



NS3000

60-120 kVA

STAND ALONE THREEPHASE UPS

3:3

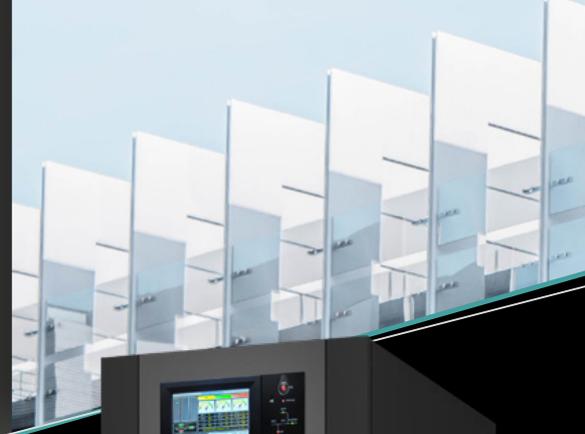
The ideal solution for:

- ✓ DATA CENTER AND SERVER
- ✓ TELECOMMUNICATIONS
- ✓ INDUSTRIAL APPLICATIONS
- ✓ BANKS AND HOSPITALS
- ✓ CORPORATE NETWORKS (LAN)



OVERVIEW

NS3000 is a medium size online Uninterruptible Power Supply (UPS), the ideal solution to solve utility stability, supply clean and power continuity for very critical loads. This system is also particularly suited where space-constrained room needs a **compact, flexible and scalable solution**.



HIGHER RELIABILITY

- DSP digital control
- Automatic analysis of main features
- Double input
- Smart ventilation system control



HIGH EFFICIENCY

- 3 level IGBT technology
- PWM high-frequency modulation
- High efficiency even at lower loads
- Ecomode system guarantees efficiency equal to 99%
- Lower heat dissipation



MINIMUM SOURCE IMPACT

- Rectifier with PFC technology
- Power Factor 0,99
- Current distortion <3%



HIGH FLEXIBILITY

- High technology LCD display
- Sized for small spaces
- Parallel up to 6 units



SIMPLIFIED MAINTENANCE

- Components designed to be easily accessible
- Easy, fast and safe maintenance



7" TOUCHSCREEN DISPLAY

The 7" touchscreen display offers **complete information and many setting options** through a simple and user friendly graphic interface.

PRODUCT RANGE

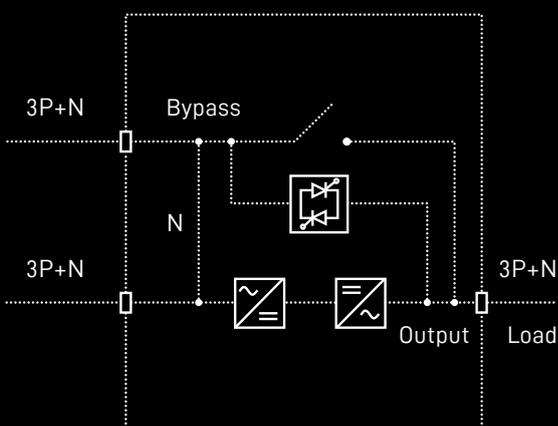


NS3000 is available in power capacities 60, 90, 120 kVA.

The system is equipped with digital signal processor (DSP), controlled IGBT rectifier, inverter transformerless, and filters for disturbances suppression.



SECTION AND STRUCTURE NS3000



SMART BATTERY MANAGEMENT

- Wider input voltage window and frequency tolerances **minimize transfer to battery**, reducing the number of charging and discharging cycles
- The lower number of interventions extends batteries service life
- In parallel redundant configuration is possible to connect the units to common battery string to have full battery capacity also in case of a single UPS failure
- NS3000 uses a three charging modes to meet the specifications of the most common battery types as sealed VRLA, AGM or wet lead acid, Ni-Cd
- Temperature-compensated charging monitors battery temperature and adjusts the charge voltage rate accordingly
- The battery management system is able to manage the manual and automatic tests, monitoring battery health and remaining lifetime

