Online Lithium-ion High Frequency BH-N 48Vdc UPS (1-3KVA)

System Introduction

BH-N Series is a double conversion 1/1 Phase pure online UPS with DSP control. It has been designed for telecomm standard with 48Vdc battery voltage. 1-3KVA with same height of 2U.

System Features

High Performance Index

- Latest HF switching power supply rectifier and PFC Technology. Input Power Factor 0.99, THDI≤3.5%
- Wide Input Range from 160~300Vac on full load (100% Load, If Load is below 50%, it can be reached even equal or lower than 115Vac) On 3 Phase Model Input range is from 304 ~ 478 Vac.
- Latest IGBT technology to achieve high overall efficiency up to 90%. Compatible with 220/230/240V and 50/60 Hz Grid Supply Systems.
- Powerful overload ability with output short circuit protection technology: 1-3 KVA: 120% overloads for 1 minute. 150% for 60ms transfer to bypass and alarm. 6-10KVA: 105-130% overload for 10 minutes, >130% overload for 60ms.
- Can be connected with all kinds of generators to save customers costs.
- Intelligent temperature compensator and low wave charger can extend battery lifetime.
- Intuitive dual LCD and LED display panels, which comprehensively and intuitively reflect the state of power system statuses, parameters, and other information. Users can modify and operate based on individual needs on these friendly displays.
- 19'' inch Rack Mount structure design. It can be compatible with standard communication cabinet to greatly save data room spaces.

Safe and Reliable

- BH Series adapts DSP technology to control UPS all processes to increase system reliability.
- BH Series adapts sensitive peak current protection circuit to protect the system from damages due to short-circuit, cold load impacts.
- 90% of system components are from international famous brands. Systems will fully tested for 24 hours before leaving the factory.

Rich Optional Accessories

BH Series can use SNMP Network Adapter, RS485/Dry Contact, USB port to build up a remote control and monitoring system.

