



RELIABILITY Power Systems

REL2931IIR 10KVA

True Online Dual Conversion UPS System

REL2931IR

10 kVA 3:1

REL2931IR-10KVA UPS is the ideal solution for the protection of peripheral network devices, conventional or rack servers, network back-up systems, communication devices and VoIP equipment. It adopts advanced DSP microprocessor control technology, which effectively improves the product performance and system reliability and realizes higher power density integration and miniaturization. It has a practical, modern design and includes several performance advantages over traditional on-line UPS and it can be installed in the rack or tower cabinets for networking applications. It can easily achieve parallel scalability and parallel redundancy, resulting in the highest levels of reliability and maximum power supply protection for critical loads.



Features

Stability and Reliability

- Based on DSP microprocessor control technology, simplifying the control circuit, higher flexibility and reliability of circuit
- Integrating short circuit, overload, overtemperature, output overvoltage / undervoltage protection and current limiting technique, improving the stability of the system
- Big design margin of power components, improving the reliability of the system operation

Flexibility and Applicability

- The UPS can be installed as a tower or in 19" rack cabinets by simply rotating the display panel
- 50 / 60 Hz power system adaptive
- Optional battery extension packs can be connected to increase UPS runtime
- Support two modes of frequency conversion: 50 Hz input / 60 Hz output or 60 Hz input / 50 Hz output
- Programmable via display panel: ECO mode, EOD point, output voltage 220 V / 230 V / 240 V selectable

Environment Friendly

- Built-in EMC filter and double surge protection, enhancing the reliability of the electricity load
- Input power factor 0.99, low harmonic current
- PFC input power factor correction technology, reducing input harmonic current and reducing pollution to the grid
- Meet the requirement of ROHS and high electromagnetic compatibility standard of Class B

High Efficiency and Energy Saving

- Pure online double conversion design, isolating and filtering various harmonics and faults of grid
- On-line operational efficiency 95%, ECO mode efficiency up to 99%
- Smart fan speed regulation, reducing noise and saving energy consumption
- High power density design, small footprint, higher operating efficiency

Other Features

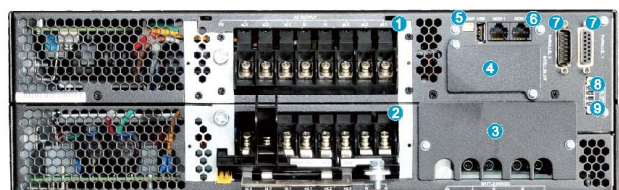
- Easy mode switch between 3:3 (three-phase), 3:1 (three-phase input and single-phase output), or 1:1 (single-phase) versions
- Output power factor 0.9, loading rate increased by 13% than ordinary UPS
- Super wide grid voltage / frequency input range, convenient for access of fuel generator, avoiding battery getting frequent discharged and extending battery life
- DC cold start function, ability to switch on the UPS by battery
- Combination key startup function, avoid error operation

Intelligent Management

- Fault self-diagnosis, self-protection function, clear fault information, easy maintenance
- Automatic switch between equalized charging and float charging modes
- Standard RS485 communication interface
- Remote centralized monitoring the operation status of UPS with remote measurement, remote signaling, remote control and automatic alarm function

Rear Panel

1. AC output terminal block
2. AC input terminal block
3. Battery terminal cover
4. Slot cover
5. Battery temperature sensor interface
6. CAN communication interface
7. Parallel interface
8. Maintenance bypass state interface
9. EPO interface



Specifications

MODEL	REL2931IIR-10KVA
Capacity	10 kVA
INPUT	
Input wiring	Three-phase five-wire (3 ϕ +N+PE)
Rated voltage	220 Vac / 230 Vac / 240 Vac (single-phase) 380 Vac / 400 Vac / 415 Vac (three-phase)
Voltage range	Single phase 80 Vac ~ 176 Vac (40% ~ 100% load linear derating) 176 Vac ~ 280 Vac (no derating) Three phase 138 Vac ~ 305 Vac (40% ~ 100% load linear derating) 305 Vac ~ 485 Vac (no derating)
Frequency range	40 ~ 70 Hz
Input power factor	> 0.99
Battery voltage	\pm 240 Vdc (\pm 192 / \pm 204 / \pm 216 / \pm 228 Vdc selectable)
Number of battery	20 PCS (support 16, 17, 18 PCS) 12 V batteries for each group
OUTPUT	
Output wiring	single-phase three-wire (1 ϕ +N+PE)
Rated voltage	220 Vac / 230 Vac / 240 Vac (single-phase) (single-phase output, select different voltage mode by programmable voltage via LCD panel);
Voltage regulation accuracy	\pm 1%
Frequency accuracy	Synchronized with utility in mains power mode; 50 Hz / 60 Hz \pm 0.25% in battery mode;
Output power factor	0.9
Output waveform distortion (THDv)	< 4% (Non-linear load); < 2% (Resistive load)
Crest factor	3:1
Inverter overload capability	105% ~ 125% for 5 min, 125% ~ 150% for 1 min, \geq 150% for 100 ms
Bypass overload capability	125% ~ 150% for 1 min, \geq 150% for 100 ms
SYSTEM	
System efficiency	95%
Number of parallel unit	\leq 4 (maximum 3+1 paralleled for single-phase mode)
Transfer time	0 ms
Protection	Output circuit protection – output overload – overtemperature – battery voltage protection – output undervoltage – fan fault
Communication interface	RS485
Display	LCD + LED
OTHERS	
Operating temperature	0°C ~ 40°C
Storage temperature	-40°C ~ + 70°C (battery bank: -20°C ~ + 40°C)
Relative humidity	0% RH ~ 95% RH (non-condensing)
Altitude	< 1000 m, (derating 1% for each additional 100 m)
Protection level	IP 20
Noise	\leq 50 dB
Dimensions (W x D x H) (mm)	130 x 757 x 430
Weight (kg)	32 kg

- All specifications subject to change without notice.
- Custom-made specifications are acceptable.

Reliability Power Systems Australia

109 Pitt St. Sydney

NSW 2000, Australia

reliability@reliability-power.com

Reliability Power Systems

Reliability Power Systems Canada

4th Floor 2 County Blvd, Brampton

ON L6W 3W8, Canada

reliability.ca@reliability-power.com

Reliability Power Systems Europe

New Summer St, Birmingham

West Midlands B19, UK

reliability.eu@reliability-power.com

Reliability Power Systems Asia Pacific

5/F China Life Tower, No.16 Chaowai St.

Chaoyang Dist, Beijing 100020, China

reliability.cn@reliability-power.com