v	vire (ABC+PE/ABCN+	-PE)					
nput phase	Three pł	nase 3Ф										
nput waveform	Sinusoid	al wave										
nput voltage	380Vrms	s±15%										
Input frequency	47Hz-63	3Hz										
Exportatior	1											
Output phase	Single phase 1Ф											
Rated Standard	L-N 0-13	-N 0-138Vrms Continuously adjustable,L-L 0-240Vrms Continuously adjustable										
set voltage Purchase		N 0-180Vrms Continuously adjustable; L-N 0-230Vrms Continuously adjustable; L-N 0-276Vrms Continuously adjustable, ax1000Vrms Continuously adjustable (Select the voltage and the output current will be reduced proportionally)										
Rated current	72.	5A	108.7A	144.9A	217.4A	326.1A	434.8A					
	*The rated	current is ca	lculated based on the 138	3V voltage. If other voltages 1	are selected, the rated cu	rrent is calculated based on t	he selected voltage.					
Maximum curr- ent		37.0A 130.5A 174A 260.9A 391.4A										
		late the maximum current based on the 138V voltage. For example, select other voltages to calculate the maximum current.										
Frequ-	Rated 40	Rated 400Hz, adjustable range 320Hz-480Hz continuously adjustable										
ency Custom	45Hz - 5	z - 500Hz,45Hz-1kHz,300Hz - 500Hz,300Hz-800Hz,300Hz-1000Hz										
Property												
nput adjustme	nt rate	≤0.5%F.S. (Resistance test)										
_oad adjustme	nt rate	≤1%F.9	S. (Resistance test	, 45Hz-500Hz expo	rtation) ; ≤2%F.S.	(Resistance test, > 5	00Hz output)					
Waveform dist	ortion(THD)		vave, THD≤2% belo on 400Hz test results.	ow 100kVA; 100kVA-	300kVA THD≤3%; A	above 300kVA THD≤5	% (400Hz output)					
Efficiency		≤150kVA model efficiency ≥90%; > 150kVA model efficiency ≥92%;										
- requency stab	ility	≤0.029	%F.S.									
Frequency stat		≤0.5%F.S.										
	/	≤0.5%	IF.J.		1.414±0.05							
Voltage crest co												

PSM

Program	ming And Readback	Accuracy & Resolution	1				
	Voltage output prog	ramming accuracy	±0.5%F.S.				
Settings	Frequency output pro	ogramming accuracy	±0.01%F.S.				
Settings	Voltage setting resolu	ition	0.01V				
	Frequency setting res	solution	0.01Hz				
Voltage output read-		back accuracy	±0.5%F.S.				
	Current output read	back accuracy	±0.5%F.S.				
Backward	Frequency output rea	ad-back accuracy	±0.01%F.S.				
read	Voltage read back res	solution	0.01V				
	Current read back re	solution	0.0001A (≤6A) ; 0.001A (≤60A) ; 0.01A < 600A (16Bits resolution)				
	Frequency read-back	resolution	0.01Hz				
Protectio	on Function						
Protection	function	Overvoltage, overcur	rent, internal overheating, short circuit				
Overload c	apacity	125% current 15s, 1509	% current 5s, 200% current 2s, 300% current Stop output immediately				
Memory function		Parameters of the last	Parameters of the last run				
Preset function		Adjust the output volt	tage and frequency online				
Environr	nental Condition						
Environme	nt	Indoor use; Installatio	on overvoltage class: II; Pollution level: P2; II equipment				
Operating	ambient temperature	0°C to 45°C; Choose	from -20°C to 45°C; -40°C to 45°C				
Storage an	nbient temperature	-20°C to 65°C					
Working ar	mbient humidity	20%-90%RH, no condensation, continuous operation					
Storage en	vironment 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 12,000m				
Cooling co	ndition	Forced air cooling, in	ntelligent speed control fan, both sides/front air, rear air				
Transport of	condition	Road transport					
Control	Panel						
Display		7 inches, LCD LCD dis	splay, touch screen				
Display item Phase voltage cumulative wo		Phase voltage (set va cumulative working t	llue & measured value), current measured value, frequency set value, working tim time, current time and date				
Control function Output ON/OFF		Output ON/OFF/Loc	ock keyboard and touch lock /Reset Restart/reset/setting/status indicator				
Mode of o	peration	Key input/LCD input/	shuttle knob input (outer ring coarse adjustment/inner ring fine adjustment)				
Control ma	ode	Local control/remote	control				
Programm	ing function	Step/ladder/gradient					

