KEHUA TECH

UPS Catalog

Reliable Power Solutions

HISTORY

2016 Awarded as global top 500 company in renewable energy industry
The solar system application achieved over 4.5GW
2015 Cultivated the military industry and nuclear power protection business
2014 Awarded as one of Top 5 of China Inverter enterprises
Introduced MES systems，awarded as most promising mid-size company by <Forbes>
2013 Introduced PLM systems
Successfully publish the modular data center
2012 ntroduced CRM systems
Set up 30,000M² Xiamen new factory
Set up 80,000M² Jiaomei factory
2011 Introduced ERP systems for processing management.
2010 Kehua officially went public and listed on the Shenzhen Stock Exchange
2009 Recognized as “UPS Well-known Trademark” by government
2008 Passed Ohsas18001 authentication
2006 Set up 70,000M² production base
Complied with RoHS requirement
2005 Passed ISO14001 authentication
2002 Implemented 6sigma management system
2001 Set up EMC test center
2000 Developed no-master-slave parallel UPS and won the national patent
1999 Transformed into private enterprise
1997 Exported UPS to Japan, America etc.
1995 Passed ISO9001 authentication
1988 Company established

CONTENTS

Kehua Group ----02

Applications / Qualifications ----03

Products

• Online Transformerless UPS

KR11 Plus Series (1-10kVA)----04
KR11-J Plus Rack Series (1-3kVA)----06
KR11-J Rack/Tower Series (6-10kVA)----08
KR-RM Rack/Tower series (1-3kVA)----10
KR31 Series (10-20kVA)----12
KR33 Series (10-200kVA)----14
KR33 BM Series (300-600kVA)----16
MR33 Series Modular UPS (25-600kVA)----18

• Online Transformer-based UPS

FR-UK11 Series (1-15kVA)----20
FR-UK31 Series (10-50kVA)----22
FR-UK33 Series (10-600kVA)----24
KR11 T Series (1-10kVA)----26
KR33 T Series (300-600kVA) ----28

• Low voltage UPS

KR11 UL Series (1-5kVA)----30
KR11A-J Rack/Tower Series (1-5kVA)----32
KR33A Series (10-30kVA)----34
FR-UK33A Series (10-200kVA)----36
MR33A Series Modular UPS (10-260kVA)----38

• Line Interactive UPS

KI Series (1-5kVA) ----40
Mini-guard Series (500-2000VA)----41

• Lithium Battery UPS

Li UPS Series (500-3000VA)----42
Li UPS-A Series (500-3000VA)----44

• DC UPS

ZL Series 240VDC Power System----46

• Telecom Inverter

DJN-K Series 48Vdc Inverter (1-5kVA) ----48
DJN P Series 48Vdc Modular Inverter (3-12kVA)----49

• Static Transfer Switch

RACK ATS (1 phase rack automatic transfer switch 10-32A/2-6kVA)----50
STS System (63-400A)----51

Telecom | Industry | Finance | Traffic | Electric Power | Medical Device | Data Center | Renewable Energy

Critical Power

KEHUA TECH - POWER SOLUTION SPECIALIST

Xiamen Kehua Hengsheng Co., Ltd. is a leading provider in mainland China, founded in 1988 and headquartered in Xiamen. KEHUA has the R & D, manufacturing, sales and service base with a facility of more than 180,000 square meters, 5 manufacture bases and emplys over 3,000 people. The Group's mission is to achieve sustained development of reliable power solution for the future of green world. KEHUA officially went public on Shenzhen Stock Exchange on Jan 13th of 2010, Stock NO.: 002335.

KEHUA owns 29 years experience of specializing in power industry and solid R&D strength: 3 R&D centers with over 700 expert engineers including 3 national experts, 1 EMC test center and 1 UL witness Test Data Program.

Being a qualified high-end power equipment manufacturer, Kehua passed ISO 9001 authentication in 1995, ISO 14001 in 2005 and OHSAS18001 in 2008. Products also have approval of UL, CE, TUV, SAA and CQC certification.

KEHUA is a integrated power solution provider in Critical Power, Renewable Energy, Data Center for customers of various industry. KEHUA provides complete range of power equipments, professional and comprehensive power services and solutions: All IGBT UPS up to 600KVA, Online double conversion UPS from 1KVA to 1200KVA, Line-interactive UPS, Lithium battery UPS, Outdoor UPS, Telecom inverter, rectifier, EPS, STS, etc.

The company insists on market-orientation and innovation, KEHUA keeps satisfying its users with intelligent, custom-made products and solutions to meet diverse demands of power.

Listed on Shenzhen Stock Exchange


Zhangzhou factory


Shenzhen factory


Xiamen factory


Jiaomei factory

Applications

With high reputation and good service in power electronics field, Kehua has participated and undertaken many power projects for key events, such as 2016 G20 Summit, the 16th Asian Games, 2010 Shanghai EXPO, Angolan Luanda Stadium (for 2010 African Cup football games), 2008 Beijing Olympic Games, the Golden Tax Project…

Qualifications

Being a qualified high-end UPS manufacturer, Kehua passed ISO9001 authentication in 1995, ISO14001 in 2005 and OHSAS18001 in 2008. With years' efforts in extending global market, UPS with CE, CB, UL,TUV, KC, SONCAP certificates are available to meet different market requirements.


OHSAS 18001


ISO9001


ISO14001

KR11 Plus Series (1-10kVA)

Main Features:

- Full digital control technology
- Low THDi: <5%
- Input power factor up to 0.996
- Output power factor up to 1.0
- AC/AC efficiency up to 95%
- Perfect LCD display panel
- High power density design
- Intelligent RS232+USB+EPO communication port
- ECO function
- SNMP or RS485+ dry contact (optional)

Application:

- Data center
- Point-of-sale
- Network device
- Commercial facility
- Precision instrument

Specification:

MODEL	KR1000+/ KR1000L+	KR2000+/ KR2000L+	KR3000+/ KR3000L+	KR6000+/ KR6000L+	KR1110S+/ KR1110+
Input					
Voltage (Vac)	120~295			80~275	
Frequency (Hz)	50/60 ± 10% (50/60Hz auto-sensing)				
Power Factor	≥0.99				
THDi	<5%				
Output					
Capacity (VA)	1000	2000	3000	6000	10000
AC/AC Efficiency (Max.)	92% (94.2%optional)	93% (94.6%optional)	94% (94.2% optional)	95%	95%
Power Factor	0.9 (1.0 optional)				
Voltage (Vac)	208/220/230/240 ± 1% (selectable on display panel)				
Frequency (Hz)	50/60 ± 0.2% (battery mode)				
THDv	THD < 2% (linear load); THD < 5% (nonlinear load)			THD < 1% (linear load); THD < 4% (nonlinear load)	
Transfer Time (ms)	0				
Battery					
Voltage (Vdc)	24/36	48/72	72/96	192/192~240	192/192~240
BATT Type	2 × 9Ah 12V/ External	4 × 9Ah 12V/ External	6 × 9Ah 12V/ External	16 × 7Ah 12V/ External 16~20 units settable	16 × 9Ah 12V/ External 16~20 units settable
Charger Current (A) Max.	1/4	1/4	1/4	1~8 (adjustable)	1~8 (adjustable)
Other					
Communication Interface	RS232, EPO, USB (slot) (SNMP, RS485+dry contact are optional in slot)				
LCD Display	AC input & output voltage, frequency, Load level, Battery level, Temperature; AC mode, Battery mode, Bypass mode, and Fault				
Alarm	Low battery, abnormal AC input, UPS failure, etc.				
Protection	Low battery, overload, short-circuit and over temperature, etc.				
Noise (dB)	<50	<55			
Working Temperature (℃)	-5 ~ 40				
Relative Humidity	0 ~ 95%, No condensation				
Dimension (W × D × H) mm	145 × 360 × 225	190 × 400 × 330		230 × 502 × 553/190 × 422 × 337	
Weight (kg)	9.2/4.5	17.7/8.5	22.9/9.2	54.5/10.9	56.2/12.5

KR11-J Plus Rack Series (1-3kVA)

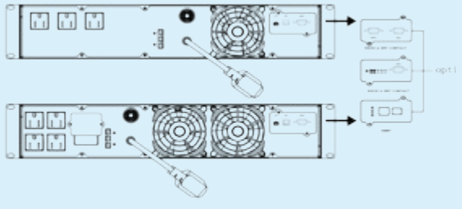
Main Features:

- Full digital control technology
- Three level inverter technology
- High AC/AC efficiency up to 94%
- Low THDi: < 5%
- High input power factor up to 0.996
- High output power factor up to 1.0
- Intelligent RS232+USB+EPO communication port
- ECO function
- Perfect LCD display panel
- Programmable rear panel
- Full options for communication and monitoring
- SNMP or RS485 dry contact (optional)
- External battery bank, Rack kits (optional)
- Online double conversion

Application:

- 19" rack device
- Computer room
- Data center
- Point-of-sale
- Router
- Hub and network device
- Commercial facility
- Precision instrument

Available socket



Specification:

MODEL	KR1000-J+	KR1000L-J+	KR2000-J+	KR2000L-J+	KR3000-J+	KR3000L-J+
Input						
Voltage (Vac)	120-295					
Frequency (Hz)	50/60 ± 10% (50/60Hz auto-sensing)					
Power Factor	≥0.99					
THDi	<5%					
Output						
Capacity (VA)	1000		2000		3000	
AC/AC Efficiency	92%		93%		94%	
Power Factor	0.9 (1.0 optional)					
Voltage (Vac)	208/220/230/240 ± 1% (settable on display panel)					
Frequency (Hz)	50/60 ± 0.2 (battery mode)					
THDv	THD < 3% (linear load); THD < 5% (nonlinear load)					
Transfer Time (ms)	0					
Overload	101%~115% for 1 min, 116%~133% for 1 s, above 134% for 200ms					
Battery						
Voltage (Vdc)	24	36	48	72	72	96
BATT Type	2 × 9Ah12V	External	4 × 9Ah12V	External	6 × 9Ah12V	External
Charger Current(A)Max.	1	4	1	4	1	4
Other						
Communication Interface	RS232+USB+EPO (RS485, Dry contact and SNMP adapter are optional)					
Display	LCD					
Alarm	Low battery, abnormal AC input, UPS failure, etc.					
Protection	Low battery, overload, short-circuit and over temperature, etc.					
Noise (dB)	< 50				< 55	
Working Temperature (℃)	-5 ~ 40					
Relative Humidity	0 ~ 95%, No condensation					
Dimension (W × D × H) (mm)	438 × 420 × 2U		438 × 420 × 2U(UPS) + 438 × 420 × 2U (Battery pack)	438 × 420 × 2U	438 × 420 × 2U(UPS) + 438 × 420 × 2U (Battery pack)	438 × 420 × 2U
Weight (kg)	11.5	7	8+14	9.9	8.5+20	10

◆ Specification is subject to change without prior notice.

KR11-J Rack/Tower Series (6-10kVA)

Main Features:

- Online double conversion
- Rack and tower convertible
- High input power factor
- Wide input voltage range
- Compact and light weight
- High reliability and performance
- Low THDi≤5%
- With ECO function
- Intelligent RS232+USB+EPO communication port
- Full protection function & Automatic bypass
- UPS management software (optional)
- SNMP or dry contact (optional)
- External battery bank, rack kits (optional)

Application:

- 19" rack device
- Computer room
- Data center
- Point-of-sale
- Router
- Hub and network device
- Commercial facility
- Precision instrument

Specification:

MODEL	KR6000-J/ KR6000L-J	KR1110S-J/KR1110-J
INPUT		
Voltage (Vac)	120~275 (L1, L2, G)	
Frequency (Hz)	50/60Hz±5% (50/60Hz ±10% settings)	
Power Factor	>0.99	
OUTPUT		
Capacity (VA)	6000	10000
Power Factor	0.8 (0.9 optional)	
Voltage (Vac)	220/230/240±2%	
Frequency (Hz)	50/60±0.2%(battery mode)	
Waveform	Pure sine wave THD < 3% (linear load)	
Transfer Time (ms)	0	
Overload	105%~129% for 10minutes, 130~150% for 1 minute, above150% for 1 second.	
BATTERY		
Voltage (Vdc)	192	
BATT Type	16×7Ah12V/External	
Charger Current(A)Max	1.5 (2A is optional)	
OTHER		
Communication Interface	RS232+USB+EPO(Dry contact, SNMP are optional)	
Display	LCD display parameters of UPS	
Alarm	Low battery, abnormal AC input, UPS failure, etc	
Protection	Low battery, overload, short-circuit and over temperature, etc	
Noise (dB)	< 60	
Working Temperature(℃)	0 ~ 40	
Relative Humidity	0 ~ 95%, No condensation	
Dimension (W×D×H)(mm)	440×550×3U(UPS)+ 440×550×3U(Battery pack)/ 440×550×3U(UPS)	
Weight (kg)	18+48/18	19+48 /19

◆ Specification is subject to change without prior notice.

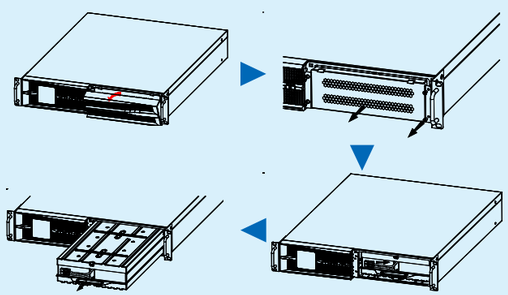
KR-RM Rack/Tower Series (1-3kVA)

Main Features:

- Hot-swappable battery design
- User-friendly and easy-shift LCD display
- Full digital control technology
- Three level inverter technology
- High AC/AC efficiency up to 93.5%
- Low THDi: < 5%
- High input power factor up to 0.996
- High output power factor up to 1.0
- Intelligent RS232+USB+EPO communication port
- Perfect LCD display panel
- Programmable rear panel
- Full options for communication and monitoring
- Selectable output sockets
- SNMP or dry contact (Optional)
- External battery pack (Optional)
- Programmable power management outlet (Optional)

Application:

- 19" rack device
- Computer room
- Data center
- Point-of-sale
- Router
- Hub and network device
- Commercial facility
- Precision instrument



Hot-swappable Battery Design

Specification:

MODEL	KR1000-RM	KR2000-RM	KR3000-RM
INPUT			
Voltage (Vac)	120-295		
Frequency (Hz)	50/60± 10% (50/60Hz auto-sensing)		
Power Factor	≥0.99		
THDi	<5%		
OUTPUT			
Capacity(VA)	1000	2000	3000
AC/AC Efficiency Max.	91.1%	92.5%	93.5%
Power Factor	0.9 (1 optional)		
Voltage (Vac)	208/220/230/240±1%(settable)		
Frequency(Hz)	50/60±0.2(battery mode)		
THDv	THD < 3% (linear load); THD < 5% (nonlinear load)		
ECO mode	YES		
Transfer Time (ms)	0		
Overload	101%~115% for 1 min, 116%~133% for 1 s, above 134% for 200ms		
BATTERY			
Voltage(Vdc)	36	48	72
BATT Type	3×7Ah12V	4×9Ah12V	6×9Ah12V
Charging Current(A)Max.	1		
OTHER			
Communication Interface	RS232+USB+EPO (DB9 dry contact and SNMP adapter are optional)		
*Output outlet	4×IEC320 C13	6×IEC320 C13 + 1×IEC320 C19	
Display	Blue screen LCD		
Alarm	Low battery, abnormal AC input, UPS failure, etc.		
Protection	Low battery, overload, short-circuit and over temperature, etc.		
Noise (dB)	< 50	< 55	
Working Temperature	0 ~ 40℃		
Relative Humidity	0 ~ 95%, No condensation		
Dimension (W×D×H) (mm)	438×420×87(2U)	438×570×87(2U)	
Weight (kg)	13.2	19.9	24.8

- IEC outlet is standard, other outlets are available and optional
- Specifications are subject to change without prior notic

KR31 Series (10-20kVA)

Main Features:

- Online double conversion
- High reliability DSP control
- Advanced PFC technology
- Wide input voltage range
- DC cold start function
- Intelligent fan speed control
- Full protection function
- Advanced battery charging management
- Intelligent RS232+USB+EPO communication port
- SNMP adapter or dry contact (optional)
- Advanced no-master-slave parallel technology (optional)
- 1P/1P or 3P/1P is suitable without additional setting (15kVA and 20kVA only)

Application:

- IT device
- Data center
- Precision instrument
- Intelligent equipment

Specification:

MODEL	KR3110S/KR3110	KR3115	KR3120
INPUT			
Voltage (Vac)	380/400/415±25% (-45% in half load)		
Frequency (Hz)	50/60 ±10%		
Power Factor	≥0.98		
Phase	3φ4W+PE		
THDi	≤5%		
Bypass Voltage (Vac)	180-260		
OUTPUT			
Capacity (kVA)	10	15	20
Power Factor	0.8 (0.9 optional)		
Voltage (Vac)	220/230/240 ±1%		
Frequency (Hz)	50/60±0.2%(battery mode)		
Waveform	Pure sine wave THD <3% (linear load)		
Overload	105%~125% load for 10 mins,126%~150% load for 1 min, above150% load for 1 second		
Transfer Time (ms)	0		
Efficiency	90%(linear load)	91%(linear load)	
Crest Factor	3:1		
BATTERY			
BATT Voltage(Vdc)	192		
BATT Type	16×7Ah 12V/External	External	
Charger Current(A)Max	1/5	5	
OTHER			
Maintenance Bypass Switch	Standard		
Communication Interface	RS232+USB+EPO (SNMP adapter, Dry contact are optional)		
Display	LCD Display indicates frequency, voltage, load, battery voltage, etc. LED indicates running status		
Alarm	Low battery, abnormal AC input, Overload, UPS failure		
Protection	Low battery, overload, short-circuit, UPS failure, and input over/low voltage		
Noise (dB)	<60		
Working Temperature (℃)	0 ~ 40		
Relative Humidity	0 ~ 95%, No condensation		
Dimension (W×D×H) (mm) Standard/Long backup	255×565×700/255×565×500	255×565×585	
Weight (kg) Standard/ Long backup	71/27	37	37

◆ Specification is subject to change without prior notice.

