Online UPS

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

Output power factor=1.0, overall efficiency > 95%, 3 level technology, smart size, smart design, highly reliability

1、System Introduction

BH-V Series is a full DSP controlled, Adopt 3 level technology, online double conversion,1/1 Phase pure sine wave online UPS, with smart design and high reliable, this system overall efficiency > 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 switching power supply rectifier and PFC Technology. Input Power Factor 0.99, THDI≤3.5%, online single phase with double conversion structure, compatible with 208/220/230/240Vac，50/60Hz Grid supply system.

◆ Wide Input Range from, from 110-300Vac in full load（If Load is below 50%, it can be reached even equal or lower than 110Vac ）which can reduce the battery usage time and maximum the battery life span.

◆ Adopt Latest 3 Lever technology to meet the critical loads, with output PF =1, overall efficiency up to 95% (98.5% under ECO mode), BH-V is a energy saving green power.

◆ Powerful overload ability with output short circuit protection technology: 1-3 KVA: 102%-110% overload for 30mins, 110-130% overload for 10mins, 130-150% overload for 500ms.

6-10KVA: Utility mode: 102-110%:30 minutes, 110-130% :10 minutes, 130-150%: 1 minute, ≥150%: overload 500ms transfer to bypass. Load<97% the overload alarm cancels, load<70% UPS back to inverter mode.

◆ Can be connected with all kinds of generators to save customers costs.

◆ Intelligent charger system, charging current 1-12A adjustable, adopt constant charging, float charging and equalized charging design, it can be maximum the battery life and highly meet different charging requirements from customers.

◆ Powerful battery anti-reverse connected alarm and protection, when the DC is not connected, UPS will alarm DC disconnect, when the DC reversely connected due to the intention of installer, UPS cannot turn on and shows DC failure, only when the DC connect is correct the UPS will work in normal.

◆ Battery configuration: optional with 16/18/20pcs without changing any spares；

◆ Powerful battery maintenance function, users can do the battery test on the LCD screen directly, do not need administrator do the battery test in field. this can greatly avoid the UPS shutdown when the battery voltage low（ intelligent deep battery test, when the DC Voltage below 11V it will recovery to utility mode automatically）；

◆ Smart identify of short circuit, if the short circuit lasts within 3s, UPS will restart on inverter automatically, if the short circuit lasts over 3s, UPS will lock the inverter with long time alarm.

◆ Under emergency status, UPS output can be remote controlled under EPO mode

◆ 2.4 inch Large Color Dot-matrix LCD+LED Screen with multi-functional keyboard to check 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 running days and

cumulative running status of UPS

- ◆ Intelligent mute control technology and scientific ventilation design greatly reduce the UPS running noise
- ◆ Standard 19” Rack-mount design, it can be compatible with standard communication cabinet to greatly save data room space
- ◆ Highly integrated PCBA board and wires design makes the system convenient in maintenance and greatly saves after-sale 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, also highly improved the impact resistance ability

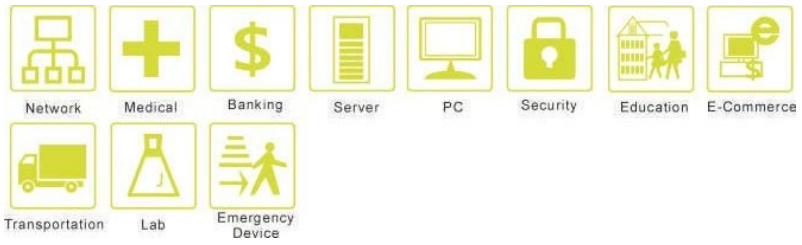
◆ BH-V series equipped the battery reverse connection protection and fault alarm to reduce the installation accidents. This can highly protection the safety of installation personnel and extend battery life.

◆ 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、Competitive points：

◆ Fully 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.；

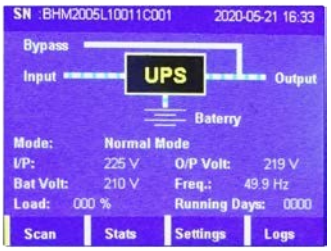
◆ Large Color Dot-matrix LCD+LED Screen with multi function and user- friendly.

