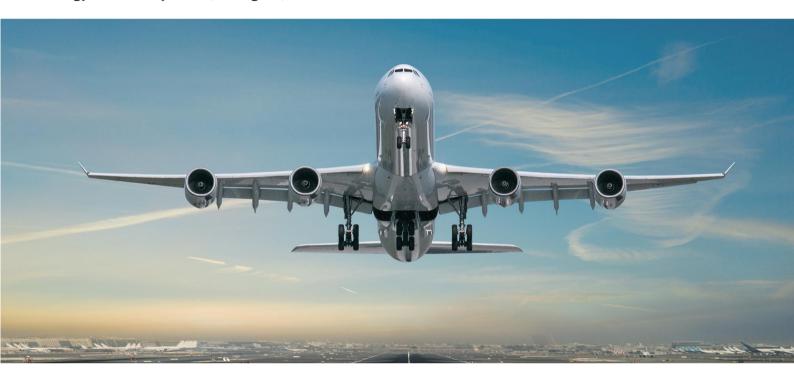
HY-PSMSU Series

Programmable Switching AC Medium Frequency Power Supply



Hangyu Power System (Shanghai) Co., LTD



















HY-PSMSU Series Programmable Switching AC Medium Frequency Power Supply



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)

HY-PSMSU Series Product Selection Table

Product Model Naming Rules High resolution/precision DC input, DC 28.5V (Some models are supported, 1:Input single phase 1:Output single phase Output capacity Short for optional function Please explain when ordering) See optional features 3:Input three-phase 3:Output three-phase 3kVA DC input, DC 270V (Some models are supported, Please specify when ordering) Selection examples: Operating temperature -20°C to 45°C Product model: HY-PSMSU 13003-CF Operating temperature -40°C to 45°C - T4 Input single-phase, output three-phase, output capacity 3kVA, - CF User-defined features Choose user-defined features. (Please specify when ordering) - MR Measurement report (Issued by CNAS certified third party)

■ 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-PSMSU 11001	1kVA			HY-PSMSU 1315L	1.5kVA			Standard:	Standard:
HY-PSMSU 11002	2kVA			HY-PSMSU 13003	3kVA	<u> </u>		L-N 0-115Vrms	400Hz
HY-PSMSU 11003	3kVA	Single phase		HY-PSMSU 1345L	4.5kVA	Single phase		L-N 0-138Vrms	320Hz-480Hz
HY-PSMSU 11005	5kVA	priuse		HY-PSMSU 13006	6kVA			Purchase:	
HY-PSMSU 31010	10kVA			HY-PSMSU 33010	10kVA			L-N 0-180Vrms	
HY-PSMSU 31015	15kVA			HY-PSMSU 33015	15kVA			L-N 0-230Vrms	
HY-PSMSU 31020	20kVA			HY-PSMSU 33020	20kVA			L-N 0-276Vrms L-N 0-1kVrms	Purchase: 45Hz-500Hz
HY-PSMSU 31030	30kVA			HY-PSMSU 33030	30kVA	ph Three		LIVO INVIIIIS	45Hz-1kHz
HY-PSMSU 31045	45kVA			HY-PSMSU 33045	45kVA			Shipboard:	300Hz-500Hz
HY-PSMSU 31060	60kVA	-	Single	HY-PSMSU 33060	60kVA		Three	220V±10% 230V±10%	300 Hz-800Hz 300Hz-1000Hz
HY-PSMSU 31075	75kVA	-	phase	HY-PSMSU 33075	75kVA		phase	Mordant787	300112 1000112
HY-PSMSU 31100	100kVA	Three		HY-PSMSU 33090	90kVA				
HY-PSMSU 31120	120kVA	priase		HY-PSMSU 33120	120kVA	phase			
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.

Product Model	PS	MSU 11001	PSMSU 11002	PSMSU 11003	PSMSU 11005					
Power		1kVA	2kVA	3kVA	5kVA					
		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 to floor table with movable cardan casters and brakes.								
Circuit mode	IGBT,	/PWM pulse width r	nodulation mode							
Communication node	Standard configuration: RS-485 & RS-232 assorting: LAN、CAN、USB、GPIB, Analog programming and monitoring interface (isolated)									
Input										
Connection mode	Single-	phase two-wire + grou	nd wire (LN+PE)							
nput phase	Single	phase 1Φ								
nput waveform	Sinusc	oidal wave								
nput voltage	220Vrr	ms±15%								
nput frequency	47Hz-6	53Hz								
Exportation										
Output phase										
Rated Standard	L-N 0-1	138Vrms Continuou	sly adjustable, L-L 0-240Vrms C	ontinuously adjustable						
set oltage Purchase			y adjustable; L-N 0-230Vrms Cont adjustable (Select the voltage ar							
Rated current		7.3A 14.5A 21.8A 36.3A								
	*The rate	ed current is calculated ba	sed on the 138V voltage. If other voltages a	are selected, the rated current is calculat	ed based on the selected voltage.					
Maximum curr-		8.7A	17.4A 26.1A 43.5A							
ent	*Calcula	ulate the maximum current based on the 138V voltage. For example, select other voltages to calculate the maximum current.								
requ-	Rated 4	Rated 400Hz, adjustable range 320Hz-480Hz continuously adjustable								
Custom	45Hz -	500Hz, 45Hz-1kHz,	300Hz - 500Hz, 300Hz-800Hz, 3	300Hz-1000Hz						
Property										
nput adjustme	nt rate	≤0.5%F.S. (Res	≤0.5%F.S. (Resistance test)							
_oad adjustmer	nt rate	≤1%F.S. (Resis	≤1%F.S. (Resistance test, 45Hz-500Hz output); ≤2%F.S. (Resistance test, > 500Hz output)							
Waveform disto	ortion(THD)	Sinusoidal wave, 100kVA以下THD≤2%;100kVA-300kVA THD≤3%;300kVA以上THD≤5%(400Hz output) *Based on 400Hz test results.								
Efficiency		≤150kVA Model efficiency≥90%;>150kVA Model efficiency≥92%;								
Efficiency	Frequency stability		≤0.02%F.S.							
	ility	≤0.02%F.S.								
		≤0.02%F.S. ≤0.5%F.S.								
requency stab	/									

