RM Series Modular Online UPS

100-1200kVA (380V/400V/415V)

RM series 3/3 UPS adopts advanced I-type 3-level technology to achieve comprehensive redundancy design from modules to the unit, offering advantages such as high power density, easy scalability, easy expansion, and a small footprint. The efficiency up to 97.5%, with intelligent mode for low-load efficiency and simplify operations and super ECO mode achieving 99% efficiency, providing high-reliability clean power supply for critical loads in medium to large data centers.

Application

Power supply for critical loads in medium- to large-scale data IDC & AIDC, Telecom operators, Internet and cloud data centers, the energy and power industry, and other industries.
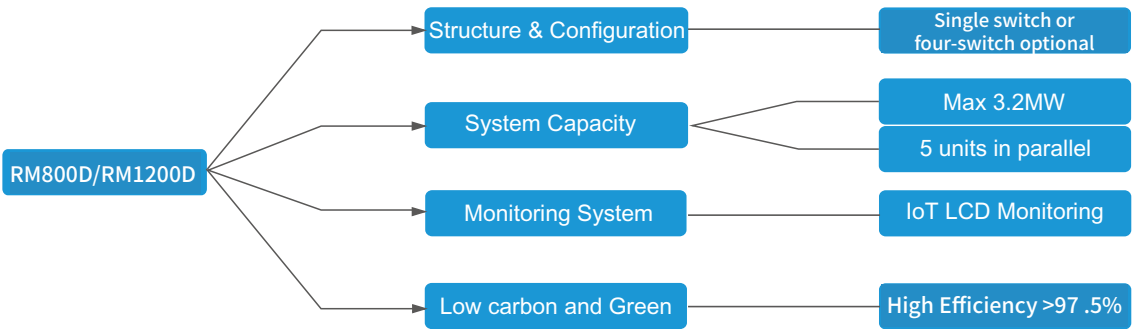
Features

- Green and low-carbon, with efficiency as high as 96%、97% 97.5% in double-conversion mode and up to 99% in super-ECO mode

- High power density, with a land area of 1.32 m² for 1200kW

- Intelligent detection of critical components such as fans and capacitors, with early warning to eliminate safety hazards

- Compatible with lead-acid and lithium-ion batteries, suitable for multiple application scenarios, supports battery configurations without a neutral line, and supports shared battery banks for parallel operation

- Modular design, supporting up to 32 modules in parallel, with online hot-swap capability and N+X redundancy

- Supports grid power, battery combined power supply, and delayed startup functionality to minimize grid impact during switching

- Fault recording function for on-site anomaly analysis and rapid issue resolution

- Energy storage UPS mode leverages lithium-ion UPS advantages, supporting peak shaving and valley filling to reduce TCO

High Density, Modular, Scalable

- High power density, 1200kW footprint is only 1.32m², power density is 757.6kW/m³, effectively saving data
- center space 100kW~3200kW configurable as needed, supports up to 4 parallel units & 32 power modules
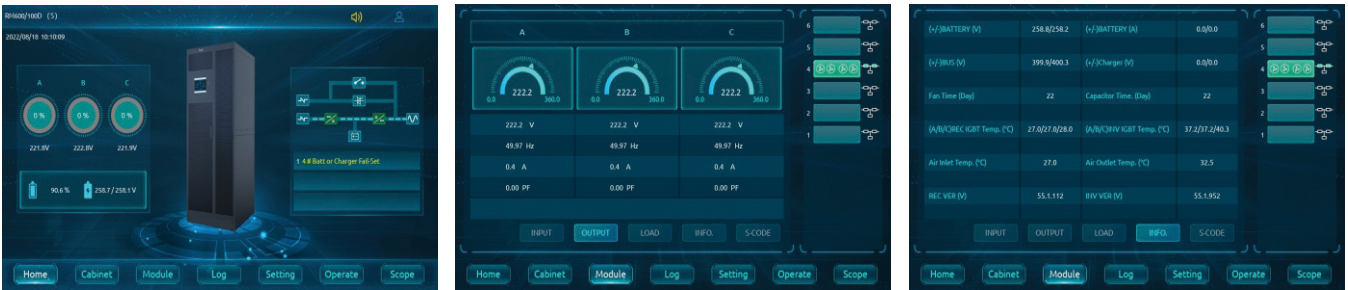

3 units in parallel

Friendly Interface

Provide graphical and text based information of alarms, status data, and instructions that users can have more friendly display and safer operation from this 10 inch color touch LCD screen for IoT application and intelligent monitoring.

