

CONNECTED WORLD SMART DEVICES

SHENZHEN SST POWER



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COMPANY PROFILE

About Us

Shenzhen SST Power Company Limited is a professional power product maker , which focus on providing more reliable, more intelligent, higher quality, and green power protection solutions for all critical electrical equipment to ensure safe operation, increasing productivity and availability, and extending their service life.

To meet customers' demand,we have expanded our manufacturing production factory to 2 for sufficient capacity of production. We have richly-experienced engineering teams and we are dedicated to providing excellent product with professional service. Shenzhen SST Power's professional team is ready to start a new chapter in the global power market.

Our Products

- 1)Voltage Stabilizer
- 2)Online UPS
- 3)Variable Voltage & Frequency Converter
- 4)Transformer
- 5)DC Power Supply
- 6)Portable Power Supply
- 7)Solar inverters & PV energy solutions
- 8)EPS (Emergency power supply)
- 9)Lead-acid maintenance-free battery
- 10)Electric vehicle charging station



Our Mission

Customer satisfaction is our permanent pursuit. To consistently create maximum value for customers, we focus on our customers' market challenges and demands by providing excellent power supply solutions and high quality products as well as the best service, and giving top priority to meeting customers' requirements to enhance their competitiveness and profitability.

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ZW-D



- Large-screen LCD display
Using large LCD screen, can dynamically display the working voltage, working current, and various working conditions.
- Fast Response
Response time within 40 millisecond.
- Wide Input Voltage Swing Ranges
Input Range can be customized from $\pm 15\%$ to $\pm 60\%$
- High Precision for the Output Voltage
Output Voltage Accuracy could be $\pm 1\%$ ($\pm 1\%$ to $\pm 5\%$ adjustable)
- Multi-protection Design
Highly reliable and enduring design. With the protection of over-voltage, under-voltage, over-load, short-circuit, automatic bypass.

ZW-D Single Phase Static Intelligent AC Automatic Voltage Stabilizer

Model	ZW-D						
Power Rating（KVA）	5KVA	10KVA	15KVA	20KVA	30KVA	40KVA	50KVA
Control Method	SCR/Non-Contact（Microprocessor CPU）						
Input							
Rated Voltage	1 x 220VAC (1Phase + N)(230V, 240V option)						
Voltage Range	±15% or ±20% (±15%~±60% customized)						
Frequency	50/60 Hz						
Output							
Rated Voltage	1 x 220VAC (1Phase + N)(230V, 240V option)						
Stabilizing Accuracy	±1%~ ±5% Adjustable						
Power Factor	PF≥0.8						
Efficiency	≥98%						
Response time	≤0.04S						
Delay time(When it is on)	≤5s（Optional）						
Waveform Distortion	≤1%						
System Protection							
Over Voltage	The output voltage is higher than 10%，turn to the bypass automatically in 3~5s						
Under Voltage	The output voltage is lower than 10%，turn to the bypass automatically in 3~5s						
Overload	If over current，the input switch will be tripped in 3~5s						
Short Circuit	When there exists short circuit, the input switch will be tripped in 3~5s						
Bypass	When the AVR fails or is repaired, the power transfer to bypass automatically						
LCD Screen							
Input Voltage	Real-time display of the input voltage						
Output Voltage	Real-time display of output voltage						
Output Current	Real-time display of working current						
Working Status	AVR, Bypass, Fuse Blown, Over-voltage, Under-voltage,Over-load etc.						
Others							
Cooling System	Air						
Insulation Resistance	≥2MΩ						
Voltage-endurance	The whole machine has no breakdown and no arcing phenomena for 2000VAC/ min.						
Noise	<65dB/m						
Working Environment							
Ambient Temperature	0℃-45℃（No condensation）						
Working Humidity	20%-90%						
Dimension							
Size WxDxH(mm)	280×550×300		350×600×400			380×780×830	
Net Weight (KG)	25	30	71	85	90	105	135
Gross Weight (KG)	28	33	80	94	99	118	150
Product specifications are subject to change without further notice.							

ZW-S



- CPU intelligent control, stable and reliable
- Main Control PCB adopts SMT process.
- Independent Phase Control, no contact, no abrasion, maintenance free.
- LCD screen, easy setup with menu button
- Response time $\leq 40\text{ms}$, Withstand all kinds of load
- Overload, Under/Over Voltage, Short Circuit, Bypass protection

ZW-S Three Phase Static Intelligent Voltage Stabilizer

Model	ZW-S											
Power Rating（KVA）	10K	20K	30K	50K	60K	80K	100K	120K	150K	200K	250K	
Control Method	SCR/Non-Contact（Microprocessor CPU）											
Input												
Rated Voltage	3 x 380VAC (3Phase + N)(208V,220V, 230V, 400V, 415V option)											
Voltage Range	±15% or ±20% (±15%~±60% customized)											
Frequency	50/60 Hz											
Output												
Rated Voltage	3 x 380VAC (3Phase + N)(208V,220V, 230V, 400V, 415V option)											
Stabilizing Accuracy	±1%~ ±5% Adjustable											
Power Factor	PF≥0.8											
Efficiency	≥98%											
Response time	≤0.04S											
Delay time(When it is on)	≤5s（Optional）											
Waveform Distortion	≤1%											
System Protection												
Over Voltage	The output voltage is higher than 10% ， turn to the bypass automatically in 3~5s											
Under Voltage	The output voltage is lower than 10% ， turn to the bypass automatically in 3~5s											
Overload	If over current， the input switch will be tripped in 3~5s											
Phase Loss	When there is phase loss, alarm and cut off the input power.(Option)											
Short Circuit	When there exists short circuit, the input switch will be tripped in 3~5s											
Bypass	When the AVR fails or is repaired, the power transfer to bypass automatically											
LCD Screen												
Input Voltage	Real-time display of the input voltage											
Output Voltage	Real-time display of output voltage											
Output Current	Real-time display of working current											
Working Status	AVR, Bypass, Fuse Blown, Over-voltage, Under-voltage,Over-load etc.											
Others												
Cooling System	Air											
Insulation Resistance	≥2MΩ											
Voltage-endurance	The whole machine has no breakdown and no arcing phenomena for 2000VAC/ min.											
Noise	<65dB/m											
Working Environment												
Ambient Temperature	0℃-45℃（No condensation）											
Working Humidity	20%-90%											
Dimension												
Size WxDxH(mm)	380×780×830					430×780×1170		520×850×1220				
Net Weight (KG)	80	85	88	104	144	153	168	213	232	274	323	
Gross Weight (KG)	95	100	109	126	167	181	196	254	270	311	259	
Product specifications are subject to change without further notice.												

ZW-S



- CPU intelligent control, stable and reliable
- Main Control PCB adopts SMT process.
- Independent Phase Control, no contact, no abrasion, maintenance free.
- LCD screen, easy setup with menu button
- Response time≤40ms, Withstand all kinds of load
- Overload, Under/Over Voltage, Short Circuit, Bypass protection
- Remote control(Optional)

ZW-S Three Phase Static Intelligent Voltage Stabilizer

Model	ZW-S										
Power Rating（KVA）	300K	400K	500K	600K	800K	1000K	1200K	1600K	2000K	2500K	3125K
Control Method	SCR/Non-Contact（Microprocessor CPU）										
Input											
Rated Voltage	3 x 380VAC (3Phase + N)(208V,220V, 230V, 400V, 415V option)										
Voltage Range	±15% or ±20% (±15%~±60% customized)										
Frequency	50/60 Hz										
Output											
Rated Voltage	3 x 380VAC (3Phase + N)(208V,220V, 230V, 400V, 415V option)										
Stabilizing Accuracy	±1%~ ±5% Adjustable										
Power Factor	PF≥0.8										
Efficiency	≥98%										
Response time	≤0.04S										
Delay time(When it is on)	≤5s（Optional）										
Waveform Distortion	≤1%										
System Protection											
Over Voltage	The output voltage is higher than 10%，turn to the bypass automatically in 3~5s										
Under Voltage	The output voltage is lower than 10%，turn to the bypass automatically in 3~5s										
Overload	If over current, the input switch will be tripped in 3~5s										
Phase Loss	When there is phase loss, alarm and cut off the input power.(Option)										
Short Circuit	When there exists short circuit, the input switch will be tripped in 3~5s										
Bypass	When the AVR fails or is repaired, the power transfer to bypass automatically										
LCD Screen											
Input Voltage	Real-time display of the input voltage										
Output Voltage	Real-time display of output voltage										
Output Current	Real-time display of working current										
Working Status	AVR, Bypass, Fuse Blown, Over-voltage, Under-voltage,Over-load etc.										
Others											
Cooling System	Air										
Insulation Resistance	≥2MΩ										
Voltage-endurance	The whole machine has no breakdown and no arcing phenomena for 2000VAC/ min.										
Noise	<65dB/m										
Working Environment											
Ambient Temperature	0℃-45℃（No condensation）										
Working Humidity	20%-90%										
Dimension											
Size WxDxH(mm)	1050×700×1500		1200×800×1600		1500×1000×1950		1500×1300×1950		2000×1500×1950		
Net Weight (KG)	450	550	750	950	1200	1400	1600	2250	4200	5200	6200
Gross Weight (KG)	550	650	890	1100	1400	1600	1850	2500	4450	5530	6500
Product specifications are subject to change without further notice.											

Product specifications are subject to change without further notice.