Program	ming And Readback A	ccuracy & Resolution				
	Voltage output progr	amming accuracy	±0.5%F.S.			
Settings	Frequency output pro	ogramming accuracy	±0.01%F.S.			
Settiligs	Voltage setting resolu	tion	0.01V			
	Frequency setting res	solution	0.01Hz			
	Voltage output read-l	oack accuracy	±0.5%F.S.			
	Current output read l	oack accuracy	±0.5%F.S.			
Backward	Frequency output rea	ad-back accuracy	±0.01%F.S.			
read	Voltage read back res	olution	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	on Function					
Protection	Protection function Overvoltage, over		rent, internal overheating, short circuit			
Overload ca	apacity	125% current 15s, 15	0% current 5s, 200% current 2s, 300% current Stop output immediately			
Memory fur	nction	Parameters of the last run				
Preset func	tion	Adjust the output vo	ltage and frequency online			
Environn	nental Condition					
Environme	nt	Indoor use; Installati	ion overvoltage class: II; Pollution level: P2; II equipment			
Operating a	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 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 cond	densation			
Altitude			ve 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, ir	itelligent speed control fan, both sides/front air, rear air			
Transport o	condition	Road transport				
Control I	Panel					
Display		7 inches, LCD LCD dis	play, touch screen			
Display iter	Display item Phase voltage (set va cumulative working		lue & measured value), current measured value, frequency set value, working time, time, current time and date			
Control fur	Control function Output ON/OFF/Lock		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			
Programm	ing function	Step/ladder/gradient				

Product	model	PSMSU 31	010	PSMSU 31015	PSMSU 31020	PSMSU 31030	PSMSU 31045	PSMSU 31060			
Power		10kVA		15kVA	20kVA	30kVA	45kVA	60kVA			
		18U		18U	24U	30U	Non-standard cabinet	Non-standard cabin			
Models	size	*1) 18U ar	*1) 18U and above, floor-to-ceiling cabinet with movable cardan casters and brakes。								
Circuit	mode	IGBT/PWM	WM pulse width modulation mode								
Communication mode Standard configuration: RS-485 & RS-232 assorting: LAN, CAN, USB, GPIB, Analog programming and monitoring interface (isolated)											
Inpu	ut										
Connect mode	tion	Three-pha	ase thre	e-wire + ground wi	re & three-phase fou	r-wire + ground wire	(ABC+PE/ABCN+PE)				
Input p	hase	Three pha	ıse 3Φ								
nput w	aveform	Sinusoida	ıl wave								
Input v	oltage	380Vrms=	±15%								
Input fre	equency	47Hz-63H	Z								
Ехро	ortation										
Output phase Single phase 1Φ											
Rated	Standard	L-N 0-138Vrms Continuously adjustable, L-L 0-240Vrms Continuously adjustable									
set voltage	Purchase	L-N 0-180V Max1000Vi	L-N 0-180Vrms Continuously adjustable; L-N 0-230Vrms Continuously adjustable; L-N 0-276Vrms Continuously adjustable; Max1000Vrms Continuously adjustable (Select the voltage and the output current will be reduced proportionally)								
Rated c	urrent	72.5/	72.5A 108.7		144.9A 217.4A		326.1A	434.8A			
	zarrent	*The rated cu	ırrent is ca	lculated based on the 138	V voltage. If other voltages a	re selected, the rated curre	selected, the rated current is calculated based on th				
Maximu ent	ım curr-	87.0			174A 260.9A		391.4A	521.8A			
			culate the maximum current based on the 138V voltage. For example, select other voltages to calculate the maximum current.								
Frequ-	Standard	Rated 400	400Hz, adjustable range 320Hz-480Hz continuously adjustable								
ency	Custom	45Hz - 500	45Hz - 500Hz, 45Hz-1kHz, 300Hz - 500Hz, 300Hz-800Hz, 300Hz-1000Hz								
Pro	perty										
nput a	djustmen	t rate	≤0.5%	6F.S. (Resistance te	st)						
Load ac	djustmen	t rate	≤1%F	S. (Resistance test	, 45Hz-500Hz exporta	ation);≤2%F.S.(Re	sistance test, > 500Hz	output)			
Wavefo	orm distor	tion(THD)		vave, THD≤2% belon 400Hz test results.	ow 100kVA; 100kVA-3	800kVA THD≤3%; Al	pove 300kVA THD≤59	% (400Hz output)			
Efficiency			≤150kVA model efficiency ≥90%; > 150kVA model efficiency ≥92%;								
Freque	ncy stabil	ity	≤0.02	%F.S.							
	stability		≤0.5%	6F.S.							
Voltage	Voltage crest coefficient		1.414±0.05								
	crest coe	efficient	1.414	±0.05							