CONNECTIVITY

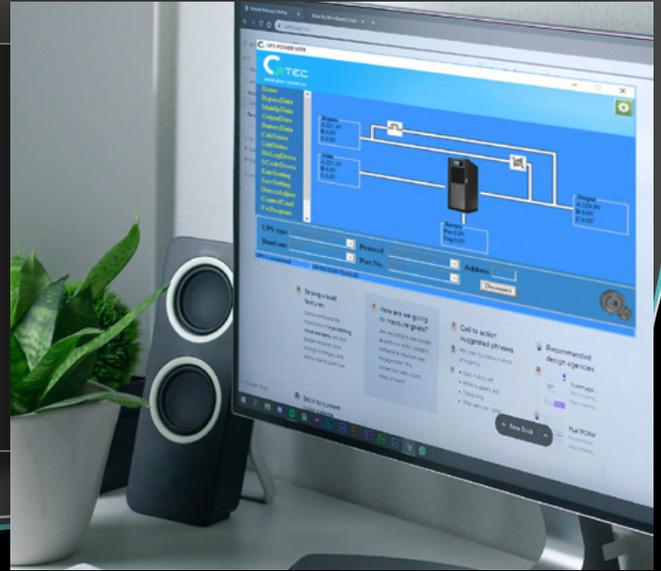
Through the standard RS232 serial port is possible to access the **user-friendly monitoring software**.

This software displays real time information in the form of bar charts and values for critical data such as **main voltage, UPS load and battery charge**. It allows **remote interrogation of UPS logs and operating parameters** to help diagnose alarms and potential fault conditions. The software can also perform an **automated safe power down** of the protected PCs and file servers.



SUPPORTED OPERATING SYSTEMS

Windows; Linux; Novell Netware; Mac OS; IBM OS/2; HP OPEN VMS; the most widely used UNIX operating systems such as: IBM AIX, HP UNIX, SUN Solaris INTEL and SPARC, SCO Unix and UnixWare, Silicon Graphic IRIX, Compaq Tru64 UNIX and DEC UNIX, BSD UNIX and FreeBSD UNIX, NCR UNIX.

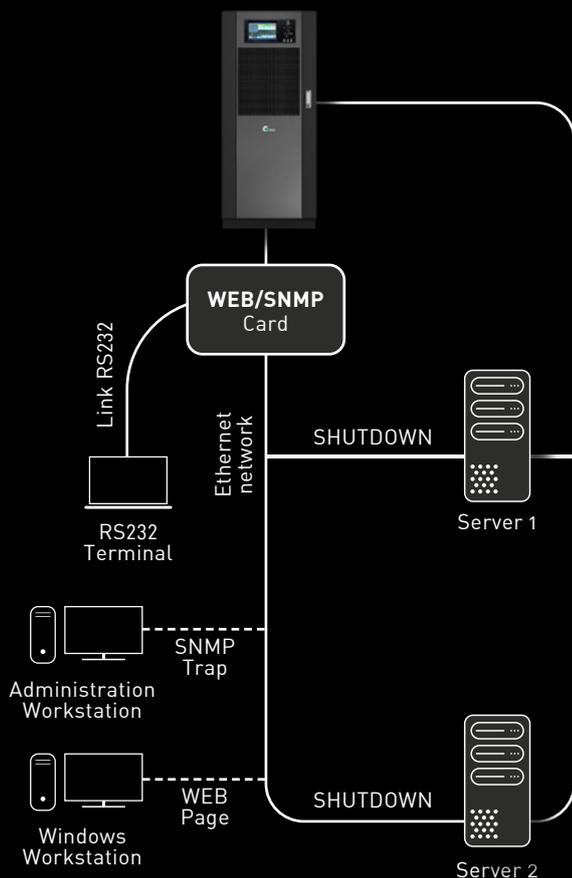


ADVANCED COMMUNICATION

- NS3000 is equipped with a **mimic led and graphic display** that provides information, measures, states and alarms regarding the UPS and the connected load.
- RS232 port and RS485 port with ModBus interface protocol are equipped in standard configuration.
- The system is equipped with **EPO (Emergency Power Off)** to power down the UPS through a remote emergency push button. (*)
- **Web/SNMP card allows UPS management across a LAN using any of the main network communication protocols - TCP/IP, HTTP and network interface via SNMP**. UPS status informations can be automatically transmitted by email.
- **Relay/AS400** card is the easy interface that allows communicating the UPS behaviour through dry contacts.