PSM

Product	model	PSM	31075	PSM 31100	PSM 31120	PSM 31150	PSM 31180	PSM 31200			
Power		75	kVA	100kVA	120kVA	150kVA	180kVA	200kVA			
		Non-standa	ard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabine			
Model si	IZE	*1) No	on-standar	d cabinet above 181	J, floor to floor cabir	net with movable uni	iversal casters and br	rakes.			
Circuit mode IGBT/PWM pulse width modulation mode											
Commur node	nication			5 & RS-232 AN, USB, GPIB, anal	og programming an	d monitoring interfa	ce (isolated type)				
Input	t										
Connectio node	on	Three-	phase thre	ee-wire + Ground w	vire & three-phase fo	our-wire + ground wi	re (ABC+PE/ABCN+I	PE)			
nput ph	nase	Three-	phase 3Ф								
nput wa	veform	Sinuso	idal wave								
nput vo	ltage	380Vrr	ms±15%								
nput free	quency	47Hz-	63Hz								
Ехро	ortation										
)utput p	phase	Single phase 1Φ									
ated	Standard	L-N 0-	L-N 0-138Vrms is continuously adjustable, L-L 0-240Vrms is continuously adjustable								
et oltage	Purchase		L-N 0-180Vrms Continuously adjustable; L-N 0-230Vrms continuously adjustable; L-N 0-276Vrms Continuously adjustable; Max1000Vrms Continuously adjustable (Optional voltage, output current will be proportionally reduced)								
Rated cu	urrent	543	5.5A	724.7A	869.6A	869.6A 1087A		1449.3A			
		*The rate	rated current is calculated based on the 138V voltage. If other voltages are selected, the rated current is calculated based on t					ne selected voltage.			
1aximun nt	n curr-		52.2A 869.6A 1043.5A 1304.4A 1565.3A 1739.2								
	-, , , ,		*Calculate the maximum current based on the 138V voltage. For example, select other voltages to calculate the maximum current.								
requ-	Standard	Rated	ated 400Hz, adjustable range 320Hz-480Hz continuously adjustable								
	Custom	45Hz	- 500Hz,	45Hz-1kHz, 300Hz	- 500Hz, 300Hz-80	00Hz, 300Hz-1000H	Z				
Prop	erty										
nput ad	ljustmer	nt rate	≤0.5%	≤0.5%F.S. (Resistance test)							
oad ad	justmen	it rate	≤1%F.S. (resistance test, 45Hz-500Hz output); ≤2%F.S. (resistance test, > 500Hz output)								
Wavefor	rm disto	rtion(THD)	Sine wave, THD≤2% below 100kVA; 100kVA-300kVA THD≤3%; Above 300kVA THD≤5% (400Hz output) *Based on 400Hz test results.								
fficiency	у		≤150kVA model efficiency ≥90%; > 150kVA model efficiency ≥92%;								
requen	icy stabi	lity	≤0.02%F.S.								
/oltage	stability		≤0.5%	%F.S.							
			1.414±0.05								
/oltage	crest co	efficient	1.414±0.05								

PSM

Program	nming And Readback	Accuracy & Resolution					
	Voltage output prog	ramming accuracy	±0.5%F.S.				
Settings	Frequency output pro	ogramming accuracy	±0.01%F.S.				
Settings	Voltage setting resolu	ution	0.01V				
	Frequency setting res	solution	0.01Hz				
	Voltage output read-	back accuracy	±0.5%F.S.				
	Current output read	back accuracy	±0.5%F.S.				
Backward	Frequency output rea	ad-back accuracy	±0.01%F.S.				
read	Voltage read back re	solution	0.01V				
	Current read back re	solution	0.0001A (≤6A) ; 0.001A (≤60A) ; 0.01A < 600A (16Bits resolution)				
	Frequency read-back	resolution	0.01Hz				
Protectio	on Function						
Protection	function	Overvoltage, overcur	rent, internal overheating, short circuit				
Overload c	apacity	125% current 15s, 1509	% current 5s, 200% current 2s, 300% current Stop output immediately				
Memory fu	nction	Parameters of the last run					
Preset func	tion	Adjust the output volt	age and frequency online				
Environr	nental Condition						
Environme	nt	Indoor use; Installatio	n overvoltage class: II; Pollution level: P2; II equipment				
Operating	ambient temperature	0°C to 45°C; Choose	0°C to 45°C; Choose from -20°C to 45°C; -40°C to 45°C				
Storage an	nbient temperature	-20°C to 65°C					
Working ar	mbient humidity	20%-90%RH, no condensation, continuous operation					
Storage en	vironment humidity	10%-95%RH, no condensation					
Altitude			ove sea level, the power is reduced by 2% per 100 meters, or the maximum working reduced by 1°C per 100 meters; When not in operation, it can reach an altitude of 12,000m				
Cooling co	ondition	Forced air cooling, in	telligent speed control fan, both sides/front air, rear air				
Transport of	condition	Road transport					
Control	Panel						
Display		7 inches, LCD LCD dis	splay, touch screen				
Display item Phase voltage (se cumulative work		Phase voltage (set va cumulative working t	lue & measured value), current measured value, frequency set value, working time time, current time and date				
Control function Output ON/OFF/L		Output ON/OFF/Loci	ck keyboard and touch lock /Reset Restart/reset/setting/status indicator				
Mode of o	peration	Key input/LCD input/	shuttle knob input (outer ring coarse adjustment/inner ring fine adjustment)				
Control ma	ode	Local control/remote	control				
Programm	ing function	Step/ladder/gradient					

