

# Innovative Efficient Power Systems

## REL2900PRO-33 Series

### 6-40KVA 3-Phase UPS Systems

True Online Pure Sinewave Industrial Protection Systems for  
Security & Safety Systems

IT & Network Systems

Medical Equipment

Telecom Systems

Aviation Systems



## Salient Features:

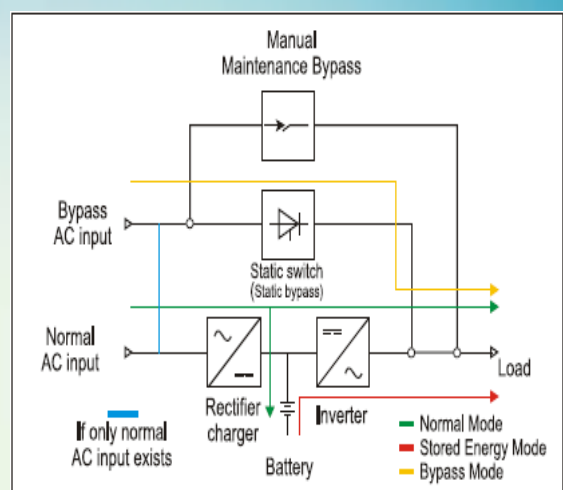
- Wide Input Voltage Range (190~485Vac)
- Output Power Factor 0.8 and 0.9 options
- Split Bypass / Dual Input facility
- Static Bypass and Maintenance Bypass
- Cold-Start function for UPS start without Input power
- Intelligent Fan Speed Control Technology as per Load variations
- The UPS can be set to operate as Frequency Converter
- UPS Monitoring via RS232, RS485, USB, SNMP, Dry Contacts
- Advance Battery Charge Control Function increases battery life and saves cost.
- Auto-Restart Function
- Configurable Battery group Voltage 192-240VDC
- REL2900PRO-33 is a comprehensively designed UPS System to bring Reliability to critical load.
- High Frequency, True Online, Double-Conversion UPS System
- DSP Digital Control Technology
- Auto Frequency Sensing
- Energy Saving ECO Mode
- Input Power Factor Correction (PFC)
- Field Selectable output Voltage configuration
- Field Selectable Battery shutdown (EOD)
- Self-Diagnostics on Power-ON
- Protections against Short Circuit, Overload, Over-Temperature, Over Voltage
- Battery Temperature compensation option



Introduction to REL2900PRO-33 Series True Online Sine Wave UPS System::

REL 2900PRO-33 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.

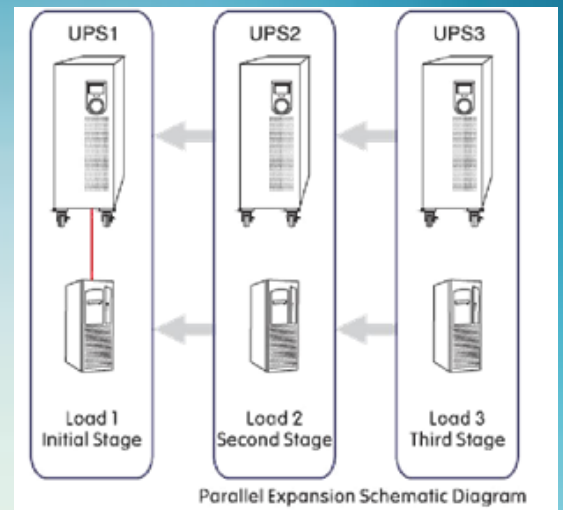
REL2900PRO-33 Series has the unique capability to be upgraded as the customer power needs grow. Just simply install a similar rating UPS to existing UPS and you will have double the power for your load. REL2900PRO-33 provides clean and protected power free of site voltage and frequency fluctuation. Your equipment always receive a stabilized power thru the UPS Inverter and built-in AVR function. The REL2900PRO-33 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 Redundancy Function

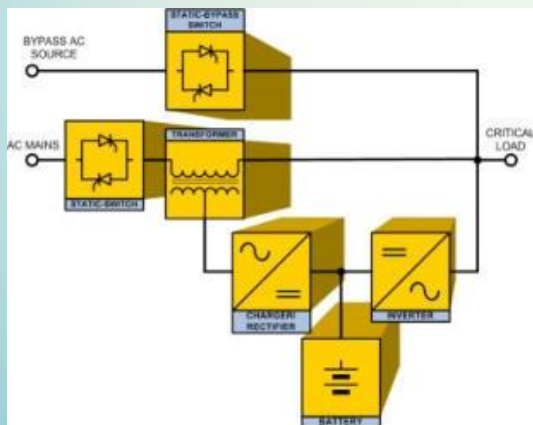
REL2900PRO-33 UPS System power is field upgradeable by installing up to 6 parallel units of same rating. It adopts digital control technology to achieve parallel redundancy function for on-site upgrade. This helps the user less investment as their business grow and site power consumption increases..

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.



### User-Friendly Mimic Display Panel Design

REL2900PRO-33 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.



