



# RELIABILITY Modular UPS

REL-4400-K3300E Series

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## REL-4400-K3300E Modular Series (10~30kVA Power Module)

Online Transformerless UPS series  
Power range : 30-300 kVA (PF 1.0)

Mode: 3 phase input and 3 phase output  
Power Module: 10/15/20/25/30 kVA (2U)



### Modular design

- All units adopt modular design, these include power module, bypass module, monitoring module, which means can be easily integrated in MDC or customized cabinet.
- Power module, Bypass module, Monitoring module, ECU control module, all these modules are supported hot-swappable

### High reliability

- Width input voltage range, line voltage range is 138-485V, UPS would be derating when input voltage is below 305V.
- UPS adopts multiple digital bus and redundancy parallel control system, make sure the whole system keep online if any single circuit fail.
- The UPS will keep on single or parallel working, if any module failed.

### Green and powersaving

- High input power factor, it is up to 0.99.
- Three level topology design, efficiency is up to 95.8%.
- THDi < 3% (100% nonlinear load)
- The UPS will be work on sleeping mode when the load is very less.
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### Parallel redundancy function

- Support parallel expanded operation: maximum is 6 units
- Support sharing batteries for the UPS in parallel.

### Flexible battery configuration

- Batteries number of each group can be selected from 30 pieces to 50 pieces.
- Large charging current can meet the requirement of long time backup.

### Strong load capacity

- Output power factor is 1.0, UPS can supply power to 100% unbalance load.
- High adaptability for load, it can connect full inductive load or capacitive load.

### Intelligent management

- With 7 inches (standard) and 10 inches (optional) colorful touch LCD screen. Support recording and exporting historic logs and fault logs.
- Support RS485, SNMP, Dry contact card, support RJ 45 interface and CAN interface.
- Support upgrade of CAN of power module inside of cabinet.
- Support upper-bottom cable access method  
60K/150K/300K bottom entry, 300K top entry optional.
- EPO & REPO function.