AVR-D



- 100% fully rated power capacity
- CPU intelligent control design to withstand all kinds of loads
- Main Control PCB adopts SMT process.
- Electronic components all adopt imported brands.
- LED screen, easy setup with menu button
- Overload, Under/Over Voltage, Short Circuit, Bypass protection

AVR-D Single Phase Servo AC Automatic Voltage Stabilizer

Item	AVR-D						
Power Rating（KVA）	1KVA	1.5KVA	2KVA	3KVA	5KVA	7.5KVA	10KVA
Control Method	Servo Motor（Microprocessor CPU）						
Input							
Rated Voltage	1 x 220VAC (1Phase + N)						
Voltage Range	150VAC ~ 250VAC						
Frequency	50/60 Hz						
Output							
Rated Voltage	1 x 220VAC (1phase + N)						
Stabilizing Accuracy	±2%						
Power Factor	PF≥1						
Efficiency	≥98%						
Response time	≤0.5S						
Delay time(When it is on)	≤5s（Optional）						
Waveform Distortion	≤1%						
System Protection							
Over Voltage	The output voltage is higher than 10%（adjustable），cut off the output in 3~5s						
Under Voltage	The output voltage is lower than 10%（adjustable），cut off the output in 3~5s						
Overload	If over current，cut off the output in 3~5s						
Bypass	When the AVR fails or is repaired, the power can be transferred to bypass manually						
Short Circuit	When there exists short circuit, the input switch will be tripped in 3~5s						
LED Digital Display							
Input Voltage	Real-time display of input voltage						
Output Voltage	Real-time display of output voltage						
Output Current	Real-time display of working current						
Working Status	AVR, Bypass, Over-voltage, Under-voltage,Over-load etc.						
Others							
Cooling System	Air						
Insulation Resistance	≥2MΩ						
Voltage-endurance	The whole machine has no breakdown and no						
Noise	<65dB/m						
Working Environment							
Ambient Temperature	0℃-45℃（No condensation）						
Working Humidity	20%-90%						
Dimension							
Size WxDxH(mm)	200×220×200			243×342×280		303×402×320	
Net Weight (KG)	7KG	8KG	9KG	14.5KG	18KG	26KG	30KG
Gross Weight (KG)	8KG	9KG	10KG	16KG	20KG	28KG	32KG
Product specifications are subject to change without further notice.							

SVC



- CPU intelligent control, stable and reliable
- Main Control PCB adopts SMT process.
- Electronic components all adopt good-quality brands.
- LED screen, easy setup with menu button
- Withstand all kinds of load
- Overload, Under/Over Voltage, Short Circuit, Bypass protection

TND&SVC AC Automatic Voltage Stabilizer

Item	TND-				SVC-					
Power Rating（KVA）	10KVA	15KVA	20KVA	30KVA	10KVA	15KVA	20KVA	30KVA	50KVA	60KVA
Control Method	Servo Motor（Microprocessor CPU）									
Input										
Rated Voltage	1x 220VAC (1Phase+N)				3 x 380VAC (3Phase + N)(208V,220V, 230V, 400V, 415V option)					
Voltage Range										
Frequency										
Output										
Rated Voltage	1 x 220VAC (1phase + N)				3 x 380VAC (3Phase + N)(208V,220V, 230V, 400V, 415V option)					
Stabilizing Accuracy										
Power Factor										
Efficiency					±2%					
Response time					PF≥0.8					
Delay time(When it is on)					≥98%					
Waveform Distortion					≤0.5S					
System Protection										
Over Voltage	The output voltage is higher than 10% ， the screen indicates over voltage.									
Under Voltage	The output voltage is under than 10% ， the screen indicates under voltage.									
Overload	If over current, cut off the input in 3~5s									
Phase Loss	When there is phase loss, alarm and cut off the input power.									
Short Circuit	When the load device is short circuited, cut off the input power									
Manual Bypass	When any failures, can be turned to the bypass manually									
LED Screen										
Input Voltage	Real-time display of the input voltage									
Output Voltage	Real-time display of output voltage									
Output Current	Current Percentage (Amps) drawn by the connected load									
Others										
Cooling System	Air									
Insulation Resistance	≥2MΩ									
Voltage-endurance	The whole machine has no breakdown and no									
Noise	<65dB/m									
Working Environment										
Ambient Temperature	0℃-45℃(No condensation)									
Working Humidity	20% -90%									
Dimension										
Size WxDxH(mm)	360×480×580				320×580×530		360×680×550		400×680×880	
Net Weight (KG)	55	65	85	95	65	75	105	122	126	140
Gross Weight (KG)	70	80	100	110	80	90	130	147	150	165
Product specifications are subject to change without further notice.										

SBW



- CPU intelligent control, stable and reliable
- Main Control PCB adopts SMT process.
- Electronic components all adopt imported brands.
- LCD screen, easy setup with menu button
- Withstand all kinds of load
- Overload, Under/Over Voltage, Short Circuit, Bypass protection

SBW Three Phase Servo AC Automatic Voltage Stabilizer

Item	SBW-											
Power Rating（KVA）	80KVA	100KVA	120KVA	150KVA	200KVA	250KVA	300KVA	400KVA	500KVA	600KVA	800KVA	1000KVA
Control Method	Servo Motor（Microprocessor CPU）											
Input												
Rated Voltage	3 x 380VAC (3Phase + N)(208V,220V, 230V, 400V, 415V option)											
Voltage Range	±20%											
Frequency	50/60 Hz											
Output												
Rated Voltage	3 x 380VAC (3Phase + N)(208V,220V, 230V, 400V, 415V option)											
Stabilizing Accuracy	±2%											
Power Factor	PF≥0.8											
Efficiency	≥98%											
Response time	≤0.5S											
Delay time(When it is on)	≤5s（Optional）											
Waveform Distortion	≤1%											
System Protection												
Over Voltage	The output voltage is higher than 10%（adjustable），cut off the input in 3~5s											
Under Voltage	The output voltage is lower than 15%（adjustable），cut off the input in 3~5s											
Overload	If over current，cut off the input in 3~5s											
Phase Loss	When there is phase loss, alarm and cut off the input power.											
Short Circuit	When the load device is short circuited, cut off the input power											
Bypass	When the AVR fails or is repaired, the power transfer to bypass manually (Option)											
LCD Screen												
Input Voltage	Real-time display of the input voltage											
Output Voltage	Real-time display of output voltage											
Output Current	Real-time display of working current											
Working Status	AVR, Bypass, Fuse Blown, Over-voltage, Under-voltage,Over-load etc.											
Others												
Cooling System	Air											
Insulation Resistance	≥2MΩ											
Voltage-endurance	The whole machine has no breakdown and no											
Noise	<65dB/m											
Working Environment												
Ambient Temperature	0℃-45℃（No condensation）											
Working Humidity	20%-90%											
Dimension												
Size WxDxH(mm)	650×1100×1200				700×1200×1500				800×1300×1700		1500×1600×2000×3door	
Net Weight (KG)	220	240	250	290	300	600	800	9500	1200	1350	1550	1750
Gross Weight (KG)	260	280	290	330	350	650	850	1000	1300	1450	1700	1900
Product specifications are subject to change without further notice.												

ZWOD



- Large-screen LCD display
- Fast Response. Response time within 40 millisecond.
- Wide Input Voltage Swing Ranges ,can be customized from - $\pm 15\%$ to $\pm 60\%$
- High Precision for the Output Voltage. Accuracy can be $\pm 1\%$ ($\pm 1\%$ to $\pm 5\%$ adjustable)
- Multi-protection ,over-voltage, under-voltage ,over-load, short-circuit, automaticbypass.
- Independent Phase Control
- Rain Proof Enclosure, Corrosion Resistant

INPUT	Rated Voltage	Phase Voltage AC 220V, Line Voltage AC 380V (Or customized)
	Sabilized Voltage Range	3P4W+G 304V-456V (Or customized)
	Frequency	50HZ/60HZ
OUTPUT	Rated Voltage	Phase Voltage AC 220V, Line Voltage AC 380V
	Center Voltage	$\pm 7\%$ (can be adjusted)
	Output Accuracy	$\pm 1\%$
	Response Time	$\leq 40\text{ms/Step}$
	Waveform Distortion	Do not produce additional waveform distortion (Static)
	Efficiency	$\geq 99\%$
	Three-phase Unbalance Factor	Three-phase voltage balance automatically, incrimination $\leq 2\%$
PROTECTION	Over-voltage	The output phase voltage is higher than 10% (242V), Uninterrupted to bypass
	Under-voltage	The output phase voltage is lower than 10% (198V) , Uninterrupted to bypass
	Phase Loss	Yes, uninterrupted to bypass (Option)
	Overload	Electric detection, overload 1 minute, the output would be cut off.
	Over-current	Electronic detection and circuit breaker dual protection.
	Short Circuit	Electronic detection and circuit breaker dual protection.
	Bypass	Manual bypass and automatic bypass. (Option)
INSTRUCTION	Voltage	A、B、C、 Σ ABC Three-phase shows respectively true and effective values
	Current	A、B、C、 Σ ABC Three-phase shows respectively true and effective values
	Working State	AVR/Bypass
	Abnormal	Over-voltage, under-voltage, over-load, fuse blowing
CONTROL MODE		DSP operate metering chip intelligent control technology
WORKING MODE		With automatic voltage regulation and the bypass, two working mode.
VOLTAGE REGULATION MODE		Three-phase adjust voltage separately
OVERLOAD CAPACITY		3 times the rated current, 1 second, can be adapted to the resistive, inductive, capacitive and impact load; can withstand the instantaneous overload impact. Stabilizer continuously output the rated current. When temperature rise stably, overload 10% for 30 minutes is allowed. Short-term (5 minutes) overload current (1.6 times rated value) is also allowed.

HHF



- Online double conversion, 1/1 Phase pure sine wave online UPS.
- With smart design and high reliable.
- Can be connected with all kinds of generators.
- Intelligent battery management.
- Powerful overload ability.
- Compact size, smart design, high reliability.
- UPS charging current can be adjustable from 1-12A

Single Phase High Frequency 1-30KVA Online UPS (Transformer-less)

Model	HHF-1101	HHF-1102	HHF-1103	HHF-1106	HHF-1110	HHF-3310	HHF-3315	HHF-3320	HHF-3330
Power Rating	1KVA/800W	2KVA/1.6KW	3KVA/2.4KW	6KVA/4.8KW	10KVA/8KW	10KVA/8KW	15KVA/12KW	20KVA/16KW	30KVA/24KW
Phase	Single Phase Input, Single Phase Output					Three Phase Input, Single Phase Output			
Input									
Voltage Range	115-276VAC					210-487VAC			
Frequency Range	47~53Hz or 57~63Hz								
Factor	0.99@ Rated voltage (100% load)								
Output									
Output Voltage	208/220/230VAC/240V±1%								
Frequency Range	Synchronization with input (mains mode)50Hz±01Hz or 60Hz±01Hz (battery mode)								
Power Factor	0.8								
Transfer Time	0ms								
Output Waveform	pure sine wave								
Over-load Ability	In the mains state, load <110%,30 minutes,110%, load <130%, 5 minutes,130%, load <10s								
Battery									
Long-run Machine	DC Volt	36VDC	72VDC	96VDC	192VDC	16pcs (16-20pcs optional)			
	Size	145*282*220	145*397*220		190*415*318	190*442*318	250*592*576		250*815*826
Environment									
Humidity	0-90% (no condensation)								
Noise	Less Than 45dB@ 1 Meter								
Control Management									
Smart RS-232 Optional USB		Support Windows ®2000/2003XP/Vista/2008,Windows ®/8,Linux.Unix,and MAC							
SNMP (Optional)		Power management Supports SNMP management and network management							

JHF



- JHF Series is a full DSP controlled, adopting latest 3-Level-Inverter technology to meet the critical loads.
- Output PF=1.0, overall efficiency above 95%
- Online double conversion, 1/1 Phase pure sine wave online UPS.
- With smart design and high reliable, this system overall efficiency.
- Can be connected with all kinds of generators to save customers costs.
- Intelligent battery management, UPS charging current can be adjustable from 1-12A;
- Powerful overload ability with output short circuit protection technology which can high make sure the UPS reliability and system safety under critical status.;
- Compact size, smart design, high reliability.

