

LIEBERT® EXL™ S1 UPS

1000-1200 kVA/kW



OVERVIEW

The Liebert® EXL™ S1 is a monolithic, transformer-free UPS that features optimized, industry leading footprint and power density, excellent operating efficiency and robust electrical protection to achieve superior cost savings.

Key Benefits

- Space-saving design minimizes footprint
- Maximizes power density
- Maximizes active power capacity
- Reduces operating expenses
- Drives down cost of ownership
- Easy to service and install
- Flexible configurations
- Eliminates upstream electrical disturbances
- Ensures robust power protection
- Compatible with modern electrical loads
- Delivers proactive remote services
- Intelligent and secure control is customizable by user
- Flexible energy store options

With Vertiv™ Services, your critical systems are fully maintained. Proactive support extends the life of your power systems, decrease your capital investment, optimizes system efficiency and effectiveness, and increases overall system availability.



Liebert EXL S1 UPS 1200 kVA/kW

Standard Features

- Advanced 600kW power cores
- Transformer-free design
- Up to 99% efficient
- Unity/Symmetrical power factor
- 100kA short circuit withstand rating
- Advanced status-at-a-glance touchscreen control panel
- Lithium-ion battery compatible
- Parallel up to 8 units
- Top and bottom entry cable access
- Front and top only service access

Optional Features

- Single or dual input
- Dual asynchronous source common mode choke
- DC battery ground fault detection
- Centralized or distributed paralleling
- Seismic anchoring kit
- Load bus synchronization
- Backfeed disconnect
- Bypass current sharing inductors
- Emergency Power Off
- Intelligent paralleling mode
- Unity communications card allowing dual simultaneous protocols
- Remote alarm status panel
- FCC Part 15 compliance

Efficient, Intelligent, Robust Features Optimize Performance

Benefit From The Saving Space Design

The Liebert® EXL™ S1 offers the industry's highest power density per square foot of any large-scale UPS.

You benefit by enabling more productive use of space. In new builds, you can choose to create more room for revenue-generating IT equipment or you might adjust designs and reduce data center construction costs.

COMPARE AND SAVE

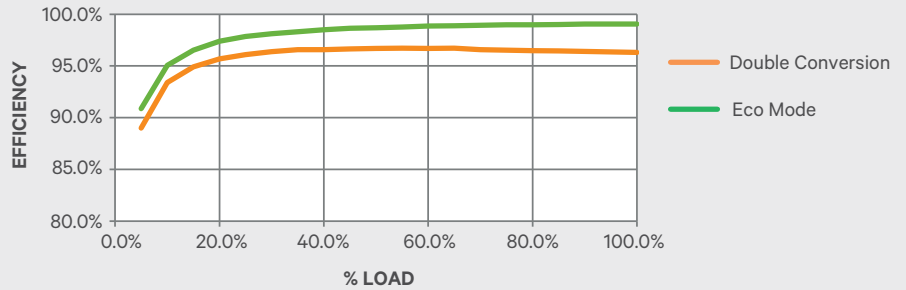


Width comparison of current UPS models of the same kVA size

Total Efficiency

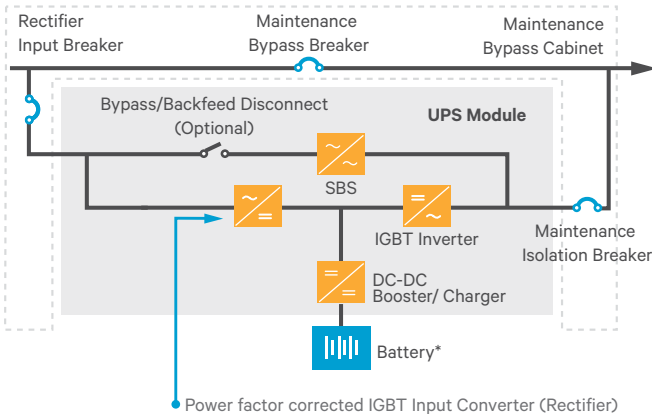
From operating savings, to low capital cost, the Liebert EXL S1 provides the optimal solution to maximize return.