6、UPS Outlook and Details

No.	Remark	No.	Remark
1	Colored 2.4 inch LCD screen	8	Parallel redundancy（not available now）
2	LED light	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 switch
7	EPO	14	Input, output, battery terminal blocks

7、6KVA/10KVA LCD screen：

◆ Main page



1、UPS Working Diagram；

2、Work Mode： Standby，Online，BAT，Bypass，ECO

3、Input Voltage；

4、Output voltage

5、BAT Voltage；

6、Output Frequency

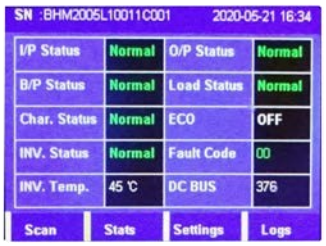
7、Load %；

8、Working（Days）

9、Serial Number；

10、Calendar、time

◆ Working Screen



1、I/P Status: Normal/ Alarm；

2、O/P Status： Normal/ Alarm

3、B/P Status： Normal/ Alarm；

4、Load Status： Normal/ Alarm

5、CHAR Status： Normal/ Alarm；

6、ECO Mode: Off/On

7、INV. Status： Normal/ Alarm

8、Fault code：00

9、INV Temp： ℃

10、Bus voltage：375

◆ Setting Screen

1、BAT Test: User can test Battery status with selected Time period in 10s、1 min、5 Minutes or deep cycle test. and cancel test

2、ECO mode

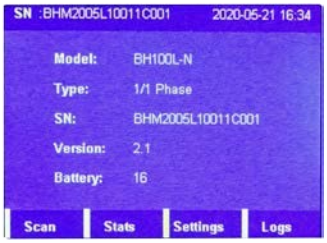
3 、 EPO mode

4、time and calendar；

5、Language：CHN/EN

6、Buzzer：ON / OFF

◆ UPS Information Screen



1、Product Model

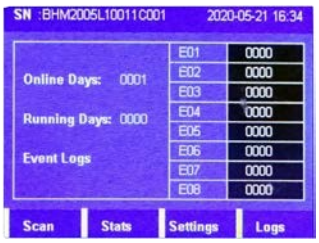
2、Product Structure：1/1 Phase Input/ Output, 3/1 Phase Input/ Output

3、Serial Number

4、Version Number

5、Battery quantity.

◆ Log screen



1: Online Days: It means the time from UPS 1st Starts up till it completely shutdown

2: Working Days: It means the time from the 1st time installation till now；

3: Event Logs: It calculates the accumulated total time for code E01- E08 faults or abnormal

◆ Log screen

1 、 It can shows the history abnormal or fault information in total 32 logs, including the event date, time, fault code (from the fault Code users could judge the abnormal details and do the warranty claim)

2、Serial number can also be found on the top of the screen

3、Time and date will also be shown

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℃				
Storage Temp	-15-60℃（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, over load、 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＜ 1500m, refer to IEC62040				
Rectifier Specification					
Input Voltage	220Vac（208/220/230/240Vac available）				
Input Voltage Range	110-300Vac, 110-176Vac/280-300Vac			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				
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%~110% load, 30mins transfer to bypass 110%~125% load, 10mins transfer to bypass 125%~150% load, 500ms ◆ Battery mode： 102%~110% load, 10mins then UPS turn off 110-125% load, 1mins UPS turn off Above 125% 10s UPS turn off			◆ Utility mode： 102%~110% load 30mins transfer to bypass, 110%~130% load, 10mins transfer to bypass,130%~150% load, 30s to bypass, >150% load, 500ms, load<97% overload alarm cancel, load<70% back to inverter mode. ◆ Battery mode： 102%~105% load, 10mins UPS turn off, 105%~125% load, 1mins UPS turn off, 125%~150% load, 10s UPS turn off, >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	< 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 maximum: 12A			Std. Built-in model 1A、Ext. model maximum: 12A		
Communication Specification						
Communication Port	Std.RS232；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 (1-3k) 440*540*88/2U (3Kva battery built-in)			440×470×88/2U	
Weight Kg		9/5	15/7	20/8	46/10	16.5/10.5
		5	7	8	12	12.5

Note：In the model's name "S" represents standard type with battery built-in, "L" represents long run battery external type.

Specifications are subject to change without further notice.