

KR-RM Series UPS

| 10-40kW@400V |
| 10-20kW@208V |



Empowering Efficiency and Reliability with KR-RM Series UPS

10-40kW@400V
10-20kW@208V

KR-RM Series UPS



- » 4.3 inch touch screen
- » High efficiency 96% @ PF=1.0
- » Compatible with 400Vac and 208Vac
- » 7 HMI languages
- » Intelligent functions
- » Battery hot swappable design

The KR-RM series UPS is designed for rack or tower mounting with high efficiency up to 96%. Multiple languages in 4.3-inch touch screen provides a convenient human-machine interaction to conduct intelligent settings and management of the system. Technically compatible with different mains conditions with phase sequence adaptation and wide input voltage range of both high and low voltage, making it suitable for many commercial applications, such as IT computer rooms, regional office buildings, and commercial security systems.

Typical Applications:



Telecom



Data Center



Finance



Government



Medical
Equipment

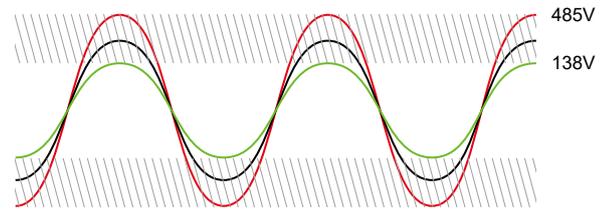


Office

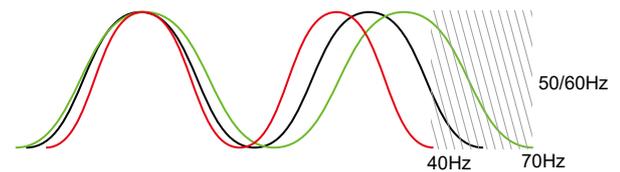


High Reliability

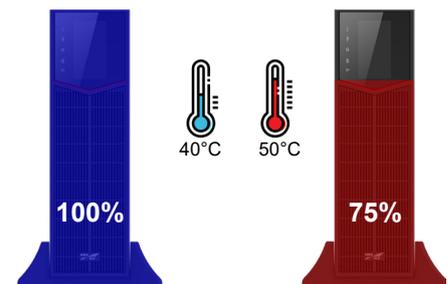
- **Wide input voltage range** of 138Vac~485Vac and **wide input frequency range** of 40-70Hz. No need for the UPS to transfer from double conversion mode to battery mode under complicated mains conditions due to the strong adaptability, thus reduce battery usage and prolong battery service life eventually.
- **High overload capability** on double conversion mode with 105% load long running, 130% load for 10 min, 155% load for 1 min, and 130% load still keeps long running when the UPS is working in bypass mode. Such reliable overload performance ensures uninterruptable power supply of the UPS when taking large load.
- When under the running condition of **high ambient temperature up to 40°C**, the UPS can still take full load with PF=1.0, and with the increasing of ambient temperature up to 50°C, the UPS will linearly derate to 75%, highly ensures the system reliability under high ambient temperature.
- **Standard anti-corrosion coating** to all PCB boards, like waterproof, dustproof and salt-spray proof, protect electronics from environmental influence such as dust, salt spray and corrosion, enabling the normal operation in harsh environment, like dusty rooms and rainy days.
- **Intelligent fan control and redundant design** ensures the reliability of the UPS and maximize fan service life.
- The most advanced dual DSP control system prevents single point failure and improves performance.
- Lightning protection design enables UPS to sustain from high surge peak voltage.
- Battery reverse connection protection to make sure the system reliability.
- Strong short circuit capability with time duration settable from 10~200ms, which provides safe protection for system.
- Optional dust filter kit allowing UPS placed in dusty environment
- **Backfeed protection:** The contactor between distribution box and UPS will automatically disconnect when the grid is powered down, and when utility power is restored, the contactor is automatically absorbed (The contactor is configured by the client).
- Cold start function allows UPS start with battery when mains is outage.
- Parallel/BSC accessory is for parallel/BSC ports connection between cabinets in the parallel system. N UPSs require N parallel wires to ensure there are at least two parallel wires for a UPS, which will improve parallel reliability.



Wide Input Voltage



Wide Input Frequency



Running Under High Temperature



Anti-Corrosion Coating

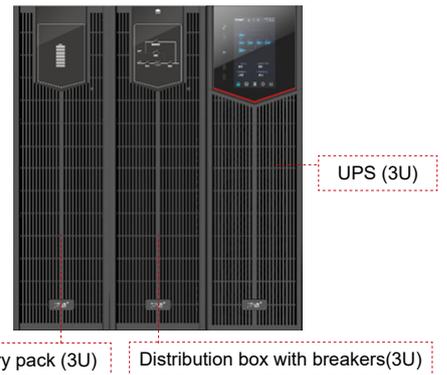
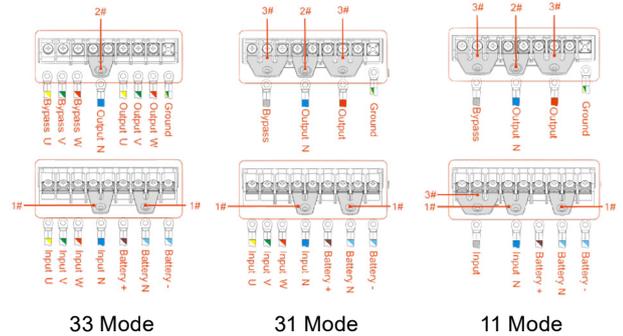


