



High Frequency Online UPS

H1-3KS/L SERIES



Features

- True double-conversion online technology
- DSP technology for all-digital control, high reliability
- Input power factor correction >0.98
- Wide input voltage (115VAC-300VAC)
- Output power factor 0.8/0.8(optional @ environment temperature below 30 degree)
- Output voltage: 200/208/220/230/240VAC
- 50HZ/60HZ frequency converter mode
- LCD and LED user interface
- Short circuit, Overload and Over temperature protection
- Generator compatible
- Auto-restart



H1-3KS/L Series Online UPS Selection Guide

Model	H1KS/L	H2KS/L	H3KS/L
Capacity	1KVA/0.8KW	2KVA/1.6KW	3KVA/2.4KW
Input			
Phase	Single phase with ground		
Nominal Voltage	220VAC		
Voltage Range	115-300VAC		
Frequency Range	40HZ-70HZ		
Power Efficiency	≥0.98 (100% Load)		
Output			
Output Voltage	220/230/240VAC		
Voltage Regulation	±2%		
Frequency Range	Synchronized 46-54Hz (Line mode), 50/60HZ±0.2HZ(battery mode)		
Overload	105%-125% for 50 seconds then transfer to bypass;		
	125%<load<150% for 30 seconds then transfer to bypass;		
	>150% for 0.3 seconds then transfer to bypass;		
Crest Power	3:1		
Waveform	Pure sine wave		
Harmonic Distortion	≤ 3% THD (Linear Load)		
Transfer Time	0ms (line to battery mode); 4ms(inverter to bypass mode)		
Protections	overload, short circuit, over temperature, surge, line abnormal		
Efficiency	85%	90%	
Battery			
DC Voltage	36V (12V*3)	72V (12V*6)	96V (12V*8)
Type	7AH/12V Maintenance-free sealed lead acid battery		
Indications and alarm			
LED	Load level, Battery level, AC mode, Battery mode, Bypass mode and Fault indicators		
LCD	Input/output voltage & frequency, Battery level, Load watt, UPS temperature, Operation mode and fault code and events		
Audible Alarm	Battery mode, Bypass mode, Low battery/Charger fault, Overload, Fault.		
Communication/Management			
Interface Port	RS-232		
Intelligent Slot	SNMP Card		
Environment			
Operation Temperature	0-40°C		
Relative Humidity	20-90%RH(non-condensing)		
Noise Level	<50dB @ 1 Meter	<45dB @ 1 Meter	
Physical			
Dimension(D*W*H)(mm)	145*400*220	192*460*348	
Net Weight (KG)	18(10)	35(16)	38(20)

"S" means standard backup time model(with inbuilt battery), "L" means long backup time model (without inbuilt battery). Product specifications are subject to change without further notice.



High Frequency Online UPS

H6-10KS/L SERIES



Features

- True double-conversion online technology
- DSP technology for all-digital control, high reliability
- Input power factor correction >0.98
- Wide input voltage (115VAC-300VAC)
- Output power factor 0.8/0.8(optional @ environment temperature below 30 degree)
- Output voltage: 200/208/220/230/240VAC
- 50HZ/60HZ frequency converter mode
- LCD and LED user interface
- Short circuit, Overload and Over temperature protection
- Automatically restarts when utility power restores after UPS shutdowns due to battery low
- Auto-restart
- EMI/RFI noise filter
- Generator compatible
- Optional SNMP card slot
- Smart RS232communication