* Feature available with Relay card

Direct Connection with Ethernet Network



FLEXIBLE TECHNOLOGY



Up to 6 units

NS3000 is characterized by **great flexibility** that allows it to satisfy the installation requirements, even if load gets higher or a redundancy level is needed.

The UPS is able to synchronize with an external source or with an external switch via Load Bus Sync. **The Parallel configuration is available up to 6 units**, allowing users to increase the power according to effective load requirement.

It is possible to adjust system's power to any load variation, and/or to get the desired redundancy level.

All connected units equally share the load. The NS3000 parallel system can work in ECOMODE and with common battery as 1+1 configuration.

CUSTOMISED SOLUTIONS AND ARCHITECTURE



CUSTOMISED SOLUTIONS

GTEC has extensive knowledge in customised solutions for various utilizations and environments; such experience was crucial to drive the NS3000 development.

The system can be equipped with **dust filter** as well as with **various IP protection degrees**. It also employs painted electronic boards, and it can be fitted to many different installation requirements.



ARCHITECTURE

NS3000 is designed to facilitate all maintenance operations. **The Uninterruptible Power System guarantees low MTTR**, consequently increasing the energy availability.



ADVANTAGES

NS3000 has many significant key strengths that allow it to get advantages both during installation and setup phase, as well as about its operating life.

PFC

The input **PFC technology** optimizes the upstream infrastructure without over rating the supply devices (as input transformers, diesel gensets, switches, cables and other) and eliminating the harmonics distortion troubles.



The NS3000 MTTR is one of the shortest in the UPS category due its architecture: it means more availability of system and less cost in intervention and maintenance.



The **high power density** makes the UPS compact compared to other systems of the same type and reduces the space required for installation.

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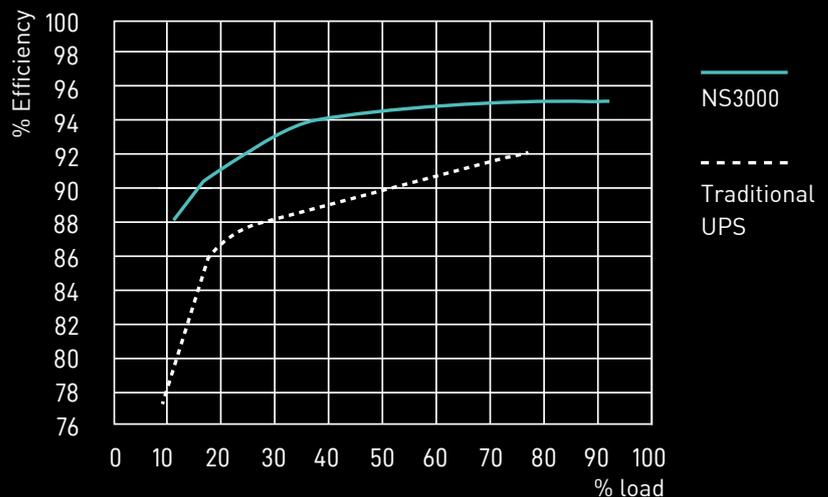
The unit is suitable also for leading power factor load **without derating**.

GREEN TECHNOLOGY

Thanks to the 3-steps level IGBT technology, as well as an extremely careful selection of high quality components, the NS3000 performance is very high. This allows a significant energy saving compared to a traditional UPS, already starting from 30% of applied load.

Choosing NS3000 you get a very fast ROI (Return Of Investment).

