



NR Series

UPS 10-40kW

- » 3 level inverter and IGBT technology
- » 3U Rack and Tower Convertible
- » Gravity sense auto-rotate LCD
- » Adjustable input and output configuration
- » AC/AC efficiency up to 96%
- » Output power factor 1.0
- » High ambient temperature up to 50 °C



Finance



Telecommunication



Data Center



Government



Energy



Medical



Transportation



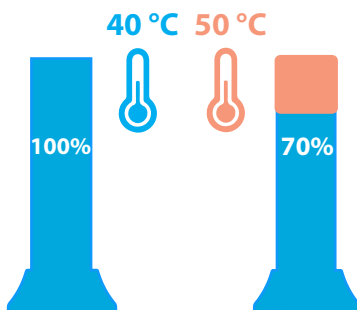
Electricity

NR Series UPS

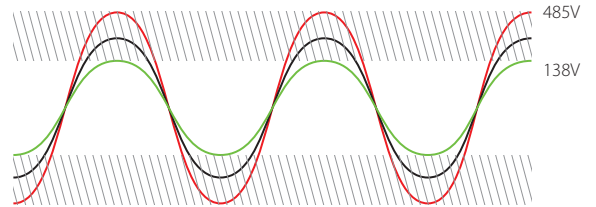


High Reliability

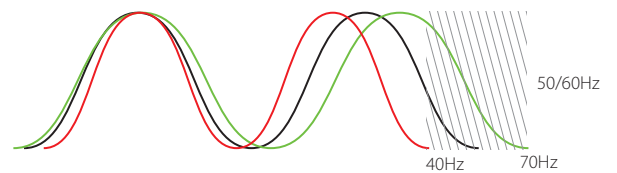
- **Wide input voltage** range -60% ~ 25% and **Wide input frequency** range 40-70Hz with high grid adaptability and prolong battery life.
- **Separate internal air channel** which hot air drives directly towards heat sink without distressing the PCB's and other internal sensitive components, improving the components service life and UPS reliability.
- The most advanced and dual DSP control prevents single failure point and increase performance.
- **High overload capacity** on inverter for 105% load long run and 130% load 10 mins and bypass 130% load long run.
- Intelligent fan control and redundant design which make sure the radiation of internal circuit and maximum fan life time.
- **Lightning and surge protection** design which help UPS to sustain from high surge peak voltage.
- Battery reverse connection protection to make sure the system reliability.
- **Standard conformal coating** to all PCB boards, protect electronics from environmental effect such as dust, salt spray and corrosion.
- Cold start function which allow UPS start on battery when grid isn't available.
- Bus synchronization control function provides reliable high power for dual bus application.
- Dual input design which supports utility input and bypass input can be connected as single source or separated source.
- No derating operate up to 40°C and continuously running under **high ambient temperature up to 50°C** with auto-derating.