Program	ming And Readback A	ccuracy & Resolution				
	Voltage output progr	amming accuracy	±0.5%F.S.			
Settings	Frequency output pro	ogramming accuracy	±0.01%F.S.			
Settings	Voltage setting resol	ution	0.01V			
	Frequency setting re	solution	0.01Hz			
	Voltage output read-	back accuracy	±0.5%F.S.			
	Current output read	back accuracy	±0.5%F.S.			
Backward	Frequency output re	ad-back accuracy	±0.01%F.S.			
read	Voltage read back resolution		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	n Function					
Protection	function	Overvoltage, overcur	rrent, internal overheating, short circuit			
Overload ca	apacity	125% current 15s, 15	50% current 5s, 200% current 2s, 300% current Stop output immediately			
Memory fur	nction	Parameters of the last run				
Preset func	tion	Adjust the output vo	ltage and frequency online			
Environn	nental Condition					
Environme	nt	Indoor use; Installat	ion overvoltage class: II; Pollution level: P2; II equipment			
Operating a	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 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 conc	lensation			
Altitude			ve 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	condition	Road transport				
Control F	Panel					
Display		7 inches, LCD LCD dis	play, touch screen			
Display iten	Display item Phase voltage (set cumulative working)		lue & measured value), current measured value, frequency set value, working time, time, current time and date			
Control function Output ON/OF		Output ON/OFF/Lock	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			
Programmi	ng function	Step/ladder/gradient	dient			

Product	model	PSMSU	31075	PSMSU 31100	PSMSU 31120	PSMSU 31150	PSMSU 31180	PSMSU 31200				
Power		75	ΚVA	100kVA	120kVA	150kVA	180kVA	200kVA				
		Non-standa	rd cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet				
Model s	size	*1) Non-standard cabinet above 18U, floor to floor cabinet with movable universal casters and brakes.										
Circuit r	mode	IGBT/F	WM pulse	width modulation r	node							
Commu mode	nication		Standard: RS-485 & RS-232 Options: LAN, CAN, USB, GPIB, analog programming and monitoring interface (isolated type)									
Inpu	ut											
Connect mode	ion	Three-	phase thre	ee-wire + Ground wi	re & three-phase fou	r-wire + ground wire	(ABC+PE/ABCN+PE)					
Input pl	hase	Three-	phase 3Ф									
Input wa	aveform	Sinusc	idal wave									
Input vo	oltage	380Vrr	ns±15%									
Input fre	equency	47Hz-6	63Hz									
Ехро	ortation											
Output	phase	Single	phase 1Φ									
Rated	Standard	L-N 0-	L-N 0-138Vrms is continuously adjustable, L-L 0-240Vrms is continuously adjustable									
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)									
Rated c	urrent	543	.5A	724.7A	869.6A	869.6A 1087A		1449.3A				
				alculated based on the 138	V voltage. If other voltages a	re selected, the rated currer	nt is calculated based on the					
Maximui ent	m curr-	652		869.6A	1043.5A 1304.4A		1565.3A	1739.2A				
	Standard		*Calculate the maximum current based on the 138V voltage. For example, select other voltages to calculate the maximum current. Pated 400Hz adjustable range 220Hz 490Hz continuously adjustable.									
Frequ- ency	Standard	Kaleu	Rated 400Hz, adjustable range 320Hz-480Hz continuously adjustable									
	Custom	45Hz -	45Hz - 500Hz, 45Hz-1kHz, 300Hz - 500Hz, 300Hz-800Hz, 300Hz-1000Hz									
Prop	perty											
Input ac	djustme	nt rate	≤0.59	%F.S. (Resistance te	st)							
Load ac	djustmer	nt rate	≤1%	F.S. (resistance test,	45Hz-500Hz output)	; ≤2%F.S. (resistanc	e test, > 500Hz outpu	ut)				
Wavefo	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.									
Efficien	су		≤150	kVA model efficienc	sy ≥90%; > 150kVA n	nodel efficiency ≥92	2%;					
Frequer	ncy stab	ility	≤0.02	2%F.S.								
Voltage	stability	′	≤0.59	%F.S.								
Voltage	crest co	efficient	1.414	±0.05								
Noise			≤65d	B(A), use 1m to wei	gh the measurement							

