

NBP S

Triple "S" You can touch

Reliable Power Quality

- Input voltage 165 Vac - 264 Vac
- Input frequency 50/60 Hz \pm 10% suitable for industrial applications
- Input power factor more than 0.99 at full load
- 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
- DC start (AC start without battery (C) is optional).
- Manual maintenance bypass mode (M) (option)
- Extended backup time with battery extension unit (option)
- Hot standby configuration (H) (option)
- 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 and Sleep mode
- Automatic detective and shutdown when no load
- Automatic battery charge power boosting (A) (option)

High Input Power Factor

True on-line Double Conversion Sine Wave UPS

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.



**ISO 9001
14001**
www.leonics.com



Accredited by Member of the Pacific Accreditation Cooperation (IPAC) and International Accreditation Forum - Inc. (IAF) Multilateral Recognition Arrangement for Quality Management Systems

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TIS 1291-2545



LEONICS CO.,LTD. A5043 ISO 9001



ISO 14001
EMS 01007/045

SPECIFICATIONS

MODEL		NBP 3KS	NBP 5KS	NBP 6KS	NBP 8KS	NBP 10KS
CAPACITY	VA / W	3000 VA / 2400 W	5000 VA / 4000 W	6000 VA / 4800 W	8000 VA / 6400 W	10,000 VA / 8000 W
INPUT	Voltage (single phase)	220 Vac -25%, +20%, (± 25% option)				
	Frequency	50 /60 Hz ± 10% at nominal voltage (± 12% option)				
	Power factor	more than 0.99 at full load				
OUTPUT	Voltage (single phase)	220 Vac ± 1%				
	Frequency	nominally locked to line frequency, free running 50 /60 Hz ± 0.1% (crystal controlled)				
	Wave form	pure sine wave (sinusoidal)				
	Total harmonic distortion	less than 3% at full linear load				
	Transient condition	less than 5% for 100% instantaneous load variation				
	Overload capability	150% for 1 min., 125% for 12 min.		150% for 2 min., 125% for 12 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 full load, Pf.=1)	> 87%				
	Economy mode / Sleep mode	> 96%				
BATTERY	Type	sealed lead acid (maintenance free) rechargeable				
	Standard backup time (full load)	more than 20 min.	more than 12 min.	more than 10 min.	more than 8 min.	more than 5 min.
	Special backup time (option)	15 - 60 min.				
	Continuous recharging time	less than 4 hours to 90% after full load discharge				
	Management	end of life indicator and alarm				
AUTOMATIC BYPASS SWITCH	Capability	150% for 10 minutes 1500% for 1 cycle				
SURGE PROTECTION	Standard energy	UL recognized surge protection to std.1449				
	I _{peak}	170 joules (option 510 joules) (2 msec wave form) 8 kA (8/20 msec wave form)				
TRANSFER TIME	Mains fail or recover	zero time (true online UPS)				
	UPS to bypass and vice versa	zero time (make before break)				
	Auto reverse	after overload return to normal				
MANUAL CONTROLS	Maintenance bypass switch	option (M-code)				
INDICATOR	Front panel LED's	bypass input, line input, 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 Display	input voltage, input frequency, output voltage, output current, output frequency, output power, % load, battery voltage, % battery, backup time, UPS status (load power factor and load power options (P-code))				
AUDIBLE ALARM	Two tones with reset for silence	mains failure, low battery, replace battery, load on bypass, over temperature, fault				
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)				
INPUT	Main input	terminal with main input circuit breaker				
	Bypass input	terminal (bypass input circuit breaker option (I-code))				
OUTPUT OUTLET		terminal (output circuit breaker option (O-code))				
COMMUNICATIONS INTERFACE	RS232 port	serial interface port can be connected to PC, workstations or servers for automatic unattended shutdown. Easy-Mon X may be required (free download from www.leonics.com)				
	Remote terminal	option (R-code)				
	Remote status interface	dry contact (option (D-code))				
	SNMP / HTTP capability	internal or external (option (S-code))				
ACOUSTIC NOISE	At 1 metre	< 50 dBA			< 55 dBA	
ENVIRONMENT	Temperature	0°C to 40°C				
	Humidity	0 - 95% (non-condensing)				
PHYSICAL DIMENSIONS (W x H x D) (cm)	UPS include standard battery	27 x 80 x 81			60 x 90 x 110.5	
	Battery Extension Unit (option)	27 x 80 x 81 (option)			60 x 90 x 110.5 (option)	
WEIGHT (Approximate in kg.)	UPS include standard battery	140	148	155	280	
	Battery Extension Unit (option)	depend on battery capacity			depend on battery capacity	
CONFORMANCE	Design regulation	IEC 62040-1, (2), EN 61000-4-2, (4), (6), IP21, TIS-1291				

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