

سیستم های یوپی اس

1 KVA- 20 KVA 1 Phase & 3 Phase



دارای کاربرد در

- شعب بانک ها
- دستگاه های ATM
- شبکه های کامپیوتر و سرور
- سیستم های فروشگاه
- کامپیوتر های شخصی و اداری
- مراکز پزشکی و آزمایشگاهی
- سیستم های مخابراتی و تجهیزات الکترونیکی حساس

ویژگی ها و امکانات

- تکنولوژی On-Line Double Conversion و DSP control
- پاور فکتور خروجی 1
- هارمونیک ورودی کمتر از 3%
- رکتیفایر های مجهز به نسل جدید IGBT و تکنولوژی اصلاح پاور فکتور PFC
- رنج ورودی گسترده : 110V-300V در سیستم های تک فاز و 304V-478V در سیستم های سه فاز
- بازدهی بالای 90 درصد
- محافظت قوی در برابر اضافه بار و اتصال کوتاه : 120% در یک دقیقه و 130% در 10 دقیقه
- سازگاری و اتصال با انواع ژنراتور
- سیستم هوشمند کنترل و مدیریت دما برای افزایش عمر باتری
- پورت های ارتباطی مختلف : SNMP, RS232, RS485, USB

series HF online UPS (1-10KVA 1/1 Phase)

Output power factor=1.0, overall efficiency > 95%, 3-level-Inverter technology, compact size, smart design,

high reliability

1. System Introduction

APR-I Series is a full DSP controlled, Adopt 3-level-Inverter technology, online double conversion, 1/1 Phase pure sine wave UPS, with multi-functional and high available design, system overall efficiency above 95%, BH-V series can be defined as a high reliability and energy saving green power.



2. System Features

2.1 High Performance Index

- ◆ Latest HF Rectifier and PFC Technology. Input Power Factor 0.99, THDI≤3%, compatible with 208/220/230/240Vac, 50/60Hz Grid supply system.
- ◆ Wide Input Range from 110-300Vac in 100% load (When Load is below 50%, Input Lower Limit can lower than 110Vac) which can reduce the battery usage and maximize battery life-time.
- ◆ Latest 3-Level-Inverter technology to meet the critical loads. Output PF=1, Overall efficiency up to 95% (98.5% under ECO mode)
- ◆ Powerful overload ability with output short circuit protection: 1-3 KVA: 120% overloads for 1 minute. 150% for 60ms transfer to bypass and alarm.
 - 6-10KVA: Online mode: 102-110%:30 minutes; 110-130% :10 minutes; 130-150 %:30s; ≥150%:500ms
 - 6-10KVA: Battery mode: 102-110% :10 minutes, 110-130% :1 minute; 130-150 %: 10s; ≥150% 500ms
- ◆ Can be connected with all kinds of generators to save customers costs.
- ◆ Intelligent charger system, charging current from 1-12A adjustable, adopting constant charging, float charging and equalized charging methods, which could meet various requirements from different Lithium-ion battery pack and greatly expand batteries' life-time
- ◆ Powerful battery anti-reverse connected alarm and protection. When battery is unconnected, UPS will alarm with DC unconnected. When the DC polarities reversely connected, UPS will not be turned on and shows DC failure, only when correcting polarities then UPS will be back to work normally.
- ◆ Battery configuration: for 6-10kva, battery quantity could be transfer into 16/18/20pcs without changing any spares;
- ◆ Powerful battery test function, users can do or cancel the battery test on LCD screen directly.
- ◆ Intelligent Short Circuit Protection. When short circuit lasts less than 3s, UPS will restart to inverter mode automatically after short-circuit removal. If the short circuit lasts over 3s, UPS will lock the inverter for protection.
- ◆ Remote EPO mode available.
- ◆ 2.4-inch Large Color Dot-matrix LCD+LED Screen with multi-functional keyboard to check UPS and lithium-ion system parameters, such as work status, temperature control and fault histories, self-diagnosis periodically discharge settings, etc.;
- ◆ Battery Self-testing can be done on the LCD directly. Battery Capacity, UPS working mode (Online or ECO first) can be set on the screen. All history faults and statistics can be seen on the screen to help user analyze the working summary of the UPS.
- ◆ Multi-page history record can be tracked on LCD highly improved the efficiency for site engineers to check the UPS and lithium-ion battery running days and cumulative running status of UPS
- ◆ Intelligent Ventilation design greatly reduces noise.
- ◆ Standard 19" Rack-mount design, compared to traditional VRLA battery pack, BH-N UPS system can be compatible with standard communication cabinet and greatly save spaces.
- ◆ Highly integrated PCBA board and wiring design makes the system convenient in maintenance and greatly saves service time.