Product model	PSM1315L	Р	SM13003	PSM1345L	PSM13006				
Power	1.5kVA		3kVA	4.5kVA	6kVA				
	4U		4U	10U	10U				
Model size	*1) 4U, standard 19-inch rack mount, or tabletop (fixed pads) 2) 10U, standard 19-inch rack, or floor table (with movable cardan casters and brakes).								
Circuit mode	IGBT/PWM pulse	width modulatior	n mode						
Communication mode	Standard: RS-485 Options: LAN, CA	35 & RS-232 CAN, USB, GPIB, analog programming and monitoring interface (isolated type)							
Input									
Connection mode	Single-phase two	wire + Ground (L	N+PE)						
nput phase	Single phase 1Φ								
nput waveform	Sinusoidal wave								
Input voltage	220Vrms±15%								
nput frequency	47Hz-63Hz								
Exportation									
Output phase	Three-phase 3Φ	phase 3Φ							
Rated Standard	L-N 0-138Vrms is	L-N 0-138Vrms is continuously adjustable, L-L 0-240Vrms is continuously adjustable							
set voltage Purchase				continuously adjustable; L-N 0-27 output current will be proportior					
	3.7A	7.3A 10.9A		14.5A					
Rated current	*The rated current is ca	s calculated based on the 138V voltage. If other voltages are selected, the rated current is calculated based on the selected volt							
Maximum curr-	4.4A	8.7A 13.1A 17.4A							
ent	*Calculate the maximur	I I num current based on the 138V voltage. For example, select other voltages to calculate the maximum current.							
Frequ-	Rated 400Hz, adji	djustable range 320Hz-480Hz continuously adjustable							
ency Custom	45Hz - 500Hz, 4	5Hz-1kHz, 300H	z - 500Hz, 300Hz	-800Hz, 300Hz-1000Hz					
Property									
Input adjustmen	t rate	≤0.5%F.S. (Resis	tance test)						
Load adjustmen	t rate	≤1%F.S. (resistan	ce test, 45Hz-500H	Iz output); ≤2%F.S. (resistance †	est, > 500Hz output)				
Waveform disto	rtion(THD)	Sine wave, THD≤2% below 100kVA; 100kVA-300kVA THD≤3%; Above 300kVA THD≤5% (400Hz output *Based on 400Hz test results.							
Efficiency		≤150kVA model	efficiency ≥90%; >	150kVA model efficiency ≥929	/. 2,				
Frequency stability		≤0.02%F.S.							
Voltage stability		≤0.5%F.S.							
Voltage crest cc	pefficient	1.414±0.05							
Voltage unbalar	nce	Three-phase ou	tput ≤1Vrms (no lo	ad or balanced load)					
Phase difference	2	Load three-pha	se balance or no lo	ad ≤±2°					
Noise		≤65dB(A), use 1	m to weigh the me	asurement					
	ge/phase difference	Three phase ve	Itago indopondont	adjustable, phase difference 0-	2EQ QQ° adjustable				

