

# NetXtend Series ONLINE UPS

## Ultimate Power Protection, True Savings!

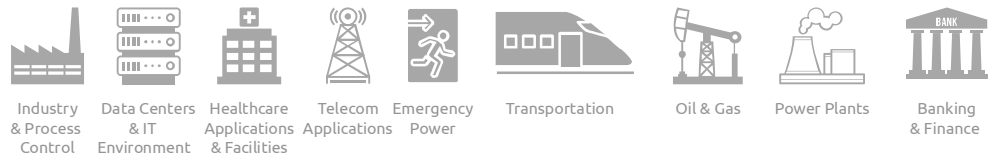
The NetXtend UPS presents a next-generation technology, power protection & performance, highest availability & versatility for harshest industrial environments, healthcare and datacenter applications whilst reducing TCO & minimising the time for ROI.

### Key Features

- \* Multi-DSP controlled, three-level topology, IGBT rectifier & inverter, PWM technology
- \* Highly-efficient, 97% AC~AC online, up to 96% eff. at 25% rated load
- \* Unity output power factor, kVA=kW, PF:1
- \* Advanced connectivity, user-friendly touchscreen LCD, LCD adjustable various parameters



### Key Applications



### Product Snapshot

#### Delivers An Outstanding 3-Level Performance & Increased Power Quality

- True VFI | online double conversion design with three level topology guarantees the complete isolation of critical load from any mains disturbances.
- Transformerless; high frequency, 3-Level IGBT rectifier & inverter design via PWM technique presents active power factor correction at input which lowers THDi at input & maximizes the input power factor as > 0,99. This leads minimized generator : UPS sizing, less investment and costs due to very low harmonics. The system reduces the effect on utility and the loads connected to the same network with the ups itself. IGBT design at the inverter stage also brings high unity output power as 1 kVA=kW while reducing the THDv as low as 1%.
- Twin DSP microprocessor control offers maximized reliability, total protection of UPS & critical load against failures & damages, unbeatable parallel redundant operation in business-critical environments and applications.
- Transformerless design also brings a compact, lightweight design which brings ease of transport, installation and maximizes power density in minimum footprint as low as 0,67 m2 for a 250 kVA NetXtend UPS.
- Greater adaptability, versatility in system configurations, higher immunity to harmonics, sudden inrush currents & energy backfeed generated by the load & environments with high RFI [loads compliant like CNC, CT]

#### Controlling Both CAPEX and OPEX

- Delivers industry leading 97% AC~AC online double-conversion 3-Level efficiency starting from 96% at 25% load rate without sacrificing reliability. Thanks to its highly efficient design, savings can reach up to 35% in dissipated energy in one year compared to traditional legacy UPS [91%] systems resulting in a faster payback period of 4 years as ROI.
- HVAC systems and cooling infrastructure initial investment is kept at minimum while cooling costs such as power, maintenance of HVAC units are at minimum. Keeping power & cooling infrastructure cost at minimum [CAPEX] along with operating costs at minimum [OPEX], also NetXtend UPS gives the power of control.
- Scalability - Pay as You Grow! Capacity can flex to meet power infrastructure growth by adding an additional ups in the field, ease of expansion from medium-sized installations to hyperscale infrastructures.

### The UPS NetXtend: Zenith in Ultimate Power Protection

The NetXtend is a next-generation VFI | online double conversion high frequency 3-level three phase UPS which offers high electrical and mechanical robustness, high reliability for various industries & applications.

The NetXtend uses the latest IGBT-PWM technology & DSP control to provide maximum power protection performance, increased power quality & clean, continuous power for any type of application.

NetXtend offers one of the lowest TCO & fastest ROI in the industry with its high efficiency values and power density. Its robust design, proven reliability and maximised availability which dramatically decrease operational downtimes and costs during its lifetime and true scalability makes it indispensable to various industries worldwide.

Advanced battery care design, zero impact on utility, generators & loads connected to the UPS NetXtend itself also makes it superior by the proven data against traditional legacy ups system along with many rivals existing in the market.

NetXtend is engineered to meet the needs of demanding environments and businesses worldwide.

#### Advanced Battery Care

The UPS NetXtend provides extended service life for batteries via its three stage charging mode. Thanks to its innovative software helps the user to monitor battery health & remaining back up period, extended scalable battery runtimes is not a matter with NetXtend.

