

Array-Type Modular Online UPS



















- power module capacity: 20kVA/30kVA/40kVA/50kVA
- efficiency: 96%
- support working without bypass module
- Battery flexible configuration 30-50pcs
- remote monitoring
- max capacity: 600kVA
- can parallel 4 units

### **Application**

Small and medium-sized data/IT room,banks,securities,communication network center, automatic production line and its control system,Building lighting, road lighting, electrical, industrial and mining enterprises.









#### **BKH Brief**

BKH series modularized UPS maintains the technical features of traditional tower-type UPS and adopts modularized design to meet the need of modern service room, while ensuring the high reliability of the system. BKH series offers various power modules and cabinet

systems, and the user can able to flexibly combine them according to load demand. The capacity of a single cabinet is 200KVA and that of combined cabinets reaches 400KVA.

#### Main Features

- UPS system is modular design, N+X redundancy, hot plugging for system update or capacity expansion.
- Strong load adaptability and loading capacity, and excellent power grid applicability.
- Green and energy-saving power supply; overall efficiency>95%, input power factor> 0.99, input current harmonics (THDi)<3%.
- Dual DSP for independent control of power module, no single point of failure.
- Digital control of rectification, inverter, charging and discharging via DSP.
- Integrated and packaged IGBT instead of discrete device to greatly enhance the reliability of power module and UPS system.
- Front panel for easy maintenance, inlet wire from top to bottom for easy connection by user.
- Large touch screen of human-machine interface, a great amount of information.
- Independent charging system, strong charging capacity, Perfect battery management scheme.
- Parallel connection technology of digital modules, precision circular current index.

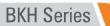
- Easy to install even close to other equipments, space-saving footprint in service room.
- Redundancy and intelligent adjustable-speed fan, low noise, low power consumption.
- Integrated distribution system inside system cabinet, easy to install, low investment by user.
- Good matching performance with motor.
- DC Starting via battery (cold boot) for easy operation.
- Three-proofing treatment of all circuit boards.
- Optional Standard battery bank or extension battery bank.



## **BKH-M1 Series Specifications**

Model (full configured ) BKH-M1A	BKH-M1A-G30K	BKH-M1A-G60K	BKH-M1A-G100K	BKH-M1A-G120K	
Capacity	10kVA-30kVA	10kVA-60kVA	10kVA-100kVA	10kVA-120kVA	
Power module capacity	10KVA			1	
Power module weight	14KG				
Power module number(MAX)	3	6	10	12	
Physical parameter					
Power module size (W*D*H)	19″*509mm*2U				
Power module weight	14KG/unit				
Cabinet size ( W*D*H)mm	600*800*1600 600*800*2000				
Cabinet weight (KG)	180	197	245	260	
Mains input(AC)	'		<u>'</u>	<u>'</u>	
Phase	3 phase 4 wires/single	e phase 2 wires+G			
*Voltage range	291~492V (line-line)	291~492V (line-line) full load			
Frequency range	30Hz~80Hz				
THDi	<3%	<3%			
Power factor	0. 995				
Bypass range	-10%~10% (can custo	-10%~10% (can customized -10%~-30%, +10%~+20%)			
Battery					
Connection type	positive and negative battery supply				
Rated voltage	+/- 384VDC (+/-32*12V series)				
Battery number	64pcs/set				
Charging current	20% * system power(battery capacity)				
Output(inverter)					
Output voltage	3 phase 380VAC/1 phase 220VAC +G				
Voltage regulation	<+/-1%				
Phase lock range	50Hz/60Hz +/-5Hz;(self frequency 50Hz/60Hz+/-0.01Hz)				
Output frequency	50Hz/60Hz+/-0.01Hz (if phase locked then mains frequency)				
Power factor	0.9				
Crest factor	3:1				
*THDu	THD<1.0% (linear load), THD<3%(non-linear load)				
*Three phase voltage unbalance degree	balance load: 0.2% 100% unbalance load: 0.5%				
Dynamic voltage transient range	<2%				
*Transient Recorery Time	0ms				
Three phase voltage deviation	mains:0.1; battery:0	.1			
Overload capacity	125% for 10min: 150% for 1min; >150% for 200ms (linear load)				
System efficiency	> 94%	> 94%			
Environment indicator					
Noise	≤60dB @100%load,	cooling fan adopt intelligent	speed control		
Display	touch screen LCD+LED				
Interface	standard: RS232, RS4	standard: RS232, RS485, dry contacts, SNMP card optional			
Operation temperature	temperature: -10C ~+40C; humidity 0%~98%; storage temperature -25C~+75C Altitude(m): <1000, 1000m-2000m above every 100m reduce 1%				

NOTES: subject to change without further notice!