Automatic Fans Control



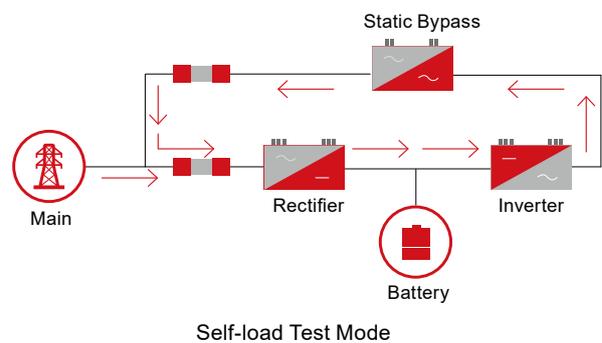
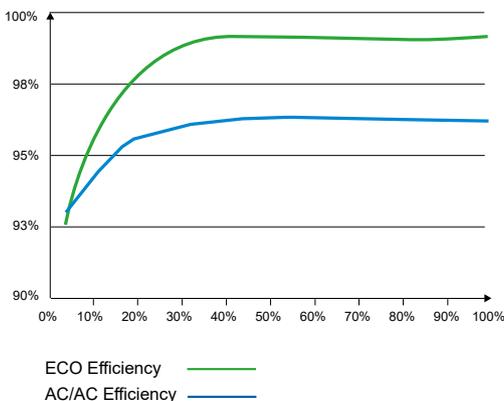
Flexible Design

- **Adjustable input and output phase configuration (33/31/11)** with high flexibility to meet multiple power distribution conditions (need jumper connector).
- **Separated UPS and distribution cabinet.** Full breaker design (input/output/bypass/maintenance bypass) of the distribution box allows manually transfer to the utility power by the maintenance bypass breaker, realizing scheduled maintenance without shutting down the load power.
- **Impact load mode enables the UPS take transformer load.**
- **VRLA and Lithium battery compatible design.**
- High power density design, large capacity of 40KVA with only 3U height, easy to be installed as both rack and tower model.
- **High voltage and low voltage compatible**, the screen can be set output voltage L - L: 380/400/415/190/200/208/220 vac.
- Super wide DC voltage range from $\pm 96Vdc$ to $\pm 240Vdc$, and battery pcs settable from 16~40 pcs.
- Standard 3U height battery pack with connector to support hot swap.
- Add new 3U height battery pack for 10kVA, with inside ± 8 batteries(no derating) and connector to support hot swap.
- Parallel slot design which allows up to 4 units parallel on site.
- Common or separate battery bank on parallel mode.



Green Power

- **Advanced IGBT and three level inverter technology** make harmonic THDi < 3% at full load with high input power factor larger than 0.99 as well as **high AC/AC efficiency up to 96%** and ECO mode efficiency up to 99%, which facilitate reduce energy consumption and grid pollution while effectively save energy, resulting in significant OPEX cost savings eventually.
- **Self-load test function** makes it easy for on-site test during commissioning. Saving time and renting cost for users, because there is no need to rent costly temporary loads, free of time-consuming cabling preparations.



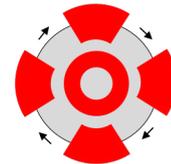


Intelligent Management

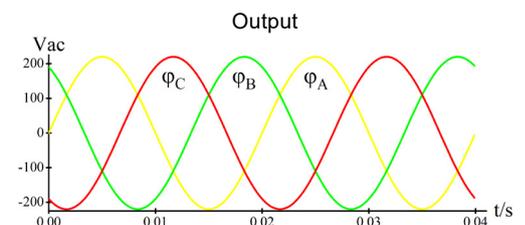
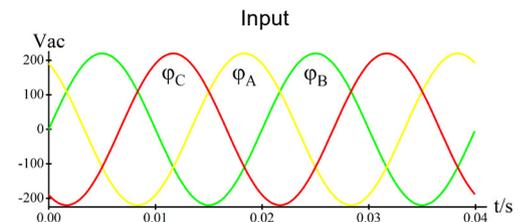
- **Key components and accessories replacement pre-alarm function**, which could pre-alarm the system fault and remind necessary service for key components, like capacitor, fan; accessories like battery and dust filter.
- **Smart timed de-dust function** with period settable manually, which allows technician set the time duration for UPS to clean the dust itself for saving the preventive service time.
- **Input phase sequence adaptation function** allows UPS keep running in inverter mode without transferring to battery mode.
- Multiple communication interfaces like embedded RS232, input EPO dry contact, maintenance bypass switch detection dry contact, 3 intelligent slots for parallel card, SNMP card and S³ lithium-ion battery protocol conversion card, greatly meets the requirement of different management systems.
- Smart battery test to prolong and ensure the service life of batteries.
- Smart generator mode. The generator will guarantee the load power rather than charging the battery when the mains input is down, or even prohibit battery charging.
- Frequency converter function (60Hz to 50Hz or 50Hz to 60Hz)