Model	JHF-1101(L)	JHF-1102(L)	JHF-1103(L)	JHF-1106(L)	JHF-1110(L)
	JHF-1101(L)-RM	JHF-1102(L)-RM	JHF-1103(L)-RM	JHF-1106(L)-RM	JHF-1110(L)-RM
Capacity	1KVA/1KW	2KVA/2KW	3KVA/3KW	6KVA/6KW	10KVA/10KW
Host Machine Specification					
UPS Structure	Online Double Conversion				
Appearance	Tower or Rack mount structure design				
Overall Efficiency	> 95%（98.5% under ECO mode）				
Noise（In 2 meters）	< 50dB				
Working Temp	-10-40℃				
Storage Temp	-15-60℃（without batteries）				
Humidity	< 20-95% Non-Condensing				
Maintenance bypass	/			optional	
protection	Overload, Short-Circuit, Over Temp., Utility Power Voltage High/low, BAT Voltage High/low				
Alarm	Mains abnormal or Fault, BAT Voltage High/low,over load、UPS fault, shot circuit etc				
Cabinet Standard	IP20				
Cooling System	Intelligent Speed Control Cooling Fan				
Altitude	<11000M, Without Derated, 1000m <altitude< 1500m, refer to IEC62040				
Rectifier Specification					
Input Voltage	220Vac（208/220/230/240Vac available）				
Input Voltage Range	100%load: 180-300Vac, 50% load: 110-300Vac			110~300Vac 110~176VAC/276~300VAC	
Input Frequency Range	44~56Hz or 54Hz~66Hz				
Input PF	0.99				
THDI	≤ 3% linear load,≤ 5% Non-linear load				
Output Specification					
Output Voltage	220Vac（208/220/230/240Vac available）				
Output PF	1.0（0.9 default type）				
Output Voltage Regulation	220Vac±1%（Static Load）; 220Vac±2%（50-0% Sudden Change）; 220Vac±5%（100-0% Sudden Change）				
Output Freq（Battery）	50Hz±0.1%（Battery mode）60Hz can be customized				
Wave form	Pure sine wave				
Distortion	< 2%（Linear Full Load）, < 4%（100% Non-Linear Full Load）				
Overload	125% More than 1 Min; >150% bypass mode and UPS turn off				
Crest Ratio	3：1				
Inverter efficiency	> 95%				
Short circuit	Circuit Auto Protection, Output Voltage/Current 0				
Noise Suppression	EMI/RFI Wave Filter				
Battery voltage low	Shut down protection				
Dynamic Response	3% at full load, recovering in 20ms				
Auto restart function	available				
Software set on/off	available				
Bypass Specification					
Static Bypass Transfer Time	0ms（the Static breaker phase lock control technology）				
Static Bypass Range	80Vac±5%~285Vac±5%				
Battery Specification					
Type	Sealed Lead Acid Maintenance Free				
Model Rated Volts/Units	12V/7Ah*2nos	12V/7Ah*4nos	12V/7Ah*6nos	12V/7Ah*16nos	
Std. Built-in BAT type backup time	5-15mim	5-15mim	5-15mim	5-15mim	5-15mim
Ext. Model rated voltage	36Vdc	72Vdc	96Vdc	192 Vdc default /240Vdc (optional)	
Charging current	Std.Built-in model 1A、Ext. model 5-10A			Std. Built-in model 1A、Ext. model 6-12A	
Communication Specification					
Communication Port	Std.RS232/EPO; SNMP/485/dry contact（optional）				
Remote Software	Multi-functional Monitoring System, Online and BAT Mode Status, utility fault, BAT Fault, Remote Control				
Physical Parameters					
Size mm （W×D×H）	Std. type	145×285×215	145×400×215	190×420×318	190×390×705
	Ext. type			145×400×215	190×360×335
	RM/RT type	440×400×88/2U			440×450×88/2U
Weight Kg		9/5	15/7	20/8	57/12
		5	7	8	12
					67.5/12.5
					12.5

Note: In the model name "L" represent "long run battery external type. Specification are subject to change without further notice.

RHF



- Realize online double conversion
- Output power factor up to 0.8
- Wide mains input range (110 V - 300 V)
- True double-conversion
- Compatible generator
- Optional exquisite SNMP card can be alone or with USB, RS232 together to monitor perfectly
- Through the display, simple operation control, and comprehensive shows the status of monitoring UPS

High Frequency Single Phase Online UPS													
Items		RHF-1101K (L)		RHF-1102K (L)		RHF-1103K (L)		RHF-1106K (L)		RHF-1110K (L)			
Phase		Single Phase											
Power Rating		1000 VA / 800 W		2000 VA / 1600 W		3000 VA / 2400 W		6000 VA / 4800 W		10000 VA / 8000 W			
Input													
Input Voltage Range/Window		55-150 VAC or 110-300 VAC at 50% load 85-140 VAC or 160-280 VAC at 100% load						110-300 VAC (Based on load at 50%) 176-300 VAC (Based on load at 100%)					
Frequency		40Hz ~ 70 Hz						46Hz ~ 54 Hz or 56Hz ~ 64 Hz					
Power Factor		100% load ≥ 0.99											
Output													
Output Voltage		200/208/220/230/240VAC						208/220/230/240VAC					
Voltage Range (Battery Mode)		± 1%											
Frequency(Synchronization correction range)		47~ 53 Hz or 57 ~ 63 Hz						46Hz ~ 54 Hz or 56Hz ~ 64 Hz					
Frequency (Battery Mode)		50 Hz ± 0.25 Hz or 60Hz ± 0.3 Hz						50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz					
Surge Ratio		3:1											
Harmonic Distortion		≤ 3% THD (Linear Load) ≤ 6% THD (Nonlinear Load)						≤ 3% THD (Linear Load) ≤ 5% THD (Nonlinear Load)					
Transfer Time	AC to DC	0ms											
	Inversion to Bypass	4 ms (Standard)						0ms					
Waveform(Battery Mode)		Pure Sine Wave											
Efficiency													
Bypass Mode		88%		88%		90%		92%		93%			
Battery Mode		83%		85%		88%		90%		91%			
Battery													
Standard model	Battery Model	12V / 9AH											
	Quantity	2		4		6		16	20	16	20		
	Max Charging Current	1.0A (Max)										Preset:1.0 A ± 10%, Max.:2.0A ± 10%	
	Charging Voltage	27.4VDC ± 1%		54.7VDC ± 1%		82.1VDC ± 1%		218.4 VDC ± 1%	273 VDC ± 1%	218.4 VDC ± 1%	273 VDC ± 1%		
Long Run model	Battery Model	It ups to the User's requirement											
	Quantity	2	3	4	6	6	8	16-20(Adjustable)**					
	The Max Charging Current	1A/2A/4A/6A(Adjustable)						1A/2A/4A/6A(Adjustable. 6A(Only sutible for 16pcs batteries)					
	Charging Voltage	27.4VDC ± 1%	41.0VDC ± 1%	54.7VDC ± 1%	82.1VDC ± 1%	82.1VDC ± 1%	109.4VDC ± 1%	273VDC ± 1% (When 20pcs batteries)					
Apperance													
LCD or LED Display		Load size, Battery power, Mains Supply Mode, Battery mode,Failure instruction											
Alarm													
Battery Mode		Sound every 4 seconds											
Low Battery		Sound every second											
Over-load		Sound every second											
Fault		Continuous sounding											
Physical Performance													
Standard model	Size,WxDxH(mm)	145 X282 X 220		145 X397 X 220		190 X421 X 318		190 x369x688		190 x442 x 688			
	Net Weight(KG)	9.8		17		27.6		61	74	66	75		
Long Run Model	Size,WxDxH(mm)	145 X282 X 220		145 X397 X 220				190 x369 x 318		190 x442 x 318			
	Net Weight(KG)	4.1		6.8		7.4		12		16	18		
Operating Environment													
Temperature & Humidity		Relative humidity 20-90 % and temperature 0- 40°C (No condensation)						Relative humidity 0-95 % and temperature 0- 40°C (No condensation)					
Noise		less 50dBA @1 Meter						Less 55dBA @ 1 Meter		Less 58dB @ 1 Meter			
Control Management													
Smart RS-232 / USB		Support Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux, Unix, and MAC											
SNMP(Optional)		Power management support SNMP management and network management											

RHF



- 50Hz / 60Hz frequency conversion mode
- ECO mode provides energy-saving efficiency (ECO)
- Emergency Power Off (EPO)
- Compatible generator
- Adjust the number of batteries
- Built-in tray switch for easy maintenance
- N + X parallel redundant applications (up to 3)