#### Reliability, Availability and Serviceability (RAS)

Maximized availability and reliability by the power engineering at its top level, NetXtend offers very robust & reliable power protection, this also leads minimized downtime and highest level of availability. Very high level of MTBF [Mean Time Between Failures] and very low MTTR [Mean Time to Repair] ensures the critical load not to fail for its duty. Serviceability is a measure of the system to be recovered after a disaster. A min. of 15 mins. of enough for a technician to diagnose and recover the system to reduce the downtime for business.

## Technical Specifications

### UPS Rating [Output PF = 1 | Unity PF, kVA=kW]

<b>Rated Power [kVA]</b>	10 15 20 30 40 60 80 100 120 160 200 250 300 400 500 600
<b>Active Power [kW]</b>	10 15 20 30 40 60 80 100 120 160 200 250 300 400 500 600

### General Characteristics

<b>MTBF/MTTR</b>	Over 250000 Hours/ Below Than 15 Minutes
<b>UPS Type &amp; Technology</b>	VFI   Online Double Conversion [Complete Isolation of Output Load with Any Mains Disturbances] High Frequency Operation, 3-Level IGBT Rectifier & Inverter, Transformerless Design Twin DSP Microprocessor Control via PWM Technique
<b>62040-3</b>	COMPATIBLE
<b>Power Factor</b>	1 Unity PF, kVA=kW
<b>Input Voltage Range</b>	-45% ~ +20% [at 50% Rated Load]
<b>True Redundancy</b>	N+X, N+1 Redundant Configurations
<b>Parallel Configuration [N+1]</b>	Up To 8 Units
<b>Standard Protection Features</b>	Input Power Limiting, Phase Reversal, Power Module Over Temperature, Over Current, High Temperature Alert, Smart Short Circuit, Regenerative Load, Current Limiting, Charging Current Limiting, Temperature Compensated Charging.
<b>Operating Conditions</b>	20°C, <1000m Above Sea Level, <45% to 55% RH, for Best Performance and Optimised System Lifetime & Health
<b>Cooling/ Isolation</b>	Forced Air Cooling via Redundant Fans, Smart Fan Speed Control Mimic LED Indicators : Utility, Bypass, Battery, Inverter, Output, Fault & Warnings Leds LCD Display : Input Values Voltages [V], Frequency [Hz], Active Power Drawn from the Utility [kW], Bypass Voltages [V] for Each Phase, Output Values Voltages [V], Frequency [Hz], Load Currents [A], Load Percentages [%] for Each Phase, kVA/ kW Load Power, Ambient Temperature [°C], Battery & DC BUS Values Battery Voltages for + & - Strings, Battery Current, DC Bus Voltages for + & - Strings, Remaining Back Up Period Alarms Alarms are Listed in This Submenu Events 500 pcs Events Log, Details Can Be Seen Via LCD Product Service Screen Commands UPS is controlled via This Submenu Along with Accessing Alarms and Date&Time Information and Settings Languages Available Languages for User is Listed Here and The User Can Select Between Listed Languages
<b>Display &amp; Parameters</b>	
<b>Maintenance Bypass</b>	STANDARD
<b>Material [Casing]/ Colour</b>	BLACK
<b>Cable Entry</b>	REAR/FRONT BOTTOM

### Efficiency

<b>AC~AC Mode</b>	97%, Starting 96% Efficiency at 25% Rated Load
<b>Eco-Mode</b>	> 99%
<b>DC~AC/ Battery Mode</b>	< 98%

### Input

<b>Rated Voltage &amp; Range</b>	380/400/415 VAC 3P+N+PE -15% ~ +20% [at 100% Rated Load] -45% ~ +20% [at 50% Rated Load]
<b>Rated Frequency &amp; Range</b>	50/60 Hz, 45 - 65Hz [Online Mode]
<b>Power Factor</b>	> 0.99 Active Power Factor Correction Circuitry
<b>Current Distortion [THDi]</b>	< 3%

### Battery

<b>Rated Voltage [DC]</b>	720 VDC - 60*12VDC Maintenance Free Sealed Lead Acid - VRLA
<b>DC Input Voltage Range</b>	600~810 VDC
<b>Intelligent Battery Management</b>	Temperature Compensated 4 Stage Charging, Deep Discharge Protection, Scheduled/Automatic & Manual Battery Test,
<b>Charging Capacity</b>	25% of Rated Power, 20°C - 25°C for Longer Battery Lifetime
<b>Operating Temperature</b>	