For example, the system achieves high operating efficiency across a broad, practical load range. This is important as load capacities ramp up.



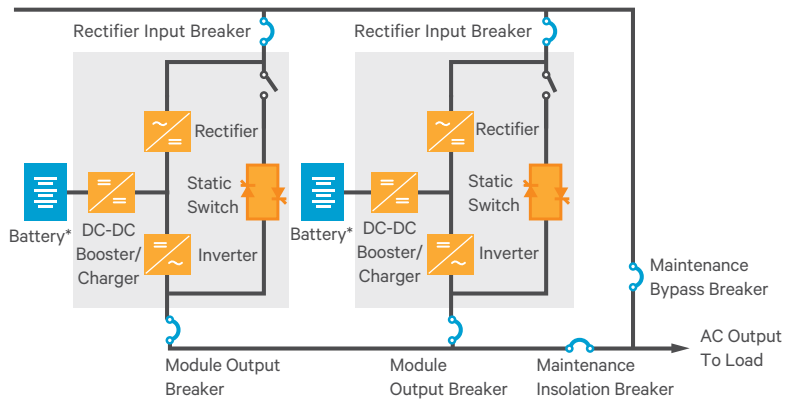
Flexible Configurations

Single Module System



Designed for use with an external maintenance bypass cabinet to ensure compliance with the latest OSHA requirements.

Distributed Bypass Multi-Module System

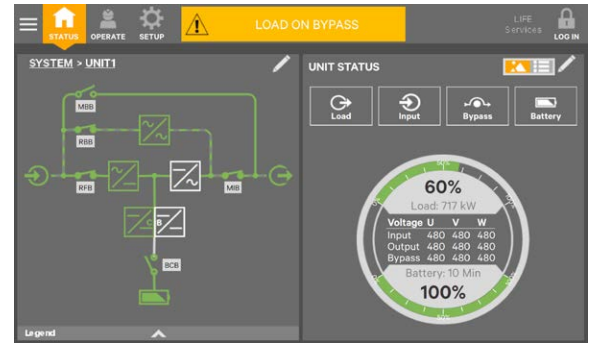


Distributed bypass multi-module design uses distributed 100% continuous duty rated static switches in each module, which provides a low initial cost due to simplified paralleling switchgear.

- External Isolating and Bypass Breakers
- *Battery breaker in cabinet-not shown

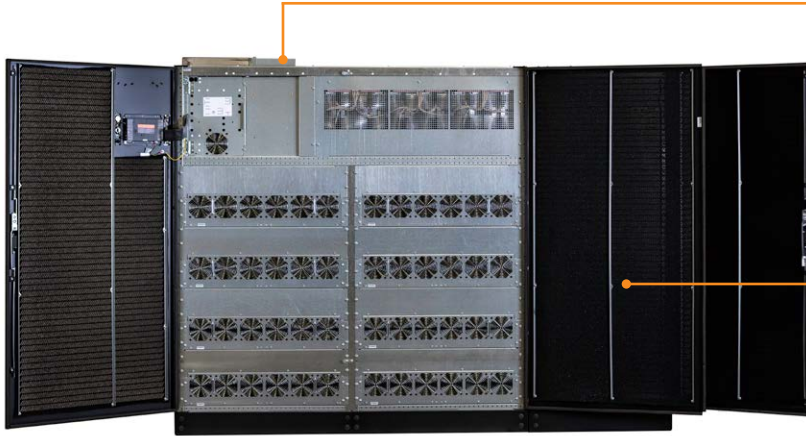
Color Touchscreen Control Panel

- Standard on Liebert® AC Power products
- Multiple access security levels
- User-customizable views
- User-friendly graphical interface
- Interactive single-line mimic diagram
- Dedicated warning/alarm and event log
- Dedicated measurements page
- Status at a glance LED light bar indicates warning and alarm conditions



Smart, Convenient Design for the Modern Data Center

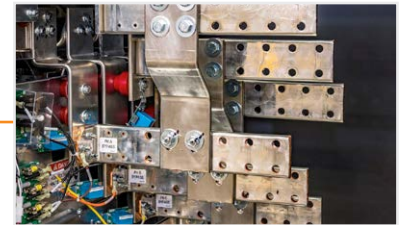
Compact, yet easy to install and service. Flexible, yet robust and adaptable.