KR33 Series (10-200kVA)

Main Features:

- Online double conversion
- Fully DSP control
- Advanced 3-level technology, high input power factor
- IGBT rectifier
- High reliability and performance
- Wide input voltage range
- DC cold start function
- Advanced battery charging management
- Frequency converter function (10-120kVA)
- Small footprint design
- Intelligent fan speed control
- ECO mode and EPO function
- Full protection function
- Intelligent RS485 Communication Port
- Dry contact, maintenance bypass
- SNMP adapter (optional)
- Advanced no-master-slave parallel technology (optional)
- Intelligent battery monitor system - MMBM (optional)

Application:

- Computer room
- Data center
- Precision instrument
- Commercial facility
- Intelligent equipment

Specification:

MODEL	KR3310S/ KR3310	KR3320S/ KR3320	KR3330S/ KR3330	KR3340	KR3360	KR3380	KR33100	KR33120	KR33160	KR33200
INPUT										
Voltage (Vac)	380/400/415 (138~485 L-L)								380/400/415 (209~ 475 L-L)	
Frequency (Hz)	40~70								50/60 ±10%	
Bypass Voltage (Vac)	380/400/415: -20%~+15%								380/400/415: -30%~+20%	
Power Factor	≥0.99									
Phase	3φ4W+PE									
OUTPUT										
Capacity (kVA)	10	20	30	40	60	80	100	120	160	200
Power Factor	1								0.9	
Voltage (Vac)	L-N: 220/230/240±1% L-L: 380/400/415±1%									
Frequency (Hz)	50/60±0.2%(Battery mode)									
Phase	3φ4W+PE									
Unbalance 3-phase voltage stabilization with full load	≤2%									
Waveform	Pure sine wave, THD<1% at linear								Pure sine wave, THD<3% at linear	
Transfer Time (ms)	0									
Efficiency	≥95%								≥94%	
Overload	115% load for 60 minutes, 130% load for 10 minutes, 150% load for 1 minute								130% for 10 mins, 150% for 10 seconds, above 150% for 200ms	
BATTERY										
Battery Voltage (Vdc)	±180~±240								480 (400-522 settable)	
BATT Type	32×7Ah 12V/ External	40×7Ah 12V/ External	40×7Ah 12V/ External	64×7Ah 12V/ External	External					
Charging Current (A)	1-10 settable			5-10 settable	5-20 settable	5-20 settable	5-30 settable		10-60 settable	
OTHER										
Communication Interface	RS485 MODBUS, dry contact (SNMP adapter optional)			RS485, dry contact (Modbus and SNMP adapter are optional)						
Display	Touch screen+LED									
Alarm	AC input abnormal, low battery, overload, failure									
Protection	Output short-circuit, overload, over-temperature, battery low voltage, output over/low voltage									
Noise (dB)	<65								<67	
Working Temperature (℃)	0~40									
Relative Humidity	0 ~ 95%, No condensation									
Dimension (W×D×H)(mm)	450×850×1400/320×850×800			320×850×800	320×850×900	450×850×1400			1200×800×1800	
Weight (kg)	237/110	254/110	304/110	110	180	206	239	239	730	760

Specification is subject to change without prior notice.

KR33 BM Series (300-600kVA)

Main Features:

- Three level technology
- DSP digital control technology
- Efficiency up to 97%
- Support 8 units in parallel, single /parallel system compatible
- Low THDi: ⩽3%
- PCB boards feature with anti-corrosion paint coating
- Intelligent fans control
- Self-aging function
- Large-size touch screen with LED indicators

Application:

- Computer room
- Data center
- Precision instrument
- Commercial facility
- Intelligent equipment

Specification:

Model	KR33300BM	KR33400BM	KR33500BM	KR33600BM
Input				
Voltage(Vac)	380/400/415			
Voltage range	-40% ～ +25%			
Input wiring	3Ph+N+PE			
Rated frequency (Hz)	50/60			
Frequency range	±5% / ±10%			
PF	0.99			
THDi	≤3%			
Bypass				
Input Voltage (Vac)	380/400/415			
Voltage range	-25% ～ +20%			
Frequency range	±5% / ±10%			
Output				
Capacity (kVA)	300	400	500	600
Output voltage	380/400/415Vac±1%			
Frequency (Hz)	50/60±0.1			
Output PF	0.9 (1.0 optional)			
THDv	<0.5%(linear load), ≤5%(nonlinear load)			
Efficiency	97%			
Output wiring	3Ph+N+PE			
Overload	≤130%, 10min; ≤150%, 1min			
Dynamic response time (ms)	20			
Dynamic response range	≤5%			
Battery				
Voltage (Vdc)	480(12V battery from 32 to 44 cells settable)			
Charging Current (A)	20-100			
Other				
Operating temperature (℃)	-5~40			
Storage temperature (℃)	-25~55			
Noise （dB)	<75			
Communication	Dry contact, MODBUS, SNMP(optional)			
Dimension (W×D×H)(mm)	1400×800×1800	1400×800×1800	1600×900×1800	1600×900×1800
Weight (kg)	950	1000	1200	1300

◆ Specification is subject to change without prior notice.

MR33 Series Modular UPS (25-600kVA)

Main Features:

- Hot-swappable design
- High efficiency up to 96%
- Dual system control card and bypass unit power
- Battery cold start function
- Intelligent fan control and redundant design
- Parallel expansion up to 4 units
- Advanced power module sleep mode
- Allow 100% three phase unbalance load
- Frequency converter function(60Hz to 50Hz or 50Hz to 60Hz)
- Self-aging test function
- EPO and ECO function
- Intelligent battery management
- Fault Trace Management(FTM)
- Programmable dry contacts
- Intelligent fan control and redundant design

Application:

- Data center
- Telecom system
- Computer room
- Financial system
- Precision instrument
- Intelligent equipment

Specification:

MODEL	MR33125	MR33200	MR33320	MR33480	MR33600
Power Module	MR3325-J	MR3340-J			
INPUT					
Rated Voltage (Vac)	380/400/415				
Voltage Range (Vac)	138~485				
Input Frequency (Hz)	40~70				
Bypass Voltage Range (Vac)	-15% (-20%/-30% optional) ~+15%(+10% /+20% optional)				
Power Factor	≥0.99				
THDi	<3%				
Phase	3Φ4W+PE				
Battery Voltage (Vdc)	±192 (±180~ ±240 settable)				
Charging Current (A)	10 Maximum (single module)				
OUTPUT					
Capacity(kVA)	125/125	200/200	320/320	480/480	600/600
Power Factor	1				
Phase	3Φ4W+PE				
Waveform	sine wave				
Voltage (Vac)	L-L:380,400,415±1%				
Frequency (Hz)	50/60± 0.2% (battery mode)				
Three Phase Difference	≤2 degrees				
Waveform Distortion	≤ 3% (linear load)				
Static Bypass Transfer Time	0				
System Efficiency	96%				
Parallel Mode	Advanced no-master-slave parallel technology, N+1 redundancy				
Overload Capacity	105-115% load for 60 minutes, 116%-130% load for 10 minutes, 131%-150% load for 1minute				
OTHERS					
Approvals	CE (EN62040-2, IEC62040-1)				
Operating Temperature(℃)	0~40				
Storage Temperature(℃)	-40~7				
Relative Humidity	0%~95% (no condensing)				
Communication Function	RS485, dry contact(SNMP optional)				
Noise (dB)	< 65	< 70			
Power Module(kVA)	25	40			
Power Module Dimension (W×D×H) mm	500x700x130				
Power Module Weight (kg)	32	33			
Dimension (W×D×H) (mm)	600x900x1400	600×860×2000		1200×860×2000	1800×860×2000
Weight (kg)	347	412	527	854	1250

◆ Specification is subject to change without prior notice.