Program	ming And Readback	Accuracy & Resolution				
	Voltage output progr	amming accuracy	±0.5%F.S.			
Settings	Frequency output pro	ogramming accuracy	±0.01%F.S.			
Settings	Voltage setting resolu	ition	0.01V			
	Frequency setting res	olution	0.01Hz			
	Voltage output read-	back accuracy	±0.5%F.S.			
	Current output read I	back accuracy	±0.5%F.S.			
Backward	Frequency output rea	ad-back accuracy	±0.01%F.S.			
read	Voltage read back res	solution	0.01V			
	Current read back res	solution	0.0001A (≤6A) ; 0.001A (≤60A) ; 0.01A < 600A (16Bits resolution)			
	Frequency read-back	resolution	0.01Hz			
Protectic	n Function					
Protection 1	function	Overvoltage, overcuri	rent, internal overheating, short circuit			
Overload c	apacity	125% current 15s, 1509	% current 5s, 200% current 2s, 300% current Stop output immediately			
Memory fu	nction	Parameters of the last run				
Preset funct	tion	Adjust the output voltage and frequency online				
Environn	nental Condition					
Environmer	nt	Indoor use; Installatio	n overvoltage class: II; Pollution level: P2; II equipment			
Operating a	ambient temperature	0°C to 45°C; Choose	from -20°C to 45°C; -40°C to 45°C			
Storage am	bient temperature	-20°C to 65°C				
Working an	nbient humidity	20%-90%RH, no condensation, continuous operation				
Storage en	vironment humidity	10%-95%RH, no condensation				
Altitude			we sea level, the power is reduced by 2% per 100 meters, or the maximum working reduced by 1°C per 100 meters; When not in operation, it can reach an altitude of 12,000m			
Cooling co	ndition	Forced air cooling, in	telligent speed control fan, both sides/front air, rear air			
Transport o	ondition	Road transport				
Control	Panel					
Display	Display 7 inches, L		splay, touch screen			
Display iten	Display item Phase voltage cumulative w		lue & measured value), current measured value, frequency set value, working time, time, current time and date			
Control fur	Control function Output ON/OI		ock keyboard and touch lock /Reset Restart/reset/setting/status indicator			
Mode of op	peration	Key input/LCD input/	shuttle knob input (outer ring coarse adjustment/inner ring fine adjustment)			
Control mo	ode	Local control/remote	control			
Programming function		Step/ladder/gradient				

Product model	PSM33010	PSM33015	PSM33020	PSM33030	PSM33045	PSM33060	PSM33075	PSM33090			
Power	10kVA	15kVA	20kVA	30kVA	45kVA	60kVA	75kVA	90kVA			
	18U	24U	28U	30U	Non-standard cabinet	Non-standard cabine	Non-standard cabinet	Non-standard cabine			
Model size	*1) Non-star	*1) Non-standard cabinet above 18U, floor to floor cabinet with movable universal casters and brakes.									
Circuit mode	IGBT/PWM p	ulse width mod	dulation mode								
Communication node		Standard: RS-485 & RS-232 Options: LAN, CAN, USB, GPIB, analog programming and monitoring interface (isolated type)									
Input											
onnection node	Three-phase	three-wire + G	Fround wire &	three-phase fo	ur-wire + groui	nd wire (ABC+I	PE/ABCN+PE)				
nput phase	Three-phase	3Ф									
nput waveform	Sinusoidal wa	ave									
nput voltage	380Vrms±15	%									
nput frequency	47Hz-63Hz										
Exportation											
Dutput phase	Three-phase	3Ф	Þ								
ated Standard	L-N 0-138Vrr	ns Continuousl [,]	s Continuously adjustable, L-L 0-240Vrms Continuously adjustable								
et roltage Purchase	L-N 0-180Vrms Continuously adjustable; L-N 0-230Vrms continuously adjustable; L-N 0-276Vrms Continuously adjust Max1000Vrms continuously adjustable (Optional voltage, output current will be proportionally reduced)						sly adjustable;				
	24.2A	36.3A	48.3A	72.5A	108.7A	145A	181.2A	217.4A			
ated current	*The rated curre	nt is calculated base	l d on the 138V volta	l ge. If other voltages	I are selected, the rat	l ed current is calcula	ted based on the sel	ected voltage.			
/aximum curr-	29A	43.5A	58A	87A	130.5A	174A	217.4A	260.9A			
nt	*Calculate the maximum current based on the 138V voltage. For example, select other voltages to calculate the maximum current.										
requ-	Rated 400Hz	, adjustable ran	adjustable range 320Hz-480Hz continuously adjustable								
ency Custom	45Hz - 500H	z, 45Hz-1kHz	, 300Hz - 500	Hz, 300Hz-80	0Hz, 300Hz-10	000Hz					
Property											
nput adjustmer	nt rate	≤0.5%F.S	S. (Resistance t	est)							
oad adjustmer	nt rate	≤1%F.S. (resistance test, 45Hz-500Hz output); ≤2%F.S. (resistance test, > 500Hz output)									
Waveform disto	ortion(THD)		Sine wave, THD≤2% below 100kVA; 100kVA-300kVA THD≤3%; Above 300kVA THD≤5% (400Hz output) *Based on 400Hz test results.								
fficiency				ncy ≥90%; > 15	i0kVA model et	fficiency ≥92%;					
requency stabi	ility	≤0.02%F	<150kVA model efficiency ≥90%; > 150kVA model efficiency ≥92%; <0.02%F.S.								
/oltage stability	/	≤0.5%F.	S.								
/oltage crest co	pefficient	1.414±0.	05								
/oltage unbalai	nce	Three-p	hase output ≤	1Vrms (no load	or balanced lo	ad)					
hase difference		Load thr	ee-phase bala	nce or no load	≤±2°						
			Load three-phase balance or no load ≤±2° ≤65dB(A), use 1m to weigh the measurement								

