

Highlights

The Liebert® APM2 UPS is an online, three-phase (in/out), 208/220V; 480V and 415V UPS, optimized with a flexible high-density design.

Key Benefits

- Higher capacity and more flexible ratings 10-150kVA 208/220V or 20-600kVA 480V/415V.
- Maximum efficiency up to 99% ECO mode, 98.8% Dynamic Online mode and 97.5% in Double Conversion mode.
- Diverse application scenarios- In-Row, Room and Against-the-wall and for high-density architectures
- Unity power factor delivers more usable power.
- Modular and scalable design provides optimal flexibility.
- Easy serviceability due to hot swappable power modules, bypass modules, HMI and communication modules and internal battery modules.
- Improved battery management with intelligent BMS for VRLA and Lithium-ion internal batteries 10-120kVA.
- High-capacity continuous rated battery charger enables quicker charging recovery and flexibility with battery energy storage applications.
- Compatible with external VRLA or Lithium-ion cabinet solutions optimized for modern applications
- Integrated paralleling capability up to 4 units for capacity and redundancy.
- Operate up to 50 °C and reduce cooling costs and expand application use
- Intelligent real-time monitoring and controls improve system performance visibility and reaction time.

Liebert APM2 is poised to lead in the industry and is designed with latest technological advancements, and innovative features.

Technology-driven efficient, flexible and scalable power solution for mission-critical facilities.

Introducing the cutting-edge Vertiv™ Liebert® APM2 UPS, a high-density modular solution with innovative features tailored for mission-critical applications in small, medium and large data centers as well as supporting critical loads in commercial, industrial and health care applications. This UPS utilizes the latest three-level IGBT technology and Silicon Carbide converters to achieve up to 97.5% double conversion efficiency, resulting in significant cost savings and reduced environmental impact.

The Liebert® APM2 is designed for scalability, allowing for rapid and secure expansion of system capacity through FlexPower technology. Each power module features scalable power and independent DSP control for automatic operation regulation, enhancing overall system availability.



Liebert® APM2 10-150kVA, 208V
Liebert® APM2 20-300kVA, 480/415V



Liebert® APM2 300-600kVA, 480/415V



Premium Performance

Vertiv™ Liebert® APM2 delivers an extraordinary double conversion efficiency of up to 97.5% , up to 98.8% efficiency in Dynamic online mode and up to 99% in ECO mode that ensures remarkable operational cost savings, reducing both the Total Cost of Ownership (TCO) and the environmental impact.

Flexible and Optimized Design

Liebert® APM2 is designed with latest technology components to achieve high power density 30kW (2U) and 60kW (3U) power module building blocks.

- Liebert APM2 can be configured in-Row/ Room, and against-the wall applications with standard top fan included.
- Available in wide range of power ratings, voltages and wiring configurations.
- Flexible battery configuration available with monitored internal modular VRLA or Li-Ion batteries, or VRLA/Lithium-Ion external battery cabinet options.
- Scalable up to 4 units in parallel.

Easy Serviceability

Liebert APM2 with its front access design eliminates all side and rear service clearances requirements and facilitates easy installation and maintenance.

Hot-swappable and modular architecture enables quick and efficient services experience, reducing MTTR < 30 min for components including bypass module, power module, control module, HMI, and internal battery modules.

Matching Ancillaries (Optional)

Liebert APM2 with its optional matching ancillary suite provides a turn-key system solution. Ancillaries include:

- Maintenance Bypass Cabinet.
- Bypass Distribution Cabinet.
- Dual Input Transformer Cabinet.
- VRLA External Battery Cabinet.
- Modular VRLA External Battery Cabinet.
- Distribution Cabinet.
- Vertiv™ EnergyCore lithium-ion available for 208 and 480V models.

Flexible Monitoring & Management Options

Monitoring adds flexibility to each installation.