Program	ming And Readback <i>F</i>	Accuracy & Resolution					
	Voltage output progr	ramming accuracy	±0.5%F.S.				
Settings	Frequency output pr	ogramming accuracy	±0.01%F.S.				
seungs	Voltage setting reso	lution	0.01V				
	Frequency setting re	esolution	0.01Hz				
	Voltage output read	-back accuracy	±0.5%F.S.				
	Current output read	l back accuracy	±0.5%F.S.				
Backward	Frequency output re	ead-back accuracy	±0.01%F.S.				
read	Voltage read back re	esolution	0.01V				
	Current read back re	esolution	0.0001A (≤6A); 0.001A (≤60A); 0.01A <600A (16Bits resolution)				
	Frequency read-bac	k resolution	0.01Hz				
Protectio	n Function						
Protection	function	Overvoltage, overcurre	ent, internal overheating, short circuit				
Overload ca	apacity	125% current 15s, 150°	% current 5s, 200% current 2s, 300% current Stop output immediately				
Memory fur	nction	Parameters of the last	Parameters of the last run				
Preset func	tion	Adjust the output volt	age and frequency online				
Environn	nental Condition						
Environme	nt	Indoor use; Installatio	on 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 env	vironment humidity	10%-95%RH, no cond	ensation				
Altitude			ve 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, int	telligent speed control fan, both sides/front air, rear air				
Transport o	condition	Road transport					
Control I	Panel						
Display		7 inches, LCD LCD dis	play, touch screen				
Display iten	Display item Phase voltage (se cumulative work		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/Lock	keyboard and touch lock /Reset Restart/reset/setting/status indicator				
Mode of op	eration	Key input/LCD input/	shuttle knob input (outer ring coarse adjustment/inner ring fine adjustment)				
Control mo	ode	Local control/remote	control				
Programmi	ng function	Step/ladder/gradient					

Product mo	del PSMSU13	15L	PSMSU13003	PSMSU1345L	PSMSU13006					
Power	1.5kVA		3kVA	4.5kVA	6kVA					
	4U		4U	10U	10U					
Model size			ch rack mount, or tabletop (fixed pads) ch rack, or floor table (with movable cardan casters and brakes).							
Circuit mod	le IGBT/PWM pu	ulse width mod	e width modulation mode							
Communication mode Standard: RS-485 & RS-232 Options: LAN, CAN, USB, GPIB, analog programming and monitoring interface (isolated type)										
Input										
Connection mode	Single-phase	two-wire + Gr	ound (LN+PE)							
Input phas	Single phase	1Ф								
Input wavef	orm Sinusoidal w	ave								
Input volta	ge 220Vrms±15	%								
Input freque	ency 47Hz-63Hz									
Exporta	tion									
Output pha	se Three-phase	3Ф								
Rated Star	dard L-N 0-138Vrm	ıs is continuou	ısly adjustable, L-L 0-240Vrı	ms is continuously adjustable						
set voltage Pur				ontinuously adjustable; L-N 0-276 output current will be proportio						
	3.7A	7.3A 10.9A 14.5A								
Rated curre		is calculated based on the 138V voltage. If other voltages are selected, the rated current is calculated based on the selected voltage.								
Maximum c	urr- 4.4A		8.7A	13.1A	17.4A					
ent	*Calculate the ma	ate the maximum current based on the 138V voltage. For example, select other voltages to calculate the maximum current.								
Frequ- Star	dard Rated 400Hz,	Rated 400Hz, adjustable range 320Hz-480Hz continuously adjustable								
ency	stom 45Hz - 500Hz	, 45Hz-1kHz, 3	5Hz-1kHz, 300Hz - 500Hz, 300Hz-800Hz, 300Hz-1000Hz							
Propert	/									
Input adjus	tment rate	≤0.5%F	S. (Resistance test)							
Load adjus	tment rate	≤1%F.S	≤1%F.S. (resistance test, 45Hz-500Hz output); ≤2%F.S. (resistance test, > 500Hz output)							
Waveform	distortion(THD)		Sine wave, THD≤2% below 100kVA; 100kVA-300kVA THD≤3%; Above 300kVA THD≤5% (400Hz output) *Based on 400Hz test results.							
Efficiency		≤150kV	'A model efficiency ≥90%;	> 150kVA model efficiency ≥9	2%;					
Frequency	stability	≤0.02%	≤0.02%F.S.							
Voltage sta	bility	≤0.5%F	S.S.							
Voltage cre	st coefficient	1.414±0	0.05							
Voltage un	palance	Three-p	hase output ≤1Vrms (no lo	oad or balanced load)						
Phase diffe	rence	Load thi	ree-phase balance or no loa	ad ≤±2°						
Noise		≤65dB(A), use 1m to weigh the me	pasurement						