RHF 3P/3P 10KVA-30KVA Online UPS

Model		RHF-3310K(L)	RHF-3315K(L)	RHF-3320K(L)	RHF-3330K(L)
Phase		Three Phase In and Three Phase Out			
Power Rating		10KVA/8KW	15KVA/12KW	20KVA/16KW	30KVA/24KW
Input					
Rated Voltage		3X380V(3phase+N)			
Input Voltage Range/Window		305-478VAC ± 3% @ 100% load 190-520VAC ± 3% @ 50% load			
Frequency		46~54 Hz 或 56~64 Hz			
Power Factor		≥0.99 @ 100% load			
Output					
Output Voltage		3X380V(3Ph+N)			
Voltage Range (Battery Mode)		±1%			
Frequency(Synchronization)		46~54 Hz or 56~64 Hz			
Frequency (Battery Mode)		50Hz ±0.1Hz or 60 Hz ± 0.1Hz			
Surge Ratio		3: 1 (maximum)			
Harmonic Distortion		≤2%THD(linear load) ; ≤5%THD (nonlinear load)			
Transfer Time	AC to DC	0			
	Inverter to Bypass	0			
Waveform(Battery Mode)		Pure sine wave			
Efficiency					
Mains Mode		90.5%	91.5%	91.5%	91.3%
ECO Mode		96.0%			
Battery Mode		87.0%	88.0%	88.0%	88.0%
Battery					
Standard Model	Battery Model	12V / 9Ah			
	Quantity	16pcs	16pcs×2 set		20pcs×3set (18-20 adjustable)
	Charging Time	9 hours recover to 90% capacity			
	Max Charging Amp	1.0A			
	Charging Voltage	218.4VDC ± 1%			273VDC±1% (base 20pcs)
Long Run Model	Battery Model	It ups to the User's requirement			
	Quantity	20pcs(preset. 16-20pcs, adjustable)			
	Max Charging Amp	4.0A			12.0A
	Charging Voltage	273VDC ± 1%(base batteries quantity is 20pcs)			
Display					
LCD Display		Load size, battery capacity, mains supply mode, battery mode, bypass mode, fault indication			
Alarm					
Battery Mode		Sound every 4 seconds			
Low Battery		Sound every second			
Over-load		Sound every half second			
Failure		Continuous sounding			
Physical Performance					
Standard Unit	Size,WxDxH(mm)	250 X 592 X 826			300 X 815 X 1000
	Net Weight(KG)	96	146		233.5
Long Run Unit	Size,WxDxH(mm)	250 X 592 X 576			250 X 815 X 826
	Net Weight(KG)	32	35		64
Operating Environment					
Temperature & Humidity		Relative humidity 0-95 % and temperature 0- 40°C (No condensation)			
Noise		Less 60dB @ 1 meter	Less 65dB @ 1 meter		
Control Management					
Smart RS-232 / USB		Support Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux, Unix, and MAC			
SNMP(Optional)		Power management support SNMP management and network management			

SHF



- Zero switching time, double conversion pure online type.
- Adopt DSP digital control technology
- Ultra-wide input voltage frequency range 55-145VAC
- Excellent load adaptability
- Can be used with generator
- High input power factor 0.99
- Reliable Product Design
- Dust-proof design

Single Phase 1KVA to 6KVA Low-Voltage 110V/120V/127V Online UPS

Model		SHF-1K-LV	SHF-1KL-LV		SHF-2K-LV	SHF-2KL-LV	SHF-3K-LV	SHF-3KL-LV	SHF-6K-LV	SHF-6KL-LV	
Power Rating	VA/W	1kVA/800W			2kVA/1.6kW			3kVA/2.4kW		6kVA/5kW	
Type		Double Conversion Online UPS									
Input & Output		Single-phase input/Single-phase output									
Input	Input	Single-phase two-line (L,N)+ Ground									
	Input Voltage	L-N: 55~145VAC									
	Frequency	40Hz-70Hz									
	Power Factor	≥0.99									
Output	Output	Single-phase two-line (L,N)+ Ground									
	Rated Voltage	110/115/120/127VAC									
	Accuracy	±2%									
	Frequency	50/60±4Hz(Phase lock follows the mains) / 50/60Hz±0.1%(Fixed frequency mode)									
	Output Wave	Pure sine wave									
	Output Distortion (THDV%)	<2%(Linear load)									
		<7%(Non-linear load)									
	Overload Capacity	1min@105%~125% rated load								10min@105%~125%	
		10s@125%~150% rated load								60s@125%~150%	
		0.5S@>150% rated load								0.5S@>150%	
Efficiency	Mains Mode	88%			89%			90%		92%	
	Battery Mode	85%			86%			87%		90%	
Battery and Charger	Battery voltage/quantity	24VDC/2pcs	36VDC	48VDC/4pcs		72VDC		72VDC/6pcs	96VDC	144VDC/	192VDC
		Internal Battery	External	Internal Battery		External		Internal Battery	External	12pcs	External
			Battery			Battery			Battery	Internal Battery	Battery
	Battery Capacity	12V/7AH	External battery decision	12V/7AH		External battery decision	12V/7AH		External battery decision	12V/7AH	External battery decision
	Backup Time	Half load ≥ 6 minutes		Half load ≥ 6 minutes			Half load ≥ 6 minutes				
	Charge Current	Standard machine (battery built-in): 1A Long-term machine (external battery): 4A									
	Structural Shape	Cabinet	Tower/Rack								
Tower Type		1KS: 145(W)X220(H)x250(L)mm								6KS-LV	
		1K, 2KS: 145(W)X220(H)x318(L)mm								190(W)x360(H)x528(L)	
		2K: 145(W)X220(H)x390(L)mm									
		3K/3KS: 190(W) x 318(H) x 368(L)mm									
Rack size		3KR/5KRS: 438mm(W) x 88mm(2U)(H) x 500mm(D) All other models L/S: 438mm(W) x 88mm(2U)(H) x 360mm(D)									
Weight Kg	8.9	4.2	14		5.9		21.6		8.3	37	16
Human Machine Interface	LCD Display	Display show input and output voltage, frequency, load percentage, working mode, machine status									
	Communication Interface	Standard RS232									
	Expansion card slot	Optional network monitoring card, support PC, mobile phone remote monitoring, MODBUS, dry contact card.									
Environment	Temperature	-10~45°C									
	Humidity	0-98% (No condensation)									
	Noise	<50dB @ 1 meters									

HLF



- Digital control to achieve online double conversion
- Built-in output isolation transformer
- Industrial design for a variety of harsh conditions
- Front maintenance design
- Adapt to all kind of load.
- Can be up to 4 parallel operation
- Rich communication interface
- Large Color Touch LCD Screen with multi-functional buttons. Safe and Reliable
- All devices will be aged and tested for more than 24 hours

HLF-33 Low Frequency Double-conversion Online UPS(Transformer -type)

Power Rating (KVA)	10KVA	15KVA	20KVA	30KVA	40KVA	60KVA	80KVA	100KVA	120KVA	160KVA	200KVA	250KVA	300KVA
Input Voltage Range	285-480VAC \pm 25%, Input 3P+N+G												
Output frequency	50/60Hz \pm 5Hz Automatic identification												
Output Power Factor	>0.98												
Output Voltage	380VAC(or 400VAC) \pm 1%												
Output Frequency	Automatic tracking of input frequency												
Output Waveform	Pure sine wave												
Power Factor	0.8												
Overload Capacity	10min/3min/1min at 110%/125%/150% overload												
Protection	Electronic short-circuit protection Current limiting protection is 1.3 times the rated current												
Transfer Time	0ms												
Battery Voltage	348VDC(29/30/31/32pcs adjustable)												
LED	Indicates input, inverter, bypass, battery status												
LCD	Display input, output voltage, frequency, battery voltage, load percentage, machine temperature												
Communication Port	232, 485, USB, Dry contact, intelligent expansion card slot												
Waveform Distortion	Linear load $\leq 3\%$, nonlinear load $\leq 5\%$												
Operating Temperature	0-40 $^{\circ}$ C												
Relative Humidity	0-95% No condensation												
Storage Temperature	-25 $^{\circ}$ C—55 $^{\circ}$ C												
Noise		<60 dB			<65 dB	<70 dB							
Net Weight(kg)	140	205	278	318	400	416	554	785	1100	1150	1200		
Gross Weight(kg)	190	245	315	360	460	430	590	815	1150	1200	1250		
Size (D×W×H)mm	670*410*950			820*450*1060	850*490*1230	900*560*1300		1000*650*1600	1200*850*1800		1400*850*1870		

JLF



- Advanced SCR Rectifier and IGBT Inverter Technology.
- Output isolated transformer to fit 200、220、230、240Vac, 50/60Hz Grid Systems;
- Wide Input Range from Single Phase 160-280Vac、3 Phase 286-475Vac ,
- High Overload Ability
- Overall Efficiency 85%. 98% under ECO Mode ;
- Full-Digitized Non-master slave parallel redundancy technology.
- Large Color Dot-matrix LCD+LED Screen
- Battery Self-testing can be done on the LCD directly.
- Monitoring can be done by WAN/LAN SNMP adapter or Cloud Monitoring Adapter.

