



VERTIV™

Liebert®

APSM 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.



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, & Environmental Sensor support. (temperature, humidity, contact closure, leak detection and more).
 - **IS-485EXI** provides communication with Liebert® SiteScan™
 - **IS-RELAY** provides 5 contact closures
 - **IS-MULTIPOINT** provides interface from *Trellis™* Power Insight 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)	440 (17)
Depth	mm (in)	800 (32)	850 (34)	800 (32)	850 (34)	800 (32)	850 (34)	850 (34)
Height	mm (in)	695 (27)	970 (38)	1060 (42)	1240 (49)	695 (27)	970 (38)	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		
Input voltage range	VAC	380/400/415; 3 Phase						
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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SL- 55000 (R10/18)