Impact Structure Design

This series Modular UPS is equipped with hot-swappable power module and bypass & monitoring modules which is designed for easy maintenance and redundancy. 100kVA power capacity in 4U heigh module, combine with bypass module which is integrated various communication port.

• Reliable Performance
3 level inverter, fully digital control, achieving input power factor>0.99, input THDi<3%, overall efficiency>97.5%.

• Small Size Large Capacity
High power density, easy to expand to meet the larger data center application site.

• Four switches
Equipped with input, bypass, output and maintenance bypass switch to save later construction.

• Kinds of Cabinets
6 slot, 8 slot, 10 slot, 12 slot cabinets, flexible configuration for different project requirements and limit of the room space.

• Various Data Transfer Port
Adequate ports, such as RS485, USB, CAN, programmable dry contact and SNMP card.

• Convenient Software Buring & Upgrade
Version burning software without outage to the load, no need to pulling out the module.

Specification

MODEL		RM600/100D ❷	RM800/100D ❸ RM800/100D-F ❹	RM1000/100D RM1000/100D-F	RM1200/100D ❺ RM1200/100D-S❻	RM1200/100D-F ❼
System Capacity		600kVA	800kVA	1000kVA	1200kVA	1200kVA
Power Module Capacity		6	8	10	12	12
Input	Dual Input	Optional				
	Phase	3P+N+PE, 380/400/415VAC (line-line)				
	Rate Frequency	50/60Hz				
	Input Voltage Range	323~478Vac (line-line), full load 323V~138Vac (line-line), load decrease linearly from 100% to 30%				
	Input Frequency Range	40Hz ~ 70Hz				
	Input PF	>0.99				
	Input THDi	<3% (100% Linear load)				
Bypass	Rate Voltage	380/400/415VAC (line-line)				
	Rate frequency	50/60Hz				
	Bypass Voltage Range	Settable, default -20% ~ +15% Up limit: +10%, +15%, +20%, +25% Down Limit: -10%, -15%, -20%, -30%, -40%				
	Bypass Frequency Range	Settable, ±1Hz, ±3Hz, ±5Hz				
	Bypass Overload	110% for long term operation 110%~125% for 10 mins 125%~150% for 1 min >150% for 200ms				
Output	Rate Voltage	380/400/415VAC (line-line)				
	Rate Frequency	50/60Hz				
	Output PF	1				
	Voltage Regulation	±1%				
	Output THDu	<1% Linear load，<5% Non-linear load				
	Inverter Overload	<110%, 1 hour 110%~125% for 10 mins 125%~150% for 1 min >150% for 200ms				
	Frequency Precision	50/60Hz±0.1%				
Battery	Voltage	±240VDC 30pcs derate to 0.7; 32~34pcs derate to 0.8; 36~38pcs derate to 0.9; 40~50pcs No derating				
	Voltage Precision	±1%				
	Charge Power	15% * Output active power				
System	Efficiency	AC Mode	≥ 96%，≥ 97%，≥ 97.5%			
		Battery Mode	≥ 96%			
	Display	LCD + LED + Color touch LCD				
	Interface	Standard: RS485, USB, CAN, Dry Contact, Intelligent card slot*2, Extendable dry contact slot				
	Option	SNMP card, AS400 card, Parallel kit, SPD, Single input kit, LBS, SMS, 485 Extendable card				
	Temperature	0 ~ 40 ℃				
	Relative Humidity	0 ~ 95% Non-condensing				
	Noise (1 meter)	75dB @ 100% load, 70dB @ 45% load				
	Altitude	<1000m, no derating; Within 1000m~2000m, 1% power derating for every 100m				
Physical	Dimension (W*D*H,mm)	Cabinet	1000*1100*2000	1200*1100*2000 1800*1100*2000	1200*1100*2000 1800*1100*2000	1200*1100*2100	2000*1100*2000
		Power module	440*795*174, PM100D ❶				
	Weight(kg)	Cabinet	400	590 890	620 940	657 1150	760
		Power module	53.5				

❶ PM100D module is 4U high and supports battery without neutral；
❷ The RM600/100D cabinet contains four 3P isolation switches for input, bypass, maintenance, and output, and supports top and bottom entry;
❸ RM800/100D and RM1000/100D are standard cabinets with only one 3P isolation switch for maintenance bypass and only support top entry;
❹ RM800/100D-F and RM1000/100D-F are fully equipped cabinets, including four 3P isolation switches for input, bypass, maintenance, and output, and support top and bottom entry；
❺ RM1200/100D has not isolation switches and supports top entry only；
❻ RM1200/100D-S includes one maintenance bypass switch and supports top entry；
❼ RM1200/100D-F is fully configuration with four 3-pin isolation switches and supports both top and bottom entry.