COST SAVING IN EFFICIENCY



MODEL	NS3060	NS3090	NS30120
Nominal Power	60 kVA / 54 kW	90 kVA / 81 kW	120 kVA / 108 kW
MAIN INPUT			
Grid system	3 Phases + Neutral + Ground		
Rated voltage / Frequency	380/400/415 VAC (Phase-Phase), 50/60 Hz		
Voltage range	-20% ~ +15%, full load -10% ~ -40%, power derating between 100%-60%		
Frequency range	40-70 Hz		
Power factor	>0.99		
Current THDi	<3%		
BYPASS INPUT			
Grid system	3 Phases + Neutral + Ground		
Rated Voltage / Frequency	380/400/415 VAC (Phase-Phase), 50/60 Hz		
Voltage range	Default -20% ~ +15%		
Frequency range	Selectable (± 1 Hz ~ ± 5 Hz), Default ± 5 Hz		
Bypass overload	110%, long term operation 110%<load<125%, 5 minutes 125%<load<150%, 1 minute 150%<load<400%, 1 second load>400%, 200 milliseconds		
OUTPUT			
Rated Voltage / Frequency	380/400/415 VAC (Phase-Phase), 50/60 Hz		
Power factor	0.9		
Voltage precision	$\pm 1.5\%$ (0-100% linear load)		
Voltage THDv	<1% from 0% to 100% linear load; <6% full non-linear load according to IEC/EN62040-3		
Inverter overload	110%, 60 minutes 125%, 10 minutes 150%, 1 minute >150%, 200 milliseconds		
Frequency regulation	50/60 Hz $\pm 0.1\%$		
Synchronized range	Selectable ± 0.5 Hz ~ ± 5 Hz, Default ± 3 Hz		
Synchronized slew rate	Selectable 0.5 Hz/s ~ 3 Hz/s, Default 0.5 Hz/s		
Crest factor	3:1		
BATTERIES			
Battery rate voltage	± 240 VDC (selectable)		
Number of batteries*	Standard: 40 (20+20) batteries 12V Selectable: 32-44, if <40 a power derating must be applied		
Charger voltage precision	1%		
Batteries arrangement	External		
Battery type	Pb / Ni-Cd		
SYSTEM			
Efficiency	Normal operation: >95% Eco Mode operation: 99% Battery operation: 95%		
Display	LED + LCD + Touch Screen		
Protection degree	IP20		
Interface	Standard equipment: RS232, RS485, USB, dry contacts Optional: SNMP, parallel kit, Cold Start, dust filter		
ENVIRONMENT			
Operating temperature	0 ~ 40 °C		
Storage temperature	-40 ~ 70 °C		
Relative humidity	0 ~ 90% (no condensing)		
Noise (dBA at 1 meter far)	65 dB maximum		
Altitude	<1000 m; load derated 1% per 100 m, from 1000 ~ 2000 m		
MECHANICAL DATA			
Dimensions W*D*H (mm)	600*980*950	600*980*1400	
Weight (Kg)	176	231	266
Colour	Cabinet: RAL 7021 (dark grey) Door: RAL 7012 (light grey)		

Note: technical specifications and data could be changed without notification

* Our standard battery cabinets are 20+20 batteries

GTEC SERVICE

GTEC supports its customers throughout the whole product life cycle, providing technical assistance and after-sales service at the highest professional standards, so to produce the best partnership experience.



MAINTENANCE is an essential activity in order to guarantee a safe and stable load protection. GTEC shows maximum care about this topic, providing the best service in terms of experience, instrumentation and safety level.



The **TECHNICAL SUPPORT** service, delivered through the dedicated Help Desk platform, guarantees prompt answers to customers' requests and allows them to directly schedule maintenance activities.



The partnership between GTEC and its customers gets consolidated through the **TRAINING SESSIONS** proposal for technical staff, so that each user can operate on the UPSs with maximum consciousness and safety.



Also, in the GTEC Service offers, a **PROJECT CONSULTING** team is available, in order to provide the best solution according to the designer's needs.

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