

# RELIABILITY POWER SYSTEMS

Powering your Critical Solution



**REL 2200N-31 Series**

**Three Phase In & Single Phase Out  
High Frequency Digital Online UPS**

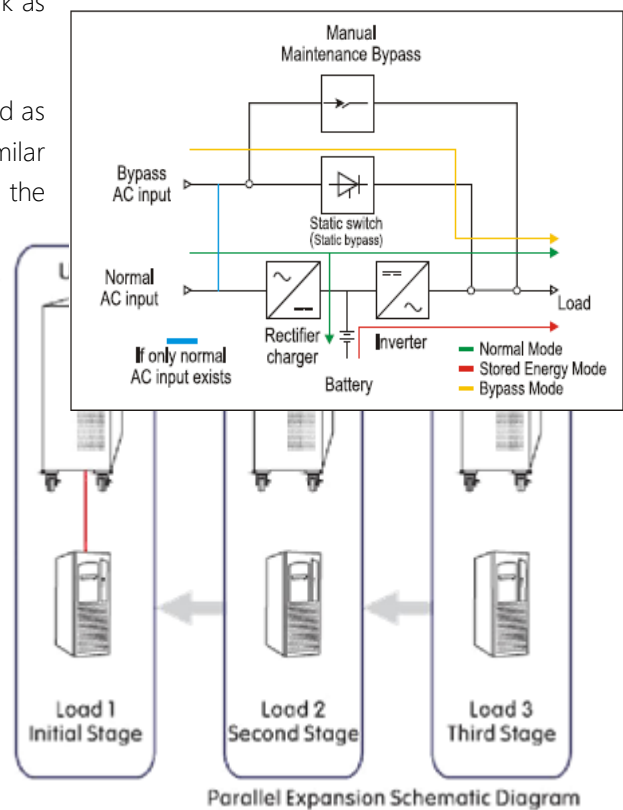


### Introduction to REL 2200N

REL 2200N is a True Online, Pure Sinewave, Double Conversion and DSP Controlled UPS System. The UPS System protects your critical load by eliminating the Utility Power fluctuations, Sags and Surges and Failures by inherent Voltage regulation function and Battery Bank Support.

The UPS System consists of A Rectifier/ Charger Assembly, An Inverter Assembly, Static Bypass Assembly, Manual Maintenance Bypass Assembly and a Battery Bank as shown in the Figure.

REL2200N Series has the unique capability to be upgraded as the customer power needs grow. Just simply install a similar rating UPS to existing UPS and you will have double the power for your load. REL2200N provides clean and protected power free of site voltage and frequency fluctuation. Your equipment always receive a stabilized power thru the UPS Inverter and built-in AVR function. The REL2200N provides backup power thru built-in batteries and keeps your critical load protected at all times. The battery autonomy time can be increased to any duration by installing External Battery Banks.



### Highly Reliable Parallel Technology

REL2200N UPS System power is field upgradeable by installing parallel units of same rating. It adopts digital control technology to achieve parallel redundancy function for on-site upgrade. This helps the user less investment as their business grow and site power consumption increases..

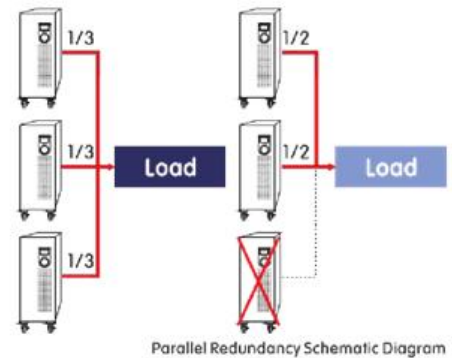


## User-Friendly Mimic Display Panel Design

REL2200N Mimic Display Panel at front is designed to be very user-friendly which is quickly understandable and used without engineering knowledge or detailed trainings. The mimic panel provides user with complete UPS Operational Status with advanced control technology LED and LCD Displays.

### Salient Features:

- ✚ The Cold-Start function allows the use of UPS even when there is no utility power.
- ✚ Time Switch and Remote Monitoring Functions support user to manage UPS from off-site location.
- ✚ Advance Battery Charge Control Function increases battery life and saves cost by managing Battery deep discharge protection and applying Intelligent Charging Technology.
- ✚ The Auto-Restart Function helps user to start UPS without user presence. In case of prolonged utility power failure and after battery autonomy ends, the UPS will shut-down. When the utility power returns the UPS will restart automatically and protect critical load without human assistance.
- ✚ REL2200N is a comprehensively designed UPS System to bring Reliability to critical load.

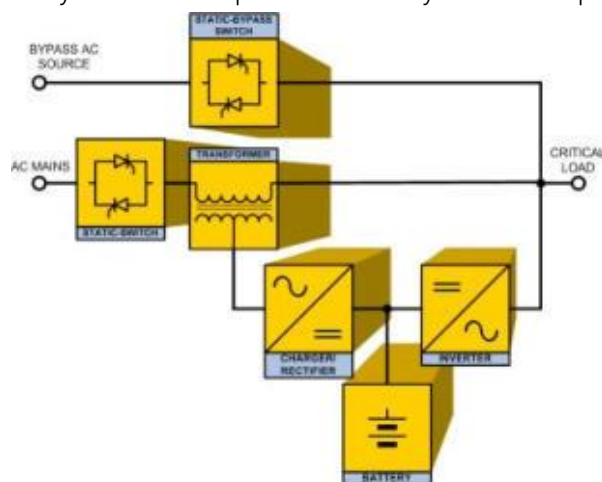


### Redundancy Function

N+1 Redundancy configuration enhances critical Load protection by making one UPS Redundant all the times. This means there will always be an extra UPS available to support critical equipment at any time. If any of the installed UPS Systems fails, the redundant UPS keeps providing high quality uninterrupted power to load thereby increasing the operation reliability. Moreover the Advanced Load Management Technology equally shares load current between installed UPS Systems and thereby prolongs the UPS service life.