High Ambient Temperature



Wide Input Voltage



Wide Input Frequency



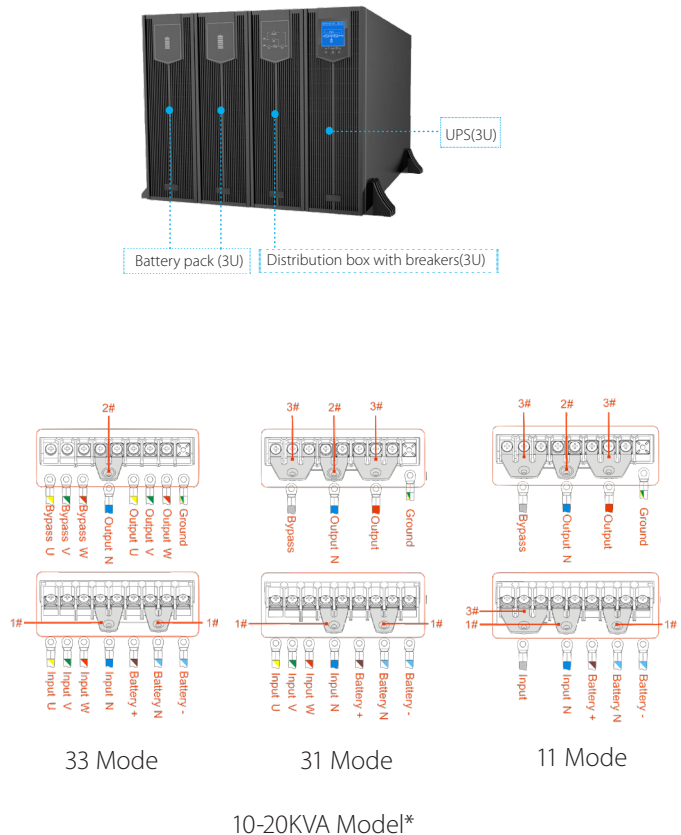
Automatic fans control



Conformal Coating

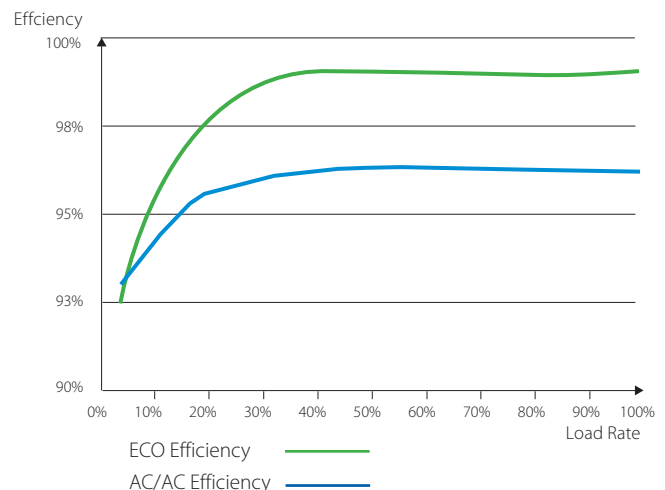
Flexible Design

- **High power density design**, up to 40KVA 3U rack and tower compatible design with 20KVA with only 500mm depth to match 600mm IT racks, 40KVA with 680mm depth to match 800mm IT racks make sure the flexibility for multiple installation situation.
- **Optimize installation and easy service** architecture minimizes the MTTR and optimizes serviceability and up to up to 20KVA only 20kg and 40KVA only 34kg easy for staff move and installation.
- Standard 3U height battery pack with anderson connector to support **hot plug**.
- **UPS and power distribution separate**, the distribution box with input/output/bypass and maintenance bypass breaker, it allows manually transfer connected equipment to utility power via a maintenance bypass switch, permitting scheduled service or UPS replacement **no need to shut down** connected equipment ensures continuous uptime.
- **Adjustable input and output phase configuration** 3:3/3:1/1:1 for 10-20KVA and 3:3/3:1 for 30-40KVA with high flexibility to meet multiple power distribution condition (need jumper connector).
- **Parallel slot** design which allow up to 4 units parallel at site.



Green Power

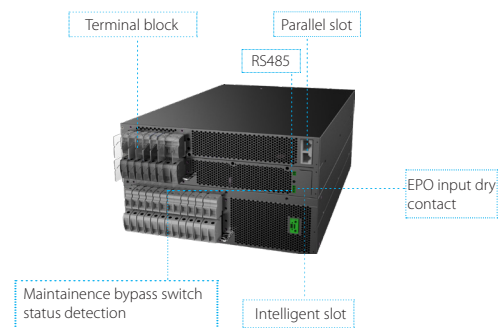
- **Latest generation IGBT and three level technology**, Low harmonic, high efficiency, effectively energy-saving.
- High input power factor up to 0.99 and **low Input THDi: < 3.0%** at full load, much less grid pollution and costs.
- **AC/AC efficiency up to 96%** and 25% load up to 94% efficiency reduces heat dissipation and limits power consumption costs, resulting in significant OPEX cost savings.
- **ECO mode efficiency up to 99%** lead to significant cost reduction.



NR Series UPS

Intelligent Management

- Multiple method of communication which provide embedded RS485, input EPO dry contact, Maintenance bypass switch dection dry contact, optional SNMP slot kit, protocol transfer slot kit, extended dry contact slot kit together with modbus protocol to compatible with most management system.
- **System power-on diagnostic** provide automatic and manual self-diagnostic UPS system and battery testing for peace of mind.
- **Super wide DC voltage** range and settable from ± 96 to ± 240 (16~40 pcs) for 10KVA **no derating** and ± 144 ~ ± 240 for 20~40KVA (24~40 pcs).
- Intelligent battery charging with 3 stage methods prolong the service life of batteries.
- **Key components pre-alarm** function which pre-alarm the system fault and remind service for key components, like capacitor, fan.
- Common or distributed battery bank on parallel mode.
- Frequency converter function(60Hz to 50Hz or 50Hz to 60Hz)
- VRLA and Lithium battery compatible design.



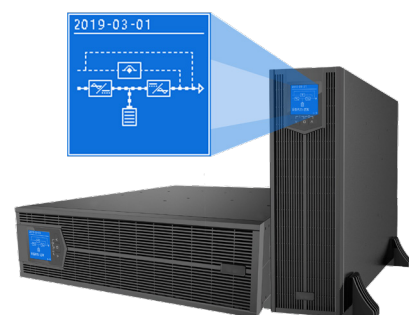
Common Battery Bank



Frequency Converter Mode

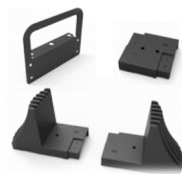
User Friendly Interface

- Multi-functional LCD display with gravity sense auto-rotate, ensure comprehensive and visualized information display.
- User-friendly graphical interface with single-line mimic diagram showing system status such as voltage, current, UPS temperature, working statu, load capacity and battery capacity.
- Fault code specific showing which easy for service and maintainence.
- System High security access with password
- Large data storage capacity,1000pcs events logs.