PSM

Program	iming And Readback	Accuracy & Resolution	1			
	Voltage output progr	ramming accuracy	±0.5%F.S.			
Settings	Frequency output pro	ogramming accuracy	±0.01%F.S.			
Settings	Voltage setting resolu	ition	0.01V			
	Frequency setting res	solution	0.01Hz			
	Voltage output read-	back accuracy	±0.5%F.S.			
	Current output read	back accuracy	±0.5%F.S.			
Backward Frequency output read		ad-back accuracy	±0.01%F.S.			
read	Voltage read back res	solution	0.01V			
	Current read back re	solution	0.0001A (≤6A) ; 0.001A (≤60A) ; 0.01A <600A (16Bits resolution)			
	Frequency read-back	resolution	0.01Hz			
Protectio	on Function					
Protection	function	Overvoltage, overcur	rent, internal overheating, short circuit			
Overload c	apacity	125% current 15s, 1509	% current 5s, 200% current 2s, 300% current Stop output immediately			
Memory function		Parameters of the last run				
Preset func	tion	Adjust the output volt	tage and frequency online			
Environr	nental Condition	'				
Environme	nt	Indoor use; Installation overvoltage class: II; Pollution level: P2; II equipment				
Operating	ambient temperature	0℃ to 45℃; Choose from -20℃ to 45℃; -40℃ to 45℃				
Storage an	nbient temperature	-20°C to 65°C				
Working ar	nbient humidity	20%-90%RH, no condensation, continuous operation 10%-95%RH, no condensation				
Storage en	vironment humidity					
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 12,000m				
Cooling co	ndition	Forced air cooling, in	ntelligent speed control fan, both sides/front air, rear air			
Transport o	condition	Road transport				
Control	Panel					
Display		7 inches, LCD LCD dis	splay, touch screen			
Display iter	n	Phase voltage (set va cumulative working t	llue & measured value), current measured value, frequency set value, working tin time, current time and date			
Control fur	nction	Output ON/OFF/Loc	k keyboard and touch lock /Reset Restart/reset/setting/status indicator			
Mode of o	peration	Key input/LCD input/	shuttle knob input (outer ring coarse adjustment/inner ring fine adjustment)			
Control ma	ode	Local control/remote	control			
Programm	ing function	Step/ladder/gradient				