## UPS VISUAL DESCRIPTION



### Rear Panel

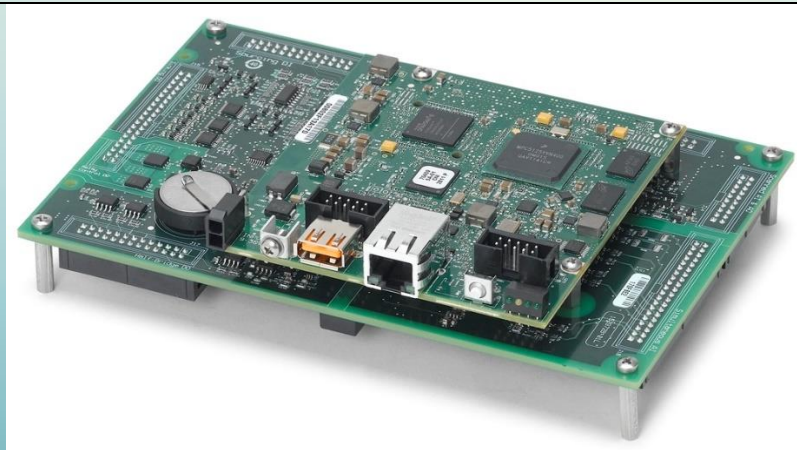
1. Mains Input
2. DC Input
3. Bypass Input
4. Output
5. Mains Input Breaker
6. Bypass Input Breaker
7. Maintenance Bypass
8. Fan
9. RS232
10. USB
11. EPO
12. BAT\_NTC (optional)
13. SNMP (optional)
14. AS400/RS485 (optional)
15. Parallel Card (optional)



## REL2900PRO-33 Three Phase UPS System Technical Specifications:

Model	6KVA	10KVA	15KVA	20KVA	25KVA	30KVA	40KVA
Nominal Capacity	5.4KW	9KW	13.5KW	18KW	22.5KW	27KW	36KW
Max No. of Parallel Units	6						
Input Voltage	3-Phase 380VAC $\pm 25$ (480/440/400/220/208VAC Customized options available)						
Input V Range	277-485Vac (No de-rating) @380V nominal						
Input Frequency	50/60Hz $\pm 10\%$ Auto-Sense						
Input Freq. Range	40-70Hz						
Input Power Factor	$> 0.99$						
THDI	$< 5\%$						
Bypass Voltage	3-Phase 380VAC $\pm 25$ (480/440/400/220/208VAC Customized options available)						
Bypass V Range	$-40\%$ to $+15\%$ (Settable)						
Output Voltage	3-Phase 380VAC $\pm 1\%$ (480/440/400/220/208VAC Customized options available)						
Output V Regulation	$\pm 1\%$						
Output Frequency	50/60Hz $\pm 0.1\%$						
Transient Response	$\pm 4\%$ (100% Loading)						
Waveform	Sinusoidal						
THDV	$< 2\%$ (Linear Load); $< 5\%$ (Non-Linear Load)						
Inverter Overload Capability	102- 125% 10 Minutes on Inverter then Transfer to Bypass (with overload Alarm)						
	125% - 150% 60 Seconds on Inverter then Transfer to Bypass (with overload Alarm)						
	$>150\%$ 0.5 Second on Inverter then Transfer to Bypass (with overload Alarm)						
Bypass Overload Capability	102- 125% 20 Minutes on Bypass then Shut-down						
	125% - 150% 2 Minutes on Bypass then Shut-down						
	$>150\%$ 1 Second on Bypass then Shut-down						
Crest Factor	3:1						
Battery Type	VR-SLA or Ni-Cd Batteries						
D.C. Voltage	168VDC to 240VDC configurable (Default S=240VDC; L=192VDC)						
Built-in Battery Option	12V-7AH/9AH *14-20 Batteries configurable						

External Battery Option	Can be configured as per Backup requirement		
Charge Current	1-10A Adjustable		
Re-Charge Time	Standard Batteries Recharge to 90% within 4-hours Extended Backup Batteries Recharge according to Battery Capacity		
Efficiency	> 93% ECO Mode 98%		
Transfer Time	Mains to Battery Mode 0 mille-second; Inverter to Bypass Mode 0 mille-second		
Protection	Over Current, Over Voltage, UV, Short Circuit, Battery Overcharge, High Temp.		
EMI	IEC/EN62040-2		
EMC	IEC61000-4-2(ESD); IEC61000-4-3(RS); IEC61000-4-2(EFT); IEC61000-4-5(Surge)		
Alarms	Mains Failure; Battery Mode, Low Battery; UPS Overload; Fan Fault, General Fault,		
LED display	Mains Status, Bypass Operation, Inverter Operation, Low Battery warning, Over Load, General Fault etc.		
LCD display	UPS status with Digital Readings for Input & Output Voltages, Battery Voltage, Input and Output Frequency, Power in KVA & KW for each Phase, Load Percentage etc.		
Communication	RS232, RS485, USB, SNMP, AS400-Dry Contacts Options for Remote Monitoring and Power Management		
Operating Temperature	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 RH	0%-90% No Condensation		
Noise	<60 db	<65 db	
UPS Dimensions D x W x H mm	655mm * 350mm * 732mm (H) + additional height for BIB Slots options		
Weight without battery (kg)	58Kg	61Kg	65Kg
Weight with battery (kg)	Net weight + As per battery options		



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