H6-10KS/L Series Online UPS Selection Guide

Model	H6KS	H10KS	H6KL	H10KL
Capacity	6KVA/4.8KW	10KVA/8KW	6KVA/4.8KW	10KVA/8KW
Input				
Phase	1/1 Phase, 1 wire+N+G			
Nominal Voltage	220VAC			
Voltage Range	120-276VAC			
Frequency Range	50Hz or 60Hz ± 10%			
Power Efficiency	>0.99			
Output				
Output Voltage	220/230/240VAC ± 1%			
Power Factor	0.8			
Frequency Range	Synchronized 46-54Hz (Line mode), 50/60HZ±0.2HZ(battery mode)			
Voltage Regulation	±2%			
Overload Capacity	105%-125% for 50 seconds then transfer to bypass;			
	125%<load<150% for 30 seconds then transfer to bypass;			
Crest Power	3:1 (max)			
Waveform	Pure sine wave			
Voltage Distortion	≤ 2% for linear load, ≤ 4% for non-linear load			
Transfer Time	0ms (line to battery mode)			
Protections	overload, short circuit, over temperature, surge, line abnormal			
Efficiency	≥ 90%			
Battery				
Battery Type	Maintenance-free sealed lead acid battery			
DC Voltage	192V (12V*16PCS)			
Transfer Time	0ms (line to battery mode), < 4ms (line to bypass mode)			
Protections	overload, short circuit, over temperature, surge, line abnormal			
Indications and alarm				
LED	Load level, Battery level, AC mode, Battery mode, Bypass mode and Fault indicators			
LCD	Input/output voltage & frequency, Battery level, Load watt, UPS temperature, Operation mode and fault code and events			
Audible Alarm	Battery mode, Bypass mode, Low battery/Charger fault, Overload, Fault.			
Output Sockets	Terminal Block			
Communication/Management				
Interface Port	RS-232			
Intelligent Slot	SNMP Card			
Environment				
Operation Temperature	0-40°C			
Relative Humidity	20-90%RH(non-condensing)			
Noise Level	<55dB			
Physical				
Dimension(D*W*H)(mm)	260*570*717			
Net Weight (KG)	84	93	35	38

"S" means standard backup time model(with inbuilt battery), "L" means long backup time model (without inbuilt battery). Product specifications are subject to change without further notice.

High Frequency Rack Mount Online UPS

HR1-6KS/L SERIES



Features

- True double-conversion online technology
- DSP technology for all-digital control, high reliability
- Input power factor correction >0.98
- Wide input voltage (115VAC-300VAC)
- Output power factor 0.8/0.8(optional @ environment temperature below 30 degree)
- Output voltage: 200/208/220/230/240VAC
- 50HZ/60HZ frequency converter mode
- LED user interface
- Short circuit, Overload and Over temperature protection
- Automatically restarts when utility power restores after UPS shutdowns due to battery low
- Auto-restart
- EMI/RFI noise filter
- Generator compatible
- Optional SNMP card slot
- Smart RS232communication



HR1-6KS/L Series Online UPS Selection Guide

Model	HR1KS/L	HR2KL	HR3KL	HR6KL
Capacity	1KVA/0.7KW	2KVA/1.4KW	3KVA/2.1KW	6KVA/4.2KW
Input				
Phase	1/1 Phase, 1 wire+N+G			
Nominal Voltage	220VAC			
Voltage Range	115 ~ 300VAC			176~276VAC
Frequency Range	46~54Hz(default), user adjustable within 40~60Hz			46~54Hz
Power Efficiency	0.97			0.98
Connection	IEC320-10A inlet		IEC320-16A inlet	Terminal block
Output				
Output Voltage	220/230/240VAC ± 2%			
Power Factor	0.7			
Frequency Range	Synchronized 46-54Hz (Line mode), 50/60HZ±0.2HZ(battery mode)			
Voltage Regulation	±2%			
Overload Capacity	108%-150% for 30 seconds			105%-130% for 10 min
	> 150% for 300 ms			> 130% for 1 min
Crest Power	3:1 (max)			
Waveform	Pure sine wave			
Voltage Distortion	≤ 2% for linear load, ≤ 4% for non-linear load			
Transfer Time	0ms (line to battery mode)			
Protections	overload, short circuit, over temperature, surge, line abnormal			
Efficiency	≥ 90%			
Bypass				
Automatic Transfer	On overload and UPS failure			
Before UPS Power-on	Default "NO", user adjustable to "YES"			Yes
Voltage Range	80~264VAC(default), user adjustable within 80~286VAC			176~261VAC
Indications and alarm				
LED	Load level, Battery level, AC mode, Battery mode, Bypass mode and Fault indicators			
Audible Alarm	Battery mode, Bypass mode, Low battery/Charger fault, Overload, Fault.			
Communication/Management				
Interface Port	RS-232			
Intelligent Slot	WebPower SNMP/Web card, AS400 card, WinPower CMC Optional			
Environment				
Operation Temperature	0-40°C			
Relative Humidity	20-90%RH(non-condensing)			
Noise Level	<55dB			
Battery Pack				
Type	Internal	External		
DC Voltage	36V (12V*3PCS)	72V (12V*6PCS)	96V (12V*8PCS)	240V (12V*20PCS)
Gross Weight (KG)	16	25.6		58.2
Dimension(D*W*H)(mm)	482.6x450x88(2U)			482.6x600x130(3U)
Physical				
Dimension(D*W*H)(mm)	482.6x450x88(2U)			482.6x600x130(3U)
Net Weight (KG)	15.3	10.3	11.2	18.3

"S" means standard backup time model(with inbuilt battery), "L" means long backup time model (without inbuilt battery). Product specifications are subject to change without further notice.



