

NB 31S

Triple "S" You can touch

Reliable Power Quality

- Latest IGBT technology for highest reliability
- Input voltage 323 Vac - 475 Vac
- Input frequency 50/60 Hz \pm 10% suitable for industrial applications
- Output voltage 220 Vac \pm 1%
- Crystal controlled output frequency 50/60 Hz \pm 0.1%

Smart Protection

- 16/32 bit microcontroller UPS
- 20 kHz PWM inverter
- Built-in power factor correction
- EMI/RFI and power line noise protection
- Surge, spike, blackout, brownout, overload and short circuit protection
- No break power backup scheme
- Zero time transfer full static switch
- Built-in sealed lead acid (maintenance free) battery
- Manual maintenance bypass mode
- DC start (AC start without battery (C) is optional)
- Extended backup time with battery extension rack
- Hot standby configuration (H) (option)
- Manual self-test, auto self-test every 2-week duration (T) (option)

Power Display and Management

- LED status and 16 Characters LCD display for monitoring and setting UPS parameter
- 256 records event log (E) (option)

Communication

- Two RS-232 serial interface ports, one port for monitoring software (Easy-Mon X) and the other port for remote terminal (R) is optional.
- Dry contact port (D) (option)
- SNMP/HTTP monitor capability (S) (option)

More Safety

- Built in output isolation transformer
- Load-Safe with new battery test scheme
- Emergency Power Off (EPO)

Energy Saving

- High efficiency > 96% with Economy mode
- Automatic detective and shutdown when no load
- Automatic battery charge power boosting (A) (option)

Smart

- Better power control with Smart CPU
- Better monitor and configure with
- Smart display and management software

Safe

- Safer with isolation transformer
- Safer load with new battery test scheme
- Safer protection for industrial applications

Save

- Saver energy with economy and sleep modes
- Saver maintenance cost with more reliable products.



True On-line Double Conversion Sine Wave UPS



SPECIFICATIONS

MODEL		NB 0831S	NB 1031S	NB 1231S	NB 1531S	NB 2031S	NB 3031S	NB 4031S
CAPACITY	Pf = 0.8	8 kVA/6.4 kW	10 kVA/8 kW	12 kVA/9.6 kW	15 kVA/12 kW	20 kVA/16 kW	30 kVA/24 kW	40 kVA/32 kW
INPUT	Voltage	380 Vac 3 phase 4 wires, 220 Vac 1 phase 2 wires for bypass input						
	Voltage range	380 Vac -15%, +25%, 220 Vac -20%, +25% for bypass input						
	Frequency	50 Hz / 60 Hz ± 10% at nominal voltage (± 12% option)						
OUTPUT	Voltage	220 Vac ± 1%						
	Frequency	Nominally locked to line frequency, free running 50 Hz / 60 Hz ± 0.1% (crystal controlled)						
	Wave form	Pure sine wave (sinusoidal)						
	Total Harmonic distortion	Less than 2% at full linear load						
	Transient condition	Less than 7% for 100% instantaneous load variation						
	Overload capability	150% for 1 min., 125% for 10 min.						
	Crest factor ratio	3 : 1						
	Protection	Over heat, overload, over voltage, under voltage, short circuit proof and battery low voltage shutdown						
	EFFICIENCY	AC to AC (at 75% load)	90%					
Inverter mode		92%						
Economy mode		96%						
BATTERY	Type	Sealed lead acid (maintenance free) rechargeable						
	Standard backup time	> 10 min	> 8 min	> 20 min	> 12 min	> 8 min	> 7 min	> 10 min
	Continuous recharging time	Less than 4 hours to 90% after full load discharge (at standard backup time)						
AUTOMATIC BYPASS SWITCH	Capability	150% for 1 minute 1000% for 1 cycle						
SURGE PROTECTION	Standard	UL recognized surge protection to std.1449						
	Ipeak	600 Joules (2 microsec wave form)						
	Surge current capability	40 kA (8/20 microsec wave form)						
TRANSFER TIME	Mains fail or recover	Zero time (True on-line UPS)						
	UPS to bypass or vice versa	Zero time (Make before break)						
	Auto reverse	After overload return to normal						
MANUAL CONTROLS	Maintenance bypass switch	yes						
INDICATOR	Front panel LED	Bypass input, Line invput, Rectifier / charger, Inverter, Inverter supply, Load level, Overload Battery level, Low battery, Replace battery, Automatic bypass, Maintenance bypass, UPS on, UPS shutdown, Over temperature / fault, Alarm						
	16 Characters LCD	Input voltage, Bypass voltage, Input frequency, Output voltage, output current, output frequency, Output power factor, %Load, Battery voltage, %Battery, Backup time, UPS status Battery data (environment temperature, voltage, current, temperature, remaining backup time, capacity,						
AUDIBLE ALARM	Two tones with reset for silence	Mains failure, low battery, replace battery, load on bypass, over temperature, overload						
FEATURES	Automatic detective and shutdown when no load	yes (Default setting is off)						
	Manual self-test	yes						
	DC start	yes						
	AC start without battery	option (C-code)						
CONNECTION	Main input	Terminal blocks with main input circuit breaker						
	Bypass input	Terminal blocks (Bypass input circuit breaker is optional (I-code))						
	Output	Terminal blocks (Output circuit breaker is optional (O-code))						
COMMUNICATION INTERFACE	RS-232 port	Serial interface port can be connected to PC, workstations or servers for automatic unattended shutdown. Easy-Mon X software may be required (free download at www.leonics.com)						
	Remote terminal	option (R-code)						
	Remote status interface	Dry contact is optional (D-code)						
	SNMP/HTTP capability	Internal or external are optional (S-code)						
ACOUSTIC NOISE	At 1 metre	< 55 dBA		< 60 dBA				
ENVIRONMENT	Temperature	0 - 40°C						
	Relative humidity	0 - 95% (non-condensing)						
DIMENSIONS	UPS include standard battery	40 x 113 x 90				65 x 95.2 x 90		
	Battery extension rack (option)	Separate (UPS and battery extension rack)						
WEIGHT	UPS include standard battery	TBA	380	TBA	410	430	TBA	TBA
	Battery extension rack (option)	Depending on battery capacity						
CONFORMANCE	Design regulation	IEC 62040-1, (2), EN 61000-4-2, (4), (6), IP20, TIS-1291						

Continuous product development is our commitment. In that manner, the above specifications may be changed without prior notice.

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