1-3KVA/0.8-2.4KW Front Panel

1KVA/800W Rear Panel

2-3KVA/1.6-2.4KW Rear Panel

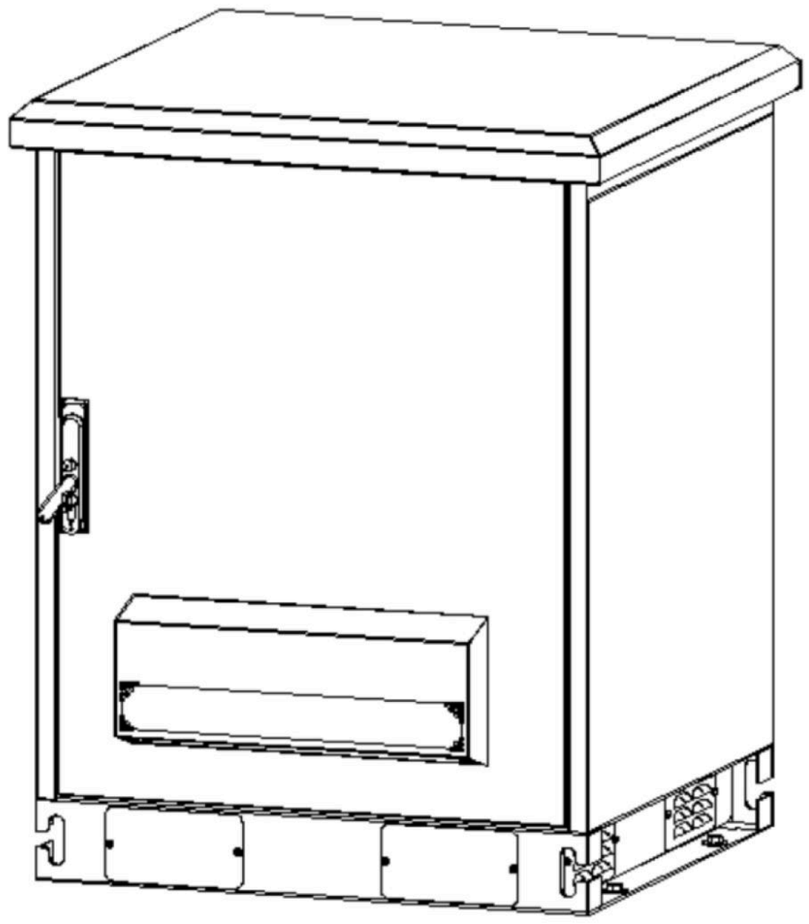
all-in-one, hot-swappable

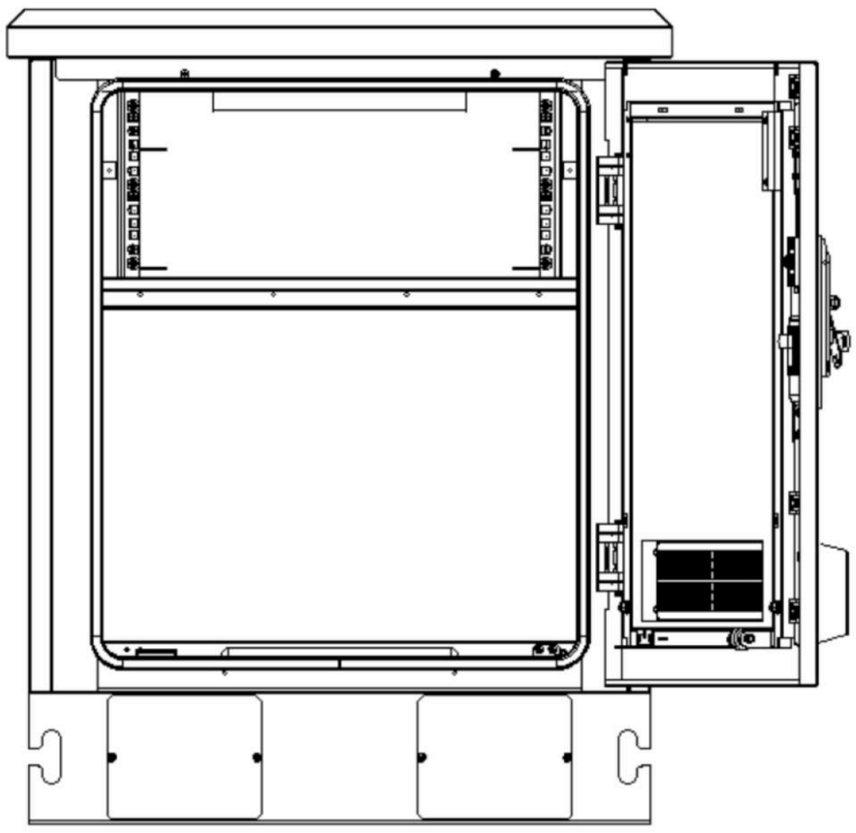
Carbon Diode

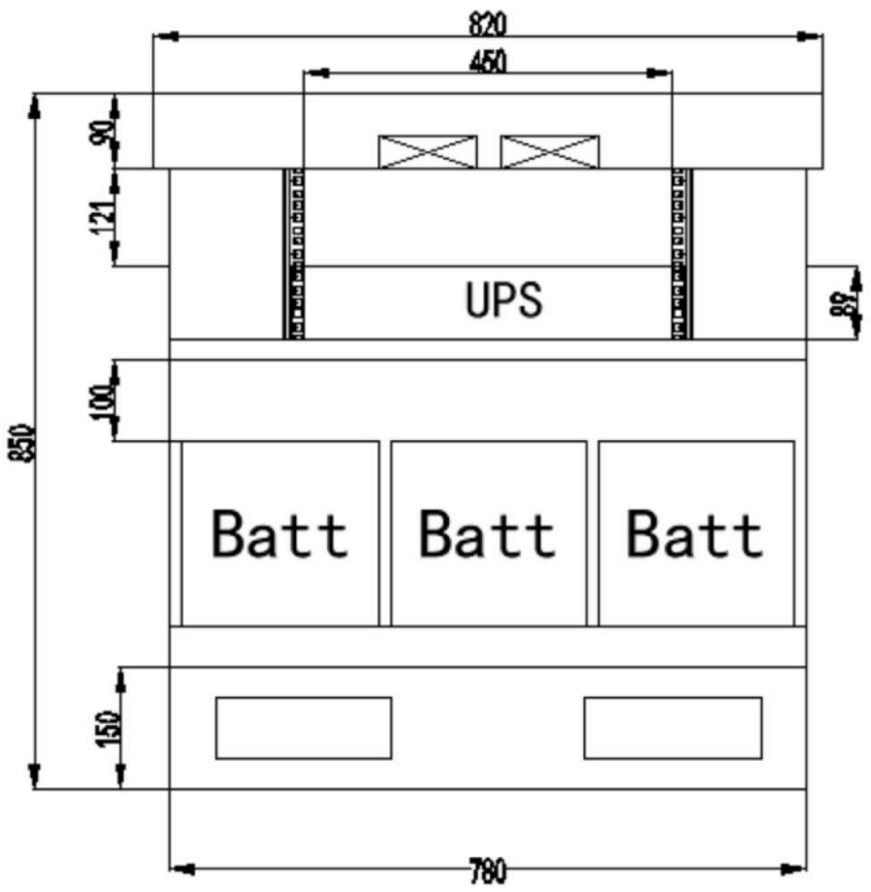
Product/Equipment Number:

ODC-P08FN02W01

Cabinet Information	
External Dimension (mm)	780(W)*650(D)*850(H)
Base Height (mm)	150
Cabinet Material	SGCC, 1.2mm
Base Material	SGCC, 2.0mm
19 inch Rack Space	5U
Door Opening Mode	Front opening
Lock	Three points anti-theft lock
Cable Entry Hole	6*Φ50
Color	RAL7035
Protection Level	IP55
Cooling Equipment Specification	
Cooling Method	Fan cooling
Input Voltage	AC220V/50Hz
Fan dimension	120x120x38
Quantities of fan	2 pcs
Commonly Optional Accessories	
Lighting	LED Lamp, AC 220V
Door Switch	Dry contact alarm, normal closed
Water Sensor	DC 12V , normal open
Smoke Sensor	DC12V~36V, NC or NO optional
Temperature Sensor	Measuring range -20~80℃,
Environmental Specifications	
Operating Temperature	-40~+55℃
Storage Temperature	-40~+70℃
Operating Humidity	5%~95% (non-condensing)







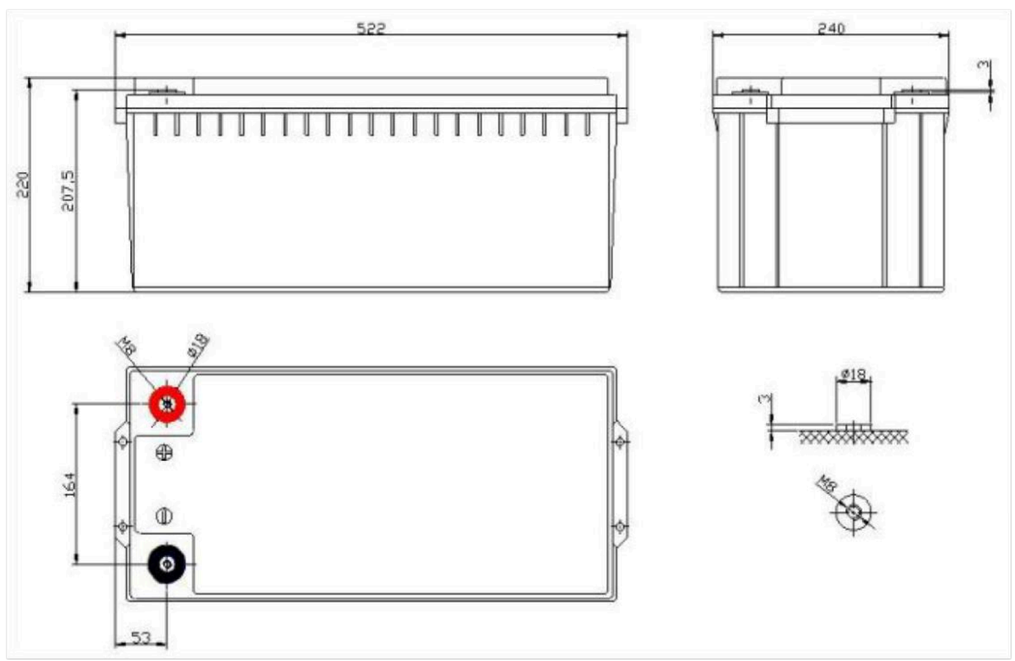
Carbon Diode

VRLA GEL Battery

(3 years warranty)