High Frequency Online UPS

H10-20KL3/1 SERIES



Features

- True double-conversion online technology
- DSP technology for all-digital control, high reliability
- Input power factor correction >0.99
- Wide input voltage
- Output power factor 0.8
- Output voltage: 208/220/230/240VAC
- 50HZ/60HZ frequency converter mode
- LCD and LED user interface
- Short circuit, Overload and Over temperature protection
- Generator compatible
- Auto-restart
- Automatically restarts when utility power restores after UPS shutdowns due to battery low
- Smart RS232 communication
- Optional SNMP card slot
- Optional emergency power off function (EPO)
- Optional maintenance bypass available
- Optional N+X parallel redundancy



H10-20KL3/1 Series Online UPS Selection Guide

Model	H10KL3/1	H15KL3/1	H20KL3/1
Capacity	10KVA/8KW	15KVA/12KW	20KVA/16KW
Input			
Phase	3/1 Phase, 3 wires+N+G		
Nominal Voltage	380VAC		
Voltage Range	304-478VAC		
Frequency Range	50Hz or 60Hz ± 10%		
Power Efficiency	>0.95		
Output			
Output Voltage	220/230/240VAC ± 1%		
Power Factor	0.8		
Frequency Range	Synchronized 46-54Hz (Line mode), 50/60HZ±0.2HZ(battery mode)		
Overload Capacity	105%-125% for 60 seconds then transfer to bypass; 125%<load<150% for 30 seconds then transfer to bypass.		
Crest Power	3:1 (max)		
Waveform	Pure sine wave		
Voltage Distortion	≤ 2% for linear load, ≤ 4% for non-linear load		
Transfer Time	0ms (line to battery mode)		
Protections	overload, short circuit, over temperature, surge, line abnormal		
Efficiency	≥ 90%		
Battery			
Battery Type	Maintenance-free sealed lead acid battery		
DC Voltage	192V (12V*16PCS)		
Transfer Time	0ms (line to battery mode), < 4ms (line to bypass mode)		
Protections	overload, short circuit, over temperature, surge, line abnormal		
Indications and alarm			
LED	Load level, Battery level, AC mode, Battery mode, Bypass mode and Fault indicators		
LCD	Input/output voltage & frequency, Battery level, Load watt, UPS temperature, Operation mode and fault code and events		
Audible Alarm	Battery mode, Bypass mode, Low battery/Charger fault, Overload, Fault.		
Output Sockets	Terminal Block		
Communication/Management			
Interface Port	RS-232		
Intelligent Slot	SNMP Card		
Environment			
Operation Temperature	0-40°C		
Relative Humidity	20-90%RH(non-condensing)		
Noise Level	<55dB		
Physical			
Dimension(D*W*H)(mm)	248*500*616		
Net Weight (KG)	27	35	35

Product specifications are subject to change without further notice.



Low Frequency Online UPS

L10-400K3/3 SERIES



Features

- Pure sine wave output, true on-line dual conversion design
- High efficiency IGBT (insulated gate bipolar transistor) inverter technology
The 6th generation low-exhaust and big-power IGBT with excellent high speed switch feature, high voltage feature and large current feature.
- Touch screen display, with the simple operation and Intuitive data, optional display language and logo
- Set the work mode on the display directly, UPS mode, ECO mode, EPS mode
- Intelligent detecting function
This system microprocessor can continually online detect power status, the breaker status and all the working status of the circuit.
- Excellent load feature
It is completely capable to load from 0-100% while no need to change to bypass, which make sure the output reliable.
- Three phase separately control, realizes the control of instantaneous over-loading balance, so as to reach 100% unbalanced load
- Perfect protection
Input/output over/low voltage protection, input surge protection, phase sequence protection, battery over charge/discharge protection, short circuit protection, over-temperature protection and so on, as well as alarm function.
- Selectable battery inspection module
Can test the single parameter and display on the LCD, battery failure will immediately alarm and inform the administrator.
- High-powered dynamic feature
Adopt kinds of feedback control such as instantaneous control mode and virtual value, not only reach the high dynamic adjustment, but also reduce the output voltage distortion.
- Optional input harmonic filter or 12 pulse rectifier
Effectively restrain the input THD, raise UPS input power factor, reduces the input THD current.
- Cold start
- Generator compatible
- Intelligent communication
With RS232 and RS485 standard collocation, optional SNMP and dry contact



