VERTIV.

Brochure

Vertiv™ Liebert® APS VRLA

Scalable modular UPS solution 5 kVA – 20 kVA with N+1 redundancy for edge and mission-critical applications. Ready for today's needs, built for tomorrow's growth.



Scalable, modular power protection for critical IT and edge environments

Vertiv™ Liebert® APS UPS combines modular scalability and flexible battery support for IT and edge environments. It delivers reliable power protection from 5 to 20 kVA (N+1).

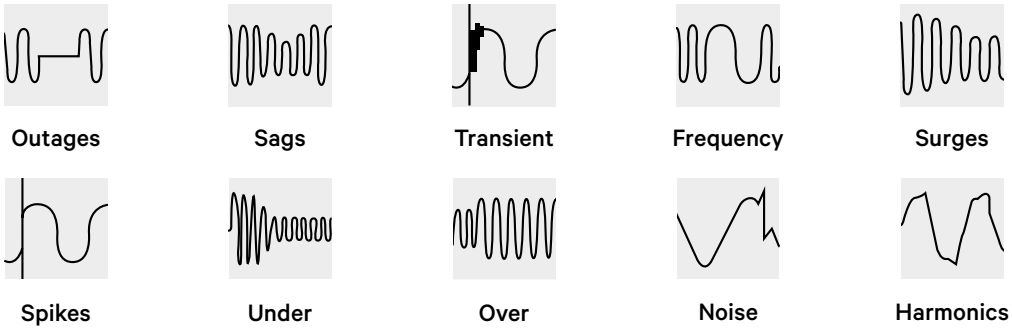
Modular power on demand

Vertiv™ Liebert® APS UPS grows with your business. Power modules (in 5 kVA increments) and battery modules install quickly, to meet changing load requirements. The modular design helps right-size capacity at installation and scale over time with a pay-as-you-grow approach. Hot-swappable modules simplify maintenance and keep systems online during upgrades for maximum uptime.

Always-on protection

Vertiv™ Liebert® APS UPS delivers built-in N+1 redundancy options for both power and battery modules, eliminating single points of failure and keeping critical loads protected even during maintenance. Its high overload capacity handles short-term surges without switching to bypass power, while a wide input voltage window reduces unnecessary battery use and extends battery life. This makes Vertiv™ Liebert® APS UPS ideal for the rising demands of AI, edge computing, and other mission-critical applications.

Protection against all critical power problems



Remote management and intelligent monitoring

Every Vertiv™ Liebert® APS UPS ships with the factory-installed Vertiv™ Liebert® IntelliSlot™ RDU120 communications card UL2900-1 and IEC 62443-4-2 Cybersecurity certified for peace of mind knowing that you are securely communicating online. The card enables secure monitoring and real-time diagnostics.

The modular design of the Vertiv™ Liebert® APS reduces mean time to repair (MTTR), enabling maximum uptime and operational efficiency.

Vertiv™ Liebert® APS UPS VRLA features

HMI module

LCD display for local monitoring, configuration, and status updates.