12200 G (12V200Ah)

Layout



Specifications

Nominal Voltage	12 V	
Nominal Capacity(C10)	200Ah(1.8V/cell@25℃)	
Dimensions	522*240*220/220mm	
Approx .Weight	68.5kg (1±3%)	
Internal Resistance	Approx.2.65mΩ@25°C	
Terminal	Φ18* M8	
Operating Temperature Range	Discharge：-20℃~ 60℃ (-4 ~ 104°F)	
	Charge： 0℃~ 40℃ (-4 ~ 104°F)	
	Storage： -20℃~ 50℃ (-4 ~ 122°F)	
Nominal Operating Temperature Range	25±3℃ (77±5°F)	
Max. Charging Current	50.0A @25°C	
Charging voltage(25°C)	Float：2 .23V ~2 .27V/cell	
	Temp.Coeffcient：-3mV/cell·℃	
	Equalization：2 35V ~2 .40V/cell	
	Temp.Coeffcient：-4mV/cell·℃	
	Cycle：2 .35V~2 .40V/cell	
	Temp.Coeffcient：-5mV/cell·℃	
Effect of temperature to rated Capacity(C10)	40℃ (104°F)	105%
	25℃ (77°F)	100%
	0℃ (32°F)	86%
Self Discharge	≤3%/month@ 25℃	
Casing material	ABS(UL94 HB or V-0 optional)	

Constant Current Discharge*(Amperes @25℃/77° F)

TIME	15min	20min	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
9.60V	362	264	230	126	80.6	49.0	40.0	34.9	30.4	23.0	20.5	10.59
10.20V	340	248	219	121	79.4	48.1	39.5	34.4	30.0	22.7	20.3	10.54
10.50V	328	239	213	119	78.2	48.0	39.2	34.2	29.8	22.5	20.1	10.49
10.80V	311	227	206	115	76.2	46.6	38.0	33.2	28.9	21.9	20.0	10.40
11.10V	286	208	191	107	73.0	44.2	36.1	31.5	27.4	20.7	19.2	9.98

Constant Power Discharge*(Watts/Unit @25℃/77° F)

TIME	15min	20min	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
9.60V	3088	2441	1917	1313	767	584	464	398	344	302	253	137
10.20V	2953	2340	1870	1263	745	575	452	385	338	299	249	134
10.50V	2852	2252	1876	1235	733	565	447	382	333	296	244	133
10.80V	2672	2110	1850	1108	700	547	442	373	328	292	243	129
11.10V	2387	1885	1715	1010	628	499	407	357	311	281	238	123

Carbon Diode

VRLA GEL Battery

12200 G (12V200Ah)

General Features

- 15 years design life(25℃)
- Gelled electrolyte for superior thermal management, long float life
- Efficient gas recombination decreases gassing/ water and extends battery life
- Robust design-resilient in harsh conditions
- Proof against deep discharge-greater long-term energy delivery and cycle life