Online Low Frequency UPS 1-30KVA (1/1 Phase, 3/1 Phase)

Model	JLF-1101	JLF-1102	JLF-1103	JLF-1106	JLF-1108	JLF-1110	JLF-1115
Capacity	1KVA/0.8KW	2KVA/1.6KW	3KVA/2.4KW	6KVA/4.8KW	8KVA/6.4KW	10KVA/8KW	15KVA/12KVA
Host Machine Specification							
UPS Structure	Online Double Conversion						
Efficiency (AC-AC)	> 85%						
Noise (In 2 meters)	< 50dB						
Working Temp	-10~40℃						
Storage Temp	-25 ~ 60℃ (Without Batteries)						
Humidity	< 95%Non-Condensing						
Safety Standard	IEC62040						
Parallel Redundancy	Available						
Protections	Overload, Short-Circuit, Over Temp., Utility Power Voltage High/low, BAT Voltage High/low						
DC Start	Available						
Display	LCD Display: Multi-Language with all kinds of messages. Input Output Status, ECO Mode Settings, INV. Temp. TX Status Calendar, Time, Serial Number, Model, Structure, History Logs, Battery Test. LED Indicators: UPS States Indicator						
Cabinet Standard	IP20						
Cooling System	Intelligent Speed Control Cooling Fan						
Elevation	< 1000M , Without Derated						
Rectifier Specification							
Input Voltage	220/200/230/240Vac Single Phase						
Input Voltage Range	160-280Vac						
Input Frequency Range	50Hz±5%						
Soft-Start	> 20 Seconds						
Output Specification							
Output Voltage	220/200/230/240Vac						
Output PF	0.8						
Output Voltage	220Vac±1% (Static Load) , 220Vac±2% (50~0% Sudden Change)						
Output Freq	50Hz±0.1% (BAT Mode)						
Distortion	< 1% (Linear Full Load) , < 3% (Non-Linear Full Load)						
Frequency	46-54Hz						
Output Waveform	Pure Sine Wave						
Overload	> 125%: More than 1 Min ; > 150%: More than 300ms					> 125%: More than 10 Mins ; > 150%: More than 1 Min	
Noise Suppression	EMI/RFI Wave Filter						
Crest Ratio	3 : 1						
Short-Circuit	Circuit Auto Protection , Output Voltage/Current 0						
Output Abnormal	INV. Output Auto-Locked Protection						
Bypass Specification							
Static Bypass Transfer Time	0ms						
Static Bypass Range	220Vac (-15~+15%)						
Frequency Range	±1Hz, ±2Hz,±3Hz Adjustable						
Bypass -> INV Transfer Time	2ms						
Frequency	0.5-2hz/s						
Manual Maintenance Bypass	None					Available	
Alarm Specification							
Alarm	Utility Power Fault, BAT Voltage Low, Overload,UPS Fault						
Battery Specification							
Type	Sealed Lead Acid Maintenance Free						
Model Rated Volts/Units	72Vdc /6Units	72Vdc /6Units	96Vdc /8Units	192Vdc or 96Vdc	192Vdc /16Units	192Vdc /16Units	192Vdc /16Units
Built-in BAT.Model Charging Current	1A	1A	1A	1A	1A	1A	1A
Ext. Model Charging Current	Std. 5A	Std. 5A	Std. 5A	Std. 5A	Std. 5A	Std. 5A	Std. 5A
BAT Low	Shutdown Protection						
Communication Specification							
Communication Port	Rs232 (Std.) ; /SNMP/RS485/ Dry Contact (Optional Accessory)						
Remote Software	Multi-functional Monitoring System, Online and BAT Mode Status, BAT Fault, Remote Control						
Physical Parameters							
Ext. Size mm (W×D×H)	220×510×395			220×610×475	220×610×715	220×610×715	220×610×715
Ext. Net Weight Kg	22.5	23.5	29	44	63	60	70

JLF



- Advanced SCR Rectifier and IGBT Inverter Technology.
- Output isolated transformer to fit 200、220、230、240Vac, 50/60Hz Grid Systems;
- Wide Input Range from Single Phase 160-280Vac、3 Phase 286-475Vac ,
- High Overload Ability
- Overall Efficiency 85%. 98% under ECO Mode;
- Full-Digitized Non-master slave parallel redundancy technology.
- Large Color Dot-matrix LCD+LED Screen
- Battery Self-testing can be done on the LCD directly.
- Monitoring can be done by WAN/LAN SNMP adapter or Cloud Monitoring Adapter.

Model	JLF-3310	JLF-3315	JLF-3320	JLF-3330	JLF-3340	JLF-3360	JLF-3380	JLF-33100	JLF-33120	JLF-33160	JLF-33200
Capacity	10KVA 9KW	15KVA 13.5KW	20KVA 18KW	30KVA 27KW	40KVA 32KW	60KVA 54KW	80KVA 72KW	100KVA 90KW	120KVA 108KW	160KVA 144KW	200KVA 180KW
Host Machine Specification											
UPS Structure	Online Double Conversion										
Appearance	Low Frequency with Output Isolated Transformer										
Overall Efficiency (AC-AC)	90%										
Noise (In 2 Meters)	< 50-60dB										
Working Temp.	-10-40℃										
Storage Temp.	-25 ~ 60℃ (Without Batteries)										
Humidity	< 95%, Non-Condensing										
National Standard	EN50091-1/IEC950										
International Standard	EN 50091-1/2; EN62040-1; EN62040-2										
Parallel Redundancy	Available upto 8 units										
Protection	Overload, Short-Circuit, Over Temp., Utility Power Voltage High/low, BAT Voltage High/low										
ECO	Available										
EPO Function	Available										
DC Start	Available (Not Recommended)										
Generator Compatibility	Available										
Display	5-7 inch LCD color touch screen + LED working indicators including Input/Output Voltage, Frequency, Current, Power, Load Capacity, Serial Number, Operational Mode, Discharge Time, History Logs, All settings including can be done on the front panel, including battery voltage, input and output voltage, frequency, parallel setting and etc.										
Mute	Auto										
Cabinet Standard	IP20										
Cooling System	Intelligent Speed Control Cooling Fan										
Elevation	<1500M, Without Derated										
Rectifier Specification											
Input Voltage	380Vac+N+W (3 phase + PE)										
Input Voltage Range	285-475Vac										
Input Frequency Range	45-65Hz										
Input PF	0.95 (with input filter)										
THDI	< 5% (with optional accessories)										
Dual Input Availability	Available(Optional accessories)										
Input Mis Phase Protection	Misphase Alarm, UPS will not be started										
Input Phase lost Protection	Phase Lost Alarm, UPS work on Bypass mode										
Soft-Start	> 20 Seconds										
Input Current	23A	31A	39A	54A	70A	100A	125A	160A	192A	256A	320A
Output Specification											
Output Voltage	Line Voltage: 380× (1±1%) AC or Phase Voltage: 220× (1±1%) AC										
Output PF	0.8/0.9 (No lag)										
Output Voltage Regulation	380Vac±1% (Static Load) : 380Vac±2% (50-0% Sudden Change) : 380Vac±3% (100-0% Sudden Change)										
Output Freq	±8% at 50Hz; Online Mode tracking input and bypass freq.; ±0.1%; when input or bypass frequency is more than ±8% or under BAT Mode										
THD	< 1% (Linear Full Load) , < 3% (Non-Linear Full Load)										
3 Phase Unbalanced	Allow 3 Phase 100% Unbalanced										
Output Volt. Unbalanced	≤1%(Balanced Load); ≤2%(50% Balanced Load)										
Input/Output Phase Shift	≤1°(Balanced Load); ≤2°(50% Balanced Load)										
Frequency Tracking Range	45-65Hz										
Output Waveform	Pure Sine Wave										
Overload	>125%: More than 10 mins ; > 150%: More than 60s transfer to bypass										
Crest Ratio	3 : 1										
Short-Circuit	Circuit Auto-Protection, Bypass Switch Tripping										
Output Abnormal	INV. Output Auto-Locked Protection										
Bypass Specification											
Static Bypass Transfer Time	0ms										
Static Bypass Input Range	380Vac (-15~+15%)										
Frequency Range	50/60Hz±1Hz, ±2Hz, ±3Hz Adjustable										
Bypass --> INV Transfer Time	2ms										
Frequency Tracking Speed	0.5-2hz/s										
Manual Maintenance Bypass	Available										
Battery Specification											
Charging Methods	DSP Controlled Charger: Equalized/Pulse Charge, Float Charge, Intelligent Battery Management										
Type	Sealed Lead Acid Maintenance Free										
Rated Volts/Units	12V/384Vdc, Std, for 32 Units , adjustable from 28-32 units										
Float Charge Voltage	438Vdc										
Charging Current	Can be set from the front Screen										
Abnormal Protections	BAT over-charged, Emergency charger shutdown protection or UPS shutdown protection										
Communication Specification											
Communication Port	RS232/SNMP/485/Dry Contact (Optional Accessory)										
Remote Software	Multi-functional Monitoring System, Online and BAT Mode Status, BAT Fault, Remote Control										
Physical Parameters											
Size mm(W×H×D)	475×990×700			550×1100×800		605×1350×800		800×1600×800		1100×1850×850	
Net Weight Kg	210	223	230	280	330	450	550	630	750	810	855

RLF



- Digital control to achieve online double conversion
- Built-in output isolation transformer
- Industrial design for a variety of harsh conditions
- Front maintenance design
- Adapt to all kind of load.
- Can be up to 4 parallel operation
- Rich communication interface
- Friendly and Intuitive User Interface. Large Color Touch LCD Screen with multi-functional buttons. Safe and Reliable
- 90% of system components are from international famous brands. All devices will be aged and tested for more than 24 hours

Three Phase Low Frequency Double-Conversion Online UPS											
Power Rating	10KVA/ 8KW	15KVA/ 12KW	20KVA/ 16KW	30KVA/ 24KW	40KVA/ 32KW	60KVA/ 48KW	80KVA/6 4KW	100KVA/ 80KW	120KVA/ 96KW	160KVA/ 128KW	200KVA/ 160KW
Input											
Rated Voltage	3 x 380VAC/400VAC (3Phase + N)										
Voltage Range/Window	304VAC ~ 440VAC										
Frequency	50/60 Hz ± 10 %										
Output											
Output Voltage	3 x 380VAC/400VAC (3phase + N)										
Voltage Accuracy	Static: ±1% Typical valueTransient: ±5% Typical value(load change 100-0-100%)										
Frequency(Synchroniz ation correction	50/60 Hz synchronize ±1 %Mains Loss ±0.1 Hz										
Frequency Tracking Rate	±1 Hz/s										
Output Waveform	Pure Sine Wave										
Total Harmonic(THDv)	<2% (Linear Load) ; <5% (Nonlinear Load)										
Phase Unbalance	120º ±1% (Balance Load) ; 120º ±2% (50% Unbalance Load)										
Time for adjustment	3 cycles returned to rated 90%										
Overload Capacity	110%~ 150% 10minutes~1 minute; 150%~ 160% >1 minute~200ms;200ms for>160%										
Peak Factor	3:1										
Load Power Factor Range	0.6~1 (Capacitive or Inductive)										
Unbalanced output voltage @ 100% unbalanced load	<1%										
Current Limit	Very heavy overload, short circuit: voltage RMS limit; impulse current: peak voltage limit										
Efficiency	90%	90%	91%	92%		93%					
Bypass											
Type	Static Switch										
Voltage	3 x 380VAC/400VAC (3Ph + N)										
Frequency	50/60 Hz										
Control Way	Microprocessor Control										
Inverter to bypass switching time	Synchronous mode - switching uninterrupted, asynchronous mode - 10ms										
Overload Capacity	150%~ 180% 1h~1s; 180%~ 200%30s~200ms;200ms for>200%										
Switch to Bypass	Overload larger than 160% would be switched immediately										
Switch back to the inverter	The alarm is switched automatically after alarm clearing										
Maintenance Bypass											
Type	uninterrupted										
Voltage	3 x 400V (3 Phase+ N)										
Frequency	50/60 Hz										
Battery & Charging											
Battery Number (12V)	29/30/31/32(Adjustable)										
Charging Mode	Option: constant voltage charging / constant current charging										
Charge Current	Default 10A, maximum 40A										
Battery Type and Quantity	Sealed lead-acid batteries, nickel cadmium battery										
Physical Performance											
Size,WxDxH(mm)	405x647 x 817			405 x656 x 941	432 x821 x 1159		554 x975x 1286		635 x 975 x 1326	705 x 1051 x 1376	
Net Weight (KG) (Without batteries)	118	120	145	193	278	365	471	573	650	785	840

Product specifications are subject to us. If any changes, there would be no notice.