PSM

Produc	t model	PSM33120	PSM33150	PSM33180	PSM33210	PSM33240	PSM33300	PSM33450				
Power		120kVA	150kVA	180kVA	210kVA	240kVA	300kVA	450kVA				
		Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabine				
Model	size	*1) Non-stand	*1) Non-standard cabinet above 18U, floor to floor cabinet with movable universal casters and brakes.									
Circuit	mode	IGBT/PWM pu	ulse width modula	ation mode								
Commi node	unication		Standard: RS-485 & RS-232 Options: LAN, CAN, USB, GPIB, analog programming and monitoring interface (isolated type)									
Inp	ut											
Connec mode	tion	Three-phase	three-wire + Grou	und wire & three-	phase four-wire +	ground wire (AB	C+PE/ABCN+PE)					
nput p	phase	Three-phase	3Ф									
nput w	vaveform	Sinusoidal wa	ve									
nput v	oltage	380Vrms±15%	,)									
nput fr	requency	47Hz-63Hz										
Exp	ortation											
Dutpu	t phase	Three-phase 3	3Φ									
Rated	Standard	L-N 0-138Vrm	is is continuously	adjustable, L-L 0-	240Vrms is contir	nuously adjustable	<u>5</u>					
set voltage Purchase		L-N 0-180Vrms Continuously adjustable; L-N 0-230Vrms continuously adjustable; L-N 0-276Vrms Continuously adjustable; Max1000Vrms continuously adjustable (Optional voltage, output current will be proportionally reduced)										
Datad	eu ur von t	289.9A	362.4A	434.8A	507.3A	579.8A	724.7A	1087A				
kaled	current -	*The rated current	is calculated based on t	the 138V voltage. If othe	er voltages are selected,	the rated current is cal	culated based on the se	elected voltage.				
Maximu	um curr-	347.9A	434.9A	521.8A	608.8A	695.8A	869.7A	1304A				
ent		*Calculate the max	*Calculate the maximum current based on the 138V voltage. For example, select other voltages to calculate the maximum current.									
-requ-	Standard	Rated 400Hz,	, adjustable range 320Hz-480Hz continuously adjustable									
ency	Custom	45Hz - 500Hz	z, 45Hz-1kHz, 300Hz - 500Hz, 300Hz-800Hz, 300Hz-1000Hz									
Pro	perty											
nput a	adjustmer	it rate	≤0.5%F.S. (R	esistance test)								
_oad a	ıdjustmer	it rate	≤1%F.S. (resistance test, 45Hz-500Hz output); ≤2%F.S. (resistance test, > 500Hz output)									
Wavef	orm distc	ortion(THD)	Sine wave, THD≤2% below 100kVA; 100kVA-300kVA THD≤3%; Above 300kVA THD≤5% (400Hz output*Based on 400Hz test results.									
fficier	псу		\leq 150kVA model efficiency \geq 90%; > 150kVA model efficiency \geq 92%;									
reque	ency stabi	lity	≤0.02%F.S.									
Voltage stability			≤0.5%F.S.									
/oltag	e crest co	pefficient	1.414±0.05									
/oltag	e unbalar	nce	Three-phase	e output ≤1Vrms (no load or baland	ced load)						
hase	difference	9	Load three-	phase balance or	no load ≤±2°							
Noise			≤65dB(A), u	se 1m to weigh th	ne measurement							
Three-phase voltage/phase difference			Thursday 10	≤65dB(A), use 1m to weigh the measurement Three-phase voltage independent adjustable, phase difference 0-359.99° adjustable								

Program	ming And Readback	Accuracy & Resolution					
	Voltage output programming accuracy		±0.5%F.S.				
Settings	Frequency output programming accuracy		±0.01%F.S.				
	Voltage setting resolution		0.01V				
	Frequency setting resolution		0.01Hz				
	Voltage output read-back accuracy		±0.5%F.S.				
	Current output read back accuracy		±0.5%F.S.				
Backward	Frequency output rea	ad-back accuracy	±0.01%F.S.				
read	Voltage read back resolution		0.01V				
	Current read back resolution		0.0001A (≤6A) ; 0.001A (≤60A) ; 0.01A < 600A (16Bits resolution)				
	Frequency read-back	resolution	0.01Hz				
Protectic	on Function						
Protection 1	function	Overvoltage, overcurrent, internal overheating, short circuit					
Overload c	apacity	125% current 15s, 150% current 5s, 200% current 2s, 300% current Stop output immediately					
Memory fu	nction	Parameters of the last run					
Preset funct	tion	Adjust the output voltage and frequency online					
Environn	nental Condition						
Environmer	nt	Indoor use; Installation overvoltage class: II; Pollution level: P2; II equipment					
Operating a	ambient temperature	0°C to 45°C; Choose from −20°C to 45°C; −40°C to 45°C					
Storage am	bient temperature	-20°C to 65°C					
Working an	nbient humidity	20%-90%RH, no condensation, continuous operation					
Storage en	vironment 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 12,000m					
Cooling condition		Forced air cooling, intelligent speed control fan, both sides/front air, rear air					
Transport condition		Road transport					
Control I	Panel						
Display 7 inch		7 inches, LCD LCD dis	inches, LCD LCD display, touch screen				
			e voltage (set value & measured value), current measured value, frequency set value, working time, ulative working time, current time and date				
Control function Output ON/OFF/I		Output ON/OFF/Lock	ock keyboard and touch lock /Reset Restart/reset/setting/status indicator				
Mode of operation Key in		Key input/LCD input/	/LCD input/shuttle knob input (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