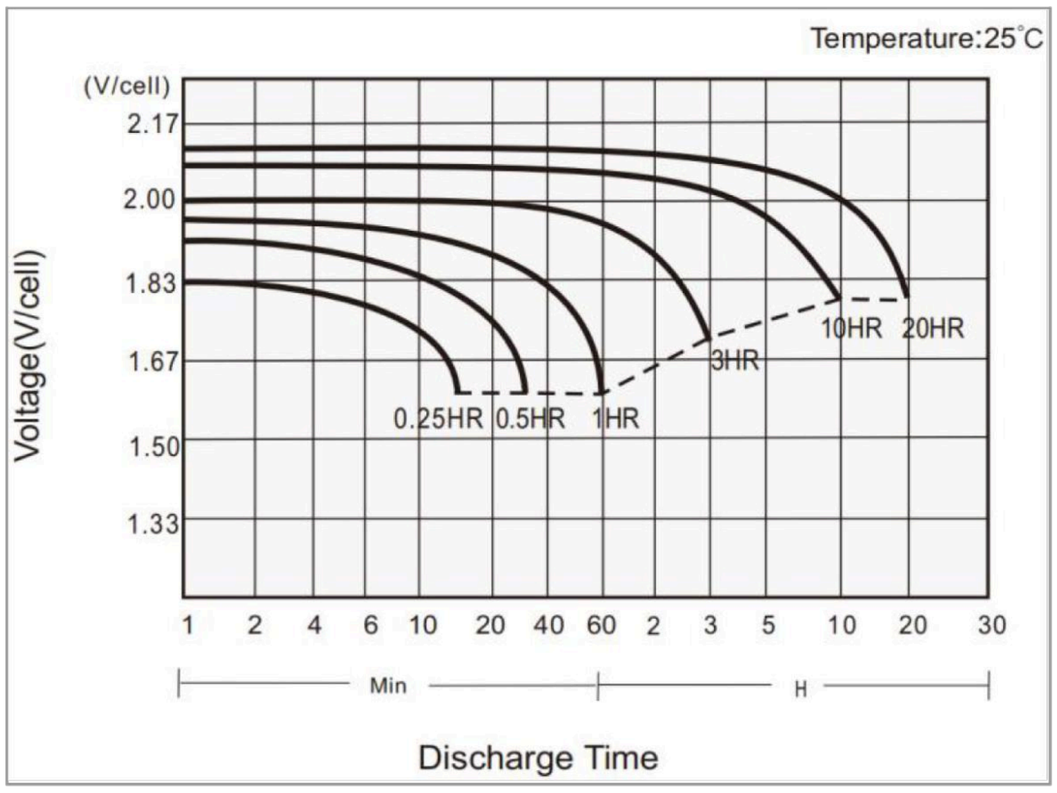
Applications

- Telecommunications
- Solar system
- Wind power system
- Engine starting
- Wheelchair, Floor cleaning machines , Golf trolley, Boats