FR-UK11 Series (1-15kVA)

Main Features:

- Online double conversion
- IGBT inverter and output isolation transformer
- Wide input voltage range
- Full protection function
- High reliability and performance
- Intelligent RS232/RS485&DB9 dry contact communication port
- Management software(optional)
- External battery bank(optional)
- SNMP adapter or USB(optional)

Application:

- IT device
- Data center
- Commercial facility
- Telecommunication
- Industry

Specification:

MODEL	FR-UK10L	FR-UK20L	FR-UK30L	FR-UK50/ FR-UK50L	FR-UK60/ FR-UK60L	FR-UK1110S/ FR-UK1110	FR-UK1115S/ FR-UK1115
INPUT							
Voltage (Vac)	220/230/240V MODEL:165~275 110/120V MODEL: 85~137						
Frequency (Hz)	50/ 60±5% (50/60Hz settable)						
Phase	Single phase three wires						
OUTPUT							
Capacity(VA)	1000	2000	3000	5000	6000	10000	15000
Power Factor	0.8 (0.9 optional)						
Voltage range(Vac)	220/230/240±2% or 110/120±2%						
Frequency (Hz)	50 / 60 ±0.5% (battery mode)						
Waveform	Pure Sine wave, THD<3% (Linear load)						
Transfer Time (ms)	0						
Overload	125% load for 60 seconds , 150% load for 1 second						
BATTERY							
Voltage (Vdc)	48		96	192			
BATT Type	4×7Ah 12V/ External	8×7Ah 12V/ External	8×7Ah 12V/ External	16×7Ah 12V/ External	16×7Ah 12V/ External	32x7Ah 12V/ External	48x7Ah 12V/ External
Charger Current(A)Max	1/4.5	1/4.5	1/4.5	1/8.0		2/6 (12 option)	3/4.5
OTHER							
Communication Interface	RS232,dry contact (USB and SNMP adapter are optional)						
Display	LCD display input voltage, output voltage, load capacity, battery voltage, etc., LED indicates running status						
Alarm	Overload, abnormal AC input, low battery						
Protection	Low battery, overload, over temperature, short circuit, output over voltage, output low voltage						
Noise (dB)	≤55					≤58	
Working Temperature	0~40℃						
Relative humidity	0~95% (no condensation)						
Dimension (W×D×H)(mm)	230×610×470			230x635x690/230×610×470		400x800x1180/ 300x610x530	400x800x1180
Weight (kg) Standard/ Long backup	31.5	43.5	53	79/44	82/45	308/65	353/158

- Specification is subject to change without prior notice.
- 110V, 120V systems are available with some different parameters.

FR-UK31 Series (10-50kVA)

Main Features:

- Online double conversion
- IGBT inverter and output isolation transformer
- Wide input voltage range
- High reliability DSP control
- DC cold start function
- Full protection function
- Intelligent RS232/RS485 & DB9 dry contact communication port
- SNMP adapter(optional)
- Advanced no-master-slave parallel technology (optional)
- Intelligent battery monitor system-MMBM(optional)

Application:

- Computer room
- Data center
- Precision instrument
- Intelligent equipment
- Industrial application

Specification:

MODEL	FR-UK3110	FR-UK3115	FR-UK3120	FR-UK3130	FR-UK3140	FR-UK3150
INPUT						
Voltage(Vac)	380/400/415±25%					
Rectified Frequency(Hz)	45~65		40~65			
SYNC Frequency(Hz)	50/60±10% (±5%optional)		50/60±5%			
Phase	Three phase in single phase out (L1,L2,L3,N,G)					
OUTPUT						
Capacity (kVA)	10	15	20	30	40	50
Power Factor	0.8 (0.9 optional)					
Voltage (V)	220/230/240±1%					
Frequency(Hz)	50/60±0.2%		50/60±0.5% (Battery mode)			
Waveform	Pure sine wave THD <3% (linear load)					
Overload	125% load for 1 minute, 150% load for 1 second		125% load for 1 minute, 150% load for 20 seconds			
BATTERY						
Voltage (Vdc)	192		348			
BATT Type	External					
Charger Current(A)Max	6(12 optional)		10~20 settable			
OTHER						
Maintenance Bypass Switch	Optional		Standard			
Communication Interface	RS232/RS485 and dry contact (SNMP adapter are optional)					
Display	LCD Display indicates frequency, voltage, load, battery voltage, etc.LED indicates running status					
Alarm	Low battery, abnormal AC input, overload, UPS failure					
Protection	Low battery, overload, output over voltage, short-circuit, over temperature					
Noise (dB)	<60		<65			
Working Temperature	0 ~ 40℃					
Relative Humidity	0 ~ 95%, No condensation					
Dimension (W×D×H)(mm)	30×780×720		400×800×1180			
Weight (kg) Standard/ Long backup	230/130	320/160	205	230	270	300

- Specification is subject to change without prior notice.
- For Parallel system, Maintenance Bypass Switch is not available.

FR-UK33 Series (10-600kVA)

Main Features:

- Online double conversion
- IGBT inverter and output isolation transformer
- Wide input voltage range
- 3 phases UPS allow 100% unbalance load
- Fully DSP control, high reliability and performance
- DC cold start function（Optional)
- Advanced battery charging management
- Intelligent fan speed control
- HMI-touch screen display
- ECO mode and EPO function.
- ECO-mode with 98% efficiency
- 10,000 events logs
- Battery self-test function
- Intelligent RS232/RS485,DB9 dry contact communication port
- 10-30kVA models with wheels
- MODBUS &SNMP adapter(optional)
- Advanced no-master-slave parallel technology (optional)
- Intelligent battery monitor system-MMBM(optional)
- 12 Pulse rectifier(optional)
- Bypass isolation transformer(optional)

Application:

- Computer room
- Data center
- Precision instrument
- Intelligent equipment
- Industrial application

Specification:

MODEL	FR-UK 3310	FR-UK 3320	FR-UK 3330	FR-UK 3340	FR-UK 3360	FR-UK 3380	FR-UK 33100	FR-UK 33120	FR-UK 33160	FR-UK 33200	FR-UK 33250	FR-UK 33300	FR-UK 33400	FR-UK 33500-12P	FR-UK 33600-12P
INPUT															
Voltage(Vac)	380/400/415±25%														
Rectifier Frequency(Hz)	40~70														
SYNC Frequency Tracking(Hz)	50/60±10%(±5% settable)														
Phase	3φ4W+PE														
OUTPUT															
Capacity (KVA)	10	20	30	40	60	80	100	120	160	200	250	300	400	500	600
Power Factor	0.9														
Phase	3φ4W+PE														
Voltage (Vac)	L-N: 220/230/240±1%, L-L:380/400/415±1%,														
Frequency(Hz)	50/60±0.2 (battery mode)														
Waveform	Pure sine wave, THD≤2% (linear load)														
3 Phases 100% Load Unbalance Voltage Stability	≤2%, allow 100% unbalance														
Overload	125% load for 10mins, 150% load for 1 min														
BATTERY															
Voltage (Vdc)	348 (360 settable)									384 (348/360/372 settable)					
BATT Type	External														
Charging Current(A)	10~40A settable									10-100A settable					
OTHERS															
Maintenance Bypass	Yes														
Communication Interface	RS485/MODBUS / dry contacts （SNMP is optional)									RS232/RS485 /Dry contacts (SNMP is optional)					
Display	Touch screen + LED														
Alarm	Overload, abnormal AC input, low battery, UPS failure,etc.														
Protection	Low battery, overload, over temperature, short circuit, output over voltage, output low voltage, etc.														
Noise (dB)	< 65									< 70					
Working Temperature	0 ~ 40℃														
Relative Humidity	0 ~ 95%, No condensation														
Dimension (W×D×H)(mm)	500×600×1180			500×800×1600			700×800×1800			1400x1000x1850		1600×1000×1850		3000×1000×1850	
Weight(kg)	230	260	300	400	450	520	600	650	825	1280	1568	1830	2050	4500	

- Specification is subject to change without prior notice
- If the higher charging current is adjusted , the UPS capacity shall be derated.