 **More Options**

- 19 inch rail kit
- Tower Kit
- Parallel kit
- SNMP Kit
- Expanded dry contact kit
- Protocol transfer kit for lithium battery
- Jumper connector for phase changing
- Intelligent Battery Monitoring System
- Lithium battery
- Input/output isolation transformer
- Battery Charge Temperature Compensation



Tower Kit



Battery Charge Temperature Compensation



Parallel Kit



SNMP Kit



Expanded Dry Contact Kit



Protocol Transfer Kit

Battery Backup Time Table

MODEL	Battery Pack	Backup Time									
	16*9AH	1.0KW	2.0KW	3.0KW	4.0KW	5.0KW	6.0KW	7.0KW	8.0KW	9.0KW	10.0KW
10KVA	1	62	26	15	10	7.5	5.2	4	3	2.6	2.4
	2	136	62	38	26	19.5	15	12.7	10	8.5	7.5
	3	177	80.5	51	36	27	21	14.5	11.5	9.5	8.0
	4	246.5	110.5	71.5	51.5	39.5	31	22	18	15	12.5
	16*9AH	1.5KW	3.0KW	4.5KW	6.0KW	7.5KW	9.0KW	10.5KW	12.0KW	13.5KW	15.0KW
15KVA	2	90	38	23.4	15	11.9	8.5	6.9	5.2	4.1	3.3
	4	180	90	54.5	38	28	23.4	18.6	15	13.2	11.9
	6	272	136	90	62	46.8	38	30.4	26	23.4	19.5
	8	363	180	124	90	66.5	54.5	44.6	38	31.6	28
	16*9AH	2.0KW	4.0KW	6.0KW	8.0KW	10.0KW	12.0KW	14.0KW	16.0KW	18.0KW	20.0KW
20KVA	2	62	26	15	10	7.5	5.2	4	3	2.6	2.4
	4	136	62	38	26	19.5	15	12.7	10	8.5	7.5
	6	204	102	62	43.5	34.6	26	20.9	18	15	13.8
	8	272	136	90	62	46.8	38	30.4	26	23.4	19.5
	20*9AH	3.0KW	6.0KW	9.0KW	12.0KW	15.0KW	18.0KW	21.0KW	24.0KW	27.0KW	30.0KW
30KVA	2	51	20	12.2	7.9	5.2	3.9	3	/	/	/
	4	113	51	29	20	15	12.2	9.5	7.9	4.5	4.1
	6	170	85	51	36	26	20	17	14.2	12.2	10
	8	227	113	74	51	30.5	29	25	20	18	15
	20*9AH	4.0KW	8.0KW	12.0KW	16.0KW	20.0KW	24.0KW	28.0KW	32.0KW	36.0KW	40.0KW
40KVA	2	36	14.2	7.9	5	3.1	2	/	/	/	/
	4	85	36	20	14.2	10	7.9	6	5	3.9	3.1
	6	127	58	36	22	18	14.2	10.9	9.2	7.9	6.8
	8	170	85	51	36	24	20	17	14.2	12.2	10

Technical Specification

MODEL	10KVA	15KVA	20KVA	30KVA	40KVA
Input					
Phase	3:3/3:1/1:1			3:3/3:1	
Voltage (Vac)	80-280(L-N)/138-485 (L-L)			138-485 (L-L)	
Frequency (Hz)	40-70				
Power Factor	≥0.99				
THDi at full Linear load	<3%				
Dual Main Input	Yes				
Output					
Capacity (kVA)	10	15	20	30	40
AC/AC Efficiency (Max.)	96%				
Power Factor	1.0				
Voltage (Vac)	220/230/240±1%(L-N) 380/400/415±1%(L-L)				
Frequency (Hz)	50/60±0.1 (battery mode)				
THDv	THD <1% (linear load), THD <3% (nonlinear load)				
Transfer Time	0				
Overload	3:3 Mode: 105% load long run, 110% load 60 mins, 130% load 10 mins, 155% load 1 min, above 155% load 200ms. 3:1&1:1 Mode: 105% load long run, 110% load 60 mins, 130% load 10 mins, 155% load 1s, above 155% load 200ms.				
ECO Mode	Yes				
Battery					
Voltage (Vdc)	±192(±96 ~±240)	±192(±144 ~±240 adjustable)*			
Charging Current (A)	4 (1-10 settable)			15 (1-20 settable)	
Other					
Communication Interface	RS485+EPO(RS232+dry contact, SNMP are optional in slot)				
Display	Multi-functional LCD				
Alarm	Low battery, abnormal AC input, UPS failure, etc.				
Protection	Low battery, overload, short-circuit and over temperature, etc.				
Noise (dB)	<55				
Working Temperature (°C)	-5~50*				
Altitude(m)	2000, no derate				
Relative Humidity	0 ~ 95%, no condensation				
Dimension (WxDxH)(mm)	UPS	438×500×130 (3U)			438×680×130 (3U)
	Distribution Box	438×500×130 (3U)			438×680×130 (3U)
	Batt. Pack	438×500×130 (3U)16* battery / 438×680×130 (3U) 20* battery			
Weight (kg)	UPS	17.5	19	20	34
	Distribution Box	8			14
	Batt. Pack	58(16*9AH)			68(20*9AH)

• Specification is subject to change without prior notice.

* Condition comply

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