Program	ming And Readback A	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	ıtion	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 resolution		0.01V				
	Current read back res	solution	0.0001A (≤6A);0.001A (≤60A);0.01A <600A (16Bits resolution)				
	Frequency read-back	resolution	0.01Hz				
Protectio	on Function						
Protection	function	Overvoltage, overcuri	rent, internal overheating, short circuit				
Overload ca	apacity	125% current 15s, 150	0% current 5s, 200% current 2s, 300% current Stop output immediately				
Memory fur	nction	Parameters of the last	Parameters of the last run				
Preset func	tion	Adjust the output volt	rage and frequency online				
Environn	nental Condition						
Environme	nt	Indoor use; Installation	on overvoltage class: II; Pollution level: P2; II equipment				
Operating a	ambient temperature	0°C to 45°C; Choose f	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 env	vironment humidity	10%-95%RH, no cond	o condensation				
Altitude			ve 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, int	relligent speed control fan, both sides/front air, rear air				
Transport o	condition	Road transport					
Control I	Panel						
Display		7 inches, LCD LCD dis	play, touch screen				
Display iter	Display item Phase voltage (set va cumulative working		lue & measured value), current measured value, frequency set value, working time, time, current time and date				
Control fur	Control function Output ON/OFF/Lock		keyboard and touch lock /Reset Restart/reset/setting/status indicator				
Mode of op	peration	Key input/LCD input/s	shuttle knob input (outer ring coarse adjustment/inner ring fine adjustment)				
Control mo	ode	Local control/remote	control				
Programm	ing function	Step/ladder/gradient					

Product model	PSMSU33010	PSMSU33015	PSMSU33020	PSMSU33030	PSMSU33045	PSMSU33060	PSMSU33075	PSMSU33090			
Power	10kVA	15kVA	20kVA	30kVA	45kVA	60kVA	75kVA	90kVA			
	18U	24U	28U	30U	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet	Non-standard cabinet			
Model size	*1) Non-stan	*1) Non-standard cabinet above 18U, floor to floor cabinet with movable universal casters and brakes.									
Circuit mode	IGBT/PWM pi	ulse width mod	ulation mode								
Communication mode	tion Standard: RS-485 & RS-232 Options: LAN, CAN, USB, GPIB, analog programming and monitoring interface (isolated type)										
Input											
Connection mode	Three-phase	three-wire + Gr	ound wire & th	ree-phase four	-wire + ground	wire (ABC+PE/	ABCN+PE)				
nput phase	Three-phase	3Ф									
nput waveform	Sinusoidal w	ave									
nput voltage	380Vrms±15	5%									
nput frequency	47Hz-63Hz										
Exportation											
Output phase	Three-phase 3Φ										
Rated Standard	L-N 0-138Vrms Continuously adjustable, L-L 0-240Vrms 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)										
Dated current	24.2A	36.3A	48.3A	72.5A	108.7A	145A	181.2A	217.4A			
Rated current	*The rated curre	nt is calculated based	on the 138V voltag	e. If other voltages a	re selected, the rated	current is calculate	ed based on the sele	cted voltage.			
Maximum curr-	29A	43.5A	58A	87A	130.5A	174A	217.4A	260.9A			
ent	*Calculate the maximum current based on the 138V voltage. For example, select other voltages to calculate the maximum current.										
Frequ- Standard	Rated 400Hz, adjustable range 320Hz-480Hz continuously adjustable										
ency Custom	45Hz - 500Hz	, 45Hz-1kHz, 30	0Hz - 500Hz, 3	00Hz-800Hz, 30	00Hz-1000Hz						
Property											
nput adjustme	nt rate	≤0.5%F.	S. (Resistance	test)							
Load adjustmer	nt rate	≤1%F.S	≤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.								
Efficiency		≤150kV	A model efficie	ency ≥90%; > 1	50kVA model e	fficiency ≥92%	, ;				
Frequency stabi	ility	≤0.02%	F.S.								
Voltage stability	1	≤0.5%F	S.								
Voltage crest co	efficient	1.414±0	.05								
Voltage unbalar	nce	Three-pl	nase output ≤	1Vrms (no load	or balanced lo	ad)					
Phase difference	e	Load thr	ee-phase balaı	nce or no load :	≤±2°						
Noise		≤65dB(A), use 1m to w	veigh the measu	urement						
	age/phase differenc	Thurs a mile		dependent adji		1:((0.05	0.000 1: 1.1	i			

Program	ming And Readback A	accuracy & Resolution					
	Voltage output progr	amming accuracy	±0.5%F.S.				
Settings	Frequency output pro	ogramming accuracy	±0.01%F.S.				
Settiligs	Voltage setting resolu	ution	0.01V				
	Frequency setting re	solution	0.01Hz				
	Voltage output read-	back accuracy	±0.5%F.S.				
	Current output read	back accuracy	±0.5%F.S.				
Backward	Frequency output re	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	k resolution	0.01Hz				
Protectio	n Function						
Protection	function	Overvoltage, overcurr	ent, internal overheating, short circuit				
Overload ca	apacity	125% current 15s, 150	% current 5s, 200% current 2s, 300% current Stop output immediately				
Memory fur	nction	Parameters of the last	Parameters of the last run				
Preset func	tion	Adjust the output volt	age and frequency online				
Environn	nental Condition						
Environme	nt	Indoor use; Installati	on overvoltage class: II; Pollution level: P2; II equipment				
Operating a	ambient temperature	0°C to 45°C; Choose f	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 env	vironment humidity	10%-95%RH, no cond	ensation				
Altitude			neters above sea level, the power is reduced by 2% per 100 meters, or the maximum working perature 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, int	elligent speed control fan, both sides/front air, rear air				
Transport o	condition	Road transport					
Control F	Panel						
Display		7 inches, LCD LCD dis	play, touch screen				
Display iten	Display item Phase voltage (set va cumulative working		ue & measured value), current measured value, frequency set value, working time, cime, current time and date				
Control fur	Control function Output ON/OFF/Lock		keyboard and touch lock /Reset Restart/reset/setting/status indicator				
Mode of op	peration	Key input/LCD input/s	shuttle knob input (outer ring coarse adjustment/inner ring fine adjustment)				
Control mo	ode	Local control/remote	control				
Programmi	ng function	Step/ladder/gradient					

