



DATACENTRE



E-MEDICAL



INDUSTRY



TRANSPORT



EMERGENCY

NextEnergy



ONLINE



Tower



3:3 250-400 kVA

NextEnergy



USB
plug



SmartGrid
ready



Flywheel
compatible



Supercaps
UPS



Service
1st start

HIGHLIGHTS

- **High efficiency up to 97% in double conversion**
- **kW = kVA (pf 1) up to 40°C**
- **Transformerless UPS**
- **High overload capacity**
- **Interactive Touch Screen**
- **Full front access, back to back install**

Riello UPS Introduces NextEnergy, the latest UPS series designed for mission critical applications. The three phase UPS offers transformerless double conversion technology VFI SS 111, with integrated IGBT three-level design. NextEnergy is designed to meet the power requirements of tomorrow, offering high efficiency and low running cost. Thanks to the Efficiency Control System, NextEnergy also guarantees the highest levels of efficiency even at partial loads. Its unity power factor and easy system upgrading make it the ideal solution for the business continuity of any IT application.

Zero impact source

NextEnergy is designed with the latest technology to not only prevent disturbances on the mains but clean the power e.g. Harmonics generated by non-linear loads. The input AC/DC converter is based on the IGBT rectifier design using the latest 3-level technology. The key features are:

- input current distortion < 3%
- input power factor 0.99
- power walk-in function that ensures progressive rectifier start-up
- start-up delay function, to restart the rectifiers when mains power is restored.

Thanks to the programmable maximum input power (kW or kVA), NextEnergy can be installed into AC supply systems with limited power availability such as a diesel generator



or contractually reduced power sources, and then supply the additional power required using the batteries (peak demand function).

Outstanding performances

- The latest technology of NextEnergy and the careful selection of high-quality components help to achieve first-class performance such as unity power factor (kW/kVA) and the capability to supply capacitive loads, which are very common in most Data Centres, without any power derating up to 40 °C.
- Outstanding system efficiency up to 97% in on-line double conversion mode, increasing to 99% in stand-by mode or smart-active.
- The unit design adopts the forced ventilation method to extract the heat produced by the internal components. Specific attention has been given to the ventilation system to ensure the best operational level and lifetime. This is thanks to the automatic speed control which constantly adjusts to the specific load level, the fan failure alarm and the fan redundancy - with condition apply.

Battery care system

The battery is one of the most important parts of the UPS that ensures the correct operation in case of mains failure.

NextEnergy includes all the latest features to prolong the battery life and keep the battery working efficiently, as well as advising users about any potential problem. The variety of charging methods allows the use of the most common type of battery and technologies available on the market such as VLRA, AGM, GEL, NiCd etc.

In addition to the flexibility of the battery cells, NextEnergy allows users to choose the most cost-effective solution for the required back-up time. The battery charging and discharging is assured by the STEP-UP/STEP-DOWN converter which means that when the batteries are charged and the mains is available, the converter is no longer connected to the supply. This means the ripple current is practically zero which leads to a significant improvement in battery life.

Operation without Neutral

NextEnergy can work with or without the neutral connection. This is an important feature to reduce the TCO of the distribution system where the neutral is created by an isolation transformer close to the load. For example, in the modern Data Centre, or where the neutral is not used at all. The major benefit being a reduced cost of the distribution arrangements.

Easy installation

- The small footprint of the cabinet and complete front access for all maintenance activities, ensures maximum space for installation and service.
- NextEnergy includes top and bottom cable entry as standard, removing the need for large and costly top entry cabinets.
- Ventilation is from the front to the top so no additional rear clearance required.

Maximum reliability and availability

NextEnergy UPS can be connected in parallel with up to 8 units to increase the capacity or add redundancy (N+1). Considering that a typical load can vary from 20 to 80%, the Efficiency Control System (ECS) function optimises the operating efficiency of the entire system according to the power absorbed by the load. This ensures higher overall efficiency during all load conditions. Hot System Expansion (HSE) allows the addition of further UPS into an existing system, without the need to switch off the operational units or transfer them to bypass mode. This guarantees maximum load protection, even during maintenance and system expansion. It ensures maximum levels of availability - even in the event of an interruption to the parallel control cable the system is "FAULT TOLERANT". It is not affected by connection cable faults and continues powering the load without disruption, signaling an alarm condition.

Interactive Touch Screen

NextEnergy is equipped with a Touch screen 7" graphic display (800x480 pixels) providing UPS information, measurements, voltage and current waveforms, operating states and alarms in different languages. The default screen displays the UPS status, graphically indicating the status of the various assemblies (rectifier, batteries, inverter, bypass). Also, the panel is used for configuration and setting the parameters of the UPS with 3 levels of the security password.

Advanced Communication

NextEnergy offers the capability to work with the advanced multi-platform communications for all the latest operating systems and network environments.