ADS



- Intelligent CPU control
- Auto restart while AC is recovering
- Boost and buck AVR for voltage stabilization
- Cold start function
- Optional USB or RS-232 communication port, RJ-45 and SNMP
- Off-mode charging
- Offering LED and LCD panels for selection, multi-color panel.

Line Interactive UPS specifications

Items	ADS-500	ADS-650	ADS-800	ADS-1000	ADS-1500	ADS-2000	ADS-2000B	ADS-3000
Power Rating	500VA /350W	650VA/390W	800 VA /480 W	1000VA /600W	1500VA /900W	2000VA/1200W	2000 VA /1200 W	3000 VA /1800 W
Input								
Voltage	110V/120 VAC or 220/230/240 VAC							
Voltage Range	81-145VAC or 145-275VAC							
Frequency	60/50 Hz(Auto sensing)							
Output								
Voltage	110/120 VAC or 220/230/240 VAC± 10%							
Voltage Range(Battery Mode)	± 10%							
Frequency Range(Battery Mode)	60/50 ± 1 Hz							
Transfer Time	4-6ms							
Waveform(Battery)	Simulated sine wave							
Battery								
Battery model & Quantity	12V4.5Ahx 1	12V7Ah x 1	12V9Ah x 1	12V7Ah x 2	12V9Ah x 2	12V9Ah x 2	12V7Ah x 4	12V9Ah x 4
Charge Time	8 hours charge to 90%							
Indicator Light Induction								
LCD Display	AC mode, Battery mode, Load level, Battery level, Input voltage, Output voltage, Overload and low battery							
Warning								
Battery Mode	Sound every 4 seconds							
Low Battery	Sound every second							
Over-load	Sound every second							
Failure	Continuous sounding							
INTERFACE								
USB/R232 Port (optional)	Support windows XP/Vista, Windows 7/8, Linux, Unix, and MAC							
Optional SNMP	Power management from SNMP management and web browser							
Protection								
Full Protection	Discharge, Short circuit and overload protection							
Physical Performance								
Size, D X W X H (mm)	280x90x140	320×90x140	330×100x150	365×140x165			395×145×210	
Weight (kgs)	4	5.2	5.7	10.0	11.9	12.6	17.0	21.0
Operating Environment								
Temperature & Humidity	Relative humidity 0-90 % and temperature 0- 40°C (No condensation conditions)							
Noise	Less 40dB @ 1 meter							
Product specifications are subject to change without further notice.								

AH



- Pure sine wave output
- DSP digital control
- Boost and buck AVR for voltage stabilization
- Cold start function
- Intelligent battery management
- Short circuit and overload protection
- Off-mode charging
- Offering LED and LCD panels for selection, multi-color panel.
- Optional USB/ RS232/RJ45/SNMP communication port

LINE INTERACTIVE SINE WAVE UPS(1KVA-3KVA)

Model	AH-1K (L)	AH-2K (L)	AH-3K (L)
Power Rating	1000VA /800W	2000VA/1600W	3000 VA /2400 W
Input			
Voltage	220/230/240 VAC		
Voltage Range	145~275VAC±5V		
Frequency	50Hz-60Hz		
Output			
Voltage	220/230/240 VAC± 10%		
Voltage Range(Battery Mode)	± 10%		
Frequency Range(Battery Mode)	50Hz±0.25Hz or 60Hz±0.3Hz		
Transfer Time	< typical 4ms		
Waveform(Battery)	Pure sine wave		
Overload	105%-110%: UPS beep alarm, do not shut down.		
	110%-130%: auto shut down after 30 seconds		
	> 130%: auto shut down immediately		
Standard Model (Battery Internal)			
Battery model & Quantity	12V7Ah x 2	12V7Ah x 4	12V7Ah x 6
Charging current(Max.)	Assume: 1A±10%; Max: 1A or 2A for option		
Charging voltage	27.3VDC±1%	54.7VDC±1%	82.0VDC±1%
Long-run Model (Battery External)			
Battery Type	12V, AH depending on applicant		
Numbers	3	6	8
Charge Current	> 5A		
Charging voltage	27.4VDC±1%	82.1VDC±1%	109.4VDC±1%
Indicator Light Induction			
LCD Display	AC mode, Battery mode, Load level, Battery level, Input voltage, Output voltage, Overload and low battery		
Protection			
Full Protection	Discharge, Short circuit and overload protection		
Physical Performance (Standard model)			
Size, D X W X H (mm)	360x147x220	440x192x340	440x192x340
Weight (kgs)	11.9	22	27.9
Physical Performance (Long-run model)			
Size, D X W X H (mm)	360x147x220	440x192x340	440x192x340
Weight (kgs)	8.5	16	18.2
Operating Environment			
Temperature & Humidity	Relative humidity 20%-90 % and temperature 0- 40°C (non- condensing)		
Noise	Less 55dB @ 1 meter		
INTERFACE			
USB/R232 Port (optional)	Support windows 2000/2003/XP/Vista/2008, Windows7/8, Linux, Unix, and MAC		
Optional SNMP	Power management from SNMP Management and web browser		

Product specifications are subject to change without further notice.

ZWM



- High efficiency online double conversion technology
- Modular design lowers MTTR
- Highly reliable operation with redundant power supply in STS
- User-adjustable charging current
- Flexible battery configuration adapts different applications
- High overload capability
- Graphic 5.7" LCD design for easy management
- N+1 or N+X parallel redundancy for power guarantee
- Optional 10" touch LCD panel

Power 3P/3P 400V Modular UPS							
Model	ZWM 30U	ZWM 42U	ZWM 30U	ZWM 30U	ZWM 42U	ZWM 42U	ZWM 42U
	-90HV	-120HV	-120HV	-180HV	-200-20KHV	-210HV	-300HV
			+Power 30U	+Power 30U			
			-80-20KHV	-120-20KHV			
PHASE	3-phase in/3-phase out						
CABINET CAPACITY*	90 KW	120 KW	120 KW or 80 KW	180 KW or 120 KW	200 KW	210 KW	300 KW
BATTERY TYPE	Built-in Battery		External Battery				
ONE POWER MODULE CAPACITY	30KVA / 30KW		30KVA / 30KW or 20KVA / 20KW		20KW	30KVA / 30KW	
MAX. POWER MODULE NO.	3	4	4	6	10	8	10
MAX. BATTERY SET NO.**	3	5	-	-	-	-	-
INPUT							
Nominal Voltage	3 x 380VAC/400VAC/415VAC (3Ph+N)						
Voltage Range	305 ~ 478 VAC at 100% load; 208 ~ 304VAC at <70% load						
Nominal Frequency	50/60Hz (Auto Sensing)						
Frequency Range	40Hz ~70Hz						
Power Factor	> 0.99 @ 100% Load , >0.98 @ 50% Load						
Harmonic Distortion (THDi)	< 3% @ 100% load						
OUTPUT							
Nominal Voltage	3 x 380VAC/400VAC/415VAC (3Ph+N)						
Voltage Regulation (Steady state)	≡ ± 1% Typical (balanced load) ; ≡ ± 2% Typical (unbalanced load)						
Nominal Frequency	50/60Hz						
Frequency Range (Synchronized)	46Hz ~ 54Hz or 56Hz ~ 64Hz						
Overload Capability	1 hour for 110%, 10 mins for 125%;, 1 min for 150%, 200ms for >150%						
Harmonic Distortion	≡2% THD (Linear Load) ; ≡ 4% THD (Non-linear Load)						
Efficiency	Up to 94.5%						
BATTERY / CHARGER							
Nominal Voltage	+/- 216V (12V x 36 pcs)						
Maximum Voltage	+/- 240V (12V x 40 pcs)						
Minimum Voltage	+/- 192V (12V x 32 pcs)						
Float Charging Voltage	2.25V / Cell						
Boost Charging Voltage	2.35V / Cell						
Temperature Compensation	Yes						
Maximum Charging Current	8A		8A for 30KW power module		6A	8A	
(Per Power Module)			6A for 20KW power module				
PHYSICAL							
Cabinet Dimension (D x W x H) mm	1100 x 600 x 1475	1100 x 600 x 2010	1100 x 600 x 1475	1100 x 600 x 1475	1100 x 600 x 2010		
Net Weight (Kg)	675	932	335 or 333	437.5 or 434.5	611	549	620
ENVIRONMENT							
Operating Temperature	0 ~ 40°C						
Relative Humidity	0 ~ 95% non-condensing						
Altitude	<1000m for Nominal power						
IP Class	IP 20						
MANAGEMENT							
Smart RS-232/USB	Supports Windows 2000/2003/XP/Vista/2008, Windows 7/8, Linux, and MAC						
Optional SNMP	Power management from SNMP manager and web browser						
STANDARDS							
Safety	IEC/EN 60950-1; IEC/EN 62040-1						
EMC	IEC/EN 62040-2 Category C3						

SO



- Small size,light weight and cheaper in cost
- High efficiency
- Economic and energy-saving
- Easy to install
- Reduced voltage drops in resistance
- leakage reactance result in improved voltage regulation.
- Variable voltages can be produced by an autotransformer.