Product	t model	PSMSU33120	PSMSU33150	PSMSU33180	PSMSU33210	PSMSU33240	PSMSU33300	PSMSU33450			
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 cabinet			
Models	size	*1) Non-standard cabinet above 18U, floor to floor cabinet with movable universal casters and brakes.									
Circuit	mode	IGBT/PWM pu	lse width modulation mode								
Commu mode	ommunication Standard: RS-485 & RS-232 Options: LAN, CAN, USB, GPIB, analog programming and monitoring interface (isolated type)										
Inpu	ıt										
Connect mode	tion	Three-phase t	hree-wire + Grour	nd wire & three-pl	hase four-wire + g	round wire (ABC+	PE/ABCN+PE)				
Input p	hase	Three-phase 3	3Ф								
Input w	aveform	Sinusoidal wa	ave								
Input v	oltage	380Vrms±159	%								
Input fre	equency	47Hz-63Hz									
Ехр	ortation										
Output	phase	Three-phase 3	ЗФ								
Rated	Standard	L-N 0-138Vrms	s is continuously a	ıdjustable, L-L 0-2	40Vrms is continu	uously adjustable					
set voltage	Purchase					djustable; L-N 0-27 nt will be proportic		ly adjustable;			
Datada		289.9A	362.4A	434.8A	507.3A	579.8A	724.7A	1087A			
Rated c	urrent	*The rated current	is calculated based on t	he 138V voltage. If other	r voltages are selected, t	the rated current is calcu	lated based on the sele	ected voltage.			
	ım curr-	347.9A	434.9A 521.8A 608.8A 695.8A 869.7A 1304A								
ent		*Calculate the maximum current based on the 138V voltage. For example, select other voltages to calculate the maximum current.									
Frequ-	Standard	Rated 400Hz, a	adjustable range 320Hz-480Hz continuously adjustable								
ency	Custom	45Hz - 500Hz,	45Hz-1kHz, 300H	z - 500Hz, 300Hz-8	300Hz, 300Hz-100	0Hz					
Prop	perty										
Input a	djustmei	nt rate	≤0.5%F.S. (F	Resistance test)							
Load ad	djustmer	nt rate	≤1%F.S. (resistance test, 45Hz-500Hz output); ≤2%F.S. (resistance test, > 500Hz output)								
Wavefo	orm disto	ortion(THD)	Sine wave, T *Based on 400Hz		00kVA; 100kVA-30	0kVA THD≤3%; A	bove 300kVA THE)≤5% (400Hz outpu			
Efficien	псу		≤150kVA mo	odel efficiency ≥	90%; > 150kVA mo	odel efficiency ≥9	2%;				
Freque	ncy stabi	ility	≤0.02%F.S.								
Voltage	e stability	1	≤0.5%F.S.								
Voltage	e crest co	efficient	1.414±0.05								
Voltage	e unbalar	nce	Three-phase	output ≤1Vrms	(no load or balan	ced load)					
Phase difference		e	Load three-p	hase balance or i	no load ≤±2°						
Tiase C											

Program		Accuracy & Resolution			
Settings	Voltage output progr		±0.5%F.S.		
	Frequency output programming accuracy		±0.01%F.S.		
	Voltage setting resolution		0.01V		
	Frequency setting resolution		0.01Hz		
Backward read	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 (16Bits resolution)		
	Frequency read-back resolution		0.01Hz		
Protection	n Function				
Protection	function	Overvoltage, overcurre	ent, internal overheating, short circuit		
Overload ca	apacity	125% current 15s, 150	% current 5s, 200% current 2s, 300% current Stop output immediately		
Memory function		Parameters of the last run			
Preset func	tion	Adjust the output voltage and frequency online			
Environn	nental Condition				
Environment		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 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 12,000m			
Cooling condition		Forced air cooling, intelligent speed control fan, both sides/front air, rear air			
Transport condition		Road transport			
Control I	Panel	1			
Display		7 inches, LCD LCD display, touch screen			
Display item Phase voltage cumulative wo		Phase voltage (set va cumulative working	value & measured value), current measured value, frequency set value, working time, ng time, current time and date		
Control function Output ON/OFF/Lock		Output ON/OFF/Lock	keyboard and touch lock /Reset Restart/reset/setting/status indicator		
Mode of operation		Key input/LCD input/shuttle knob input (outer ring coarse adjustment/inner ring fine adjustment)			
Control mode		Local control/remote control			

