



**VIRTUE
ENERGY**



RACK HV 1~3kVA Lithium-ion UPS

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The R series lithium-ion UPS (1~3kVA) is based on online double-conversion technology, serving as an ideal power supply solution for small-scale scenarios. It can fully eliminate various grid-related issues, supports rack-mount installation, and achieves a maximum efficiency of 96%. Compact in size and high in power density, when paired with the R series lithium battery backup, it effectively saves installation space. It supports automatic restart upon power recovery, making it suitable for unattended sites. A variety of optional smart cards are available for comprehensive and flexible UPS status monitoring.



Telecom



Transportation



Finance



Medical



Data Center



PRODUCT ADVANTAGES

- Programmable periodic battery diagnosis;
- Freely set UPS self-test time;
- High frequency on-line double conversion;
- High Efficiency;
- 3-level Inverter for the best loading capability;
- DSP (Digital signal processors) control;
- Active input power factor correction 0.99;
- Li-ion Battery Powered;
- Long battery lifecycle, more than 2000;
- Generator compatible;
- Cold start & Economic operation mode (ECO);
- Wide input voltage range 90~300V and frequency range 40~70Hz;
- Optional dedicated cloud monitoring card for lithium-ion UPS;
- 50Hz / 60Hz Frequency auto sensing;
- Dry Contact control Interface for BMS;
- Incorporated MODBUS (RS485) interface with BMS;
- Li-ion battery provide up to 3x backup time, comparing with regular lead-acid UPS product;
- Li-ion Battery Charger : Constant current , constant voltage, floating, turn-off 4 state charger for Li-ion battery, open to customize the logical behavior for customer- specified battery pack.

PRODUCT PARAMETERS

MODEL		R1K-Li	R1KS-Li	R2K-Li	R2KS-Li	R3K-Li	R3KS-Li
Capacity	VA/W	1kVA/1KW		2kVA/2KW		3kVA/3KW	
Topology		Double Conversion Online UPS					
Phase		Single Phase Input Single Phase Output					
Mains Input							
Wiring		L/N+PE					
Rated Voltage		208/220/230/240Vac					
Voltage Range		Line-Neutral: 90~300VAC					
Frequency Range		40Hz-70Hz					
Input Power Factor		≥0.99					
Ac Output							
Wiring		L/N+PE					
Output Voltage		208/220/230/240Vac					
Voltage Regulation		±1%					
Output Frequency		50/60±4Hz(Sync Mode) / 50/60Hz±0.1(Free Run)					
Waveform		Sine Wave					
Distortion (Thdv%)		<2%(Linear Load)					
		<8%(None-Linear Load)					
Over Load Capability		100%~105% Continuous					
		60Sec.@105%~125%Rated Load					
		10Sec.@126%~150%Rated Load					
		0.3Sec.@>150%Rated Load					
Efficiency							
Ac/Ac Mode		90%		91%		92%	
Dc/Ac Mode		87%		88%		89%	
Battery & Charge							
Rated Battery Voltage		51.2/48VDC (default for 16cell of LiFePO4)					
Battery Capacity		615WH	External Battery Depends	922WH	External Battery Depends	1229WH	External Battery Depends
Backup Time		>30mins @ Full load		>20mins @ Full load		>20mins @ Full load	
Backup Time 2 (External Battery Module)		51.2V50AH-150mins 51.2V100AH-300mins @ Full Load		51.2V50AH-75mins 51.2V100AH-150mins @ Full Load		51.2V50AH-50mins 51.2V100AH-100mins @ Full Load	
Charging Current		1/2/3K: 4A; 1/2KS: 4A / 8A(Optional) / 12A(Optional); 3KS: 6A / 12A(Optional) / 16A(Optional)					
Charging Voltage		56.8V(default for 16cell of LiFePO4) / Customerized according to battery request					
Charger Behavior & Protection		CC./ CV./Floating./Turn-Off 4 states 3 over voltage protection loop, preserve interface for over temperature/over pressure switch off interface					
Physical							
Dimension WxHxD(mm)		440 x 80 x 400	440 x 80 x 400	440 x 88 x 500	440 x 80 x 400	440 x 88 x 612	440 x 80 x 400
Weight		13.6kg	7.7kg	16.0kg	7.8kg	20.9kg	8.2kg
HMI							
LCD DISPLAY with LED indicator		Input Mains Voltage, Frequency, Load level, Operation Mode, Health Status, Battery SOC					
Standards Communication		1. RS232 PORT/USB Card (not HID) 2. Dry Contact Interface for BMS control 3. ModBUS For BMS interface					
Optional Extension Card		1.Network Card: Support SNMP/TCP/IP for remote monitoring the UPS via Smart Phone APP, Web page, PC Monitor Software, Support Server / NAS shutdown. 2.RS485-Modbus Card, LAN(TCP IP)-ModBUS Card. 3.Mini AS400 Relay Card					
Operating Environment Endurance							
Temperature Range		-10~50℃					
Relative Humidity		0-98% (Non-condensing)					
Acoustics Noise		<50dB @ 1 meters					

① Battery rated voltage is open to customization

② Dimension might vary for different bezel

③ The socket and terminal configuration on the rear panel may be different for countries or regions according to order

④ More parameter customization, please contact sales representative



Durable Safe And Reliable

High-end Lithium Battery System Solution Service Provider

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