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

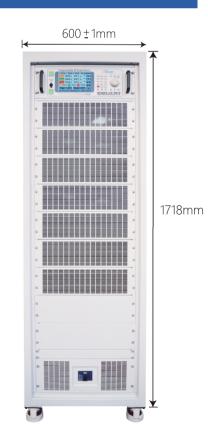


24U 600(W)*800(D)*1190(H)mm 30U 600(W)*800(D)*1453(H)mm 36U 600(W)*800(D)*1718(H)mm

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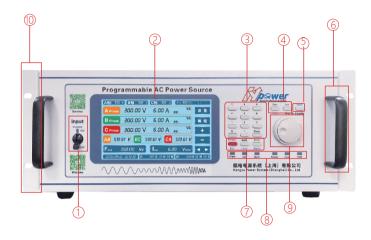






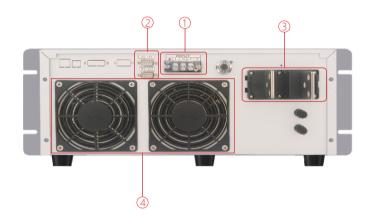
Display And Control Panel

Control Panel



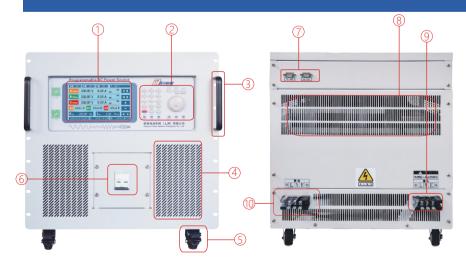
- ① Power input circuit breaker
- ② LCD display (7 inches, touch screen)
- ③ Numeric input keyboard
- ④ Frequency/voltage or current setting key
- ⑤ Shift function reuse key
- 6 Case handle
- ⑦ Lock Locks, confirms Enter, and exits Esc Local Local or Reset Restarts Output ON/OFF Switch
- Status light
 Status light
- Multistage shuttle adjustment knob
- (inner ring fine adjustment/outer ring coarse adjustment)
- (1) 19-inch standard rack mounting holes

Rear Panel



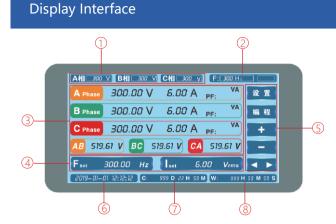
- ① Ac input terminal
- ② RS-485 & RS-232 communication interface
- ③ Ac output terminal
- ④ Heat dissipation outlet

Front Panel & Rear Panel



- ① LCD display (7 ", touch screen)
- ② Control area
- ③ 19-inch standard rack handle
- ④ Heat dissipation inlet
- ⑤ Casters
- ⑥ Power input circuit breaker
- ⑦ Communication interface
- (8) Heat dissipation outlet
- AC input terminals
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- AC output terminal
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Display And Control Panel



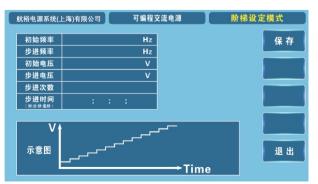
Display Interface

航裕电源系统(上海)有限公司	可编程交流电源	
电压 VOLTAGE	Vrms	设置
电流 CURRENT	Arms	编程
功率 POWER	KW	+
功率因数 PF		-
Fset H.	z V _{set} Vrms	
2019-01-01 12:12:12 C	: 999 D 23 H 59 M W: 999 H	H 59 M 59 S

Main interface of single-phase power supply



Main interface of three-phase power supply



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

- ① Three phase voltage
- ② Product frequency
- ③ Three-phase voltage and current display area
- ④ Frequency/voltage setting value
- ⑤ Function setting area
- 6 Current time
- ⑦ Cumulative running time
- This running time

A相	B相 双相输出电	源 F :
A Phase	V	A 设置
B Phase	V	A 编程 +
AB	۷	
Fset	Hz Vset	Vrms 🔺 🕨
	C: D H	MW: HMS