Transformer

Dry Type Auto-Transformer		
Phase	Single Phase	Three Phase
Power Ratings	5KVA-300KVA	10KVA-1000KVA
Input Voltage	1φ 220V/110V	3φ 220V/380V
Output Voltage	Can be customized to meet client’s requirements	
Frequency	50/60Hz	
Connection	Δ/Δ, Y/Y	
Efficiency	≥99%	
Insulation Class	B class, F class, H class, HC class for option.	
Overload Capacity	More than 1.2 times the rated load,allowed to work for 2 hours	
Cooling Type	Self-cooling	
Noise	≤35dB (Within one meter)	
Temperature	≤65℃	
Insulation Resistance	≥5MΩ	
Dielectric Strength	3000VAC/1min	
DESIGN LIFE	20 years	
Work Environment	Temperature: -20~+40℃ Humidity: ≤93%RH ,No condensation	
Working place	No corrosive gas and conductive dust	
Safety standards	Compliance with VDE0550 、 IEC439 、 JB5555 、 GB226	



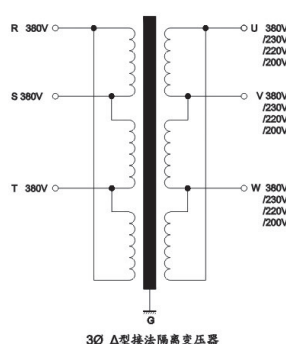
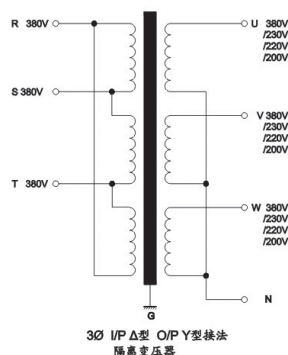
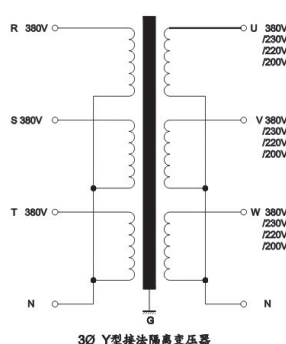
SG



- Remove third harmonics and reduce interference signals
- Transformer system Impedance can be increased.
- The distortion of nonlinear load current doesn't affect the accuracy of sampling
- When starting large-load equipment, reduce the impact on the system voltage;
- Prevent Purifying the power grid.
- Unbalanced Load will not affect its normal operation.
- New neutral lines can be created
- Reduce short-circuit current.

Dry Type Step-up& Step-down Isolation Transformer

Phase	Single Phase	Three Phase
Power Ratings	5KVA-300KVA	10KVA-1000KVA
Input Voltage	1φ 220V/110V	3φ 220V/380V
Output Voltage	Can be customized to meet client's requirements	
Frequency	50/60Hz	
Connection	Y/Δ, Y/Y, or Δ/Y	
Efficiency	≥99%	
Insulation Class	B class, F class, H class, HC class for option.	
Overload Capacity	More than 1.2 times the rated load, allowed to work for 2 hours	
Cooling Type	Self-cooling	
Noise	≤35dB (Within one meter)	
Temperature	≤65℃	
Insulation Resistance	≥5MΩ	
Dielectric Strength	3000VAC/1min	
DESIGN LIFE	20 years	
Work Environment	Temperature: -20~+40℃ Humidity: ≤93%RH ,No condensation	
Working place	No corrosive gas and conductive dust	
Safety standards	Compliance with VDE0550 、 IEC439 、 JB5555 、 GB226	



FC



- High accuracy of voltage and frequency regulating with fast reponse time.
- Display the voltage, frequency, current and power simultaneously
- Instant trip breaker within 2ms in case of failure
- No interference of radiation, no harmonic disdortation
- With buzzer alarm for overload, over voltage, over temperature, short circuit
- Apply worldwide for all kinds of voltage and frequency standard
- Pure and stable sinewave output, withstands all kinds of load.

FC11 One Phase Variable Voltage & Frequency Converter

Item	FC11											
Power Rating (KVA)	0.5K	1K	2K	3K	5K	10K	15K	20K	30K	50K	60K	
Control Method	IGBT/PWM (Pulse Width Modulation)											
Input												
Rated Voltage	1P2W+G 220V											
Voltage Range	±10%											
Frequency	50Hz(47Hz~63Hz)											
Output												
Rated Voltage	Low Grade: 0-150V ; High Grade: 0-300V											
Limit Current Low Grade(L-N)(A)	4	8	17	25	42	83	125	167	250	417	500	
Limit Current High Grade(L-N)(A)	2	4	8	13	21	42	63	83	125	208	250	
Source Voltage Regulation	≤±1%											
Load Voltage Regulation	≤±1%											
Power Factor	PF≥0.8											
Frequency	50/60Hz(40.0~499.9HZ (Programmable))											
Frequency Stability	≤0.01%											
Wave distortion	< 2%											
Efficiency	≥90%											
Reponse time	≤2ms											
Crest Factor	3:01:00											
System Protection	Overload, over voltage, over current, under voltage, over temperature, short circuit											
LED Display												
Voltmeter	4 Digital LED display for output voltage, resolution 0.1V											
Ammeter	4 Digital LED display for output current, resolution 0.1A											
Wattmeter	4 Digital LED display for output power, resolution 0.1W/0.1KW											
Frequency Meter	4 Digital LED display for output frequency, resolution 0.1Hz/Step											
Others												
Cooling System	Air											
Insulation Resistance	≥2MΩ											
Voltage-endurance	The whole machine has no breakdown and no arcing phenomena for 2000VAC/ min.											
Working Environment												
Ambient Temperature	0℃-45℃(No condensation)											
Working Humidity	0% -90% (No condensation)											
Altitude	≤1500m											
Dimension												
Size WxDxH(mm)	430×500×180			350×530×660		350×650×860		550×750×1100		700×900×1300		
Net Weight (KG)	25	29	40	70	75	120	138	180	270	380	400	
Gross Weight (KG)	31	35	46	76	80	132	180	200	300	400	420	
Product specifications are subject to change without further notice.												

FC



- High accuracy of voltage and frequency regulating with fast response time.
- Display the voltage, frequency, current and power simultaneously
- Instant trip breaker within 2ms in case of failure
- No interference of radiation, no harmonic distortion
- With buzzer alarm for overload, over voltage, over temperature, short circuit
- Apply worldwide for all kinds of voltage and frequency standard
- Pure and stable sinewave output, withstands all kinds of load.

FC31 One Phase Variable Voltage & Frequency Converter

Item	FC31											
Power Rating (KVA)	15K	20K	30K	50K	60K	75K	100K	120K	150K	160K	200K	
Control Method	IGBT/PWM (Pulse Width Modulation)											
Input												
Rated Voltage	3P4W+G 380V											
Voltage Range	±10%											
Frequency	50Hz(47Hz-63Hz)											
Output												
Rated Voltage	Low Grade: 0-150V ; High Grade: 0-300V											
Limit Current Low Grade(L-N)(A)	125	167	250	417	500	625	833	1000	1250	1333	1667	
Limit Current High Grade(L-N)(A)	63	83	125	208	250	313	417	500	625	667	833	
Source Voltage Regulation	≤±1%											
Load Voltage Regulation	≤±1%											
Power Factor	PF≥0.8											
Frequency	50/60Hz(40~499.9Hz(Programmable))											
Frequency Stability	≤0.01%											
Wave distortion	< 2%											
Efficiency	≥90%											
Reponse time	≤2ms											
Crest Factor	3:01:00											
System Protection	Overload, over voltage, over current, input under voltage, over temperature, short circuit											
LED Display												
Voltmeter	4 Digital LED display for output voltage, resolution 0.1V											
Ammeter	4 Digital LED display for output current, resolution 0.1A											
Wattmeter	4 Digital LED display for output power, resolution 0.1W/0.1KW											
Frequency Meter	4 Digital LED display for output frequency, resolution 0.1Hz/Step											
Others												
Cooling System	Air											
Insulation Resistance	≥2MΩ											
Voltage-endurance	The whole machine has no breakdown and no arcing phenomena for 2000VAC/ min.											
Working Environment												
Ambient Temperature	0℃-45℃(No condensation)											
Working Humidity	0% -90% (No condensation)											
Altitude	≤1500m											
Dimension												
Size WxDxH(mm)	350×650×80	500×650×85	550×6750×1	700×900×1300			800×1100×1400			850×1220×1400		
Net Weight (KG)	138	180	270	380	400	440	500	950	1020	1200	1500	
Gross Weight (KG)	180	200	300	400	420	462	562	1000	1043	1250	1550	
Product specifications are subject to change without further notice.												

FC

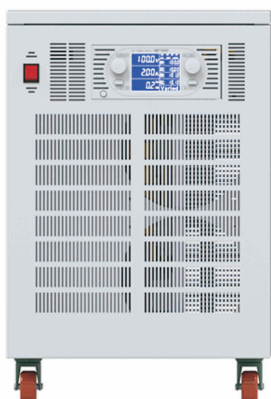


- High accuracy of voltage and frequency regulating with fast reponse time.
- Display the voltage, frequency, current and power simultaneously
- Instant trip breaker within 2ms in case of failure
- No interference of radiation, no harmonic disdortation
- With buzzer alarm for overload, over voltage, over temperature, short circuit
- Apply worldwide for all kinds of voltage and frequency standard
- Pure and stable sinewave output, withstands all kinds of load.