Power module

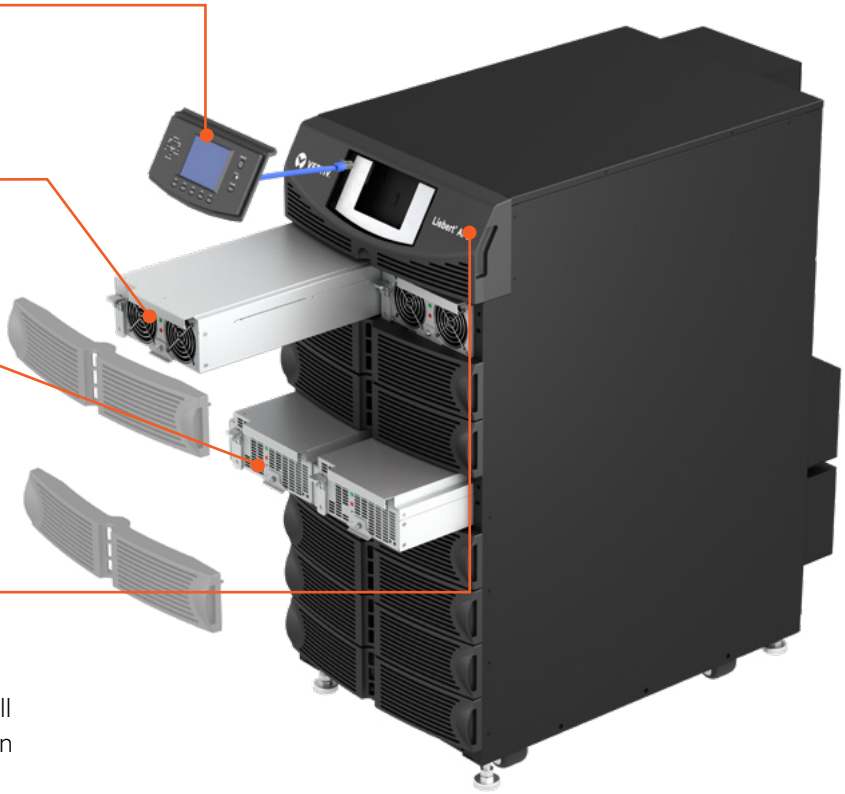
Adds 5 kVA / 4.5 kW of power capacity, enabling quick scaling or redundancy.

Battery module

Hot-swappable battery strings (VRLA) expand runtime and adapt to site requirements.

System control and monitoring units

Redundant control units (standard on all Vertiv™ Liebert® APS frames), coordinate all modules with fault-tolerant logic to maintain system availability.





RDU120 networking card

Factory-installed card UL2900-1 and IEC 62443-4-2 Cybersecurity certified enabling secure remote management, real-time diagnostics, and environmental monitoring through Vertiv™ LIFE™ Services.

Optional power output distribution modules (Up to two PD2 Series PODS)

Flexible outlet configurations available for different load requirements in addition to the standard hardwire output.

See PODs options on page 10.

Built-in redundancy and modular design for maximum uptime

Vertiv™ Liebert® APS UPS is engineered for continuous availability through a fault-tolerant modular design that keeps power conditioned and stable even during maintenance or component failure.

System architecture and availability

Module-level N+1 redundancy	Eliminates single points of failure and maintains output power if a module is removed or replaced.
FlexPower™ Core assemblies	Delivers capacity in 5 kVA / 4.5 kW increments for precise configuration and easy expansion.
Fault-tolerant design	Isolates a module in error while the system continues to operate.
Up to 200% overload capacity	Maintains conditioned output during brief overload events without switching to bypass.

Battery and power management

Integrated battery monitoring and temperature-compensated charging	Extends battery service life and reduces replacement costs.
Modular power, control, and battery components	Simplifies service through user-replaceable design, cutting maintenance time and cost.
Optional external maintenance bypass cabinet	Enables safe service or upgrades without taking the load offline.

Performance and deployment flexibility

0.9 output power factor	Provides more usable kilowatts to IT and edge loads in the same footprint.
Wide input-voltage window	Minimizes unncessary battery use and helps preserve runtime availability.
Power Output Distribution (POD) options	Offers configurable outlet layouts to meet application requirements.

Key applications

Retail

Power failure in retail stops transactions, disrupts inventory system, and negatively impacts customer experience. Outages interrupt point-of-sale systems, slow down order processing, and affect in-store services that rely on connected devices. The conditioned power of Vertiv™ Liebert® APS UPS keeps core retail operations functioning even when power interruptions occur and allows payment systems, servers, and network devices to run smoothly. Its modular, hot-swappable design lets you add power or battery capacity as business requirements change.



Finance

Banks and financial institutions depend on uninterrupted power for secure transactions and continuous access to data. Even brief outages can distrupt ATM networks, delay approvals, or affect customer access to online and mobile banking. Clean, consistent power keeps fraud-detection tools, branch systems, and communication links stable throughout day-to-day operations. Vertiv™ Liebert® APS UPS delivers stable, conditioned power to keep critical systems online. Built-in redundancy and scalable capacity support branch operations and increasing digital demand.