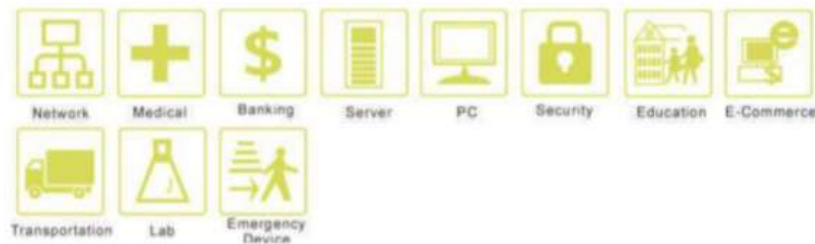
2.2 Safe and Reliable

- ◆ Adopt DSP technology to control UPS all processes to lower the total distortion and increase system reliability
- ◆ Sensitive peak current protection circuit to protect the system from damages due to non-linear load, short-circuit, cold load impacts.
- ◆ Three-level technology design, it can cope with the sudden changes of complex & Static loads.
- ◆ BH-V series equipped the battery reverse connection protection and fault alarm to reduce the installation accidents. This can highly protection the safety of installation personnel and extend battery life.
- ◆ Intelligent speed control cooling fan alarm.

3. Rich Optional Accessories

BH-V Series can use SNMP Network Adapter, RS485/Dry Contact, CAN, maintenance bypass switch (above 6kva) and EPO function to build up a remote control and monitoring system.

4. Compatible applications/loads



5. Technical Points:

- ◆ Full DSP control online UPS which provide outstanding stability and reliability;
- ◆ Output PF=1.0. overall efficiency above 95%
- ◆ 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.;
- ◆ Large Color Dot-matrix LCD+LED Screen with multi function and user- friendly.

6. System Details



No.	Remark	No.	Remark
1	Dot Matrix 2.4 inch LCD screen	8	Parallel Redundancy (not available now)
2	LED Indicators	9	SNMP slot
3	Inverter on/off	10	RS232 port
4	Down button	11	DC low noise cooling fan
5	Up button	12	Maintenance bypass switch (optional)
6	Confirm button	13	Input Breaker
7	EPO	14	input, output, battery terminal blocks

8. Specification

Model	BH10S/BH10L	BH20S/BH20L	BH30S/BH30L	BH60S/BH60L	BH100S/BH100L
	BH10S/L-RM	BH20L-RM	BH30L-RM	BH60L-RM	BH100L-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°C				
Storage Temp	-15-60°C (without batteries)				
Humidity	< 20-95% Non-Condensing				
Safety Standard	GB/T 7260, GB/T 4943, YD/T1095, TLC				
Safety Standard	EN/IEC 61000, EN/IEC 62040,				
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, overload, UPS fault, shot circuit etc				
ECO mode	available				
EPO mode	available				
DC start	available				
Generator compatibility	available				
Display	LCD Display: Multi-Language with all kinds of messages. Input/ Output /bypass Status, ECO Mode , charging status, load status, Rectifier status, INV. Temp, LED Indicators: UPS States Indicator			LCD Display: Multi-Language with all kinds of messages. Input/ Output /bypass Status, ECO Mode , charging status, load status, Rectifier status, INV. Temp, Colored LCD screen: Working (days); SN; Calendar, time; UPS model & structure; Version No.; history log records; history fault records; language set; ECO set; time & calendar set; battery test & so on. LED Indicators: UPS States Indicator	
Mute	Automatic				
Cabinet Standard	IP20				
Cooling System	Intelligent Speed Control Cooling Fan				
Altitude	<11000M. Without Derated, 1000m <altitude< 4500m, refer to IEC62040				
Rectifier Specification					
Input Voltage	220Vac (208/220/230/240Vac available)				
Input Voltage Range	110~300Vac 110~176VAC/276~300VAC				
Input Frequency Range	44~56Hz or 54Hz~66Hz ± 10Hz (adjustable)				
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 (utility)	46Hz≤input Freq.≤54Hz, output Freq.=input Freq.; When Input Freq.<46Hz or >54Hz, Locked at 50Hz				
Output Freq (Battery)	50Hz±0.1% (Battery mode)				
Wave form	Pure sine wave				
Distortion	< 2% (Linear Full Load), < 4% (100% Non-Linear Full Load)				
Overload	◆Utility mode: 102%~105% load, more than 30mins, 105%~125% load, more than 10mins, 125%~150% load, 30s, >150% load, 500ms ◆Battery mode: 102%~105% load, more than 10mins, 105%~125% load, more than 1mins, 125%~150% load, 10s, >150% load, 500ms				
Crest Ratio	3: 1				
Inverter efficiency	> 95%				
Short circuit	Circuit Auto Protection, Output Voltage/Current 0				
Output Abnormal	INV. Output Auto-Locked Protection				
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%					
Bypass -> INV Transfer Time	< 4ms			< 2ms		
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	144×282×214	144×397×214	190×421×318	190×360×670	
	Ext. type			144×397×214	190×360×335	
	RM/RT type	440×450×88/2U			440×470×88/2U	
Weight Kg	Std./ Ext.	9/5	15/7	20/7.5	46/10	47/10.5
	RM/RT type	5	7	8	10	10.5

Note: In the model name "S" represent standard type with battery built-in. "L" represent long run battery external type. Specification are subject to change without further notice.