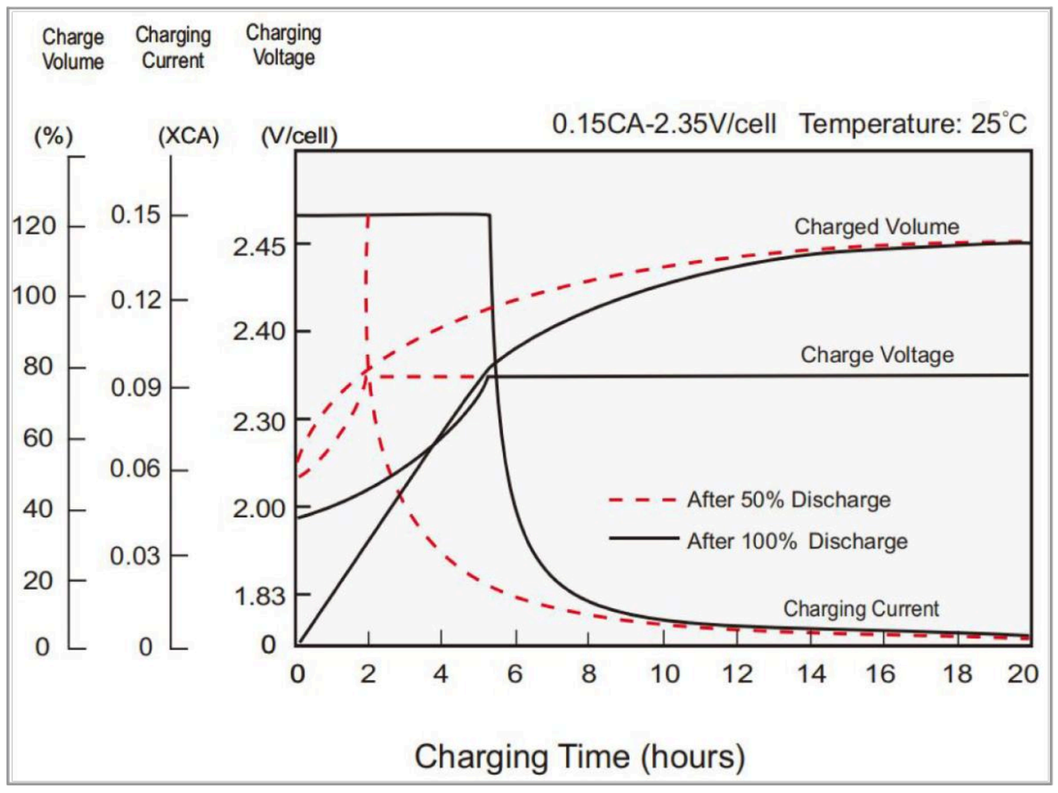
Standards

- Compliant with IEC60896, IEC61427, GB/T19638,YD/T1360-2015,YD/T799, DL/T637
- Certified for TLC, CE, RoHS and Reach compliance
- The company Aokly is certified under TS16949,OHSAS18001,SA8000, ISO9001, ISO14001,ISO45001 and ISO50001 management systems