FC33 One Phase Variable Voltage & Frequency Converter

Item	FC33											
Power Rating（KVA）	10K	15K	20K	30K	45K	60K	75K	100K	120K	150K	200K	
Control Method	IGBT/PWM (Pulse Width Modulation)											
Input												
Rated Voltage	3P4W+G 380V											
Voltage Range	±10%											
Frequency	50/60Hz(47Hz-63Hz)											
Output												
Rated Voltage	Low Grade: 0-300V ; High Grade :0-520V											
Limit Current Low Grade(L-N)(A)	28	42	54	83	125	167	208	275	333	417	558	
Limit Current High Grade(L-N)(A)	14	21	27	42	63	83	104	138	167	208	279	
Source Voltage Regulation	≤±1%											
Load Voltage Regulation	≤±1%											
Power Factor	PF≥0.8											
Frequency	400HZ（499.9HZ can be customized）											
Frequency Stability	≤0.01%											
Wave distortion	< 2%											
Efficiency	≥90%											
Reponse time	≤2ms											
Crest Factor	3:01:00											
System Protection	Overload, over voltage, over current, input under voltage, over temperature, short circuit											
LED Display												
Voltmeter	4 Digital LED display for output voltage, resolution 0.1V											
Ammeter	4 Digital LED display for output current, resolution 0.1A											
Wattmeter	4 Digital LED display for output power, resolution 0.1W/0.1KW											
Frequency Meter	4 Digital LED display for output frequency, resolution 0.1Hz/Step											
Others												
Cooling System	Air											
Insulation Resistance	≥2MΩ											
Voltage-endurance	The whole machine has no breakdown and no arcing phenomena for 2000VAC/ min.											
Working Environment												
Ambient Temperature	0℃-45℃(No condensation)											
Working Humidity	0%-90%(No condensation)											
Altitude	≤1500m											
Dimension												
Size WxDxH(mm)	500×650×850			550×750×1100		700×900×1300			800×1100×1400		850×1220×1400	
Net Weight (KG)	160	200	260	320	370	400	440	900	950	1250	1650	
Gross Weight (KG)	180	220	280	370	400	430	490	950	1000	1300	1700	
Product specifications are subject to change without further notice.												

DC



- Simple but practical. Easy to operate.
- Low Voltage Distortion.
- Safety Protections.
- Wide optional output voltage can be chosen.
- Applying IGBT/PWM technology.
- Both RS232 and RS485 are Optional.
- Customization is available. Output voltage 0-1000V adjustable, output frequency 5-1000HZ adjustable
- can be connected to PLC
- Suitable for resistive, capacitive, inductive and other mixed loads.
- Each phase can be loaded independently.

Adjustable DC Voltage Constant-current Power Supply

Input Voltage	Three Phase AC380V \pm 10%, 50Hz; (Single Phase AC 220V \pm 10%)
Single output voltage adjustable range	(0~) V (Customized)
Single output constant current value adjustable range	(0~) A (Customized)
Source Voltage Regulation	Voltage Regulation \leq 0.5%
Load Regulation	Voltage Regulation \leq 1%
Constant Current	\leq 2%
Overall Efficiency	\geq 86%
Ripple Voltage	Total ripple voltage Vpp \leq 2%
※ Output Voltage	Accuracy \pm 1.5%;
Output Current	Accuracy \pm 2%.
Output Voltage Overshoot during Startup	\leq 2%。
Insulation Resistance	Input—Output \geq 20M Ω
Input—Enclosure	\geq 20M Ω
Output—Enclosure	\geq 80M Ω
Insulating Strength	Input—Output: AC1500V, 10mA, 1min
Input—Enclosure	AC1500V, 10mA, 1 min
Output—Enclosure	AC1500V, 10mA, 1min
Overtemperature Protection Temperature Threshold	(75~85) $^{\circ}$ C。
MTBF	\geq 50000H
Cooling Air Tunnel	Internal cooling wind left in, right out

VARIAC



- Waveform Distortionless,
- Small Volume,
- High Efficiency,
- Easy To Use ,
- Reliable Operation

Voltage regulators/Variable Transformer (Variac)

Working Conditions

1. Ambient temperature	-10~50℃
2.Relative humidity	15~85% (25℃
3. Altitude	<1500M

Product Parameters

Input Voltage	220V±10%
	380V±10%
Output Voltage	0~250V±10%
	0~430V±10%
Insulation Resistance	Single Phase>5MΩ; Three Phase>2MΩ
Waveform Distortion	No additional distortion
Temperature Rise	<60℃
Dielectric Strength	2000V/min
Efficiency	≥90%

More Specs

Item/Model	Capacity (KVA)	Phase No.	Rated input voltage (V)	Rated output voltage (V)	Max. output current (A)	Product size (W * D * L) (mm)	Gross weight (kg)
TDGC2-0.2	0.2	1	220V	0-250V	0.8A	105*130*130	26.5
TDGC2-0.5	0.5				2A	125*150*130	28
TDGC2-1	1				4A	180*200*210	26
TDGC2-2	2				8A	180*200*210	33
TDGC2-3	3				12A	210*230*235	23
TDGC2-5	5				20A	240*285*250	18
TDGC2-10	10				40A	240*335*400	40
TDGC2-15	15				60A	240*335*560	58
TDGC2-20	20				80A	240*340*590	60
TSGC2-1.5	1.5	3	380V	0-430V	2A	125*180*340	12
TSGC2-3	3				4A	180*250*430	21.5
TSGC2-6	6				8A	180*250*460	27
TSGC2-9	9				12A	210*250*590	35
TSGC2-15	15				20A	240*330*560	56
TSGC2-20	20				26.5A	240*330*580	60
TSGC2-30	30				40A	350*420*1060	150

INVERTER



- Full digital voltage and current double closed loop control,
- advanced SPWM technology, output of pure sine wave.
- Two output modes: mains bypass and inverter output; uninterrupted power supply.
- Available in 4 charging modes
- Solar hybrid charging.
- Advanced MPPT technology with an efficiency of 99.9%.
- With the charging requirement (voltage, current, mode) setting
- Allowing access of lead-acid battery and lithium battery.

All-in-one Off-Grid Solar Charger Inverter

Models	HF4830S60-145	HF4840S80 -145	HF4850S80-145	HF4825U80 -145	HF4830U80 -145	HF4835U80-145
AC mode						
Rated input voltage	220/230Vac			110/120Vac		
Input voltage range	(170Vac~280Vac) ±2%			(90Vac~140Vac) ±2%		
Frequency	50Hz/ 60Hz (Auto detection)					
Overload/short circuit protection	Circuit breaker					
Efficiency	>95%					
Conversion time (bypass and inverter)	10ms (typical)					
AC reverse protection	Available					
Maximum bypass overload current	30A	40A				
Inverter mode						
Output voltage waveform	Pure sine wave					
Rated output power (VA)	3000	4000	5000	2500	3000	3500
Rated output power (W)	3000	4000	5000	2500	3000	3500
Power factor	1					
Rated output voltage (Vac)	230Vac			120Vac		
Output frequency (Hz)	50Hz/60Hz ± 0.3Hz					
Overload protection	(102% < load <125%) ±10%: report error and turn off the output after 5 minutes;			(102% < load <110%) ±10%: report error and turn off the output after 5 minutes;		
Peak power	6000VA	8000VA	10000VA	4000VA	4500VA	5000VA
Loaded motor capability	2HP	3HP	4PH	1HP	2HP	2HP
Rated battery input voltage	48V (Minimum starting voltage 44V)					
Battery voltage range	Undervoltage alarm/shutdown voltage/overvoltage alarm /overvoltage recovery... settable on LCD screen)					
Power saving mode self-consumption	Load≤50W					
AC charging						
Battery type	Lead acid or lithium battery					
Maximum charge current	0-60A			0-40A		
Charge current error	± 5Adc					
Charge voltage range	40 ~58Vdc			40 ~60Vdc		
Short circuit protection	Circuit breaker and blown fuse					
Circuit breaker	30A	40A				
Overcharge protection	Alarm and turn off charging after 1 minute					
PV charging						
Maximum PV open circuit volt	145Vdc					
PV operating voltage range	60-145Vdc					
MPPT voltage range	60-115Vdc					
Battery voltage range	40-60Vdc					
Maximum output power	3200W	4200W				
PV charging current range	0-60A	0-80A				
Hybrid charging Max charger current specifications (AC charger+PV charger)						
Max charger current(can be set)	0-120A	0-140A		0-120A		
Certified specifications						
Operating temperature	-15°C to 55°C					
Storage temperature	-25°C ~ 60°C					
Communication interface	USB/RS485(WiFi/GPRS)/Dry node control					
Size (L*W*D)mm	378*280*103	426*322*124				
Weight (kg)	6.2	10.8				

Power Saver



- Large-screen LCD display
- Power-saving software to optimize the power supply to the light
- Time Control
- Wide Input Voltage Swing Ranges
- High Precision for the Output Voltage
- Multi-protection Design
- Independent Phase Control
- Rain Proof Enclosure, Corrosion Resistant

Three Phase Intelligent Street Lights Power Saver/ Energy Saver

INPUT	Rated Voltage	Phase Voltage AC 220V, Line Voltage AC 380V (Or customized)
	Sabilized Voltage Range	3P4W +G 323V-437V (Or customized)
	Frequency	50HZ/60HZ
OUTPUT	Rated Voltage	Phase Voltage AC 220V, Line Voltage AC 380V
	Center Voltage	±7%(can be adjusted)
	Output Accuracy	±1%
	Response Time	≤40ms/Step
	Waveform Distortion	Do not produce additional waveform distortion (Static)
	Efficiency	≥99%
	Three-phase Unbalance Factor	Three-phase voltage balance automatically, incrimination ≤2%
PROTECTION	Over-voltage	The output phase voltage is higher than 10% (242V), Uninterrupted to bypass
	Under-voltage	The output phase voltage is lower than 10% (198V) , Uninterrupted to bypass
	Phase Loss	Yes, uninterrupted to bypass (Option)
	Overload	Electric detection, overload 1 minute, the output would be cut off.
	Over-current	Electronic detection and circuit breaker dual protection.
	Short Circuit	Electronic detection and circuit breaker dual protection.
	Bypass	Manual bypass and automatic bypass. (Option)
Instructions	Working State	AVR/Bypass
	Abnormal	Over-voltage, under-voltage, over-load, fuse blowing
CONTROL MODE		DSP operate metering chip intelligent control technology
WORKING MODE		With automatic voltage regulation and the bypass, two working mode.
VOLTAGE REGULATION MODE		Three-phase adjust voltage separately
OVERLOAD CAPACITY		3 times the rated current, 1 second, can be adapted to the resistive, inductive, capacitive and impact load; can withstand the instantaneous overload impact. Stabilizer continuously output the rated current. When temperature rise stably, overload 10% for 30 minutes is allowed. Short-term (5 minutes) overload current (1.6 times rated value) is also allowed.