Liebert EXL S1 UPS 1000-1200 kVA/kW, doors open



Easy, safe access to communication and monitoring connections via top unit panel - no high voltage components.



Convenient jumpers allow for single or dual input connections.

Intelligent Paralleling

Activate for improved efficiency at partial load. The system can automatically adapt capacity to load requirements and then switch non-loaded units to standby mode, while still delivering continued system availability.



33%



Four units at 33% load each = 96% efficiency.



65%



Two units at 65% load each = 96.8% efficiency.

- Maximizes double conversion efficiency
- Balances system usage
- Improves component lifespan
- Enhances energy and TCO reduction

TECHNICAL SPECIFICATIONS

UPS Rating (kVA)	1000	1100	1200
Output Active Power at 95°F (35°C)(kW)	1000	1100	1200

Input AC Parameters

Input Voltage to Rectifier/ Bypass (VAC)	480, 3-phase, 3-wire
Permissible Input Voltage Range	+10%, -15%
Input Frequency (Hz)	60 ± 5Hz
Input Power Factor	≥ 0.99
Input Current Distortion (THDi) at Nominal Voltage at Full Load (%)	≤ 3.0
Power Walk-in (seconds)	1 to 90 (selectable in 1 second increments)

Battery & DC Parameters

Battery Type	Lithium ion, VRLA (Valve Regulated Lead Acid), VLA (Vented Lead Acid)
Nominal Battery Bus (VDC) / Battery Float Voltage (VDC)	480 / 540
DC Ripple at Float Voltage	< 1.0% (RMS value) < 3.4% Vpp
Temperature Compensated Battery Charging	Standard with Vertiv™ Battery Cabinets

Output Parameters

Load Power Factor Supported (Without Derating)	0.7 Leading to 0.7 Lagging
Output Voltage (VAC)	480, 3-phase, 3-wire
Output Voltage Regulation (%) / Output Voltage Regulation (50% Unbalanced Load) (%)	< 1.0 (3-phase RMS average) / < 2.0 (3-phase RMS average)
Output Frequency (Hz)	60 ± 0.1%
Output THD at Nominal Voltage (Linear Load) (%)	≤ 1.5 (RMS value)
Output THD at Nominal Voltage including a 100kVA Non Linear Load per IEC 6204-3 (%)	≤ 5.0 (RMS value)
Transient Recovery	IEC 62040-3, section 5.31 Figure 1
Voltage Displacement (Balance Loads) / Voltage Displacement (50% Balance Loads)	120 deg ±1 deg / 120 deg ±2 deg
Overload at Nominal Voltage and 77°F (25°C)	125% for 10 minutes, 150% for 60 seconds, 200% for 200 milliseconds

Physical Characteristics

Dimensions, W x D x H / Weight, Unpackaged	104.5 in (2654 mm) x 36.0 in (914 mm) x 79.1 in (2009 mm) / 4667 lbs (2117 kg)
Color	Black, RAL 7021
Protection Class, UPS Enclosure	NEMA 1, IP 20 (with and without front door open)

Environmental

Operating Temperature	32°F to 95°F (0°C to 35°C)
Relative Humidity	0% to 95%, non-condensing
Operating Altitude	Up to 3300 ft (1000 m) without derating
Acoustical Noise at 39 inches (dBA)	78 (72 at partial load)

Communications

Options	2 Liebert® Intellislots
Card Compatibility	IS-UNITY-DP, IS-485EXI
Protocols Available	MODBUS-IP, MODBUS-485, BACNET-IP, BACNET-MSTP, SNMP, HTTP, LIFE™ Services

Standards

Transportation / Safety	ISTA Procedure 1H / UL 1778 5th Edition; CSA 22.2 NO 107.3
EMI / Surge	IEC 62040-2; FCC Part 15, Class A / ANSI C62.41, Category B3
ENERGY STAR® Qualified UPS	Pending

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