## **BKH-M2 Series Specifications**

Model	BKH-M2A-T60K	BKH-M2A-T100K	BKH-M2A-T160K	BKH-M2A-T200K
Capacity	20kVA-60kVA	20kVA-100kVA	20kVA-160kVA	20kVA-200kVA
Power module capacity	20kVA			
Module size(W*D*H)	19″*690mm*3U			
Module weight	28KG/unit			
Mains input(AC)				
Phase	3 phase +N+PE			
*Voltage range	291~492 V(line-line) full load; 200V~291V linearly decrease			
Frequency range	35Hz~70Hz			
THDi	<3% (full linear load)			
Power factor	0. 995			
Bypass range	-10%~10% (can custon	nized -10%~-30%, +10%~+2	(0%)	
Battery				
Connection type	positive series and nega	ntive series battery		
Rated voltage	+/- 240VDC (positive	and negative each 20pcs*12	V series), can customized	
*Battery numbers	40pcs/set (can customize 30~50pcs/set optional)			
Charging current	20% system power (bat	tery capacity)		
Output /inverter				
Output voltage	380VAC 3 phase 4 wire	es+PE		
*Voltage regulation	<±1%			
Phase lock range	50Hz/60Hz+/-5Hz(self frequency 50Hz/60Hz+/-0.01Hz)			
Output frequency	50Hz/60Hz+/-0.01(turn into mains frequency if phase locked)			
*Power factor	1			
Crest factor	3:1			
*THDu	THD<2.0% (linear load), THD<3%(non-linear load)			
*Three phase voltage unbalance degree	balance load: 0.5% 100% unbalance load : 1%			
Dynamic voltage transient range	<3%			
Transient Recovery Time	Oms			
Three phase voltage deviation	mains:0.4; battery:0.3			
Transfer time	mains to battery: 0ms; inverter to bypass: 0ms			
Overload capacity	125% for 10min: 150% for 1min; >150% for 200ms (linear load)			
*System efficiency	≥96%			
<b>Environment index</b>				
Noise	≤60dB @100%load, cooling fan adopt intelligent speed control			
Display	touch screen LCD+LED			
Interface	standard: RS232, RS485, dry contacts, SNMP card optional			
Operation temperature	temperature: -10C ~+40C; humidity 0%~98%; storage temperature -25C~+75C Altitude(m): <1000, 1000m-2000m above every 100m reduce 1%			
IP class	Ip30( Removable dust filter)			
Physical specifications		<u> </u>		
Cabinet size (W*D*H)	600*800*1250	600*1100*2000	600*110	0*2000
Cabinet weight KG	130	295	305	310

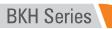
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# BKH-M3 Series Specifications

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Model	BKH-M3A-T90K	BKH-M3A-T150K	BKH-M3A-T240K	BKH-M3-T300K
Capacity	30kVA-90kVA	30kVA-150kVA	30kVA-240kVA	30kVA-300kVA
Power module capacity	30kVA			
Module size(W*D*H)	19"*690mm*3U			
Module weight	36KG/unit			
Mains input(AC)				
Phase	3 phase +N+PE			
*Voltage range	291~492 V(line-line) full load; 200V~291V linearly decrease			
Frequency range	35Hz~70Hz			
THDi	<3% (full linear load)			
Power factor	0.995			
Bypass range	-10%~10% (can customi:	zed -10%~-30%, +10%~+20%	(o)	
Battery				
Connection type	positive series and negative series battery			
Rated voltage	+/- 240VDC (positive a	nd negative each 20pcs*12V	series), can customized	
*Battery numbers	40pcs/set (can customize 30~50pcs/set optional)			
Charging current	20% system power (battery capacity)			
Output /inverter				
Output voltage	380VAC 3 phase 4 wires+PE			
*Voltage regulation	<±1%			
Phase lock range	50Hz/60Hz+/-5Hz(self frequency 50Hz/60Hz+/-0.01Hz)			
Output frequency	50Hz/60Hz+/-0.01(turn into mains frequency if phase locked)			
*Power factor	1			
Crest factor	3:1			
*THDu	THD<2.0% (linear load), THD<3%(non-linear load)			
*Three phase voltage unbalance degree	balance load: 0.5% 100% unbalance load : 1%			
Dynamic voltage transient range	< 3%			
Transient Recovery Time	0ms			
Three phase voltage deviation	mains:0.4; battery:0.3			
Transfer time	mains to battery: 0ms; inverter to bypass: 0ms			
Overload capacity	125% for 10min: 150% for 1min; >150% for 200ms (linear load)			
*System efficiency	>96%			
Environment index				
Noise	≤60dB @100%load, cooling fan adopt intelligent speed control			
Display	touch screen LCD+LED			
Interface	standard: RS232, RS485, dry contacts, SNMP card optional			
Operation temperature	temperature: -10C ~+40C; humidity 0%~98%; storage temperature -25C~+75C Altitude(m): <1000, 1000m-2000m above every 100m reduce 1%			
IP class	Ip30( Removable dust filter)			
Physical specifications		·		
Cabinet size (W*D*H)	600*800*1250	600*1100*2000	600*1100*2000	
Cabinet weight KG	130	295	305	310
Modules No.(Max)	3	5	8	10
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# **BKH-M4 Series Specifications**