KR11 T Series (1-10kVA)

Main Features:

- Output isolation transformer
- Online double conversion
- High input power factor
- Wide input voltage range
- Full protection function
- Automatic bypass
- High reliability and performance
- THDi≤5%
- Dual Output 208V/120V voltage
- Intelligent RS232 communication port
- EPO function
- UPS management software (optional)
- SNMP or USB or dry contact (optional)
- Manual bypass switch (optional)
- External battery bank (optional)

Application:

- Data center
- Point-of-sale
- Router
- Hub and other network device
- Commercial facility
- Precision instrument

Specification:

MODEL	KR1000T/ KR1000TL	KR2000T/ KR2000TL	KR3000T/ KR3000TL	KR6000T/ KR6000TL	KR1110T
INPUT					
Voltage (Vac)	120~295			120~275	
Frequency (Hz)	50/60±10%/5% (50/60Hz settable)				
Power Factor	≥0.99				
OUTPUT					
Capacity (VA)	1000	2000	3000	6000	10000
Power Factor	0.8				
Voltage (Vac)	208/220/230/240±2% or 110/120±3%				
Frequency (Hz)	50/60±0.2% (battery mode)				
Waveform	Pure sine wave THD < 3% (linear load)				
Transfer Time（ms）	0				
Overload	105%~129% for 60 seconds, 130%~150% for 30 seconds, above 150% for 300ms			105%~129% for 10minutes, 130~150% for 1 minute, above150% for 1 second.	
BATTERY					
Voltage(Vdc)	36	72	96	192	
BATT Type	3×7Ah 12V/External	6×7Ah 12V/External	8×7Ah 12V/External	16×7Ah 12V/External	
Charger Current(A)Max	1/5	1/5	1/5	1/6	
OTHER					
Communication Interface	RS232 (Dry contact, USB and SNMP adapter are optional)			RS232+USB+EPO (Dry contact, SNMP are optional)	
Display	LCD & LED display				
Alarm	Low battery, abnormal AC input, UPS failure				
Protection	Low battery, overload, short-circuit and over temperature				
Noise (dB)	< 55			< 60	
Working Temperature(℃)	0 ~ 40				
Relative Humidity	0 ~ 95%, No condensation				
Dimension (W×D×H)(mm) Standard/ Long backup	156×530×220	198×630×347		255×650×790	
Weight (kg) Standard/ Long backup	20/12	38/27	42/28	147/105	107

◆ Specification is subject to change without prior notice.

KR33T Series (300-600kVA)

Main Features:

- Isolation output transformer
- Online double conversion
- High input power factor
- Wide input voltage range
- Full protection function
- Automatic bypass
- High reliability and performance
- THDi≤5%
- Dual Output 208V/120V voltage
- Intelligent RS232 communication port
- EPO function
- UPS management software (optional)
- SNMP or USB or dry contact (optional)
- Manual bypass switch (optional)
- External battery bank (optional)

Application:

- Data center
- Point-of-sale
- Router
- Hub and other network device
- Commercial facility
- Precision instrument

Specification:

MODEL	KR33300T	KR33400T	KR33500T	KR33600T
Input				
Rated voltage(Vac)	380/400/415(settable)			
REC voltage range(Vac)	228~475			
Bypass voltage range	±20%			
Bypass frequency sync(Hz)	50/60±5%(±10% optional)			
Battery voltage(Vdc)	480V（384V~504V, 32~42pcs 12V battery settable）			
Charging mode	Equalized and float Charging			
Charging current(A)	20~100			
PF	≥0.999			
THDi	≤2%(full load)			
Output				
Capacity (kVA)	300	400	500	600
Voltage(Vac)	380/400/415Vac±1%			
Frequency(Hz)	50/60±0.02%（Battery mode）			
Output PF	0.9			
THDV (Linear load)	≤0.5%			
THDV (Non linear load)	≤2%; (RCD output PF=0.8,≤6%)			
Crest factor	3:1			
Voltage Transient range (Hz)	±5%			
100% load system efficiency	95%			
Power consume without load	4.785kw (INV); 2.736kw(ECO)		5.745kw (INV) 4.34kw(ECO)	
Frequency sync range (Hz)	45~55/54~66			
Inverter overload	130% 10min; 150% 1min;			
Inverter short circuit current-limiting (A)	1150	1600	1900	2300
Bypass overload	130% long time;150% 10min;			
Transfer time(AC to DC) (ms)	0			
ECO/normal mode transfer time (ms)	≤10			
Other				
Maintenance bypass	Yes			
Display	Touch screen+ LED			
Communication port	RS232/485, dry contact (SNMP, MODBUS optional)			
DC start function	Optional			
Noise(dB)	72		75	
Working temperature(℃)	-5~40			
Storage temperature(℃)	-20~55			
Humidity	0~95%			
IP	IP20			
Approvals	EN62040-2:2006			
Dimension(W×D×H)(mm)	1600X1000X1800		2200X1000X1800	
Weight(kg)	1400	1700	2300	2400

◆ Specification is subject to change without prior notice.

KR11 UL Series (1-5kVA)

Main Features:

- Online double conversion
- High input power factor
- Wide input voltage range
- Full protection function
- Automatic bypass
- High reliability and performance
- Intelligent RS232 communication port
- EPO for 5kVA
- Manual bypass switch optional for 5kVA
- UPS management software (optional)
- SNMP or USB or dry contact (optional)
- External battery bank (optional)

Application:

- Data center
- Point-of-sale
- Router
- Hub and other network device
- Commercial facility
- Precision instrument

Specification:

MODEL	KR1000A/KR1000AL	KR2000A/ KR2000AL	KR3000A/ KR3000AL	KR5000A/ KR5000AL
INPUT				
Voltage (Vac)	80~148			83~138
Frequency (Hz)	50/60Hz±5%			
Power Factor	>0.99			
OUTPUT				
Capacity (VA)	1000	2000	3000	5000
Power Factor	0.8			
Voltage (Vac)	110/115/120±2%			
Frequency (Hz)	50/60±0.2% (battery mode)			
Waveform	Pure sine wave THD < 3% (linear load)			
Transfer Time (ms)	0			
Overload	105%~129% for 60 seconds, 130%~150% for 30 seconds above 150% for 300ms			105%~129% load for 10 minutes 130%~149% load for 1 minute above 150% load for 1 second
BATTERY				
Voltage(Vdc)	36	72	96	
Internal BATT Type	3×7Ah 12V/External	6×7Ah 12V/External	8×7Ah 12V/External	
Charger Current(A)Max	1/5			
OTHER				
Communication Interface	RS232 (USB or Dry contact or SNMP adapter is optional)			
Display	LCD display parameters of UPS			
Alarm	Low battery, abnormal AC input, UPS failure			
Protection	Low battery, overload, short-circuit and over temperature			
Noise (dB)	< 45			< 60
Working Temperature	0 ~ 40℃			
Relative Humidity	0 ~ 95%, No condensation			
Dimension (W×D×H)(mm)	156×400×220	198×490×347		255×565×700/255×565×500
Weight (kg)	13/7	28/16	34/17	70/24

◆ Specification is subject to change without prior notice.

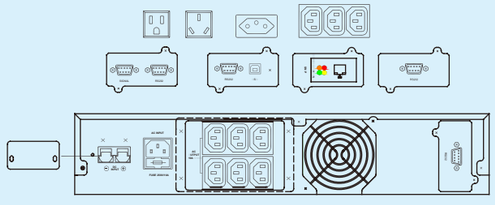
KRA-J Rack/TowerSeries (1-5kVA)

Main Features:

- Online double conversion
- Rack and tower convertible
- High input power factor
- Wide input voltage range
- Compact and light weight
- High reliability and performance
- Full protection function & automatic bypass
- Intelligent RS232 communication port
- 5kVA UPS has ECO&EPO function
- UPS management software (optional)
- SNMP, USB, dry contact (optional)
- External battery bank, Tower housing, rack kits (optional)

Application:

- 19" rack device
- Computer room
- Data center
- Point-of-sale
- Router
- Hub and network device
- Commercial facility
- Precision instrument



Specification:

MODEL	KR1000A-J/KR1000AL-J	KR2000A-J/ KR2000AL-J	KR3000A-J/ KR3000AL-J	KR5000A-J/ KR5000AL-J
INPUT				
Voltage (Vac)	80~148			60~138
Frequency (Hz)	50/60± 5% (50/60Hz ± 10% settable)			
Power Factor	≥0.99			
OUTPUT				
Capacity (VA)	1000	2000	3000	5000
Power Factor	0.8			
Voltage (Vac)	110/120±2%			
Frequency (Hz)	50/60±0.2% (battery mode)			
Waveform	Sine wave, THD<3% at linear load			
Transfer Time (ms)	0			
Overload	105%~129% for 60 seconds, 130%~150% for 30 seconds, above 150% for 300ms			125~150% for 1 minute, above150% for 1 second.
BATTERY				
Voltage (Vdc)	36	72	96	96
BATT Type	3×7Ah 12V/External	6×7Ah 12V/External	8×7Ah 12V/External	16×7Ah 12V/External
Charger Current(A)Max	1/5	1/4	1/4	1/3
OTHER				
Communication Interface	RS232 (Dry contact, USB or SNMP adapter is optional)			RS232+USB+EPO (Dry contact or SNMP are optional)
Display	LED indicates the status of UPS			LCD & LED display
Alarm	Low battery, abnormal AC input, UPS failure			
Protection	Low battery, overload, short-circuit and over temperature			
Working Temperature	0~40℃			
Relative Humidity	0~95%, No condensation			
Dimension (W×D×H)(mm) Standard/Long backup	440×500×2U	440×500×2U(UPS)+ 440×500×2U(Battery pack)/ 440×500×2U(UPS)		440×550×3U(UPS)+ 440×550×3U(Battery pack)/ 440×550×3U(UPS)
Weight(kg) Standard/long backup	14/7	10+22/12	11+28/13	18+48/18

◆ Specification is subject to change without prior notice.