### Output Characteristics

<b>Rated Voltage &amp; Accuracy</b>	380/400/415 VAC 3P+N+PE [Selectable from Front Panel] < ±1% at 100% Rated Linear-Static Load, < ±2% at Non-Linear Load; < ±5% at Dynamic Loads
<b>Rated Frequency &amp; Accuracy</b>	50/60 Hz (Selectable), ±1% ( Synchronized to Mains) ±0,01% ( Free Running Mode, Selectable)
<b>Power Factor</b>	1 Unity PF, kVA=kW
<b>Voltage Distortion [THDv]</b>	≤2% (at 100% Linear Load)
<b>Crest Factor</b>	3:1
<b>Unbalanced Load &amp; Acceptable Load PF</b>	Compatible with Operation on 100% Unbalanced Load 1 Leading to 1 Lagging without Any Degradation
<b>Overload Operation</b>	10 mins @ 100% ~ 125% Rated Load 60 seconds @ 126 ~ 150% Rated Load Switches to Bypass Line over 150% Rated Load, Continuous Operation on Bypass Up to 200% Rated Load.

### Static Bypass

<b>Rated Voltage &amp; Range</b>	380/400/415 VAC 3P+N+PE -15% ~ +12% [Adjustable]
<b>Rated Frequency &amp; Range</b>	50/60 Hz, 47 ~ 53 Hz/ 57 ~ 63 Hz [Adjustable]

### Communication & Supervision

<b>Remote Monitoring &amp; Management</b>	Standard (Available As Hardware & Software): RS232 Serial Comm. Port, RS485 MODBUS Serial Comm. Port, SNMP Slot, EPO-Emergency Power OFF Button, Generator Interface Optional (Standard in Software, Optional as Hardware): SNMP- Network Management Kit [External or Internal], 4 pcs Dry Contacts (Programmable), Generator Interface, Remote Monitoring & Management Panel, TCP/IP converter, GSM/GPRS Modem, Communication Ports Multiplier.
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### Environment

<b>Operating Temperature Range</b>	
<b>Prespecified Operating T.</b>	0°C - 40°C/20°C - 25°C / -25°C ~ 70°C
<b>Storage Temperature</b>	
<b>Altitude/ Relative Humidity</b>	< 1000m above sea level/ < 95% (non-condensing)
<b>Noise</b>	< 55 dBA

### Certifications

<b>Safety</b>	EN 62040-1
<b>Electromagnetic Compability [EMC]</b>	EN 62040-2
<b>Performance [VFI-SS-111]</b>	EN 62040-3
<b>Safety</b>	EN 60950-1 Information Technology Equipment
<b>Quality Management</b>	CE, ISO 9001:2015, ISO 14001:2015

### Optional Features & Accessories

<b>Isolation Transformer</b>	Optional for Input & Output
<b>Custom Input Voltage Range</b>	Optional
<b>IP Classified Enclosure</b>	Available from IP21 ~ IP 66
<b>Others</b>	Paralleling Kit, Network Management Kit(Internal/ External), External Bypass, Remote Monitoring & Management Panel, Isolation Transformer, UPS Looking Battery Enclosures...etc

### Physical

<b>Rated Power [kVA]</b>	10	15	20	30	40	60
<b>Model</b>	TSNX010	TSNX015	TSNX020	TSNX030	TSNX040	TSNX060
<b>Weight [kg]</b>	100	114	116	122	180	202
<b>Dimensions [mm]</b>		400*750*1100			520*890*1310	
<b>Rated Power [kVA]</b>	80	100	120	160	200	250
<b>Model</b>	TSNX080	TSNX100	TSNX120	TSNX160	TSNX200	TSNX250
<b>Weight [kg]</b>	253	285	405	522	570	600
<b>Dimensions [mm]</b>		670*770*1650		800*895*1850		
<b>Rated Power [kVA]</b>	300	400	500	600		
<b>Model</b>	TSNX300	TSNX400	TSNX500	TSNX600		
<b>Weight [kg]</b>	700	710	720	750		
<b>Dimensions [mm]</b>		1680*800*1820				
<b>Protection Degree</b>	IP20 (Standard)					



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