Appearance & Size

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



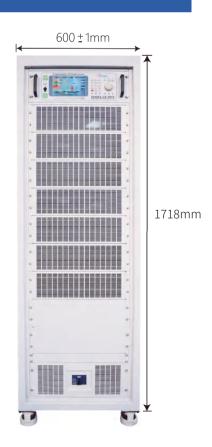




24U 600(W)*800(D)*1190(H)mm 30U 600(W)*800(D)*1453(H)mm 36U 600(W)*800(D)*1718(H)mm

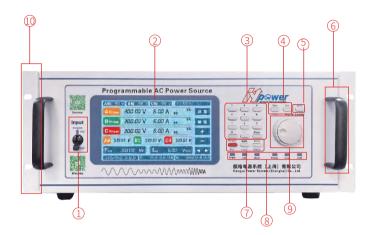






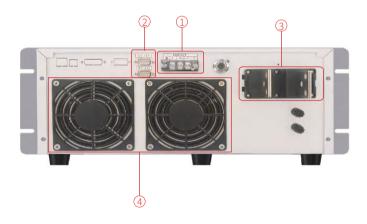
Display And Control Panel

Control Panel



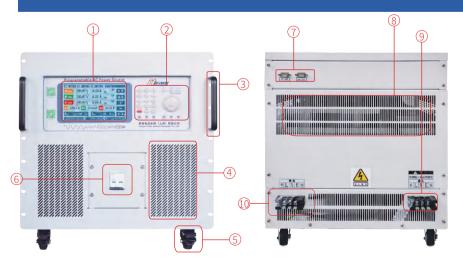
- Power input circuit breaker
- ② LCD display (7 inches, touch screen)
- 3 Numeric input keyboard
- 4 Frequency/voltage or current setting key
- 5 Shift function reuse key
- 6 Case handle
- ① Lock Locks, confirms Enter, and exits Esc Local Local or Reset Restarts Output ON/OFF Switch
- Status light
-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

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Display And Control Panel

Display Interface



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

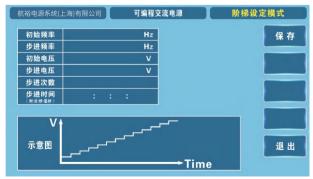
Display Interface



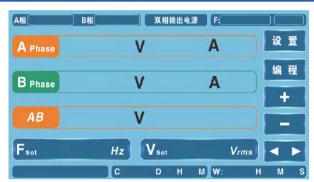
Main interface of single-phase power supply



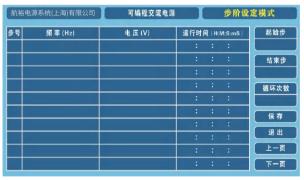
Main interface of three-phase power supply



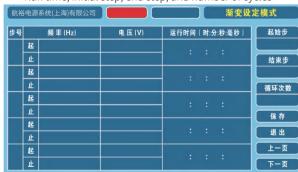
Step setting page can set the required initial frequency, Step frequency, initial voltage, step voltage, step number and step time



Main interface of the dual phase power supply

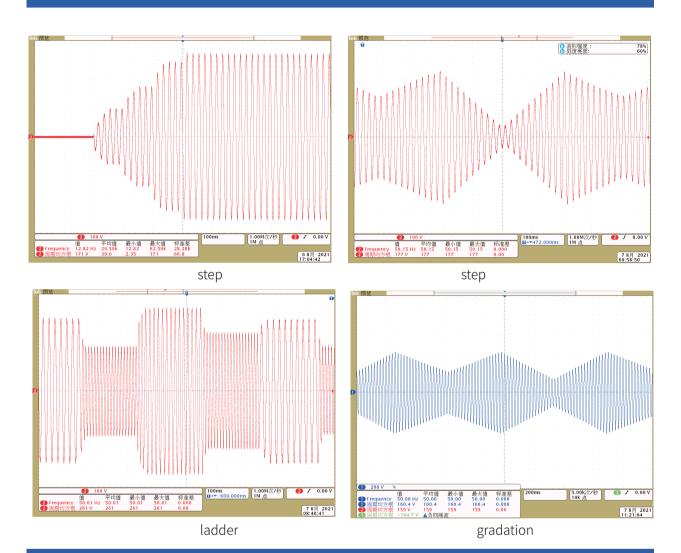


Step setting page can set the required frequency, voltage, Run time, initial step, end step, and number of cycles

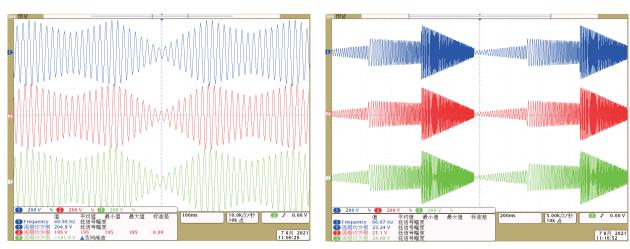


The gradient Settings page can set the required voltage and frequency Run time, initial step, end step