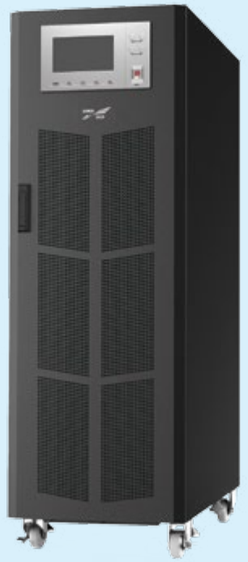
KR33A Series (10-30kVA)

Main Features:

- Online double conversion
- DSP and full digital control
- No-master-slave N+1 parallel technology
- International IGBT power modules
- Internal maintenance bypass
- PCB boards feature with anti-corrosion paint coating
- Manual bypass maintenance design
- DC startup function
- Allow 100% three phase unbalance load
- EPO function
- Intelligent battery management
- Intelligent network supervising
- Intelligent fans control

Application:

- Computer room
- Data center
- Precision instrument
- Commercial facility
- Intelligent equipment



Specification:

MODEL	KR3310A/KR3310AS	KR3320A/KR3320AS	KR3330A/KR3330AS
INPUT			
Nominal voltage (Vac)	110/115/120 (L-N)		
Voltage range (Vac)	83~138V full load, 73~83V 75% load, 60~73V 50% load		
Rectifier frequency (Hz)	50/60±5% (±10% optional)		
Bypass voltage range (Vac)	110+15%(+20% optional)/-25%		
Power factor (PF)	>0.99		
THDI	<3%		
Phase	3φ4W+PE		
Battery	External/16pcs x 12AH 12V	External/32pcs x 12AH 12V	External/48pcs x 12AH 12V
Battery voltage (Vdc)	192		
Charging current (A)	6		
OUTPUT			
Capacity (kVA)	10	20	30
Power factor (PF)	0.9		
Phase	3φ4W		
Waveform	Pure sine wave		
Voltage(Vac)	110/115/120 (L-N)		
Frequency(Hz)	50/60±0.2% (battery mode)		
Waveform distortion	THD≤3%		
Static bypass transfer time(ms)	0		
System efficiency	≥93%		
Parallel mode	Advanced no-master-slave parallel technology, N+1 redundancy		
Overload capacity	106-130% load for 1min ; 150% load for 10s (to bypass)		
OTHERS			
Maintenance bypass	Yes		
DC cold start function	Yes		
Display	Touch screen+LED		
Communication function	RS232/RS485， dry contact,SNMP (optional)		
Approvals	Meet standard EN 62040-2: 2006		
Noise(dB)	<65		
Dimension (WxDxH) (mm)	500×800×1500		

FR-UK33A Series (10-200kVA)

Main Features:

- Online double conversion
- IGBT inverter and output isolation transformer
- Wide input voltage range
- 3 phases UPS allow 100% unbalance load
- Fully DSP control, high reliability and performance
- DC cold start function
- Advanced battery charging management
- Intelligent fan speed control
- ECO mode and EPO function.
- Intelligent RS232/RS485 communication port
- MODBUS & SNMP adapter (optional)
- Advanced no-master-slave parallel technology (optional)
- Intelligent battery monitor system – MMBM (optional)
- Bypass isolation transformer (optional)

Application:

- Computer room
- Data center
- Precision instrument
- Intelligent equipment
- Industrial application

Specification:

MODEL	FR-UK 3310A/FR-UK3310AS	FR-UK 3320A/FR-UK3320AS	FR-UK 3330A/FR-UK3330AS	FR-UK 3340A	FR-UK 3350A	FR-UK 3360A	FR-UK 3380A	FR-UK 33100A	FR-UK 33120A	FR-UK 33160A	FR-UK 33200A
INPUT											
Voltage(Vac)	208/220 ±20% (±25% optional)										
Rectifier Frequency(Hz)	40~70										
SYNC Frequency Tracking(Hz)	50/60±10%(±5% optional)										
Phase	3φ4W+PE										
OUTPUT											
Capacity (kVA)	10	20	30	40	50	60	80	100	120	160	200
Power Factor	0.8 (0.9 optional)										
Phase	3φ4W+PE										
Voltage (Vac)	L-N: 120/127±1%, L-L:208/220±1%,										
Frequency(Hz)	50/60±0.5% (battery mode)										
Waveform	Pure sine wave, THD≤3% (linear load)										
3 Phases 100% Load Unbalance Voltage Stability	≤2%, allow 100% unbalance										
Overload	105% load for 60mins, 125% load for 10 mins, 150% load for 1 min.										
BATTERY											
Voltage (Vdc)	192			348 (360 setting)							
BATT Type	External /Max 7Ah 12V 64pcs			External							
Charger Current(A) Max	10~40 settable										
Battery Self-testing	Automatically alarm and estimate battery status in battery abnormal status										
OTHER											
Maintenance Bypass	Yes										
Communication Interface	MODBUS/RS485 and dry contact (RS232 and SNMP adapter are optional)										
Display	LCD Display indicates frequency, voltage, load, battery voltage, etc. LED indicates running status										
Alarm	Overload, abnormal AC input, low battery, UPS failure										
Protection	Low battery, overload, over temperature, short circuit, output over voltage, output low voltage										
Noise (dB)	<65										
Working Temperature	0 ~ 40℃										
Relative Humidity	0 ~ 95%, No condensation										
Dimension (W×D×H)(mm)	500×800×1180 /500×800×1600			800×800×1600			1400×1000×1850				1600×1000 ×2000
Weight(Kg)	300/500	325/530	340/540	590	620	670	970	1000	1200	1450	1700

- The UPS power capacity above 200KVA can be customized.
- Specification is subject to change without prior notice.

MR33A Series Modular UPS (20-240kVA)

Main Features:

- Online double conversion
- DSP digital control
- N+X parallel redundancy UPS
- ECO+EPO function
- Internal maintenance bypass
- PCB boards feature with anti-corrosion paint coating
- Module communication ring connection redundancy design
- Advanced power module dormancy technology
- DC startup function
- 3 level inverter technology
- Allow 100% three phase unbalance load
- Intelligent battery management
- Flexible network management
- Frequency converter function (60Hz to 50Hz or 50Hz to 60Hz)
- Self-aging test function

Application:

- Data center
- Telecom system
- Computer room
- Financial system
- Precision instrument
- Intelligent equipment

Specification:

MODEL	MR3360AS/MR3360A	MR33100A	MR33160A	MR33240A
Maximum Capacity	60kVA	100kVA	160kVA	240kVA
POWER MODULE				
Power Module	MR3320A-J			
INPUT				
Configuration	3 phase 4 wires + ground			
Nominal voltage(Vac)	190/208/220 (L-L)			
Voltage Range (Vac)	156~260 (L-L)			
Frequency Range	50/60Hz ± 10%			
PF	≥0.99			
THDi	≤3%			
Batteries (Vdc)	±192 Vdc (±180, ±240V settable)			
OUTPUT				
PF	0.9(1.0 optional)			
Frequency Range	50/60Hz±0.2% at battery mode			
Voltage Stability (Vac)	190/208/220±1%(static) 190/208/220 ±2% (load 0~100%)			
Transient Recovery Time (ms)	20(loads 0~100%)			
Overload	125% loads for 10 minutes, 150% loads for 1 minute			
Transfer Time (ms)	0			
Efficiency	≥95% (AC-AC)			
BATTERY				
Battery Type	128×9 AH/12V/External	External		
OTHER				
Communication Interface	Dry contact, RS232/RS485			
SNMP Adapter (optional)	Yes			
Display	Touch screen + LED			
Working Temperature(℃)	-5~40			
Relative Humidity	≤95% No condensation			
Protection Degree	IP20			
Approvals	CE (EN 62040-2, IEC 62040-1)			
Noise (dB)	≤60	≤65		
Power Module Dimension(W×D×H) (mm)	500×700×130			
Power module weight (kg)	32			
Cabinet Size (W×D×H)(mm)	600×1050×2000 /600×900×1400	600×860×2000	1200×860×2000	

◆ Specification is subject to change without prior notice.