L10-400KL3/3 Series Online UPS Selection Guide

Model	L10K3/3	L20K3/3	L30K3/3	L40K3/3	L60K3/3	L80K3/3	L100K3/3	L120K3/3	L160K3/3	L200K3/3	L300K3/3	L400K3/3	
Nominal capacity(KVA)	10KVA	20KVA	30KVA	40KVA	60KVA	80KVA	100KVA	120KVA	160KVA	200KVA	300KVA	400KVA	
Waveform	Pure sine wave online												
Phase	3 phase +N+G												
Input power factor	>0.8, >0.95												
Rectifier													
Nominal input voltage	220/380VAC, 230/400VAC, 240/415VAC												
Range	±25%												
Nominal input frequency	50Hz±10%, 60Hz±10%												
Output ripple	<2%												
Soft start	0~100% 5s												
Charge													
Charge mode	Constant current to constant voltage, with temp compensation; with auto change												
Float voltage	432VDC												
Boost voltage	464VDC												
Temperature compensation voltage	3mV/°C (monomer)												
Charge current	0.1C(automatically change according to battery capacity)												
Charge power	20%of rated capacity												
Battery													
Battery type	Maintenance-free lead acid battery												
Battery capacity	7~999AH settable(according to the capacity)												
Battery number	32pcs 12V, or 192pcs 2V (nominal voltage 384VDC)												
Inverter													
Phase	3 phase +N												
Rated power	Rated capacity×0.8												
Nominal voltage	220/380VAC, 230/400VAC, 240/415VAC												
Output voltage stability	±1%(stable load); ±3%(fluctuant load)												
Output frequency stability	50Hz/60Hz<±0.5%												
Crest factor	> 3:1												
Output waveform distortion	Pure sine wave, linear load<3%;non-linear load<5%												
Dynamic characteristics	Instant voltage<±5%(from 0 to100%), instant recover time<10ms												
Unbalanced load voltage	<±5%												
Overload protection	125% 1 minute; 150% 1s; 200% 200ms												
Efficiency	>95%(full load)												
Bypass													
Phase	3 phase +N												
Nominal voltage	220/380VAC, 230/400VAC, 240/415VAC												
Transfer time	<1ms(static switch with 0 transfer time)												
Protection													
Input protection	Input voltage/frequency over limited; wrong phase; lack phase protection												
Output protection	Over current; short circuit; factor low protection												
Battery protection	Over charge; over-discharge protection												
Temperature protection	Environment over temperature protection; inverter over temperature protection												
Hardware failure protection	Assistant power abnormal, breaker cut off, breaker overload, power devices over current/over voltage etc. protection												
System parameters													
Working environment	Temp: 0~40°C, relative humidity 30%~90 % (1% decrease against 100 meters' rise, altitude 4000 meters Max)												
Cooling down method	Compulsive ventilation(with temperature control)												
Communication interface	RS232, RS485; optional SNMP card(for internet long distance monitor)												
Redundancy function	Tandem hot backup or parallel connection												
Anti-surge capacity	10/700µS, 5KV; 8/20µS, 20KA												
Protection level	IP21												
Safety performance	Vin-n Vout-n 3000VAC, creepage<3.5mA, insulating resistance>2MΩ(500VDC)												
Noise(dB)	40-50	45-55	55-60	60-65	65-70								
Dimension(W×D×H)mm	430×750×1080			480×895×1200			980×800×1800			1380×950×1800		1600×1150×1800	
Weight(Kg)	200	350	400	480	580	850	920	1200	1300	1520	1830	1980	

Product specifications are subject to change without further notice.