- Large, Intuitive 9-inch Full Color touchscreen HMI.
- Supports UNITY communication card; with common management protocols & enhanced security features.
- Compatible with Vertiv™ Power Insight, Vertiv™ Environet™ Alert and Vertiv™ LIFE™ Services for remote monitoring.

Runtime Expandability

Desired runtimes can be achieved with Liebert APM2 through various integrated battery solutions including:

- Modular VRLA or Li-Ion internal batteries.
- Matching VRLA external battery cabinet(s).
- Vertiv™ Energy Core external Li-ion battery cabinet(s).

Vertiv™ Liebert® APM2 Compatible with Vertiv™ EnergyCore Li-Ion Battery Cabinet

Liebert® APM2 is designed to work efficiently with a variety of battery solutions, including the Vertiv™ EnergyCore battery system. Optimize efficiency and free up space by pairing it with the Vertiv EnergyCore battery system that fits your requirements. The Vertiv EnergyCore has options with a high-power density 250kW+ battery cabinet that arrives fully equipped to streamline deployment and reduce costs. **Vertiv EnergyCore can be optimized for a 5-minute EOL runtime, removing the need for extra cabinets compared to other Lithium solutions in the market.** Plus, it's user-friendly interactive touch screen allows for easy control and UPS integration.



Saves footprint of up to 55%

Technical Specifications 208/220V

Models (kVA/kW)	Vertiv™ Liebert® APM2 10-60 kW	Vertiv™ Liebert® APM2 60-150 kW
Ratings	10,20,25,30,40,45,50,60	60,75,80,90,100,120,140,150
Input		
Power Module Capacity	15kW/kVA	30kW/kVA
Nominal input voltage	208/220V (3-phase 3-wire + N + PE)	
Input voltage range without battery discharge*	125-249V	
Nominal input frequency	50/60 Hz	
Input frequency range	40 to 70 Hz	
Input power factor at full load	0.99	
Current THD at full linear load*	< 3%	
Bypass voltage tolerance	Upper limit: +10%,15%,or+20% Vac Default: +15% Vac Lower limit: -10%,-15%,-20%,-30%, or -40% Vac Default: -20% Vac	
Bypass frequency tolerance	±10%	
Battery		
Internal Battery	Modular VRLA or Lithium Ion	External Battery Only
External Battery	VRLA, Lithium	VRLA, Lithium
Battery Bus voltage	192-288v (16~24 jars)	
Voltage temperature compensation	-3.0 mV/°C/Cell (selectable 0 to -5.0 at 25°C)	
Battery charger max. current*	140 A	600 A
Output		
Nominal output voltage	208/220V (3-phase 3-wire + N + PE)	
Nominal output frequency	50/60 Hz	
Output power factor	Unity	
THDv at full linear load	≤ 1%	
Inverter overload capacity*	≤ 105% Continuous; 105% to 125% for 10 min; 125% to 150% for 1 min; >150% for 200 ms	
Double conversion efficiency	Up to 98.4%	Up to 95.7%
ECO mode efficiency	Up to 98%	Up to 98.8%
Dynamic Online	Up to 97%	Up to 97%
Dimensions and Weight		
Frame Dimensions (W x D x H) mm	600 x 1030 x 2000 mm	600 x 1030 x 2000 mm
Kg	328 kg (without power module)	332k (without power module)
Power Module (W x D x H) mm	440 x 510 x 87 mm	440 x 630 x 130 mm
Kg	26.4 kg	35.5 kg
Battery Module VRLA (W x D x H) mm	230 x 730 x 87 mm	-
Battery Module Weight (Kg)	35.5kg	-
Battery Module Li-Ion (W x D x H) mm	796 x 440 x 87	-
Battery Module Li-Ion Weight (Kg)	36 Kg	-
General		
Noise within 1 m (no fan)	≤ 65 dB	≤ 65 dB
Maximum altitude	<1500 m without derating (compliant with IEC/EN 62040-3 at altitudes exceeding 1500m)	
Operating Temperature	32°F to 122°F (0°C to 50°C)*C with automatic derating >40°C	
Relative Humidity	0% to 95%, non-condensing	
Protection level IEC (60529)	IP20	
General and safety requirements for UPS	UL 1778 5th Edition; CSA 22.2 NO 107.3	
EMC requirements for UPS	IEC 62040-2; FCC Part 15, Class A	
Transportation	ISTA Procedure 3B	

Specifications are subject to change without any further notification.