## Technical Specifications:

Cabinet (30 kVA module)		K3330E-60kVA	K3330E-150kVA	K3330E-300kVA
Capacity (VA/Watts)	UPS cabinet	30k~60k /30k~60k	30k~150k /30k~150k	30k~300k /30k~300k
	Module		HPM3330E-RM /30k	
	Max. Number	2+1 /2+2(optional)	5 /4	10 /9
Cabinet (25 kVA module)		K3325E-50kVA	K3325E-125kVA	K3325E-250kVA
Capacity (VA/Watts)	UPS cabinet	25k~50k /25k~50k	25k~125k /25k~125k	25k~250k /25k~250k
	Module		HPM3325E-RM /25k	
	Max. Number	2+1 /2+2(optional)	5 /4	10 /9
Cabinet (20 kVA module)		K3320E-60kVA	K3320E-100kVA	K3320E-200kVA
Capacity (VA/Watts)	UPS cabinet	20k~60k /20k~60k	20k~100k /20k~100k	10k~200k /10k~200k
	Module		HPM3320E-RM /20k	
	Max. Number	3 /3+1(optional)	5 /4	10 /9
Cabinet (15 kVA module)		K3315E-45kVA	K3315E-75kVA	K3315E-150kVA
Capacity (VA/Watts)	UPS cabinet	15k~45k /15k~45k	15k~75k /15k~75k	10k~150k /10k~150k
	Module		HPM3315E-RM /15k	
	Max. Number	3 /3+1(optional)	5 /4	10 /9
Cabinet (10 kVA module)		K3310E-30kVA	K3310E-50kVA	K3310E-100kVA
Capacity (VA/Watts)	UPS cabinet	10k~30k /10k~30k	10k~50k /10k~50k	10k~100k /10k~100k
	Module		HPM3310E-RM /10k	
	Max. Number	3 /3+1(optional)	5 /4	10 /9
Redundancy Bypass module (optional)		Yes /NA	NA /Yes	NA /Yes
<b>INPUT</b>				
Nominal voltage		380/400/415Vac, (3Ph+N+PE)		
Operating voltage range		138~305Vac for 40% Load; 305~485Vac for 100% Load;		
Operating frequency range		40Hz-70Hz		
Power factor		≥0.99		
Harmonic distortion (THDi)		≤ 3% (100% linear load)		
Bypass voltage range		Maxvoltage:220V:+25%(optional+10%,+15%,+20% );230V:+20%(optional+10%,+15% ); 240V:+15%(optional+10%) Min. voltage: -45% (optional-10%, -20%, -30%)		
Bypass Frequency range		Frequency protection range: ± 10 %		
Generator input		Support		
<b>OUTPUT</b>				
Rated voltage		380/400/415Vac, (3Ph+N+PE)		
Power factor		1.0		
Voltage regulation		± 1 %		
Output frequency	Line Mode	±1% / ±2% / ±4% / ±5% / ±10% of the rated frequency(optional)		
	Bat. Mode	(50/60±0.1%)Hz		
Crest factor		3:1		
Harmonic distortion (THD)		≤ 2 % with linear load; ≤ 4 % with nonlinear load		
Efficiency		UP to 95.8%		
<b>BATTERY</b>				
Battery voltage		Optional Voltage: ±180/192/204/216/228/240/252/264/276/288/300Vdc(30/32/34/36/38/40/42/44/46/48/50pcs optional); 360Vdc~600Vdc (30~50 pcs, 36 pcs define, 36~50 pcs no power derating; 32~34 pcs output power factor 0.9; 30 pcs output power factor 0.8;)		
Power module Charge Current		18A(Max.)		
UPS cabinet Max. Charge Current		54A/72A	90A/72A	180A/162A
<b>SYSTEM FEATURES</b>				
Transfer time		Utility to Battery : 0ms; Utility to bypass: 0ms		
Overload	Line Mode	≤110% overload for 60 min; ≤125% overload for 10 min; ≥150% overload for 1 min		
	Bypass Mode	135% overload for long term; >1000% overload for 100 ms		
Overheat		Line Mode: Switch to Bypass; Backup Mode: Shut down UPS immediately		
Low battery voltage		Alarm and Switch off		
Self-diagnostics		Upon Power On and Software Control		
Backfeed protection		Support		
EPO(optional)		Shut down UPS immediately		
Battery		Advanced Battery Management		
Noise suppression Audible & Visual alarms Status LED & LCD display		Complies with EN62040-3		
Reading on the LCD display		Line Failure, Battery Low, Overload, System Fault		
Communication interface		Line Mode, Bypass Mode, Battery Low, Battery Fault, Overload & UPS Fault		
		Input, Output, Battery, Command, Setting, Maintenance		
		CAN, RS485, Parallel, Dry contact port, Relay card(optional), SNMP card(optional), Battery temperature sensor(optional)		
<b>ENVIRONMENTAL</b>				
Operating temperature		0°C ~ 40°C		
Storage temperature		-25°C ~ 55°C		
Humidity range		0 ~ 95% (non condensing)		
Altitude		< 1500m		
Noise level(from 1M distance)		<58dB	<61dB	<68dB
<b>PHYSICAL</b>				
Dimension W×H×D (mm)	UPS cabinet	600×850×1200		600×850×2000
	Power module	440x620x86 (2U)		
Net weight (kg)	UPS cabinet	142	153	295
	Power module	10kVA: 19; 15-30kVA: 21		
<b>STANDARDS</b>				
Safety		IEC/EN62040-1, IEC/EN60950-1		
EMC		IEC/EN62040-2, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8		

## REL-4400-K3300E Modular Series (40/50kVA Power Module)

Online Transformerless UPS series  
Power range : 40~1000 kVA ( PF 1.0 )

Mode: 3 phase input and 3 phase output  
Power Module: 40/50 kVA (3U)



## Modular design

- All units adopt modular design, including power module, bypass module, monitoring module, can be easily integrated in MDC or customized cabinet.
- Power module, Bypass module, Monitoring module, ECU control module, all these modules are hot-swappable.

## High reliability

- Wide input voltage range, line voltage range is 138-485V, UPS will derate to 40% when input voltage is below 305V.
- UPS adopts multiple digital bus and redundancy parallel control system, making sure the whole system keep online if any single circuit fail.
- The UPS will keep on single or parallel working, if any module fail.
- Thickened conformal coating, applicable for harsh environment such as high heat, high humidity, dust, salt spray.

## Green and powersaving

- High input power factor, it is up to 0.99.
- Three level topology design, efficiency is up to 96%.
- THDi < 3% (100% linear load).
- The UPS will work in sleeping mode when the load is very small.

## LBS function

- LBS function can realize 2 independent UPS system work in synchronization, and it enhances the reliability of the system.

## Parallel redundancy function

- Support parallel expanded operation: maximum is 6 units (K3300E-800/1000, maximum is 4 units).
- Support sharing batteries for the UPS in parallel.

## Flexible battery configuration

- Batteries number of each group can be selected from 30 pieces to 50 pieces.
- Large charging current can meet the requirement of long time backup.

## Strong load capacity

- Output power factor is 1.0, UPS can supply power to 100% unbalanced load.
- High adaptability for load, it can connect full inductive load or capacitive load.

## Intelligent management

- With 7 inches (standard) and 10 inches (optional) colorful touch LCD screen.
- Support recording and exporting history logs and fault logs.
- Support SNMP, RS232, RS485, BMS, Dry contact interface.
- Support upgrade of CAN of power module inside of cabinet.
- EPO & REPO function.