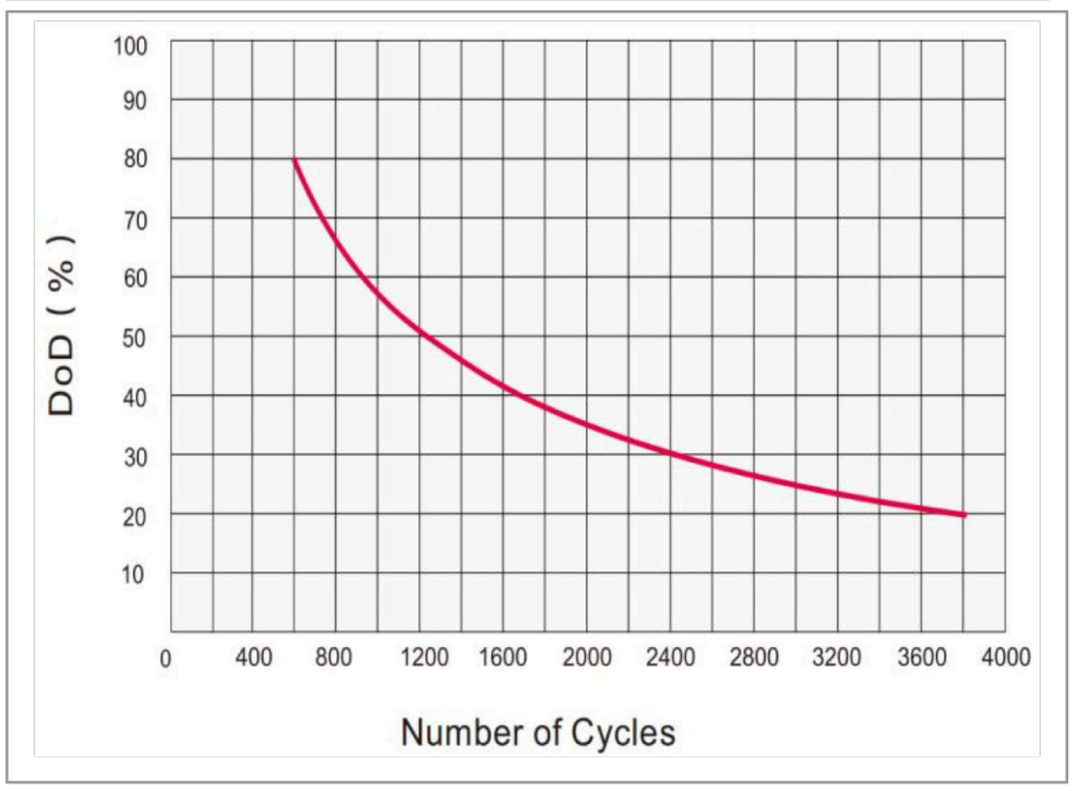
Discharge Characteristics



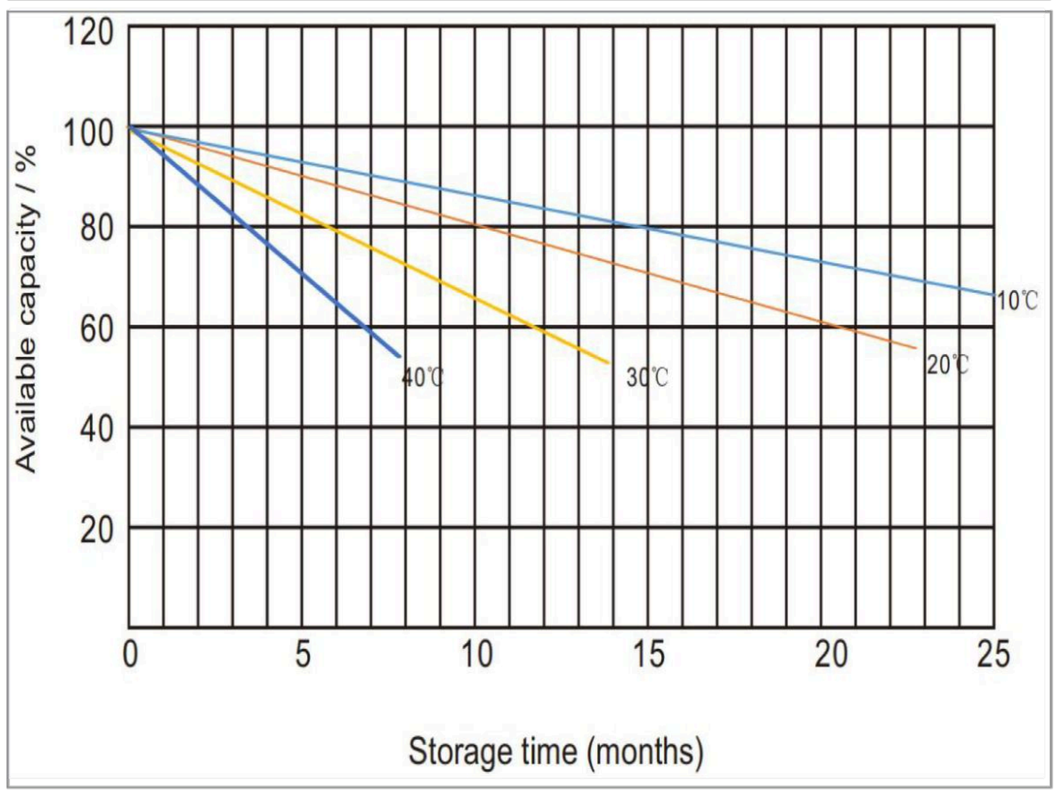
Charging Characteristics



Cycle Life in Relation to DoD



Self Discharge Characteristics



BH Series (3 years warranty)

BH-V Series DSP Control HF Online UPS (1-10KVA 1/1 Phase)

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.

SYSTEM FEATURES

■ 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 110-300Vac in 100% 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 96% (98.5% under ECO mode), BH-V is a energy saving green powers.
- Powerful overload ability with output short circuit protection technology, high compatibility with all kinds of generators:
  1-3 KVA: 120% overloads for 1 minute.150% for 60ms transfer to bypass and alarm.
  6-10KVA: Utility mode: 102-110%:30 minutes, 110-130% :10 minutes, 130-150%:1 minute, ≥150%:500ms
  6-10KVA: Battery mode: 102-110% :10 minutes, 110-130% :1 minutes, 130-150% : 10s, ≥150% 500ms.
- 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 connect, 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.
- 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.

■ Rich Optional Accessories

- BH-V Series can use SNMP Network Adapter, RS485/Dry Contact, USB port,
- and EPO function to build up a remote control and monitoring system.

