



Liebert®

EXS

from 10 to 20 kW

Optimized and integrated three-phase
UPS solution with high efficiency
power protection



Vertiv, formerly Emerson Network Power, designs, builds, and services mission critical technologies that enable vital applications for data centers, communication networks, and commercial & industrial environments



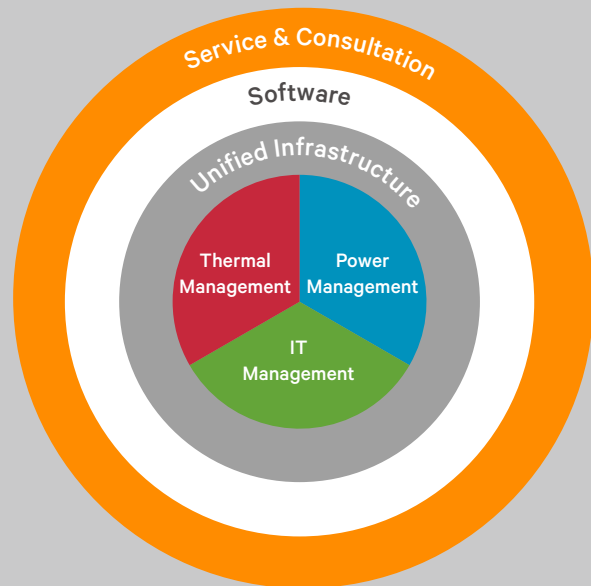
We support today's growing mobile and cloud computing markets with our portfolio of power, thermal and infrastructure management products, software and solutions, all complemented by our extensive global service network.

We help strengthen the world's most vital applications by bringing together global reach and local knowledge, and our decades-long heritage, including brands like Chloride, Liebert, NetSure, and Trellis.

Vertiv

Your Vision, our Passion

With a unique combination of industry expertise, technology, and resources, our mission is to support and power mission-critical technologies that drive possibility.



Chloride®

Our global industrial power solutions meet the most demanding technical specifications and provide safe, reliable power- no matter the challenge

NetSure™

Our global intelligently engineered DC power systems deliver high availability, energy efficiency and scalability for converged networks

Liebert®

Our global power and thermal management solutions are some of the world's most efficient and reliable power and cooling technologies

Trellis™

Our industry-leading software gives customers an integrated view of operations across IT and facilities resources, enabling better decisions that save time and money

Liebert® EXS from 10 to 20 kVA

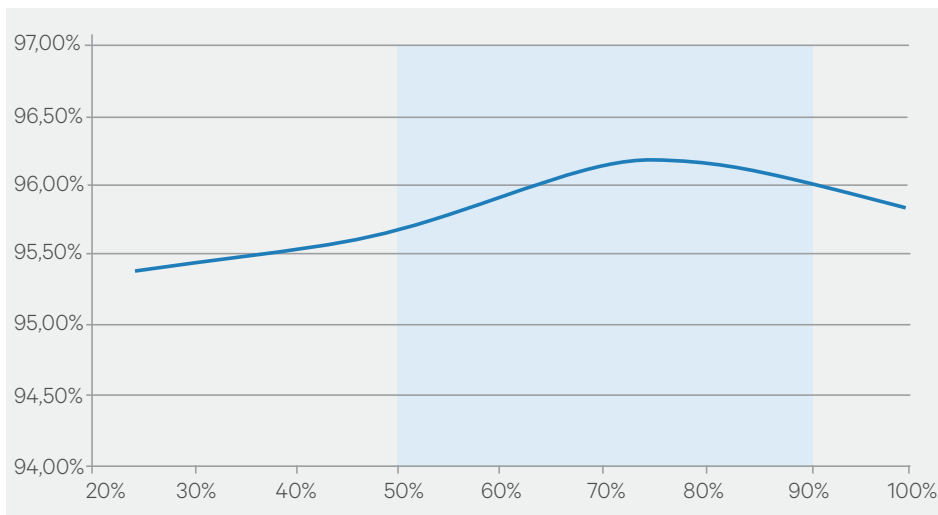
Compact design and improved performances

The new Liebert® EXS is a monolithic transformer-free UPS which brings exceptional features for mission-critical applications. Its extraordinary double conversion efficiency up to 96.2% ensures remarkable operational cost savings, reducing both the Total Cost of Ownership (TCO) and the environmental impact.

At the same time, with its unity output power factor and high power density, Liebert EXS is able to provide the utmost active power possible in a compact footprint. In fact, its improved design reduces its footprint to a minimum, providing continuous power protection with optimized internal runtime in a standalone solution, making the Liebert EXS perfect for both IT installations and other mission critical applications, such as transportation, emergency lighting, healthcare, retail and government facilities.

FEATURES AND PERFORMANCES

- Output power factor up to 1
- Double conversion efficiency up to 96.2%
- ECO mode efficiency up to 99%
- Compact footprint with multiple internal runtime configurations
- Available in 3/3 and 3/1 versions
- Integrated maintenance bypass
- Integrated input and output breakers/switches
- Parallel capability for capacity and redundancy



Liebert EXS efficiency curve



Central Power Supply System (CPSS)

Liebert EXS is compliant with the CEI EN 50171 standard, which defines the requirements that a UPS shall conform to in order to be considered as a CPSS, and hence capable of supplying the necessary emergency power to essential safety equipment without restrictions in power output. In fact, the unit can be used to power emergency escape lighting in case of normal supply failure and may also be suitable for powering other safety systems such as automatic fire extinguishing installations, signaling safety installations and smoke extraction equipment.



Flexibility

To ensure superior protection for critical loads, the Liebert® EXS range has been designed to optimize specific rating requirements, thus enhancing flexibility and installation space needs.

Liebert EXS's flexibility is further enhanced through:

- Single and three phase output configurations
- Integrated parallel capability up to 4 units
- Common or distributed battery bank
- Internal and external battery configurations for optimized back up time management
- Casters for easy UPS repositioning

Output Configuration

Liebert EXS models up to 20 kVA can be configured on-site to deliver three (3/3) or single (3/1) phase output giving it the flexibility to adapt to changes in installation environments.

Integrated Autonomy

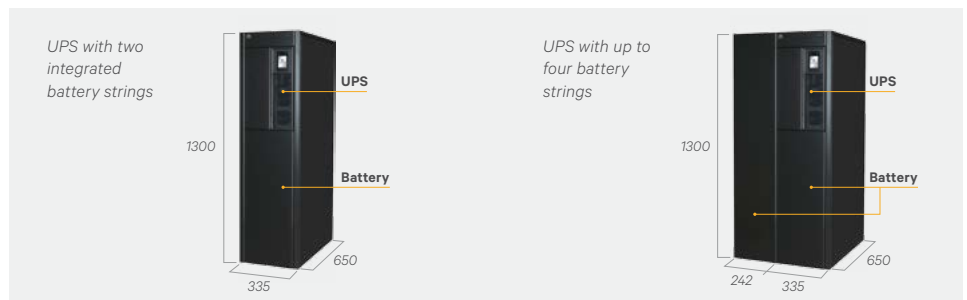
Liebert EXS provides an optimized integrated autonomy which results in back up times in a compact footprint. Its internal architecture is able to house up to four battery strings, further optimizing integrated autonomy and delivering the added advantage of virtually eliminating the need for an external battery cabinet. This furthermore reduces installation costs and minimizes the demand on physical space. In addition, Liebert EXS's powerful battery charger ensures rapid recharge, increasing its ability to manage longer back up times.

Full Galvanic Isolation

Liebert EXS offers integrated full galvanic isolation, meaning that an isolation transformer may be housed inside the UPS cabinet. This greatly reduces the system footprint, thus providing space saving advantages.

The transformer may be connected to the input or to the output of the UPS, providing:

- Full galvanic isolation for medical and other critical applications
- Installation with two independent input sources (with different neutrals)
- Installation in distribution without neutral.



Liebert EXS 10 - 20 kVA architecture

VERTIV™ TRELLIS™

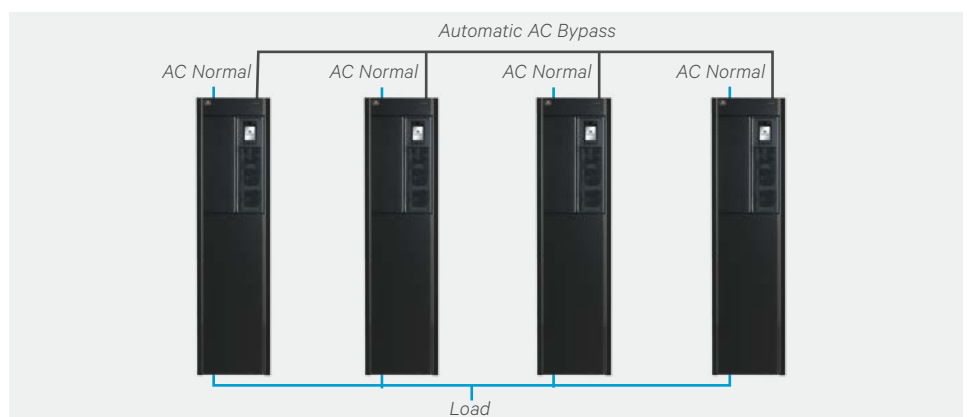
Vertiv Trellis platform is a real-time infrastructure optimization platform that enables the unified management of data center IT and facilities infrastructure. The Vertiv Trellis platform software can manage capacity, track inventory, plan changes, visualize configurations, analyze and calculate energy usage, and optimize cooling and power equipment as well as enable for virtualization. The Vertiv Trellis platform monitors the data center, providing a thorough understanding of system dependencies to help IT and facilities organizations keep the data center running at peak performance. This unified and complete solution, delivers the power to see the real situation in your data center, make the right decision and take action with confidence.

In The Field

Parallel Ready

Liebert EXS can be connected with up to four units in parallel. A single unit can be upgraded to parallel operation via easy to modify software settings, allowing the system to be customized for the requested configuration. The loop parallel connection used in paralleling the

system delivers ultimate reliability and eliminates the possibility of a single point of failure, ensuring perfect load sharing and fast detection of any variation in the system status.



Liebert EXS - Parallel configuration

Communication

Liebert® EXS features a multi-lingual LCD user interface allowing close control and monitoring of system status and performance. The UPS offers the following communication features:

- Voltage-free contacts
- Intellislot for SNMP, Modbus or Relay communication
- USB interface

These communication capabilities make Liebert EXS compatible with any building management system.

Software Connectivity

Vertiv™ shutdown software offering prevents unexpected server shutdowns and minimizes downtime warning of pending power losses and initiating safe shutdown of operating systems if required. Vertiv Nform™ network communications system enables customers to leverage the distributed monitoring capabilities of network connected equipment, providing centralized management of distributed systems.

Serviceability

The architecture of the Liebert EXS is designed to optimize installation and simplify service with its easily removable power assembly. This architecture considerably minimizes the time needed for repairs and optimizes serviceability. Liebert EXS also comes equipped with casters to facilitate ease of movement and relocation.



Connectivity cards



Liebert EXS 10 - 20 kVA

Vertiv LIFE™ Services Remote Diagnostic and Preventive Monitoring

Vertiv's service program is designed to ensure that your critical power protection system is maintained in an optimum state of readiness at all times.

The **Vertiv LIFE™ Services** remote diagnostic and preventive monitoring service provides early warning of UPS conditions and out of tolerances.

This allows effective proactive maintenance, fast incident response and remote trouble shooting, giving customers complete security and peace of mind.

With **Vertiv LIFE Services** you will benefit from:

Uptime Assurance

Constant monitoring of UPS parameters, thus maximizing the system's availability.

First Time Fix Rate

Pro-active monitoring and data measuring ensure that when our customer engineers are dispatched on-site, they arrive prepared for first time resolution.

Proactive Analysis

From Vertiv LIFE Services centers, our experts proactively analyze the data and trends of your equipment, to recommend actions to ensure their best performance.

Minimized Total Cost of Ownership of Your Equipment

The continuous monitoring of all relevant parameters in turn maximizes unit performance, reduces on-site maintenance and extends the life of your equipment.

Fast Incident Response

Vertiv LIFE Services allow for immediate definition of the best course of action, as a result of the regular communication between your Liebert EXS system and our **Vertiv LIFE Services** centers.

Reporting

You will receive a comprehensive report detailing the working order of your equipment and its operational performance.

Enabling Tomorrow's **CRITICAL EDGE INFRASTRUCTURE**



We helped some of the largest names in the industry bring new capacity online faster and at a lower cost when search and social media increased demand for storage and computing.



We were the first to introduce an integrated enclosure system to distributed networks.



Our portfolio spans power, thermal and infrastructure management products, software and solutions.



Protecting your critical technologies takes more than just great software and equipment. It takes a level of experience that only comes from years of finding solutions when the industry needed them most. We were the first to protect mainframes with precision cooling systems.



And now as challenges and demands grow, we continue to find better ways to help you strengthen your most vital applications. Formerly the Network Power business of Vertiv, we've brought together the most trusted and experienced names in critical infrastructure.



Complemented by a network of nearly 250 service centers worldwide. It's a combination of experience and resources that allow us to better adapt to what's needed, anticipate what's next and continue to find solutions in ways other companies simply can't.



Liebert® EXS Specifications

Technical Characteristics			
Ratings (kVA)	10	15	20
INPUT			
Nominal input voltage (V)	380/400/415 (three-phase + neutral)		
Input voltage range without battery discharge (V)	173 to 498*		
Nominal frequency (Hz)	50/60		
Input frequency range (Hz)	40 to 70		
Input power factor at full load (kW/kVA)	0.99		
Current THD at full linear load (THDI%)	≤ 3%*		
Bypass voltage tolerance (%)	selectable from +20 to -40		
Bypass frequency tolerance (%)	±20 (±10 selectable)		
BATTERY			
Battery blocks per string	24-40*		
Voltage temperature compensation (mV/°C/Cell)	-3.0		
Battery charger max. current (A)	13		
OUTPUT			
Nominal output voltage (V)	380/400/415 (three-phase) or 220/230/240 (single-phase)		
Nominal output frequency (Hz)	50/60		
Maximum active power (kW)	10	15	20
THDv at full linear load (%)	2		
Inverter overload capacity	105% for 60 min; 125% for 5 min; 150% for 1 min; >150% for 200ms		
Double conversion efficiency	Up to 96.2%		
ECO mode efficiency (%)	Up to 99%		
DIMENSIONS			
Dimensions (W x D x H) mm	335 x 650 x 1300		
Net/Shipping weight (excluding battery) kg	85/115		
Net/Shipping weight (including 2*32 batteries) kg	385/415		
GENERAL			
Noise at 1 m (dBA)	≤58		
Maximum altitude	1500 m without derating (max. 3000 m)		
Protection level IEC (60529)	IP20		
General and safety requirements for UPS	EN/IEC/AS 62040-1		
EMC requirements for UPS	EN/IEC/AS 62040-2		
UPS classification according to CEI EN 62040-3	VFI-SS-111		

* Conditions apply



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