Low Frequency Online UPS

L10-80K3/1 SERIES



Features

- Pure sine wave output, true on-line dual conversion design
- Adopt 4 layer PCB, and SMD technology
- High efficiency IGBT (insulated gate bipolar transistor) inverter technology
The 6th generation low-exhaust and big-power IGBT with excellent high speed switch feature, high voltage feature and large current feature.
- Touch screen display, with the simple operation and intuitive data, optional display language and logo
- Set the work mode on the display directly, UPS mode, ECO mode, EPS mode
- Intelligent detecting function.
This system microprocessor can continually detect power status online, the breaker status and all the working status of the circuit.
- It is completely capable to load from 0-100% while no need to change to bypass, which make sure the output reliable.
- Perfect protection
Input/output over/low voltage protection, input surge protection, phase sequence protection, battery over charge/discharge protection, short circuit protection, over-temperature protection and so on, as well as alarm function.
- Selectable battery inspection module
Can test the single parameter and display on the LCD, battery failure will immediately alarm and inform the administrator.
- High-powered dynamic feature
Adopt kinds of feedback control such as instantaneous control mode and virtual value, not only reach the high dynamic adjustment, but also reduce the output voltage distortion.
- Optional input harmonic filter or 12 pulse rectifier
Effectively restrain the input THD, raise UPS input power factor and reduce the input THD current.
- Cold start
- Generator compatible
- Intelligent communication
With RS232 and RS485 standard collocation, optional SNMP and dry contact



L10-80KL3/1 Series Online UPS Selection Guide

Model	L10K3/1	L15K3/1	L20K3/1	L30K3/1	L40K3/1	L60K3/1	L80K3/1
Nominal capacity(KVA)	10KVA	15KVA	20KVA	30KVA	40KVA	60KVA	80KVA
Waveform	Pure sine wave						
Phase	3 phase +N+G						
Input power factor	>0.85						
Rectifier							
Nominal input voltage	220/380VAC, 230/400VAC, 240/415VAC						
Range	±25%						
Nominal input frequency	50Hz±10%, 60Hz±10%						
Output ripple	<2%						
Soft start	0~100% 5s						
Charge							
Charge mode	Constant current to constant voltage, with temp compensation; with auto change						
Float voltage	432VDC						
Boost voltage	464VDC						
Temperature compensation voltage	3mV/°C (monomer)						
Charge current	0.1C(automatically change according to battery capacity)						
Charge power	20% of rated capacity						
Battery							
Battery type	Maintenance-free lead acid battery						
Battery capacity	7~999AH settable(according to the capacity)						
Battery number	32pcs 12V, or 192pcs 2V (nominal voltage 384VDC)						
Inverter							
Phase	Single L+N+G						
Rated power	Rated capacity×0.8						
Nominal voltage	220/380VAC, 230/400VAC, 240/415VAC						
Output voltage stability	±1%(stable load); ±3%(fluctuant load)						
Output frequency stability	50Hz/60Hz<±0.5%						
Crest factor	> 3:1						
Output waveform distortion	Pure sine wave, linear load<3%; non-linear load<5%						
Dynamic characteristics	Instant voltage<±5%(from 0 to 100%), instant recover time<10ms						
Unbalanced load voltage	<±5%						
Overload protection	125% 1 minute; 150% 1s; 200% 200ms						
Efficiency	>93% (full load)						
Bypass							
Phase	Single L+N						
Nominal voltage	220/380VAC, 230/400VAC, 240/415VAC						
Transfer time	<1ms(static switch with 0 transfer time)						
Protection							
Input protection	Input voltage/frequency over limited; wrong phase; lack phase protection						
Output protection	Over current; short circuit; factor low protection						
Battery protection	Over charge; over-discharge protection						
Temperature protection	Environment over temperature protection; inverter over temperature protection						
Hardware failure protection	Assistant power abnormal, breaker cut off, breaker overload, power devices over current/over voltage etc. protection						
System parameters							
Working environment	Temp: 0~40°C, relative humidity 30%~90 % (1% decrease against 100 meters' rise, altitude 4000 meters Max)						
Cooling down method	Compulsive ventilation(with temperature control)						
Communication interface	RS232, RS485; optional SNMP card(for internet long distance monitor)						
Redundancy function	Tandem hot backup or parallel connection						
Anti-surge capacity	10/700μS; 5KV; 8/20μS; 20KA						
Protection level	IP21						
Safety performance	Vin-n Vout-n 3000VAC, creepage<3.5mA, insulating resistance>2MΩ (500VDC)						
Noise(dB)	45~50	50~55	55~58	55~60			
Dimension(W×D×H)mm	430×750×1050	430×765×1050	430×765×1080	980×800×1800			
Weight(Kg)	135	158	185	215	318	445	498

Product specifications are subject to change without further notice.