VERTIV.™

Liebert®

APS™ UPS

5-20 kVA

Flexible, efficient scalable UPS
for room or row-based applications

A Scalable Power Solution for Dynamic Demands

Provide mission-critical availability while reducing costs and maintaining flexibility for the future with the Liebert® APS™ UPS, a scalable, modular power solution for 5 to 20kVA applications.

Low TCO

With the Liebert APS UPS, you can maintain flexibility for the future and ensure the availability of your critical systems– all while obtaining energy efficiency.

- **Industry-leading efficiency:**
  - **91.5-92%** efficiency: 200-240V in/out transformer-free models.
  - **90-91%** efficiency: 200/100-240/120V in/out transformer-free models.
  - **88.5-89.9%** efficiency: transformer-based models.
- **Modular batteries, controls and power components** to help reduce maintenance costs with user replacement.
- **Scalability** that allows you to cost-effectively add power capacity or battery modules as needed.
- **Module-level redundancy** eliminates the expense of purchasing and planning for additional cabinets.
- **Reduced installation time and cost** because units are shipped pre-configured and factory tested.
- **Integrated into one system:** power modules, batteries, maintenance bypass, and distribution in a single, small-footprint cabinet.
- **Integral battery monitoring** with temperature compensated charging to prolong battery life and help reduce replacement costs.
- **Two year hassle-free factory warranty program** for repair or replacement.

FlexPower core hardware assemblies enable quick and easy capacity increases

Hot-swappable FlexPower assemblies and battery modules may be added without powering down connected equipment.

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Reliability and Serviceability

Your business depends on the data center and the IT network to run. With the Liebert® APS™ UPS solution, you get peace of mind that your critical IT functions – and your business – will be available and running as expected through power disruptions, fluctuations and outages.

- **Internal redundancy capability** (N+2/20kVA) enhances reliability and provides multiple layers of protection.
- **No single point of failure** - Full redundant design allows the critical load to run on conditioned power if there is a failure of any component.
- **Configurable** design provides your desired level of capacity and redundancy.
- **Fault-tolerant design**, enables the power, battery and control modules to take themselves offline if there is a problem, without sacrificing overall system integrity.
- **Superior overload capabilities**, able to provide conditioned power to temporary overloads without transfers to/from bypass power.
- **Internal wrap-around maintenance bypass and Frame-level bypass with independent controls** in separate assembly provide higher reliability and availability.

Low TCO for Today, Flexibility for the Future

Flexibility

The Liebert APS UPS helps you enhance flexibility to stay ready for what's next:

- **Capacity on demand** with FlexPower™ core modules delivers capacity changes in 5 kVA/4.5 kW increments - without powering down.
- **More real kW** - 0.9 power factor provides more real power to support the I.T. load than many other solutions in this size range.
- **Isolated and non-isolated models** to provide the protection and efficiency you need.
- ***Trellis*™ platform connectivity**, so the Liebert APS can easily be integrated with this robust, real-time data center optimization solution.
- **Communications card option to fit your needs**, allow integration with a variety of infrastructure management solutions.
  - **IS-UNITY-DP** provides LIFE Services, Web Interface, SNMP, Modbus IP / RTU, BACNet IP / MSTP, & Envrionmental Sensor support. (temperature, humidity, contact closure, leak detection and more).

  - **IS-485EXI** provides communication with Liebert® SiteScan™
  - **IS-RELAY** provides 5 contact closures
  - **IS-MULTIPORT** provides interface from Liebert MultiLink shutdown software to up to 4 computers
- **Optional matching external battery cabinets.**
- **Installation Flexibility** – use on raised floors, non-raised or in rack.
- **Large input voltage window**, which minimizes transfer to battery and increases battery life; low line transfer can range down to 110v.
- **Integrated distribution PODs** create the right distribution options to meet application requirements.

Service Solutions to Keep You Up and Running

To enhance the availability and trouble-free operation of your Liebert® APS™ UPS, Vertiv™ offers a range of optional service programs, including:

- **LIFE™ Services** remote monitoring and diagnostic features provides early warning of issues so you can respond to them more rapidly – or solve them before they happen.
- **Remote monitoring** by factory experts,24 x 7 x 365.
- **Two year warranty** includes onsite repair.
- **Start-up** by factory-trained engineers to ensure proper installation and operation.
- **Customer resolution center** provides direct access to our engineers, whenever you need them.
- **Exclusive, guaranteed four-hour response time** so you never need to wait long for critical assistance.
- **Preventive maintenance visits** to assess your equipment and make corrective adjustments.