Output Voltage Waveform Of Single-phase Power Supply



Output Voltage Waveform Of Three-phase Power Supply



Three-phase step

Three-phase gradient

Cooperative Customers (Part)

Aerospace & Defense Military Research Lnstitute









Development







China Aerospace

Aerospace science and engineering

Aviation industry

Engineering Group

China Shipbuilding

China Shipbuilding

CASC 803 (Shanghai Aerospace Control Technology Institute)

CASC 800 (Shanghai Aerospace Precision Machinery Research Institute)

CASC 804 (Shanghai Aerospace Electronic Communication Equipment Research Institute) AVIC 607 Institute (China Leihua Electronic Technology Institute)

CASC 805 (Shanghai Aerospace System Engineering Institute)

CASC 808 (Shanghai Precision Measurement and Testing Institute)

CASC 811 (Shanghai Space Power Research Institute)

CASC 812 (Shanghai Satellite Equipment Research Institute)

CASC 801 (Shanghai Space Propulsion Research Institute)

CASC 502 (Beijing Control Engineering Research Institute)

CASC 510 (Lanzhou Institute of Space Technology Physics)

CASIC 206 (Beijing Machinery and Equipment Research Institute)

CASIC 304 Institute (Beijing Great Wall Institute of Measurement and Testing Technology)

CASIC 307 Factory (Aerospace Chenguang Co., LTD.)

33 CASIC (33 Aerospace Science and Industry Institutes)

CASIC 3651 Factory (Guizhou Aerospace Linquan Motor Co., LTD.)

AVIC 615 (Aeronautical Radio Electronics Research Institute of China)

AVIC 618 (Xi 'an Flight Automatic Control Research Institute)

AVIC 105 Factory (Tianjin Aviation Electromechanical Co., LTD.)

AVIC 115 Factory (Shaanxi Aero Electric Co., LTD.)

China Electrical

Corporation

Industry Corporation

AVIC 118 Factory (Shanghai Aviation Electric Appliance Co., LTD.)

AVIC 181 Factory (Wuhan Aviation Instrument Co., LTD.)

AECC 606 Institute (Shenyang Engine Research Institute)

CETC 14 Institute (Nanjing Institute of Electronic Technology)

CETC 21 Institute (Shanghai Micromotor Research Institute)

CETC 23 Institute (Shanghai Transmission Line Research Institute)

CETC 36 Institute (Jiangnan Institute of Electronic Communication)

CETC 38 Institute (East China Institute of Electronic Engineering)

CETC 50 Institute (Shanghai Microwave Technology Research Institute) CETC 51 Institute (Shanghai Microwave Equipment Research Institute)

CETC 54 Institute (Shijiazhuang Communication Measurement and Control

Technology Research Institute)

CETC 55 Institute (Nanjing Institute of Electronic Devices)

CSIC 707 Institute (Tianjin Institute of Marine Instruments)

CSIC 719 Institute (Wuhan Second Ship Design Institute)

CSIC 704 Institute (Shanghai Marine Equipment Research Institute)

CSIC 726 Institute (Shanghai Marine Electronic Equipment Research Institute)

Jiangnan Shipbuilding (Group) Co., LTD

Nanjing Panda Electronics Co., LTD

State-owned 741 Factory (Nanjing Huadong Electronics Group Co., LTD.)

Chinese People's Liberation Army

South Sea Fleet

Fast China Sea Fleet

North Sea Fleet

Navy Plant 701 / Plant 702

4724 Factory (Shanghai Haiying Machinery Factory)

Unit 95861 (Empty Base 1)

Commercial Aviation





Commercial Aircraft Corporation of China

Rockwell Collins





Guangzhou Aircraft Maintenance Engineering Co ITD

Beijing Aircraft Maintenance Engineering Co., LTD

Scientific Research & Third Party Quality Inspection Agency



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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Cooperative Customers (Part)

Military Academies & Local Universities





National University of Aerospace engineering Defense Technology university



Army Engineering University



Air force Engineering University



Naval University of Engineering



Dalian Naval Academy



Naval Aeronautical University



Beijing University of Beijing Institute

Aeronautics and Astronautics of Technology



Harbin Institute of Technology



Harbin Engineering Nanjing University of Nanjing University or Northwestern University Aeronautics and Astronautics Science and Technology Polytechnical University









Zhejiang University





University of Science and Tsinghua University Technology of China

Peking University.

Shanghai Jiao Tong University



Tianjin University Hust (Huazhong University of





Hust (Huazhong University North China Electric of Science and Technology) Power University

Beijing University of Technology

Zhejiang University of Technology

Xi 'an University of Technology

Dalian Maritime University

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Honeywell

Huawei

Xiamen fara





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Saic Motor Corporation





China Automotive Heavy duty Automobile Research BMW Brilliance Research Institute and Development Corporation







Saic Volkswagen



Geely Automobile







Huichuan





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United New Energy



Official wechat: hypower-cn



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 System, 2024 Hangyu Power AC Power Supply Product Manual, version 06.00, 2024 All technical data and instructions are based on the actual product If there is any change, Hangyu Power has the final interpretation right

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