Technical Specifications 480/415/400V

Models (kVA/kW)	Vertiv™ Liebert® APM2 20-120 kW	Vertiv™ Liebert® APM2 120-300 kW	Vertiv™ Liebert® APM2 300-600 kW
Ratings	20,30,40,50,60,80,90,100,120	120,150,180,200,225,250,300	300,360,400,420,480,500,540,600
Input			
Power Module Capacity	30kW/kVA	60kW/kVA	
Nominal input voltage	380/400/415/480 V (3-phase 3-wire + N + PE); 480V (3-phase 3-wire+PE)		
Input voltage range without battery discharge*	380/400/415V: 228~478V; 480V: 288~528V		
Nominal input frequency	50/60 Hz		
Input frequency range	40 to 70 Hz		
Input power factor at full load	0.99		
Current THD at full linear load*	≤ 3%		
Bypass voltage tolerance	For 380V/400V/415V models, Upper limit selections: +10%, +15%, +20%; default +15%. Lower limit selections: -10%, -15%, -20%, -30%, -40%; default -20%. For 480V models, Upper limit selections: +10%. Lower limit selections: -10%, -15%; default -10%.		
Bypass frequency tolerance	±10%		
Battery			
Internal Battery	Modular VRLA or Lithium-Ion	External Battery Only	
External Battery	VRLA, Lithium Ion, Nickel Zinc	VRLA, Lithium Ion, Nickel Zinc	
Battery Bus voltage	384-528V (32~44 jars)	360-600V (30~50 jars)	
Voltage temperature compensation	-3.0 mV/°C/Cell		
Battery charger max. current*	140 A	600 A	1200 A
Output			
Nominal output voltage	380/400/415/480 V (3-phase 3-wire + N + PE); 480V (3-phase 3-wire+PE)		
Nominal output frequency	50/60 Hz		
Output power factor	Unity		
THDv at full linear load	≤ 1%		
Inverter overload capacity*	≤ 105% Continuous; 105% to 125% for 10 min; 125% to 150% for 1 min; 150% to 200% for 200 ms		
Double conversion efficiency	Up to 97%	Up to 97.5%	
ECO mode efficiency	Up to 99.5%		
Dynamic Online	Up to 98%	Up to 99.2%	
Dimensions and Weight			
UPS Dimensions (W x D x H), mm	600 x 1030 x 2000 mm	600 x 1030 x 2000 mm	1200 x 1030 x 2000 mm
UPS Weight (kg) (no power modules)	328 kg	332kg	638.5kg
Power Module Dimensions (W x D x H), mm	440 x 518 x 87 mm	440 x 630 x 130 mm	
Power Module Weight (kg)	26.4 kg	35.5 kg	
Battery Module VRLA (W x D x H) mm	230 x 730 x 87 mm		
Battery Module Weight (Kg)	30kg		
Battery Module Li-Ion (W x D x H) mm	796 x 440 x 87		
Battery Module Li-Ion Weight (Kg)	36 Kg		
General			
Noise within 1 m (no fan)	≤ 65 dB		≤ 70dB
Maximum altitude	<1500 m without derating (compliant with IEC/EN 62040-3 at altitudes exceeding 1500m)		
Operating Temperature	32°F to 122°F (0°C to 50°C)*C with automatic derating >40°C		
Relative Humidity	0% to 95%, non-condensing		
Protection level IEC (60529)	IP20		
General and safety requirements for UPS	UL 1778 5th Edition; CSA 22.2 NO 1073		
EMC requirements for UPS	IEC 62040-2; FCC Part 15, Class A		
Transportation	ISTA Procedure 3B		

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