### REL2200N Series A True Online Sine Wave UPS System:

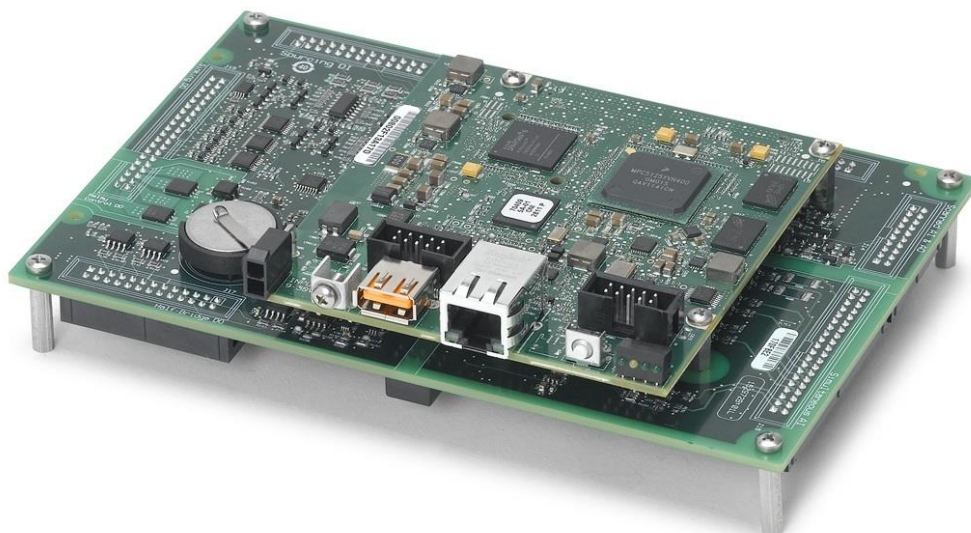
REL2200N is a True Online, Double Conversion, Pure Sinewave UPS System. In the Double Conversion On-Line mode when utility power fails it does not affect the load as the UPS has zero transfer time to the batteries and batteries are always online and available for service. The Utility power interruption does not cause activation of any mechanical or static transfer switches. This is due to the advantage of UPS DC Bus directly connected in parallel to Battery Bank and Input Rectifier.



## REL2200N-31 three Phase In Single Phase Out UPS System Technical Specifications:

Power KVA	1KVA	2KVA	3KVA	5 / 6KVA	10KVA	15KVA	20KVA
Power KW (PF 0.9)	0.9KW	1.8KW	2.7KW	4.5/ 5.4KW	9KW	13.5KW	18KW
Input Voltage	3-Phase 380VAC $\pm$ 25 (480/400/220/208VAC Customized options available)						
Input Frequency	50/60Hz $\pm$ 10%						
Bypass Voltage	1-Phase 220VAC $\pm$ 25 (Customized options available)						
Input Frequency	50/60Hz $\pm$ 10%						
Output Voltage	1-Phase 220VAC $\pm$ 1% (240/230/127/110V Customized Options available)						
Output Frequency	50/60Hz $\pm$ 0.5%						
Transient Response	$\pm$ 4% (100% Loading)						
Waveform	Sine Wave THD < 3%						
Overload Capability	Upto 125% 15 Minutes on Inverter then Transfer to Bypass (with overload Alarm)						
	125% - 150% 60 Seconds on Inverter then Transfer to Bypass (with overload Alarm)						
	>150% 3 Seconds on Inverter then Transfer to Bypass (with overload Alarm)						
Crest Factor	3:1						
Battery Type	Sealed Lead Acid, Lithium or Ni-Cd Batteries						
D.C. Voltage	48Vdc	96Vdc		192Vdc			
Built-in Option Batteries Conf.	12V7AH *4	12V7AH *8		12V7AH *16-20 Batteries			
External Option Battery Bank	Can be configured as per Backup requirement						
Charge Current	1-10A Adjustable						
Efficiency	> 85%						
Transfer Time	0 ms in Synchronized mode; <2 ms for unsynchronized mode						
Protection	Over Current, Over Voltage, Undervoltage, Short Circuit, Battery Overcharge, High Temperature						

EMC	EN62040-2:2006;EN61000-3-2:2006+A1:2009+A2:2009						
Alarms	Mains Failure: Alarms for 90 seconds with 4 second intervals						
	Low Battery Alarm: Keeps Alarming every second before shutdown						
	UPS Overload Alarm: Keeps alarming and transfers the load to Bypass						
	General Fault Alarm: Beeps						
LED display	Mains available/ Bypass operation / Inverter operation / Low Battery warning/ Over loading warning/ General Fault						
LCD display	UPS status with Digital Readings for Input/ Output/ Battery Voltage/ Input and Output Frequency / Load Percentage etc.						
Communication Ports	RS232 , AS400 Relays, Remote Monitoring and SNMP Options						
Operating Temperature Range	0°C - 50°C						
Operating Altitude	<1000 Meters Normal Operation; 1% degradation of Power Factor for each 100 meters higher to a max. of 4000 meters						
Humidity	0%-90% No Condensation						
Noise	<58 db						
Dimensions (mm) DxWxH	520*180*400	595*215*420		590*245*530	720*370*980		
Weight without battery (kg)	30	41	52	48	69	130	155
Weight with built-in battery (kg)	41	58	69	85	110	147	172



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