Compatible applications/loads

Carbon Diode

SPECIFICATION

Model	BH10S	BH10L	BH20S	BH20L	BH30S	BH30L	BH60S	BH60L	BH100S	BH100L
Capacity	1KVA/1KW		2KVA/2KW		3KVA/3KW		6KVA/6KW		10KVA/10KW	
Host Machine Specification										
UPS Structure	Double Conversion High Frequency Online									
Appearance	Tower or Rack-Mount Type									
Overall Efficiency (AC-AC)	＞95%									
Noise(In 2 meters)	＜50dB									
Working Temp	-20℃ - +40℃									
Storage Temp	-20 ～60℃(Without BATs)									
Humidity	＜95% Non Condensing									
Safety Standard	GB/T14715									
EMC Standard	EN 50091/EN62040-1/2									
Protections	Overload, Short-Circuit, Over Temp., Utility Power Voltage High/low, BAT Voltage High/low									
Parallel Redundancy	None						Optional Accessory			
Generator Compatibility	Available									
DC Start	Available									
Manual Maintenance Bypass	None						Optional Accessory			
Display	Premium Version LCD Display: Multi-Language with all kinds of messages. Input/ Output /bypass Status, ECO Mode , charging status, load status, Rectifier status, INV. Temp.; Working (days); SN; Calendar time; UPS model & structure; Version No.; log records; fault records; language set; ECO set; time & calendar set; battery test,etc. Standard Version: LCD display: Input/ Output /bypass Status, ECO Mode, charging status, load status, Rectifier status, INV. Temp									
Alarm	Auto									
Mute	Auto									
Rectifier Specification										
Input Voltage Range	100% Load:160～300Vac，50% Load:115～300Vac									
Input Frequency Range	40-70Hz(Auto Tracking)									
Input PF	0.99									
THDI	<3% (Linear Load); <5% (Non-Linear Load);									
Output Specification										
Output Voltage	220/230/240Vac Adjustable									
Output PF	1 (No Lag)									
Output Voltage Regulation	220Vac±1%(Static Load)；220Vac±2%(50-0% Sudden Change)；220Vac±3%(100-0% Sudden Change)									
Output Freq.(Online Mode)	When 46Hz ≤Input Freq.≤ 54Hz , Input Freq.=Output Freq. ；When Input Freq.<46Hz or >54Hz, Locked at 50Hz									
Output Freq. (BAT Mode)	50Hz± 0.2%									
Output Waveform	Pure Sine wave									
Distortion	<1%(Linear Full Load)， < 3%(100% Non-Linear Load)									
Overload	＞125%: More than 1 min ＞150%: 300 ms transfer to bypass						＞120%: More than 1 min ＞150%: 300ms transfer to bypass			
Crest Ratio	3：1									
Efficiency	>95%									
Short-Circuit	Circuit Auto Protection, Output Voltage/Current 0									
Output Abnormal	INV Output Auto-Locked Protection									
Noise Suppression	EMI/RFI Wave filter									
BAT Low	Shutdown Protection									
Dynamic Response	3% at full load，recovering in 20ms									
Auto-Restart	Available									
Software Control	Available									
Bypass Specification										
Static Bypass Transfer Time	0ms									
Static Bypass Range	80Vac± 5%～285Vac±5%									
Bypass -> INV Transfer Time	2ms									
Battery Specification										
Type	Sealed Lead Acid Maintenance Free									
Std. Model Rated Volts/Units	12V 7/9Ah×2P		12V 7/9Ah×4P		12V 7/9Ah×6P		12V 7/9Ah×16P		12V 7/9Ah×16P	
Backup time	5-10min		5-10min		5-10min		5-15min		5-15min	
Ext. Model Rate Volts/Units	24Vdc	36Vdc	48Vdc	72Vdc	72Vdc	96Vdc	192Vdc	192/240Vdc	192Vdc	192/240Vdc
Std. Model Charging Current	1A		1A		1A		1A		1A	
Ext. Model Charging Current		1-12A		1-12A		1-12A		1-12A		1-12A
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										
Tower Size mm(W×D×H)	145×285×215		145×400×215		190×420×318	190×400×215	190×390×705	190×360×335	190×390×705	190×360×335
Net Weight Kg	9	5	15	7	20	7.5	46	10	46.5	10.5
Size mm(RM, W×D×H)	440×400×88/2U		440×400×88/2U		440×540×88/2U	440×400×88/2U	440×470×88/2U		440×470×88/2U	
Net Weight Kg	9	5	15	7	20	7.5	/	10	/	10.5

Note:Specification are subject to change without further notice.