- PowerShield³ monitoring and shutdown software included for Windows operating systems 10, 8, 7, Hyper-V, 2016, 2012, and previous versions, Mac OS X, Linux, VMWare ESXi, Citrix XenServer and other Unix operating systems.
- Compatible with PowerNetGuard remote monitoring service.
- 2 slots for the installation of the optional communication accessories such as network adapters and BMS interface.
- Ethernet and USB ports.
- Relay cards with customized alarms and commands.



OPTIONS

SOFTWARE

PowerShield³
PowerNetGuard

ACCESSORIES

NETMAN 204
MULTICOM 302

MULTICOM 352

Multi I/O
I/O Expansion board

PRODUCT ACCESSORIES

Isolation transformer
Parallel configuration kit

Synchronisation device (UGS)

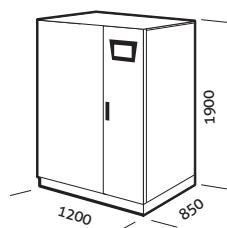
Hot connection device (PSJ)

Battery cabinets empty or for
extended runtimes

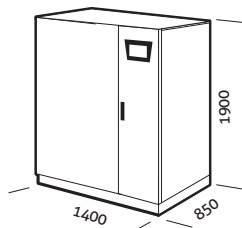
IP rating IP31/IP42

DIMENSIONS

NXE 250
NXE 300



NXE 400



BATTERY BOX

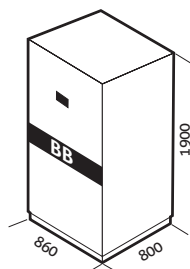
MODELS

BB 1900 480-V6 / BB 1900 480-V7
BB 1900 480-V8 / BB 1900 480-V9

UPS MODELS

NXE 250-300-400

Dimensions
(mm)



THREE-PHASE ISOLATION TRANSFORMERS

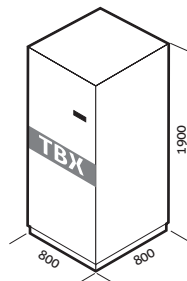
MODELS

TBX 200 T - TBX 250 T

UPS MODELS

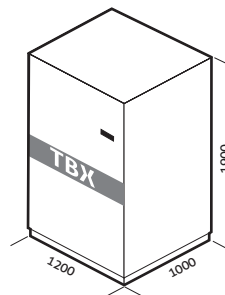
NXE 250

Dimensions
(mm)



TBX 300 T - TBX 400 T

NXE 300 - 400



MODELS	NXE 200		NXE 250	NXE 300
INPUT				
Nominal Voltage	380-400-415 Vac three-phase			
Voltage tolerance	+ 20% - 40% (with restrictions)			
Frequency	45 - 65 Hz			
Power factor	0.99			
Harmonic current distortion	< 3%			
Soft Start	0 - 100 % in 120 sec (selectable)			
Standard equipment provided	Back feed protection, separate bypass line			
BYPASS				
Nominal voltage	380-400-415 Vac three phase + N			
Nominal frequency	50 or 60 Hz (selectable)			
Frequency tolerance	± 2% (selectable from ± 1% to ± 5%)			
OUTPUT				
Nominal Power (kVA)	250	300	400	
Active Power (kW)	250	300	400	
Number of phases	3 + N			
Nominal Voltage	380 - 400 - 415 Vac three-phase + N (selectable)			
Static Stability	± 1%			
Dynamic Stability	± 5% in 10 ms			
Voltage distortion	< 1% with linear load/< 3% with non-linear load			
Frequency stability on battery	± 0.05 %			
Frequency	50 or 60 Hz (selectable)			
Overload	110% for 60'; 125% for 10'; 150 % for 1'			
BATTERIES				
Type	VLRA AGM / GEL, NiCd, Supercaps, Li-ion, Flywheels			
Ripple current	Zero			
Recharge voltage compensation	-0.11 V x °C			
INFO FOR INSTALLATION				
Weight (kg)	880		1100	
Dimension (WxDxH) (mm)	1200 x 850 x 1900		1400 x 850 x 1900	
Input cable	Top and bottom		Top and bottom	
Remote signals	Volt-free contact (configurable)			
Remote controls	EPO, bypass and another spare			
Communications	USB + Dry contacts + 2 slots for communications interface			
Operating temperature	0 °C to 40 °C			
Relative humidity	5 to 95 % non-condensing			
Colour	Dark grey RAL 7016			
IP rating	IP 20 (other on request)			
Efficiency (AC-AC) – On lline mode	up to 97%			
Standards	Safety: EN 62040-1 (directive 2014/35/UE); EMC: EN 62040-2 (directive 2014/30/UE)			
Classification in accordance with IEC 62040-3	(Voltage Frequency Independent) VFI - SS - 111			
Moving the UPS	Pallet Jack			

The information in this document is subject to change without notice. Riello UPS assumes no responsibility for any errors that may appear in this document. DATNXC3Y18NREN