KI Series (1-5kVA)

Main Features:

- Digital technology
- Intelligent battery charger
- Reliable online interactive design,with output transformer
- Intelligent regulation system on utility power voltage
- Fully functional protection
- Intelligent RS232 communication port
- UPS management software (optional)
- External SNMP or USB or dry contactor (optional)
- External battery bank (optional)

Specification:

MODEL	KI1000	KI1000L	KI2000	KI2000L	KI3000	KI3000L	KI5000L
INPUT							
Voltage (Vac)	150~300						
Frequency (Hz)	50/60 ± 5%（50/60Hz settings）						
OUTPUT							
Capacity (VA/W)	1000/700		2000/1400		3000/2100		5000/3500
Voltage (Vac)	220/230/240±2% (battery mode)						
Frequency (Hz)	50 /60± 0.1% (battery mode)						
Waveform	Pure sine wave, THD < 3%						
Transfer time	Typical 4ms (Synchronous switch-over)						Typical 8ms
Overload	Utility mode: 150% for 5 minutes, above 200% for 3 seconds Battery mode: 120% for 30 seconds, above 150% for 1 second						
BATTERY							
Voltage (Vdc)	24		48		72		48
BATT type	2×7Ah 12V	External	4×7Ah 12V	External	6×7Ah 12V	External	External
Charger Current(A)Max	1	10	1	10	1	10	30
OTHER							
Communication Interface	RS232. (Dry contact, USB and SNMP adapter are optional)						
Display	LED or LCD display operation status of UPS						
Alarm	Low battery, abnormal AC input, UPS failure						
Protection	Low battery, overload, short-circuit and over temperature						
Dimension (W×D×H)(mm)	156×450×220		198×525×347				255×590×500
Weight (kg)	16	13	35	26	44	30	48

◆ Specification is subject to change without prior notice.

Mini-guard Series (500-2000VA)

Main Features:

- Advanced digital control technology
- Streamline design
- Comprehensive net equipment protection
- Green idea environmental design
- Flexible and practical cold start function
- Wide voltage range for intellectual regulating (SMART AVR)
- Intelligent power management (optional)

Specification:

MODEL	UPS500	UPS700/ UPS700L	UPS1000/ UPS1000L	UPS1600/ UPS1600L	UPS2000/ UPS2000L	SUPS700	SUPS1200
INPUT							
Voltage(Vac)	140~280 / 90~145					190~265	
Frequency (Hz)	50/60 ± 10%						
OUTPUT							
Power (VA/W)	500/300	700/420	1000/600	1600/960	2000/1200	700/420	1200/720
Voltage (Vac)	220/230±10% ; 110/120±10% (on battery mode)					220/230±10% (on battery mode)	
Frequency (Hz)	Synchronizing with input AC while it is normal, and 50±0.5% or 60 ± 0. 5% on battery mode						
Transfer time	Typical 6ms, including detection time and switching time (Synchronous switch-over)						
Waveform	Square wave					Pure sine wave	
BATTERY							
Voltage (Vdc)	12	12	12/24	36	36/48	24	24
BATT type	1×7Ah	1×7Ah/ External	2×7Ah/ External	3×7Ah/ External	3×9Ah/ External	2×7Ah	
Charger Current(A)Max	1	1/8	1/6	1/5	1/5	1	
OTHER							
Communication Interface	RS232, RJ11 / RJ45 (USB and SNMP adapter are optional)					RS232 (USB, SNMP adapter are optional)	
Display	LCD display shows status of AC input, inverter, low battery, overload and battery capacity, or LED indicators show status of AC input, inverter, low battery, overload						
Dimension (W×D×H)(mm)	90×325×165/ 120×380×220		120×380 ×220	156×450×220		122×380×170	
Weight (kg)	6	6.5/8	11.5/9.5	17/13	18.5/15	8	9

◆ Specification is subject to change without prior notice.

Li UPS Series (500-3000VA)

Li UPS series is rack-mount UPS combined with Lithium batteries. it is ideal for IT device, telecommunication system, data center, automatic device and those require high quality power protection, supplying reliable power guarantee for your loads. Customization products are available for special requirement.
Compared with lead acid battery, the lithium batteries have many advantages such as higher reliability, longer cycling lifetime, smaller size and better environmental protection.

Main Features:

- Double outputs: AC output and 48V DC output (long backup time model)
- Pure sine wave output
- Low broadband noise current
- Advanced digital control technique
- Comprehensive equipment protection
- Special Lithium battery charger
- DC cold start and automatic start at low voltage recover
- Intelligent power management (optional)
- External charger (optional)

Application:

- IT Device
- Data Center
- Telecom system
- Automatic Device
- Precision Instrument

Specification:

MODEL	UPS500Li-S	UPS1000 Li-S	UPS500Li	UPS1000Li	UPS2000Li	UPS3000Li
INTPUT						
Voltage (Vac)	220/230 ± 20%					
Input frequency (Hz)	50/60 ± 10%					
OUTPUT						
Power Factor	0.7(0.8 optional)					
AC Voltage (Vac)	220/230±3%(on battery mode)		220/230±2%(on battery mode)			
Frequency (Hz)	50/60 ± 0. 5%					
Transfer Time (ms)	<10					
Waveform	Pure Sine Wave					
BATTERY						
Voltage (Vdc)	24		48			
BATT Type	10Ah BATT pack with BMS	20Ah BATT pack with BMS	External			
Charger Current(A)Max	1		4		8	
OTHER						
Communication Interface	RS232 and dry contact (SNMP is optional)					
Display	LED indicators show status of AC input, inverter, low/high battery, fault;					
Dimension (W×D×H) (mm)	440×500×2U		440×320×1U		440×500×2U	
Weight (kg)	14	16	6		13	

◆Different type of lithium battery has different specifications such as size, weight, etc.
◆Specification is subject to change without prior notice.

Li UPS-A Series (500-3000VA)

Li UPS-A series is rack-mount UPS combined with Lithium batteries, featuring low AC output voltage such as 100/110/120Vac. it is ideal for IT device, telecommunication system, data center, automatic device and those require high quality power protection, supplying reliable power guarantee for your loads. Customization products are available for special requirement.
Compared with lead acid battery, the lithium batteries have many advantages such as higher reliability, longer cycling lifetime, smaller size and better environmental protection.

Main Features:

- Double outputs: AC output and 48V DC output
- Pure sine wave output
- Low broadband noise current
- Advanced digital control technique
- Comprehensive equipment protection
- Special Lithium battery charger
- DC cold start and automatic start at low voltage recover
- Intelligent power management (optional)
- External charger (optional)

Application:

- IT Device
- Data Center
- Telecom system
- Automatic Device
- Precision Instrument

Specification:

MODEL	UPS500Li-A	UPS1000Li-A	UPS2000Li-A	UPS3000Li-A
INTPUT				
Voltage (Vac)	100/110/120 ± 15%			
Input frequency (Hz)	50/60 ± 10%			
OUTPUT				
Power Factor	0.7 (0.8 optional)			
AC Voltage (Vac)	100/110/120±2% (on battery mode)			
Frequency (Hz)	50/60 ± 0. 5%			
Transfer Time (ms)	<10			
Waveform	Pure Sine Wave			
BATTERY				
Voltage (Vdc)	48			
BATT Type	External			
Charger Current(A)Max	4		8	
OTHER				
Communication Interface	RS232 and dry contact (SNMP is optional)			
Display	LED indicators show status of AC input, inverter, low/high battery, fault;			
Dimension (W×D×H) (mm)	440×400×1U		440×500×2U	
Weight(kg)	5.5		11.2	

◆Specifications are subject to change without prior notice.