Model	BKH-M4A-T120K	BKH-M4A-T200K	BKH-M4A-T320K	BKH-M4A-T520K	
Capacity	40kVA-120kVA	40kVA-200kVA	40kVA-320kVA	40kVA-520kVA	
Power module capacity	40kVA				
Module size(W*D*H)	19"*690mm*3U				
Module weight	39KG/unit				
Mains input(AC)					
Phase	3 phase +N+PE				
*Voltage range	291~492 V(line-line) full load; 200V~291V linearly decrease				
Frequency range	35Hz~70Hz				
THDi	<3% (full linear load)				
Power factor	0.995				
Bypass range	-10%~10% (can customiz	red -10%~-30%, +10%~+20%	(n)		
Battery					
Connection type	positive series and negative	e series battery			
Rated voltage	+/- 240VDC (positive and	+/- 240VDC (positive and negative each 20pcs*12V series), can customized			
*Battery numbers	40pcs/set (can customize 30~50pcs/set optional)				
Charging current	20% system power (battery capacity)				
Output /inverter					
Output voltage	380VAC 3 phase 4 wires+PE				
*Voltage regulation	<±1%	-			
Phase lock range	50Hz/60Hz+/-5Hz(self fre	50Hz/60Hz+/-5Hz(self frequency 50Hz/60Hz+/-0.01Hz)			
Output frequency	50Hz/60Hz+/-0.01(turn into mains frequency if phase locked)				
*Power factor	1				
Crest factor	3:1				
*THDu	THD<2.0% (linear load), THD<3%(non-linear load)				
*Three phase voltage unbalance degree	balance load: 0.5% 100% unbalance load : 1%				
Dynamic voltage transient range	< 3%				
Transient Recovery Time	0ms				
Three phase voltage deviation	mains:0.4; battery:0.3				
Transfer time	mains to battery: 0ms; inverter to bypass: 0ms				
Overload capacity	125% for 10min: 150% for 1min; >150% for 200ms (linear load)				
*System efficiency	>96%				
<b>Environment index</b>					
Noise	≤60dB @100%load, cooli	ing fan adopt intelligent spee	d control		
Display	touch screen LCD+LED				
Interface		standard: RS232, RS485, dry contacts, SNMP card optional			
Operation temperature	temperature: -10C ~+40C; humidity 0%~98%; storage temperature -25C~+75C Altitude(m): <1000, 1000m-2000m above every 100m reduce 1%				
IP class	Ip30( Removable dust filter)				
Physical specifications					
Cabinet size (W*D*H)	600*800*1250	600*1100*2000	600*1100*2000	1200*1100*2000	
Cabinet weight (KG)	130	295	305	578	
Modules No.(Max)	3	5	8	13	

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# BKH-M5 Series Specifications

Model	BKH-M5A-T200K	BKH-M5A-T300K	BKH-M5A-T500K	BKH-M5A-T600K
Capacity	50kVA-200kVA	50kVA-300kVA	50kVA-500kVA	50kVA-600kVA
Power module capacity	50kVA			
Module size(W*D*H)	19"*690mm*3U			
Module weight	39KG/unit			
Mains input(AC)				
Phase	3 phase +N+PE			
*Voltage range	291~492 V(line-line) full load; 200V~291V linearly decrease			
Frequency range	35Hz~70Hz			
THDi	< 3% (full linear load)			
Power factor	0.995			
Bypass range	-10%~10% (can custom	ized -10%~-30%, +10%~+20%	)	
Battery				
Connection type	positive series and negative series battery			
Rated voltage	+/- 240VDC (positive and negative each 20pcs*12V series), can customized			
*Battery numbers	40pcs/set (can customize 30~50pcs/set optional)			
Charging current	20% system power (battery capacity)			
Output /inverter				
Output voltage	380VAC 3 phase 4 wires+PE			
*Voltage regulation	<±1%			
Phase lock range	50Hz/60Hz+/-5Hz(self frequency 50Hz/60Hz+/-0.01Hz)			
Output frequency	50Hz/60Hz+/-0.01(turn into mains frequency if phase locked)			
*Power factor	0.9			
Crest factor	3:1			
*THDu	THD<2.0% (linear load), THD<3%(non-linear load)			
*Three phase voltage unbalance degree	balance load: 0.5% 100% unbalance load: 1%			
Dynamic voltage transient range	< 3%			
Transient Recovery Time	0ms			
Three phase voltage deviation				
Transfer time	mains:0.4; battery:0.3  mains to battery: 0ms: inverter to bypass: 0ms			
Overload capacity	mains to battery: 0ms; inverter to bypass: 0ms			
*System efficiency	125% for 10min: 150% for 1min; >150% for 200ms (linear load) >95%			
Environment index	29370			
	<70dB @1009/land and	ling for adopt intelligent area	d aantual	
Noise Display	≤70dB @100%load, cooling fan adopt intelligent speed control			
Interface	touch screen LCD+LED standard: RS232, RS485, dry contacts, SNMP card optional			
menace				
Operation temperature	temperature: -10C ~+40C; humidity 0%~98%; storage temperature -25C~+75C Altitude(m): <1000, 1000m-2000m above every 100m reduce 1%			
IP class	Ip30( Removable dust filter)			
Physical specifications				
Cabinet size (W*D*H)	600*1100*2000	600*1100*2000	1200*1100*2000	
Cabinet weight KG	295	305	578	600
Modules No.(Max)	4	6	10	12

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