Key Components Life



Time Dedusting



Phase Sequence Adaptation



Frequency Converter Mode



User-friendly Interface

- Colorful **4.3 inches touch screen** with LED Indicators, ensuring comprehensive and visualized information display.
- User-friendly graphical interface with single-line mimic diagram showing system status such as voltage, current, UPS temperature, working status, load capacity and battery capacity.
- **Multi-language** build-in display with Chinese, English, Spanish, Italian, French, Portuguese, Russian.
- Large data storage capacity, 1000pcs events logs.
- Easy update for display firmware.



Rack Mode



Tower Mode



More Options

- 19-inch rail kit
- Parallel card
- SNMP card
- Battery box ($\pm 8/16/20$ batteries in one cabinet)
- Dry contact card
- Protocol conversion card for lithium battery
- Jumper connector for phase changing
- Battery Charge Temperature Compensation
- Dust filter



19 inch rail kit



Parallel kit



SNMP kit



Battery box



Dry contact kit



Dust filter



Jumper connector



Battery charge
temperature compensation

Technical Specifications

MODEL	KR10KVA-RM	KR20KVA-RM ¹	KR30KVA-RM	KR40KVA-RM ¹
Capacity (kVA)	10	20	30	40
INPUT				
Voltage (Vac)	400V model: 138~485 (305~485 at full load) (L-L) 208V model: 121~268 (155~268 at full load) (L-L)			
Frequency (Hz)	40-70			
Power Factor	≥0.99			
THDi	≤3% (resistive full load), ≤5% (non-linear full load)			
Phase	400V model: 10-20KVA: 33/31/11; 30-40KVA: 33/31 208V model: 33/31			
BYPASS				
Voltage (Vac)	±10%/±15%/±20% (default ±20%)			
Frequency (Hz)	±5%/±10% (default 10%)			
Overload	130%: long term; 155%: 1min; above 155%: 200ms			
OUTPUT				
Voltage (Vac)	L-L: 380/400/415±1%			
Frequency (Hz)	50/60±0.1 (battery mode)			
Power Factor	1.0			
THDv	≤2% (resistive full load), ≤4% (non-linear full load)			
AC/AC Efficiency (Max.)	400V model: 96% 208V model: 94%			
Overload	105%: long term; 110%: 60min; 130% load: 10 min; 155%: 1 min; above 155%: 200ms			
Transfer Time (ms)	0 (Mains mode-Battery mode), ≤1ms (Mains mode-Bypass mode)			
Crest Factor	3:1			
BATTERY				
Battery Type	Lead-acid/ S ³ lithium-ion batteries			
Voltage (Vdc)	±96 (±96~±240 adjustable at full load)	400V model: 10K: ±96 (±96~±240 adjustable at full load) 20-40K: ±192 (±96~±240 adjustable □ ±192~±240 at full load) 208V model: ±96 (±96~±120 adjustable at full load)		
External Battery Module (EBM)	B3U-192-20-2C		B3U-240-40-2C	
EBM Battery	16*9AH/12V		20*9AH/12V	
Charging Current (A)	4 (1-10 settable)		15 (1-20 settable)	
GENERAL				
Communication	RS232, EPO Optional: SNMP card, RS485+dry contact card, Li Protocol Conversion card			
Display	4.3" touch screen			
Noise (dB)	≤55		≤60	
Working Temperature (°C)	-5~40			
Altitude (m)	2000			
Relative Humidity	0 ~ 95%, no condensation			
Protection Grade	IP20			
Agency/Certification/Conformance	EN IEC 62040-1, EN IEC 62040-2, EN IEC 62040-3			
Dimension (W×D×H)(mm)	UPS	438×535×130 (3U)		438×720×130 (3U)
	Distribution Box	438×500×130 (3U)		438×680×130 (3U)
	Battery Pack	438×500×130 (3U)		438×680×130 (3U)
Weight (kg)	UPS	18.4		34.2
	Distribution Box	8		14
	EBM	45		56

● Specification is subject to change without prior notice.

1. Compatible 400/208Vac, for example: 20kVA (400V) can be set to 10kVA (208V), 40kVA(400V) can be set to 20kVA (208V).

Reliable • Flexible • Responsible

Kehua Tech

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

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