Model	APR-S1101	APR-S1102	APR-S1103	APR-S1106	APR-S1110
Capacity	1KVA/1KW	2KVA/2KW	3KVA/3KW	6KVA/6KW	10KVA/10KW
Overall Specification					
UPS Structure	Online Double Conversion High Frequency				
Appearance	Tower / Rack Mount				
Display	LCD Display				
Overall Efficiency	>95% (98.5% under ECO mode)				
Protection	Overload, Short-Circuit, Over Temp, Utility Power Voltage High/Low, Bat Voltage High/Low				
Noise	>45dB				
Working Temp	-25- +50°C				
Storage Temp	-25- +60°C (Without Battery)				
Humidity	>95% (Non Condensing)				
Safety Standard	GB/T 7260 GB/T 4943, YD/T 1095, TLC				
EMC Standard	EN/LEC 61000, EN/EC 62040				
DC Start	Available				
ECO / EPO Mode	Available				
Maintenance Bypass	No		Optional		
Generator Compatibility	Available				
Cabinet Standard	IP20				
Cooling System	Intelligent Speed Control Cooling Fan				
Rectifier Specification					
Input Voltage	220 Vac (208/220/230/240 Vac available)				
Input Voltage Range	110-300 Vac, 110-176 Vac Available				
Input Frequency Range	44-56Hz or 54-66Hz ± 10Hz(Can be set)				
Input PF	0.99				
THDI	≤ 3% Linear Load	≤ 5% Non-linear load	≤ 4% linear load	≤ 6% Non-linear load	
Output Specification					
Output Voltage	220 Vac, (208/220/230/240 Vac Available)				
Output PF	1.0				
Output Voltage Regulation	220Vac±2% (0-50% Sudden change)220 Vac ±1% (Static load) 220Vac±3% (0-100% Sudden change)				
Output Freq (Utility)	If 46Hz<Input Freq<54Hz Input Freq=Output Freq, If Input Freq>54Hz Or <46Hz Locked at 50 Hz				
Output Freq (Battery)	50 Hz ± 0.1%				
Waveform	Pure Sine Wave				
Distortion	<1% (Linear Full Load), <3% (100% Non Linear Load)				
Crest Ratio	3:1				
Overlad	<125% More than 1Min				
Short Circuit	Circuit Auto Protection, Output Voltage/current 0				
Noise Suppression	EMI/RFI Wave Filter				
Battery Voltage Low	Shut Down Protection				
Bypass Specification					
Static Bypass Transfer Time	0 ms				
Static Bypass Range	80Vac±5% - 285Vac±5%				
Bypass To Inverter Transfer Time	<2ms				
Battery Specification					
Type	Sealed Lead Acid Maintenance Free				
Ext. Model Rated voltage	36Vdc	96Vdc	96Vdc	192-240Vdc	192-240Vdc
Charging current (Ext.type)	MAX.12A				
Communication Specification					
Communication Port	RS232/EPO,SNMP/485/dry contact				
Remots Software	Multi-fuctional Monitoring System, Online and BAT Mode Status, Utility Fault, BAT Fault, Remote Control				
Physical Parameters					
Size(D x W x H) (Tower)	285 x 145 x 215	400 x 190 x 318	420 x 190 x 318	390 x 190 x 705	390 x 190 x 705
Net Weight	5	7.5	7.5	10	10.5
Size(D x W x H) (Tower)	400 x 440 x 88	400 x 440 x 88	400 x 440 x 88	470 x 440 x 88	470 x 440 x 88
Net Weight	5	7.5	7.5	10	10.5

یوپی اس های آنلاین تک فاز سری KVA (1-10)

خروجی سینوسی کامل 1/1 ph

تکنولوژی آنلاین دابل کانورژن Double Conversion و تکنولوژی سه سه سطحی

دارای کنترل پنل با صفحه نمایش LCD

ضریب توان خروجی برابر یک PF=1

ضریب توان ورودی بیش از 99%

راندمان کلی 95 %

محدوده وسیع ولتاژ ورودی (110-300 V)

بهره گیری از فن آوری PWM High Frequency با سیستم کنترل میکروپروسسوری

بهره گیری از سیستم PFC (Power Factor Correction)

حفاظت اتصال معکوس باتری

مجهز به پورت RS 232 و قابلیت نصب کارت SNMP

قابلیت کار با ژنراتور

انعطاف پذیری در انتخاب تعداد باتری

سیستم شارژر هوشمند و قابلیت تنظیم جریان شارژ

قابل ارائه در دو نوع Rack mount/Tower

یکسال گارانتی و ده سال خدمات پس از فروش

