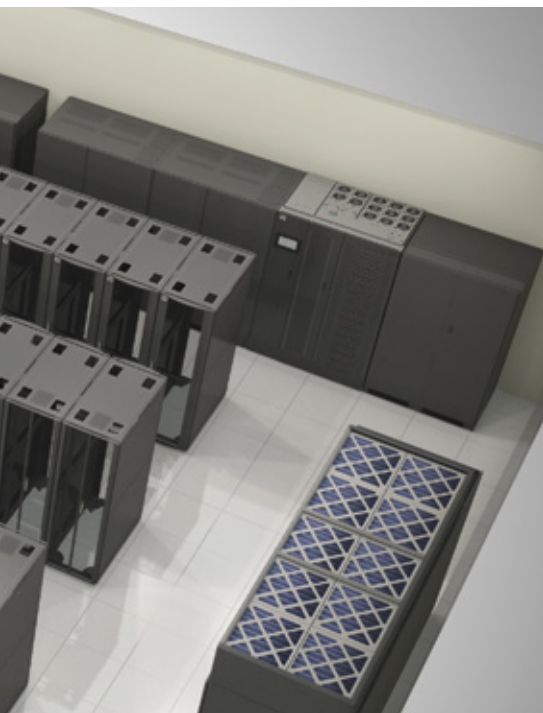


## *Liebert® NX™, 225-600 kVA/kW UPS*

Maximum Efficiency in a Transformer-free, High Efficiency, Scalable On-line UPS



EFFICIENCY. FLEXIBILITY. RESILIENCY. INTELLIGENCE

## The UPS as Dynamic as Your Business

Organizations have varying goals for their data center. Some demand maximum protection in terms of availability, while others strive to maximize more around efficiency in relation to operating savings and low total cost of ownership.

The Liebert® NX™ UPS is a scalable system with features that make it the right solution for a Maximum Efficiency data center – with a design that supports high operating efficiency, lower TCO, and intelligent operation.

### The Liebert NX 225-600 kVA/kW UPS is ideally suited for:

- Mid to large data centers
- Server rooms
- Colocation Facilities
- Telecommunications
- Labs and testing facilities



*Efficient and Economical- obtain lower PUE, operating and capital costs*

The Liebert NX 225-600kVA/kW UPS provides the capabilities to drive truly economical efficiency.

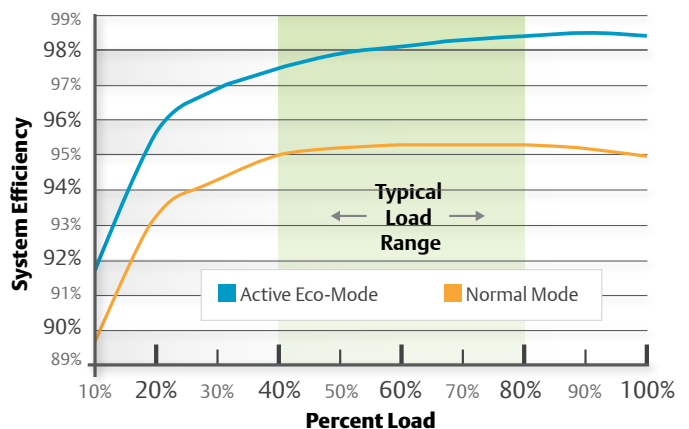
- Delivers up to 98% operating efficiency.
- Active IGBT Rectifier reduces size requirements for generator sets, circuit protection, cabling and transformers, minimizing installation and operation costs.
- Optimizes battery life with temperature-compensated, continuous float charging
- Unity power factor ratings deliver more real power for your money.
- Smaller footprint (33% less than similar competitor's 600kVA/kW system)

Optimized transformer-free design:

- Power factor corrected active IGBT rectifier
- Supports leading power factor loads without de-rating

The Liebert NX uses an optimized Eco-Mode to provide excellent dynamic response, avoiding potential battery damage while providing fast seamless transitions and energy savings.

### Efficiency Curve for Liebert NX UPS



Liebert NX delivers extremely high efficiencies in both normal mode and Active Eco-Mode™ operation.

Higher  
Power  
Factor



Better  
Operating  
Efficiency



Smaller  
Footprint



Efficient,  
Economical  
UPS

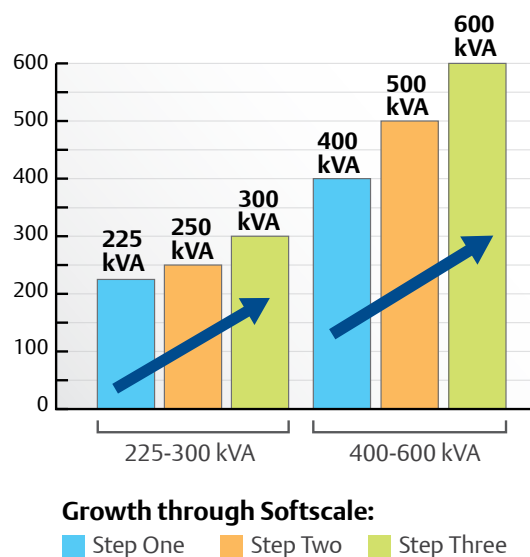
**Save \$10,000 in energy cost per year for every 1% gain in efficiency\***

\*At \$.10/kWH, 1MW

## Dynamic Configurations Enhance Deployment

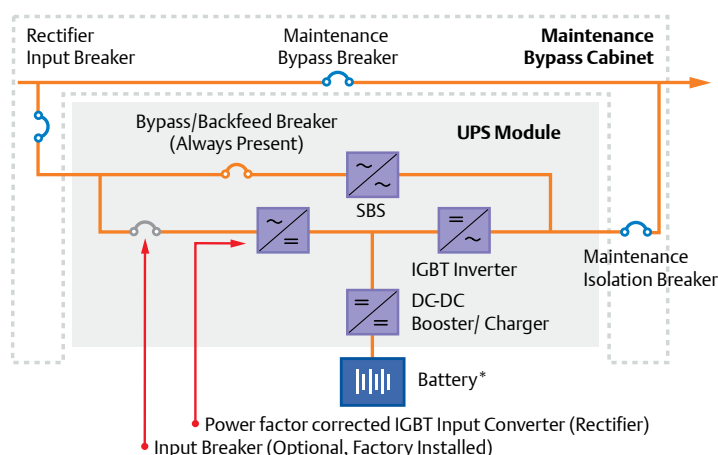
The Liebert NX 225-600kVA/kW UPS provides advantages to dynamic facilities that need to meet changing business conditions.

- Softscale technology conserves capital while providing an rapid, economical expansion path.
- Simple 1+N paralleling provides low initial cost and additional levels of redundancy.
- Parallel up to 6 systems for capacity or redundancy.
- High power density and small footprint deliver more kilowatts per square foot for efficient space utilization.
- Automatically adapts to dynamically changing load power factors (leading and lagging) without derating, modification or recalibration.



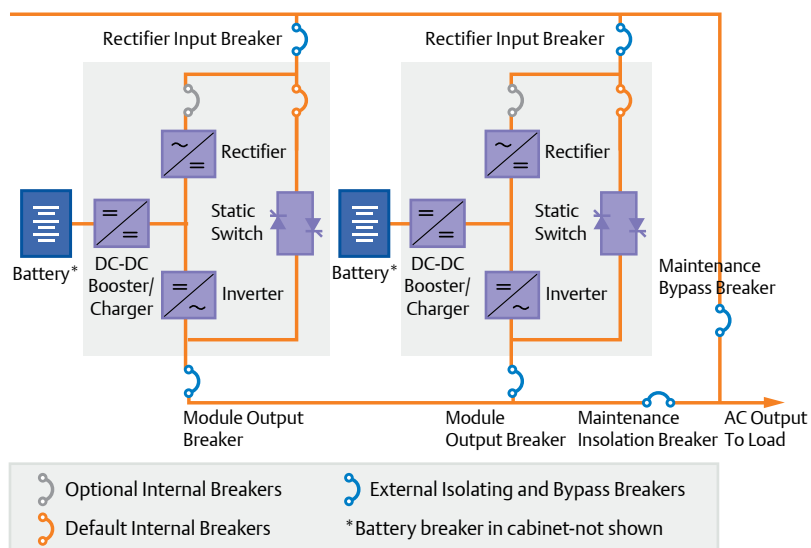
Softscale technology allows your system to efficiently grow with IT operations without adding to the system footprint

### Single Module System



The Liebert® NX™ 225-600 kVA is designed for use with an external maintenance bypass cabinet to assure compliance with the latest OSHA requirements.

### Liebert NX 1+N Distributed Bypass Multi-Module System



The Liebert NX 225-600kVA/kW 1+N multimodule design uses distributed 100% continuous duty rated static switches in each module, which provides a low initial cost due to simplified paralleling switchgear. It also provides high reliability due to the redundancy of all UPS functional blocks including the static switch.

## Resiliency to Keep Key Applications Running



*Availability and flexibility is enhanced with standard and optional features*

The Liebert® NX™ 225-600kVA/kW UPS provides the must-have features one comes to expect from the industry's reliability leader.

- True on-line, double conversion technology corrects for all types of power fluctuations.
- Excellent output power quality, with advanced inverter control.
- Optional dual bus synchronization of multiple UPS units when feeding independent distribution paths.
- Continuous-duty static switch is more robust and reliable than a momentary static switch design.
- Higher overload capacity for a more robust operation.
- 100 kAIC withstand rating.
- Over 1.2M hours of field MTBF.
- Seismic certification - models available with OSHPD approval.
- Optional Battery DC Ground Fault Detection

*\* Thermal runaway protection is standard with Liebert Battery Cabinets*

Liebert NX matching battery cabinet:

- System matched for all Liebert NX UPS.
- Optional Albér® BDSi™ integrated battery monitoring to optimize battery life and performance.
- Breaker for safe battery service without shutdown.
- Parallelable for extended runtime or redundancy.
- Internal bussing between attached cabinets to minimize site wiring.

Flywheel – Battery-free alternative for short duration backup.

- Less than 30 second runtimes or battery cycling protection.
- Placement flexibility – lightweight, small footprint; no special space conditioning requirements.
- Low maintenance; over 20 year life.
- Parallel with lead-acid battery to limit battery cycling.
- Parallelable for capacity and redundancy.



Liebert NX 225-600 kVA/kW UPS can be matched with battery cabinets and bypass/distribution cabinet to create a robust, flexible UPS system.



Meet runtime demands with flexible battery cabinets.

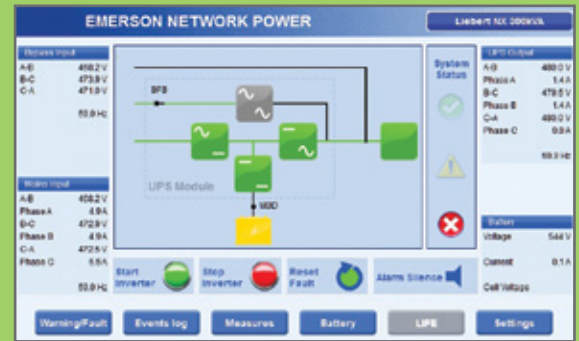


Albér BDSi Integrated Battery Monitoring for Liebert NX Matching Battery Cabinets



Vycon Flywheel Solution

## Intelligent, Self-Optimizing Management and Control



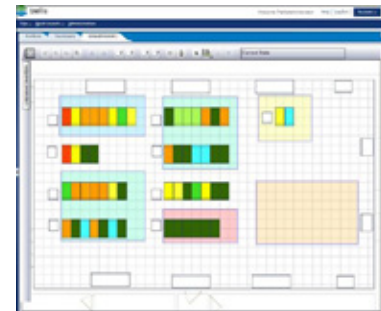
Intelligent technologies make the Liebert® eXL™ UPS easy to use, and enhance visibility and availability. The integrated controls, available battery monitoring, and DCIM compatibility enable a system that keeps you informed and in control.

### Simple and Comprehensive Monitoring

The large, menu-driven 9" touch screen monitor panel on Liebert NX™ is easy to read to reduce human errors. Multiple parameters are monitored; data is recorded, stored and easily viewable. Unit metering and status information is displayed in a logical format, and is selectable in English, Spanish, French, and Portuguese.

The UPS also includes multiple Liebert communication ports for important connectivity and visibility:

- **The Trellis™ Platform:** Provides robust Data Center Information Management (DCIM) capabilities using selectable modules and suites.
- **Liebert SiteScan®:** Offers centralized monitoring and control of all critical infrastructure systems, using a variety of network protocols.
- **Liebert Nform™:** Enables data center monitoring for any SNMP device that supports a network interface.



The Trellis™ Platform



Liebert SiteScan

### Albér Battery Monitoring Systems:

With a new, easy to use software interface, the factory integrated Albér BDSUi™ or stand alone battery monitoring system provides advance warning of pending UPS battery failures, the most common cause of unplanned data center outages.

Utilizing its patented DC resistance testing method, the Albér BDSUi provides real-time system and component level visibility by verifying the state of health of the entire battery system.



Albér Battery Xplorer Dashboard

#### System View



View data on parallel battery strings simultaneously.

#### Alarm View



View active alarms in a sortable and customizable grid.

#### String View



View a trend graph showing the history of all the string level parameters



Liebert Nform





## *LIFE™ Services for Simple, Secure Protection and Insight, 24x7x365*



### Critical Services and Support

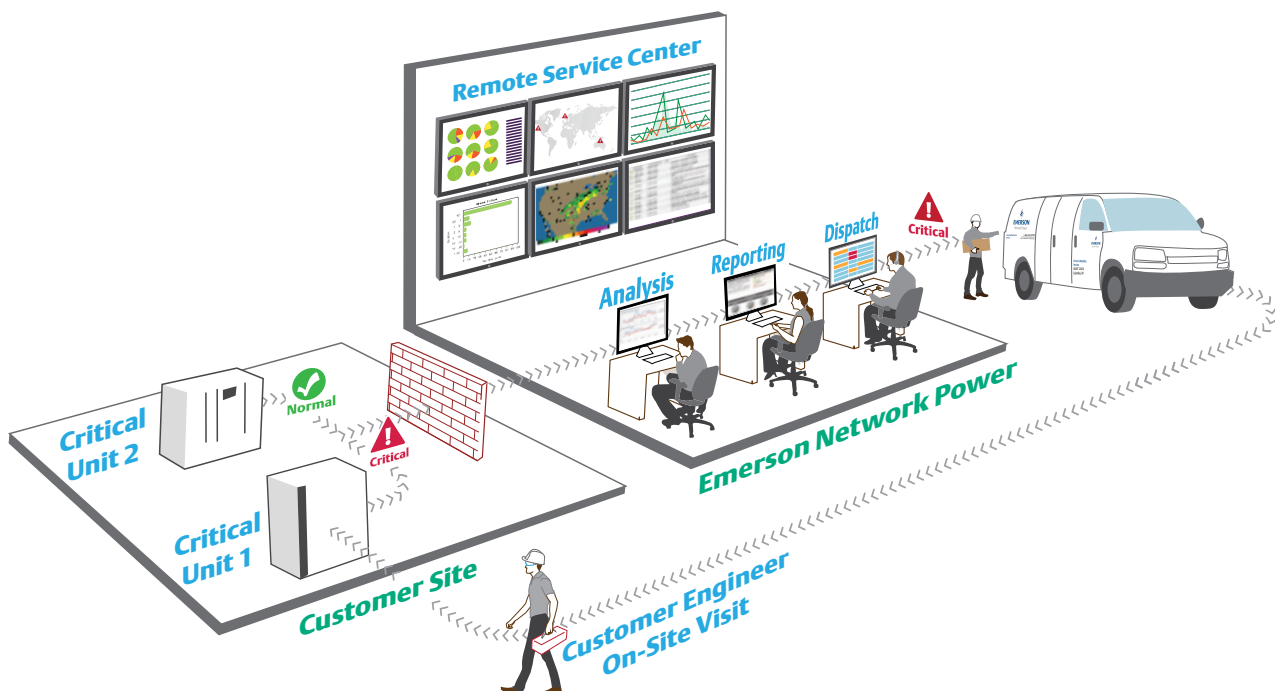
LIFE Services, offered by Emerson network Power, provides increased uptime and operational efficiency through continuous monitoring, expert analysis, and proactive response that ultimately helps you optimize the health of the Liebert® eXM™ UPS and have peace of mind.

Detailed parametric data is continuously captured with advanced technology embedded in the Liebert eXM UPS. The data is transmitted safely and efficiently to an authorized remote service center staffed with system engineers. Should an operating anomaly or alarm condition arise, the engineer performs an immediate analysis and initiates an appropriate response to quickly, safely, and accurately restore to its proper operating condition.

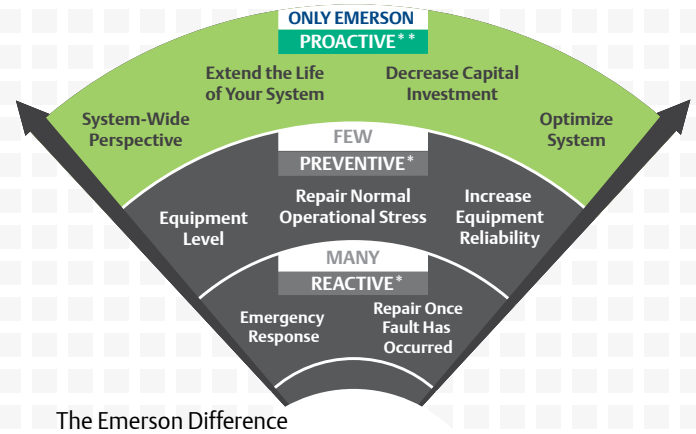
- 24x7 continuous remote monitoring
- Expert analysis and diagnosis
- Quick, safe and accurate response

LIFE Services offers following benefits:

- 1. Uptime assurance** delivered by 24x7 monitoring; early detection of trends and operating anomalies that may lead to critical failures if not addressed; and interpretation of alarm and status messages to understand potential impact.
- 2. Rapid incident response** delivered by the Liebert eXM UPS alarm messages and relevant data automatically transmitted for analysis, trending and diagnosis; remote diagnosis of the equipment while customer engineer is being dispatched to the site; and shipment of parts necessary to perform the corrective maintenance.
- 3. Increased insight and ease of management** delivered by notification of operating conditions that may impact the health of the Liebert eXM UPS; explanation of critical system health with trend and analysis reports delivered quarterly; and integration of services from remote detection of critical and anomaly conditions through on-site response to restore the critical system.



## World Class Witness Test Capability Improves Speed of Deployment



### The Liebert® Power Systems Test Center

The Liebert Power Systems Test Center for large UPS systems is a state-of-the-art test facility designed to provide customers with pre-installation testing of the performance, interoperability, and efficiency of Liebert UPS modules and systems under a variety of conditions. Located in Delaware, Ohio, the 25,600 square-foot facility, including a 2,600 square-foot customer observation station, is the largest and most comprehensive in the industry.

Testing includes individual modules as well as the complete power system — including large UPS units such as the Liebert NX™, Liebert STS2 static transfer switches and associated switchgear support systems — and is essential to the smooth, rapid installation and commissioning of large power systems. Customers leave the Liebert Power Systems Test Center with documented proof and confidence that their complex power system will operate seamlessly in accordance with business-critical availability requirements.

### Emerson Network Power, Liebert Services

Maximizing the performance and efficiency of your data center's uninterruptible power supply (UPS) and other power distribution systems requires systems be properly maintained by factory-trained technicians.

Trust Emerson Network Power, Liebert Services to take your critical maintenance to the next level — proactive maintenance that can significantly extend the life of your power systems, decrease your capital investment, optimize system efficiency and effectiveness, and increase overall system availability.



### Emerson Network Power, Liebert Services

#### Industry Experience

As long as data centers have existed, Liebert Services has been supporting data center infrastructure and providing integrated services for mission-critical environments.

#### System Wide Expertise

Nobody understands Liebert power equipment, precision cooling units and electrical infrastructure better than the experts at Liebert Services.

#### Technical Expertise

Our knowledge of systems and how they integrate into your overall facility makes us uniquely qualified to apply the latest technology and best practices to your power, precision cooling, and battery systems.

#### Unparalleled Responsiveness

With Liebert Services, you have 24/7 access to a network of data center infrastructure specialists armed with the knowledge and parts to resolve your problems. Anytime. Anywhere.

#### Fast, Efficient Problem Resolution

Only Liebert Services offers the right combination of industry, system, and technical expertise along with the extensive resources necessary to identify and understand any data center need and provide proactive solutions.

## Liebert® NX™ System Specifications

System Rating kVA(kW)		225(225)	250 (250)	300 (300)	400 (400)	500 (500)	600 (600)
Maximum Upgradable Capacity (Softscale units only)		300 (300)	300 (300)	N/A	600 (600)	600 (600)	N/A
General Specifications							
UPS Technology		Online Double Conversion with Energy Optimization Mode Capability					
Battery Technology*		Non-Spillable, Flame Retardant, Valve Regulated Battery, 10- and 20-Year Design Life; Flooded Cells; Flywheels					
AC-AC Efficiency		Up to 95.5% in double-conversion mode; up to 98% in Active Eco-Mode					
Input AC Specifications							
Power Factor		>0.99 at full load					
Nominal Input Voltage VAC		480 V, 3-wire +Ground					
Input Voltage Range VAC		480 VAC, 3-wire plus Ground +10%, -15%**					
Frequency		60 Hz					
Input THDi		< 3% Double Conversion Mode					
Nominal Input Current	SoftScalable	380A	380A	380A	760A	760A	760A
	Fixed Capacity	285A	317A		506A	633A	
Maximum Input Current	SoftScalable	399A	399A	399A	799A	799A	799A
	Fixed Capacity	299A	332A		530A	663A	
Output AC Specifications							
Nominal Output Current	SoftScalable	361A	361A	361A	722A	722A	722A
	Fixed Capacity	271A	301A		481A	601A	
Power Factor Rating		1.0					
Loads Supported		0.9 Leading to 0.9 Lagging without derating					
Physical Specifications							
UPS Dimensions (WxDxH) in. (mm)		53.2 (1,350) X 33.5 (850) X 76.8 (1,950)			90.6 (2,300) X 33.5 (850) X 76.8 (1,950)		
UPS Weight lb (kg)		2,425 (1,100)			4,800 (2,177)		
Matching Battery Cabinet Dimensions (WxDxH) in. (mm)		Top Terminal: 56.3 (1,430) X 33.5 (850) X 76.8 (1,950)					
		Front Terminal: 68.8 (1,750) X 33.5 (850) X 76.8 (1,950)					
Battery Weight – Per Single Cabinet Max-lb (kg)		Top Terminal: 5,140 (2,331)					
		Front Terminal: 8,990 (4,076)					
Monitoring Specifications							
UPS Monitoring		Optional: SNMP/Web, Modbus RTU, Modbus 485, SiteScan, Nform					
Environmental Specifications							
Operating Temperature Range °F (°C)		32 to 104 (0 to 40)					
Storage Temperature Range °F (°C)		-4 to 104 (-20 to 40)					
Audible Noise		70 dBA					
Safety Certification		UL 1778, CSA C22.2 NO. 107.3-05					
Seismic Certification  OSHPD:		IP = 1.5, (Fp/Wp) = 1.63, SDS = 2.27, ap = 1.0, Rp =2, Ω0 = 2.5, z/h = 1.0					
Product Support							
Warranty		1 Year, Full Parts and Labor					

\* Contact Liebert sales representative or contact factory for application support for flooded cells.

\*\* Conditions apply.



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