ZLSeries
240VDC Power System

Main Features:

- Intelligent DSP control
- Touch screen interface
- Modular N+1 design for easy expansion
- Hot-swappable modules ensure quick and online maintenance
- Intelligent alternately working modules
- PFC technology for high power factor 0.99 and low THDi ≤5%
- DC power application with high efficiency ≥95%
- Flexible communication management: CAN bus and RS485 port
- Voltage/current/capacity is adjustable (Optional)
- Multiple monitor modules are available (Optional)

Application:

- IDC data center
- Mobile communication data center
- Banks
- 3G, 4G base station
- Other equipments with 240VDC power source

Specification:

MODEL	ZL304-G400	ZL304-G600	ZL304-G800	ZL304-G1200	ZL304-G1600
INPUT					
Ratecl Voltage (Vac)	260~530 (>304Vac 100% load)				
THDu	≤5%				
THDi	≤3% (100% load), ≤5% (50% load)				
PF	≥0.99				
Frequency (Hz)	40~66				
Wires	3 phase 3 wires+ground				
Applicable battery capacity	100AH~2000AH				
OUTPUT					
Voltage (Vdc)	240/360				
Voltage (Vdc)	180~300 adjustable				
Current (A)	400	600	800	1200	1600
Current limit	rated current× (20% ~110%)				
Voltage regulation	≤±0.2%				
Current regulation	≤±1.0%				
Ripple	≤±0.13%				
Efficiency	≥95%				
Parallel performance	≤±1%				
Charger	Boost and floating （manually and automatically）				
OTHER					
Insulation monitor	DC BUS and DC circuit				
Insulation resistor (MΩ)	≥10				
Insulation grade	Output to ground, input to ground, input to output with 2.5kVAC, no arc in 1 minute				
Alarm	Battery fault, insulation fault, AC fault, output fault, modular fault, system modular				
IP grade	IP20				
Display	LCD				
Noise(dB)	≤60dB				
Protection	AC over voltage, sag, DC output over voltage, protection for input phase missing, over load protection, DC output over current protection, protection for short circuit, over temperature protection				
Cooling	Fans (speed adjustable)				
Dimension (W×D×H) (mm)	800×800×2000	2000×600×2000	2600×600×2000		3200×600×2000
Weight (kg)	400	660	920	1080	1360

◆ Specification is subject to change without prior notice.

DJN-K Series
48 Vdc Inverter (1-5kVA)

DJN series inverters adapt to telecom systems with 48VDC power supply, adopting high efficiency SPWM inversion technology. DJN series inverter can be connected to teleprinter, telegraph terminal, wireless paging equipment, data switching exchange, local exchange, microwave communication equipment, program controlled exchange charging system, fax machine and all kinds of AC instrument, computer equipment and various communication equipment. Meanwhile, DJN-K Series inverter "on ECO mode" can be used for air conditioner, such as 3KVA for 1.5P and 5KVA inverter for 3P air conditioner.

Main Features:

- Compliant with communication standard of AC and DC power supply system
- High performance SPWM inversion technology
- Perfect protection
- Low DC current noise

Specification:

MODEL	DJN1000-K	DJN1500-K	DJN2000-K	DJN3000-K	DJN5000-K
INPUT					
Voltage (Vdc)	40-60				
OUTPUT					
Capacity (VA)	1000	1500	2000	3000	5000
Power Factor	0.7 (0.8 optional)				
Voltage (Vac)	110/220/230±2%				
Waveform	Sine wave, THD<3%				
Frequency (Hz)	50/60±0.5%				
OTHER					
Panel Display	LED indicators show status of inverter' s operation				
Protection	Low battery, over voltage, overload, short-circuit and over temperature.				
Communication Interface	dry contact	dry contact	dry contact +RS232	dry contact +RS232	dry contact + RS232
Dimension (WxDxH) (mm)	440×286×1U	440×360×1U	440×350×2U	440×350×2U	440×440×3U
Weight (kg)	5	6	10	10	14

◆ Specification is subject to change without prior notice.

DJN-P Series
48 Vdc Modular Inverter (3-12kVA)

DJN-P inverters adopting rack imbed design so as to be more slinky and tide ,easy to install 3+1 parallel system for high MPBF, adapt to telecom systems with 48VDC power supply, adopting high efficiency SPWM inversion technology. DJN-P inverter can be connected to teleprinter, telegraph terminal, wireless paging equipment, data switching exchange, local exchange, microwave communication equipment, program controlled exchange charging system, fax machine and all kinds of AC instrument, computer equipment and various communication equipment.
DJN-P series parallelable inverter powers,3+1 for redundancy system, being able to supply high-performance uninterrupted AC power for various precision instruments

Main Features:

- Compliant with communication standard of AC and DC power supply system
- High performance SPWM inversion technology
- Perfect protection
- Low DC current noise

Specification:

MODEL	DJN3000-P / DJN-S12
INPUT	
Voltage (Vdc)	43-60
OUTPUT	
Capacity (VA)	3000 (N+X)
Power Factor	0.7 (0.8 optional)
Voltage (Vac)	110/220/230±2%
Waveform	Sine wave, THD<3%
Frequency (Hz)	50/60±1%
OTHER	
Panel Display	LED indicators show status of inverter' s operation
Protection	Low battery, over voltage, overload, short-circuit and over temperature.
Communication Interface	dry contact + RS232 (system)
Dimension (WxDxH) (mm)	435×358×2U / 445×335×10U
Weight (kg)	8.5/15

◆ Specification is subject to change without prior notice (DJN-S12, without moudule).

RACK ATS
(1 phase rack automatic transfer switch 10-32A/2-6kVA)

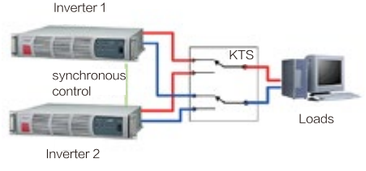
Main Features:

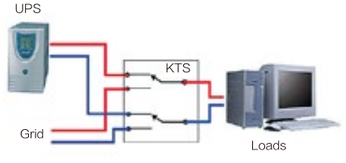
- Isolated dual AC input
- Accurate synchronization
- Flexible control panel location (Front or Rear);
- It ensures the high MTBF and the system reliability of Inverter system or UPS system

Specification:

MODEL	KTS010	KTS032
Input voltage (Vac)	110/220±25%	
Input frequency (Hz)	50/60Hz±6Hz	
Rated output capacity 110V	1kVA/0.7kW	3kVA/2.1kW
Rated output capacity 220V	2kVA/1.4kW	6kVA/4.2kW
Overload	125%, not limited; 150%≥60S	
Output voltage (Vac)	110/220±25%	
Transfer time (ms)	6-10	
Dimension (mm) (W×D×H)	440×286×1U	
Weight (kg)	4	

- Specification is subject to change without prior notice.





STS System (63-400A)

Main Features:

- Strong adaptability for input power
- Accurate synchronized detection system
- Human machine interface--Lovely touch screen
- Your choice for main input power source
- Perfect protection function
- Remote monitor via RS485

Application:

STS is applied for various important power supply environments,such as computer systems, working and fire fighting in buildings,hospitals, malls, hotels, highway, tunnels, subway, light rail, airport,electric power system, finance, telecommunication and so on.

Specification:

MODEL	STS33063	STS33100	STS33160	STS33250	STS33400
INPUT					
Input way	3φ+N+PE or 3φ+PE				
Rated voltage	190/208/220/380/400V/415Vac				
Rated frequency	50/60Hz				
Input voltage range	±15%				
Input frequency range	±10%				
OUTPUT					
Transfer time (ms)	4ms				
Current rating	3 phases, 63A per phase	3 phases, 100A per phase	3 phases, 160A per phase	3 phases, 250A per phase	3 phases, 400A per phase
Overload capacity	<150% With load for long time 150%~170% ,15 minutes ; >170% 1.5 seconds				
Efficiency(100%linear load)	98%				
OTHER					
Noise (dB)	<55				
Protection level	IP20				
EMC	Complies with CE(EN / IEC 62040-2)				
Safety and regulatory	Complies with CE(EN / IEC 62040-1)				
Dimensions(mm)(W×D×H)	600×800×1600				
Weight(kg)	125	135	142	146	152
Communication	RS485				

- Specification is subject to change without prior notice.
- Special capacity can be customized

KEHUA TECH

Reliable • Flexible • Responsible

Xiamen Kehua Hengsheng Co., Ltd.

Add: No. 457, Malong Road, Torch High-Tech Industrial Zone, Xiamen Fujian 361006 China

Tel: +86-592-5160516

Fax: +86-592-5162166

Email: Intertrade@kehua.com

www.kehua.com

Version No.: 20170825-01-500

General Disclaimer

The information in this document may contain predictive statements including, without limitation, statements regarding the future financial and operating results, future product portfolio, new technology, etc. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in the predictive statements. Therefore. such information is provided for reference purpose only and constitutes neither an offer or an acceptance. Kehua may change the information at any time without notice.