Main interface of the dual phase power supply

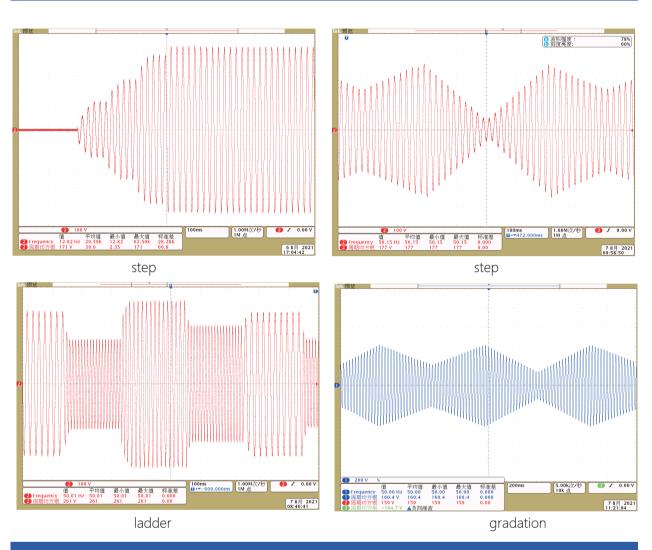
航裕电源系统(上海)有限公司 可编程交流电源			步阶设定模式			
步号	頻 率 (Hz)	电压 (V)	运行时间(H	:M:S:mS)	起始步	
			: :	:		
			: :	:	结束步	
			: :	:		
			: :	:	循环次数	
			: :	:		
			: :	:	保存	
			: :	+	退出	
			: :	:		
			: :	:	上一页	
			: :	:	下一页	

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

航裕	航裕电源系统(上海)有限公司				渐变设定模式		
步号		频 率 (Hz)	电压(V)	运行时间(时:分:和	9:毫秒)	起始步
	起						
	止				•		结束步
	起						
	止				•		循环次数
	起						
	止			•			保存
	起			- :			退出
	止						
	起			:			上一页
	止						下一页

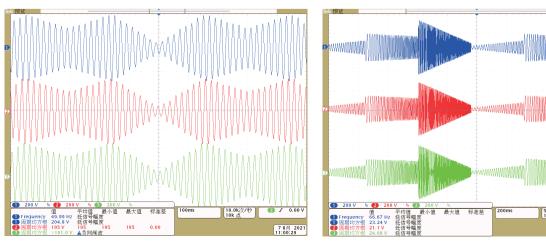
The gradient Settings page can set the required voltage and frequency Run time, initial step, end step

Measured Waveform



Output Voltage Waveform Of Single-phase Power Supply

Output Voltage Waveform Of Three-phase Power Supply



Three-phase step

Three-phase gradient

5.00k次/和 10k 点 🚯 J 0.00 V

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Cooperative Customers (Part)

Aerospace & Defense Military Research Lnstitute



China Aerospace



Aerospace science

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China Air Development







China Electrical **Engineering Group** China Shipbuilding Corporation

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Commercial Aviation





Rockwell Collins



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Guangzhou Aircraft Maintenance Engineering Co., I TD

SEARI

Scientific Research & Third Party Quality Inspection Agency



South Sea Fleet East China Sea Eleet

North Sea Fleet

Navy Plant 701 / Plant 702

Unit 95861 (Empty Base 1)

Technical Institute of Physics and Chemistry (Beijing) Institute of Urban Environment (Xiamen)

Electrotechnical Research Institute (Beijing)

Institute of Applied Physics (Shanghai)





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of Science and Technology) Power University



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Technology

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University

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Technology





Air force Engineering University



Harbin Engineering University



Shanghai Jiao Tong University



Zhejiang University of Technology



Nanjing University of

Naval University of

Engineering

Zhejiang University



Technology

Naniing University of

Dalian Naval Academy

Tianjin University Hust (Huazhong University of Science and Technology)



Dalian Maritime

University



Naval Aeronautical

University

Northwestern

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Custom

21

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Research Institute

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华人运通 HUMAN HORIZONS



United New Energy





Shanghai Tongmin vehicle

Nind era



Chinese Express



Official wechat: hypower-cn



Standard product free warranty for three years



Contact us

Hangyu Power System (Shanghai) Co., Ltd

Tel: 400 612 6078 Fax: 021-6728 5228-8009 Email: Sales@hypower.cn Address: Block B, Building 11, No. 1698 Minyi Road, Songjiang District, Shanghai Website: www.hypower.cn

©Hangyu Power Technologies, 2024 Hangyu Power AC Power Supply Product Manual, version 06.00, 2024 The warranty period of all standard products in this manual is three years, except non-standard products 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: