



Liebert®

EXM™ UPS

80kW - 200kW

Efficient and Flexible Power-Optimized
For Medium-Size UPS Applications



Medium-Size UPS as dynamic as your Business

Small- and medium- sized businesses need UPS solutions that deliver lower first costs and ongoing operational savings, high reliability, and enable speed and flexibility in a dynamic IT environment.

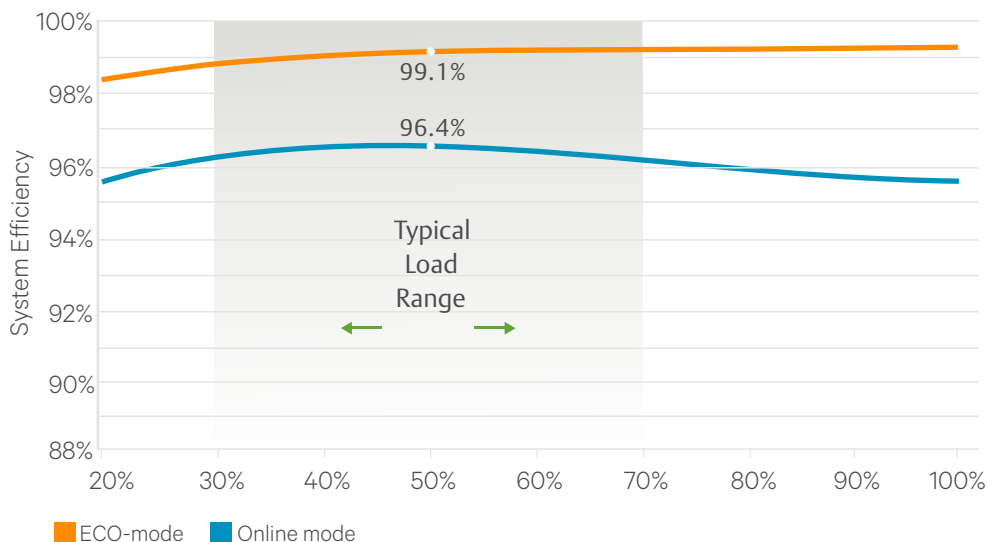
Vertiv's commitment to deliver the most technologically-advanced product for your mission-critical applications is reiterated by our next generation UPS series, **Liebert® EXM™**.

Highly efficient, most flexible, & reliable transformer-free UPS for small- and mid-tier applications

Efficient power protection can help you meet your capital requirements. Our latest ECO-mode feature delivers over 99% efficiency, while the Double Conversion mode has been optimized to exceed 96% efficiency.

Flexible configurations provide an ideal mix of both row-based and room-based benefits, optimized to deliver excellent performance at a significantly low total cost of ownership, and allow organizations to meet stringent Service Level Agreements.

Reliability is the epicenter of **Liebert® EXM™**. Its internal and external architecture is rugged enough to handle input faults, load faults, temporary overloads, input power disturbances, and even light industrial environment.



Liebert® EXM™ efficiency curve in double-conversion mode: Liebert® EXM™ UPS saves over USD 1,000/year for every percentage point gain in efficiency. **USD 0.1/kWh

Highlights

- Online mode efficiency exceeding 96% at partial load
- ECO-mode availability for parallel configurations
- Unity output PF (kVA=kW)
- Powerful battery charging capability
- Flexible air flow management; From front to back or front to top
- Top or bottom cable entry
- Integrated transformer option
- Full front access for installation & service
- LIFE™ remote diagnostic & preventive monitoring service
- Robust internal architecture makes it suitable for light industrial applications
- With improved touch screen display



Liebert® EXM™'s Efficiency credentials and performance is certified by TUV-Rheinland in accordance with IEC/EN 62040-1, IEC/EN 62040-3

Efficient System

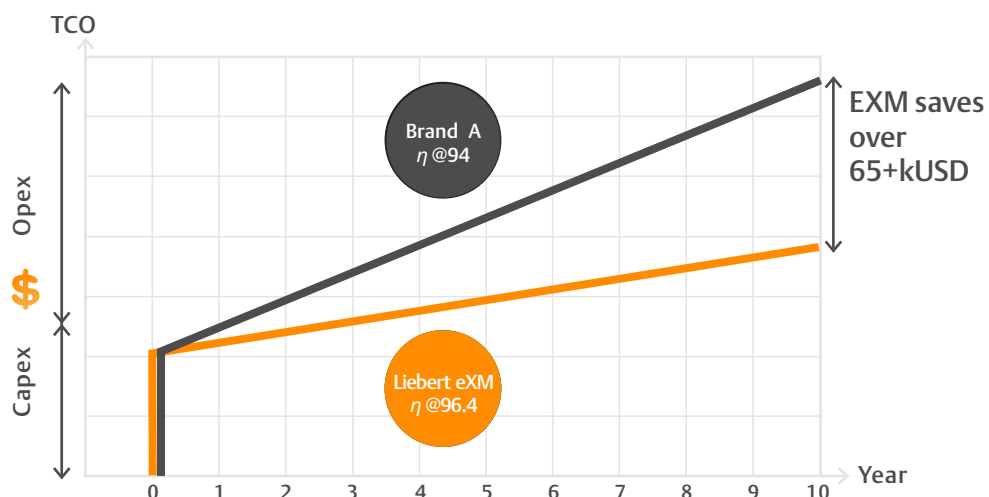
Since the need for improving energy efficiency has become ubiquitous, many manufacturers have introduced energy efficient UPS systems to meet customer requirements on energy conservation. However, they fail to convey the true picture of efficiency with respect to load at typical operating conditions.

Usually, UPS efficiency is judged at full load calculations –but your system rarely runs at full load. Compare double conversion efficiencies in the 30-70% load range to get a true picture of the operating costs.

This is where Liebert® EXM™ draws out the critical difference by consistently exceeding unmatched 96% efficiency levels.

Similarly, under the ECO-mode Liebert® EXM™ constantly delivers over 99% efficiency across the typical load range & it is able to do so even in a parallel operation, without the need for external accessories, thus saving on initial costs, while ensuring a high level of availability by transferring the load to inverter and vice-versa in less than 2ms, in case of a utility voltage anomaly of failure.

TCO performance at typical 40-60% load level



When two or more UPS are paralleled to reach the required capacity, an integrated Intelligent Paralleling algorithm comes into the picture. Intelligent Paralleling evenly distributes the operating hours across the connected UPS units by rotating the active ones, thus maximizing the total system efficiency.

With its advanced efficiency techniques, Liebert® EXM™ contributes to minimizing the carbon footprint of applications, thereby helping data centers to meet the industry's environmental and efficiency compliance standards.



Flexible Configuration & Design Options

Liebert® EXM™ provides a power protection solution of proven quality for your IT services. With versatile features such as flexible air flow management with the facility of front and top cable entry, it significantly reduces the total cost of ownership of the electrical infrastructure and easily adapts to different installation requirements- **from a row of racks in a data center to the corner of an equipment room** (fed from cables running above the units or beneath the raised floor).

For installations that require full galvanic isolation

Some ratings of Liebert® EXM™ can be equipped with an integrated transformer, offering a certified proven solution with a zero footprint impact.

Customized to fit specific needs

Liebert® EXM™ is designed to take care of your dynamic distribution needs. Liebert® EXM™ 80-120kVA can house a complete distribution assembly including an input, output, bypass, and maintenance switch.

Built-in distribution assembly reduces the capital and commissioning expenses that occur while setting up a switch distribution infrastructure.

For higher ratings, an optional switch side car can be ordered to facilitate the full arrangement of the switch assembly. This side car arrangement greatly optimizes the overall space & saves initial costs by also enabling top cable entry.



Liebert EXM (160-200 kVA) with switch sidecar



Liebert EXM detached from the wall



Liebert EXM adjacent to the wall

High Availability

Liebert® EXM™ has been designed to maximize the availability of secure power, leveraging Vertiv's experience and expertise in developing high MTBF UPS solutions and Low MTTR through a design for serviceability /maintainability construction.

There are numerous factors that contributes to the reliability of **Liebert® EXM™**. Especially, one of them is the **rugged internal topology** wherein the internal air channel is designed in such a way that internal hot air drives directly towards the heat sink, without distressing the PCBs and other internal sensitive circuits, consequently improving the service life of the component significantly, thereby preventing failure and ensuring utmost reliability.

Liebert® EXM™ provides enhanced fault tolerance at partial loads versus a traditional fixed capacity monolithic UPS. It can tolerate internal power module failures and still support a partial load without going to bypass mode.

The battery charger of **Liebert® EXM™** can deliver 15% of the nominal UPS power for battery recharge. Therefore, it is able to provide adequate current to charge even batteries with a long backup time, thus making it ideal for prolonged battery-powered applications.

Serviceability

Many service organizations can perform basic repair activities and maintain equipment at some level of competency, but Vertiv services can take your critical maintenance to the next level-proactive maintenance that can significantly extend the life of your power systems.

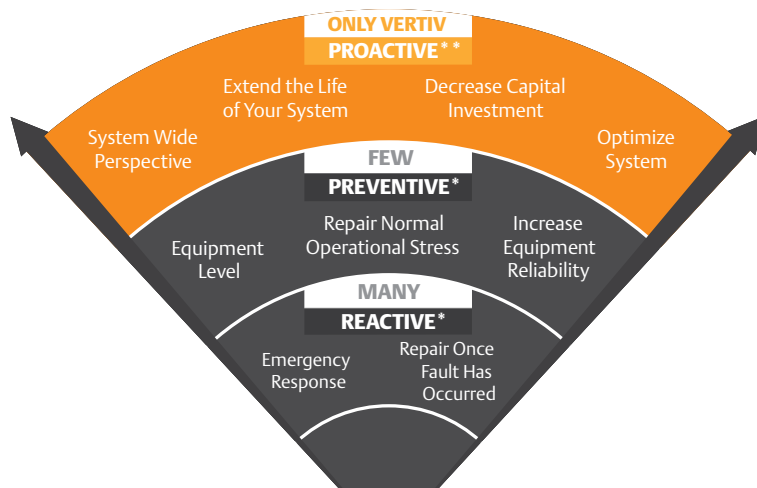


LIFE™ Remote Diagnostic & Preventive Monitoring Service

The LIFE™ remote diagnostic & preventive monitoring service provides early warning of UPS conditions and out of tolerance logs. This allows effective proactive maintenance, fast incident response and remote trouble shooting, subsequently giving you complete security and peace of mind.

With LIFE™ services you will benefit from:

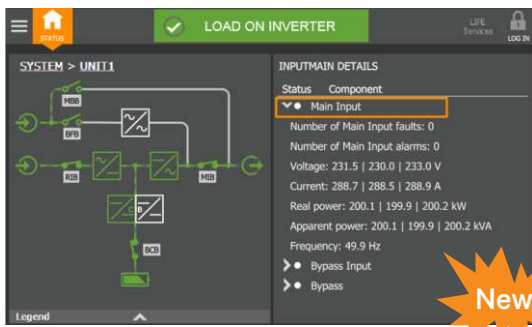
- Uptime assurance
- First time fix rate
- Proactive analysis
- Minimized total cost of equipment ownership
- Fast incident response
- Effective reporting



Intuitive, Intelligent Operations at Every Level

Touch Screen Control Panel offers Intelligent Control

- Intuitive, easy to use and reduces chances of human error
- Improves productivity by providing relevant and crucial information
- Power performance parameters visualized
- Service and maintenance support at your fingertips
- Compatible with the *Trellis™* Platform



Optional Integrated Alber Battery Monitoring Systems

- Advance warning of pending UPS battery failures
- Real-time system and component level visibility
- Verify the health of the entire battery system
- Integrated into the battery cabinet



Alber BDSUi Battery Monitor

Communications & Environmental Monitoring:

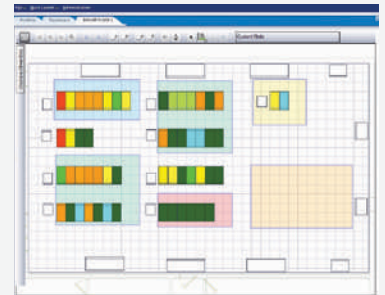
Leverage the capabilities of Unity Communications card and sensors to easily daisy chain together data inputs to monitor the following:

- Temperature
- Humidity
- Access
- Leaks
- More



SOFTWARE

Software to Match Your Needs



The Trellis™ Platform



Liebert® SiteScan®



Liebert® Nform™

Technical Specifications

Nominal Ratings(kVA/kW)	80kVA/kW	100kVA/kW	120kVA/kW	160kVA/kW	200kVA/kW
Input					
Nominal input voltage (V)	380/400/415				
Input voltage range without battery discharge (V)*	229~478				
Nominal input frequency (Hz)	50/60				
Input frequency range (Hz)	40-70				
Bypass voltage tolerance (%)	Upper limit: +10%, +15%, or +20% default: +15%; Lower limit: -10%, -20%, -30% or -40% default: -20%				
Bypass frequency tolerance (%)	+/- 10% or +/- 20%, default: +/-10%				
Input power factor (kW/kVA)	>0.99				
Current THD at full linear load (THDi%)*	<3%				
Battery					
Number 12V battery per string (Min-Max)	30-44				
Temperature compensation (mV/°C/cl)	-3.0 (selectable from 0 to -5.0 around 25°C or 30°C, or inhibit)				
Battery charger max. (A)	20	24.5	30	40	49
Output					
Nominal output voltage (V)	380/400/415				
Nominal output frequency (Hz)	50/60				
Nominal active power (kW)	PF=1				
THDv with 100% linear load (%)	<1%				
Inverter overload capacity	110% for 60 min; 125% 10min; 150% for 1 min				
Efficiency					
Online mode efficiency	Up to 96.4%				
ECO-Mode efficiency	Up to 99.1%				
Dimensions and weight					
Dimensions (W x D x H) mm	600 x 1000 x 2000				
Weight(Net weight)	385	430	430	475	520
General					
Noise at 1 m dB(A)	57	59	59	61	64
Altitude	≤1500; derate power by 1% per 100m between 1500m and 300m				
Ventilation	Front to back standard/ Front to top (optional)				
Protection level IEC (60529)	IP 20 Standard				
General and safety requirements for UPS	EN62040-1 / IEC62040-1 / AS62040-1				
EMC requirements for UPS	EN62040-2 / IEC62040-2 / AS62040-2 (Class C2*)				
Method of specifying the performance and test requirements of UPS	EN62040-3 / IEC62040-3 / AS62040-3 (VFI-SS-111)				

* Conditions apply

Note: Class C3 is standard whereas class C2 is optional;

Specifications are subject to change without any prior notification.



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ACP-EN-AP-9-1-0-17-3