## Compatible with generator

- Power Walk In function, it can reduce the start current impact to system, and it can reduce the capacity of generator.

## Technical Specifications:

Module Model	K3340E-RM	K3350E-RM	
<b>Cabinet Model</b>	K3340E-80/120/200/320/400kVA	K3350E-150/200/250/300/400/500/600/800/1000kVA	
Cabinet capacity (VA)	80k~400k	150k~1000k	
Module capacity (VA)	40k	50k	
Max. number	2/3/5/8/10	3/4/5/6/8/10/12/16/20	
<b>INPUT</b>			
Nominal voltage	380/400/415Vac, (3Ph+N+PE)		
Operating voltage range	138~305Vac for 40% load; 305~485Vac for 100% load		
Operating frequency range	40Hz~70Hz		
Power factor	≥0.99		
Harmonic distortion(THDi)	≤3% (100% linear load)		
Bypass voltage range	Max. voltage:220V: +25% (optional+10%, +15%, +20%); 230V: +20% (optional+10%, +15%); 240V: +15% (optional+10%) Min. voltage: -45% (optional-10%, -15%, -20%, -30%)		
Bypass frequency range	Frequency protection range: ±10%		
Power Walk In	Support		
Generator input	Support		
<b>OUTPUT</b>			
Rated voltage	380/400/415Vac, (3Ph+N+PE)		
Power factor	1.0		
Voltage regulation	±1%		
Output frequency	synchronize with input, when the input frequency > ±10% (±1%/±2%/±3%/±4%/±5% optional), output 50/60(±0.1Hz)		
Crest factor	3:1		
Harmonic distortion(THDv)	≤1% with linear load; ≤3% with nonlinear load		
Efficiency	up to 96%		
<b>BATTERY</b>			
Battery voltage	Optional Voltage: ±180/192/204/216/228/240/252/264/276/288/300Vdc(30/32/34/36/38/40/42/44/46/48/50pcs optional); 360Vdc~600Vdc (30~50 pcs, 36 pcs default, 36~50 pcs no power derating; 32~34 pcs output power factor 0.9; 30 pcs output power factor 0.8)		
Power module charge current	20A (Max.)		
<b>SYSTEM FEATURES</b>			
Transfer time	Utility to Battery : 0ms; Utility to bypass: 0ms		
Overload	Line mode: ≤110%, 60min; ≤125%, 10min; ≤150%, 1min; to bypass: >150% Shut down immediately. Bypass mode: 135% overload for long term; >1000% overload for 100 ms		
Overheat	Line Mode: Switch to Bypass; Backup Mode: Shut down UPS immediately		
Low battery voltage	Alarm and Switch off		
Self-diagnostics	Upon Power On and Software Control		
Backfeed protection	Support		
EPO (optional)	Shut down UPS immediately		
Battery	Advanced Battery Management		
Noise suppression	Complies with EN62040-3		
Audible & visual alarms	Line Failure, Battery Low, Overload, System Fault		
Status LED & LCD display	Line Mode, Bypass Mode, Battery Low, Battery Fault, Overload & UPS Fault		
Reading on the LCD display	Input, Output, Battery, Command, Setting, Maintenance		
Communication interface	RS232, RS485, Parallel, LBS, BMS, Dry contact port, Relay card(optional), SNMP card(optional), Battery temperature sensor(optional)		
<b>ENVIRONMENTAL</b>			
Operating temperature	0°C ~ 40°C		
Storage temperature	-25°C ~ 55°C		
Humidity range	0 ~ 95% (non condensing)		
Altitude	<1500m, derating required when >1500m		
Noise level	<68dB	<73dB	
<b>PHYSICAL</b>			
Dimension W x D x H (mm)	UPS cabinet (S/F)	80/120kVA: 600×850×1200 200/320kVA: 600×850×2000 400kVA: 1200×850×2000	150kVA: 600×850×1200 250kVA: 600×850×1600 200/300/400kVA: 600×850×2000 500/600kVA: 1200×850×2000 800/1000kVA: 2000×850×2000
	Power module	440×620×130	
Net weight (kg)	UPS cabinet (S/F)	180~460	150kVA: 190; 200kVA: 240; 250kVA: 220; 300kVA: 260; 400kVA: 290; 500kVA: 480; 600kVA: 540; 800kVA: 960; 1000kVA: 1050;
	Power module	33	34
<b>STANDARDS</b>			
Safety	IEC/EN62040-1, IEC/EN62477-1		
EMC	IEC/EN62040-2 (IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8)		

Specifications are subject to change without prior notice. S:

Without or only with one maintenance bypass breaker

F: With mains, bypass, maintenance bypass and output breakers





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