Battery Cabinet Liebert APS UPS

12 Bay Transformer-based Liebert APS UPS

16 Bay Transformer-based Liebert APS UPS

16 Bay Transformer-free Liebert APS UPS

10 Bay Transformer-free Liebert APS UPS

LIEBERT® APS™ UPS								
Parameters		Units	10 Bay	16 Bay	12 Bay	16 Bay	10 Bay	16 Bay
			Xfmr-free		Xfmr-based		Xfmr-free dual inverter	
Frame Rating		kVA	15	20	15	20	15	20
		kW	13.5	18	13.5	18	13.5	18
General & Environmental								
Conducted and radiated EMC levels			IEC/EN/AS 62040-2 Cat 2, CISPR22 Class A, FCC Part 15 Class A					
Compliant safety standards			IEC/EN/AS 62040-1:2008, UL 1778 4th Ed and CSA 22.2 No. 107.1				UL 1778 4th Ed and CSA 22.2 No. 107.1	
Compliant immunity standards			IEC/EN/AS 61000-4-2, 3, 4, 5, 6					
Environmental			WEEE and ROHS2 (6 by 6), REACH Compliant					
Mechanical		Units	10 Bay	16 Bay	12 Bay	16 Bay	10 Bay	16 Bay
Width		mm (in)	440 (17)	440 (17)	440 (17)	440 (17)	440 (17)	440 (17)
Depth		mm (in)	800 (32)	850 (34)	800 (32)	850 (34)	800 (32)	850 (34)
Height		mm (in)	695 (27)	970 (38)	1060 (42)	1240 (49)	695 (27)	970 (38)
Weight (frame rating populated)	Unit weight	kg (lbs)	256.3 (565)	317.5 (700)	360.6 (795)	417.3 (920)	256.3 (565)	317.5 (700)
	Shipping weight	kg (lbs)	274.4 (605)	335.7 (740)	378.7 (835)	435.4 (960)	274.4 (605)	335.7 (740)
Environmental		Units						
Operating temperature		°C (°F)	0 - 40 (32 - 104)					
Relative humidity		%	0 - 95%, non-condensing					
Altitude		m (ft)	3000 (10000) @ 25°C (77°F)					
Efficiency (AC-AC)		%	91.8-92.0	91.6-92.0	88.5-89.9	88.6-89.7	90.4-91.0	90.0-91.0
Nominal heat dissipation		BTU/Hr (max)	4208	5747	5528	7965	4904	6768
Input Data		Units						
Nominal input voltage		VAC	200/208/220/230/240; Single Phase				200/100, 208/120, 220/110, 230/115, 240/120; Single Phase	
			380/400/415; 3 Phase					
Input voltage range		VAC	The input voltage range based on the ouput loading, refer to User Manual					
Power factor		Cos	Single-phase input, > 0.99; three-phase input, > 0.95			Single-phase input, > 0.99		
Input frequency range		Hz	40 to 70 auto-sensing					
Battery Module		Units						
Battery capacity		W	36W @ 15min-rate to 1.67V per cell @ 25°C (77°F)					
Backup time (full load)		minutes	5 (for non-redundant system which has equal number of battery strings and power modules)					
Maximum charge current (full load)		Amps	Power module internal charger: 1.8A / Charger module: 10A					
Nominal voltage		VDC	144					
Recharge time		Hrs	< 5 to 90% capacity (PM internal charger with 1:1 ratio of PM to Battery Strings)					
Output Data		Units						
Output voltage		VAC	200/208/220/230/240; Single Phase		100/100/173/200,110/110/190/220, 115/115/199/230, 120/120/208/240; Single Phase		200/100, 208/120, 220/110, 230/115, 240/120; Single Phase	
Voltage regulation		%	±3					
Voltage stability (100% step load)		%	±7					
Voltage Recovery time		ms	≤ 60					
Voltage distortion		%	≤ 3, linear load					
			≤ 5, non-linear load		≤ 7, non-linear load		≤ 5, non-linear load	
Output frequency		Hz	50/60					
Output overload capability		%	< 104% continuous					
			105% - 130% for 1 min					
			131% - 150% for 10 sec					
			151% - 200% for 1 sec					
			> 201% for 250 msec					

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