Infrastructure

Transportation, utilities, emergency response centers and other infrastructure networks rely on constant power for control, monitoring, and communications. Outages can interrupt signaling, delay responses, or limit visibility across large, distributed operations. A resilient power infrastructure helps maintain uptime for sensors, controllers, and dispatch systems that support reliable service delivery. Vertiv™ Liebert® APS UPS provides reliable, redundant power to keep these systems operating. Its modular design enables fast service and expansion without taking the system offline.



Build your Vertiv™ Liebert® APS UPS system in three simple steps

Standard configurations

The Vertiv™ Liebert® APS UPS includes power modules, battery modules, and a pre-installed communication card. Systems are sold as pick-to-order, allowing organizations to start with a standard configuration and add additional power modules and/or battery runtime as needed. All required components ship together in a single shipment. For custom-configured solutions, please contact your local Vertiv representative.

Step 1: Choose your frame size

Select the frame size based on maximum power rating, and available space for battery modules. Then, choose VRLA battery modules according to your site's runtime requirements, budget, and maintenance preferences.

The Vertiv™ Liebert® APS UPS is equipped with proven VRLA battery technology, providing reliable backup power for standard environments.



AS1 Series



AS2 Series

AS1 & AS2 Series





15 kVA, 10 Bay, Xfmr-free
17.3 W x 31.5 D x 27.4 H inches
(440 W x 800 D x 695 H mm)



20 kVA, 16 Bay, Xfmr-free
17.3 W x 33.5 D x 38.2 H inches
(440 W x 850 D x 970 H mm)

APS series	Input type	Output voltage	Max capacity	Power/Charger modules bays	Battery modules bays
AS1	220/230/240 V single-phase or 380/400/415 V three-phase	220/230/240 V single-phase	15 kVA (N+1) 13.5 kW	Top 4-Bays	All 10-Bays
AS2	220/230/240 V single-phase or 380/400/415 V three-phase	220/230/240 V Single-Phase	20 kVA (N+1) 18.0 kW	Top 6-Bays	All 16-Bays



Step 2: Determine power rating and battery strings

Choose the right power capacity and battery configuration to meet your runtime and redundancy needs. Use the table below to find the correct catalog number and battery string quantity.

Frame	Power rating	VRLA Part#	# Battery strings	# Battery modules
AS1	5 kVA (4.5 kW)	AS1A0NCUMNNXNVM	1	2
	10 kVA (9 kW)	AS1B0NCVMNNXNVM	2	4
	15 kVA (13.5 kW)	AS1C0NCWMNNXNVM	3	6
AS2	5 kVA (4.5 kW)	AS2A0NCUMNNXNVM	1	2
	10 kVA (9 kW)	AS2B0NCVMNNXNVM	2	4
	15 kVA (13.5 kW)	AS2C0NCWMNNXNVM	3	6
	20 kVA (18 kW)	AS2D0NCXMNNXNVM	4	8

Note: At 100% load, the VRLA option provides approximately 5 minutes of runtime.
For detailed runtime charts and additional information, please refer to the Technical Specifications section on page 17.

Configuration options

Your Vertiv™ Liebert® APS UPS may be designed as non-redundant or redundant, depending on the criticality of the attached load:

- **Non-redundant:** All installed modules share the full load. If one fails, the system transfers to bypass power
- **Redundant (N+1):** Add one extra power module beyond your load requirement to provide fault tolerance and maximum availability. All installed modules share the full load. In the event of overload or unexpected hardware issues, the remaining modules support the full load. If a battery module is compromised the remaining modules in the system will provide reduce runtime but will still deliver battery backup in the event of a power failure.
- **Example:** 20 kVA total for a 15 kVA N+1 system. If one module malfunctions, it is automatically isolated, and the remaining modules continue supplying power without interruption.
- **How to configure redundancy:**
  - Add one extra power module for N+1 redundancy; add two extra power modules for N+2 redundancy, etc.
  - Add one extra battery module for battery redundancy.
  - For complete redundancy, add both.

Redundant control units

- Standard on all Vertiv™ Liebert® APS frames, these units use fault-tolerant logic to coordinate all modules, ensuring continuous system availability.
- Redundancy mode and redundancy alarms can be configured via the LCD screen on the UPS. (Refer to user guide for more details)

Note: The actual selection of extra modules for redundancy will be done in Step 3.

Step 3: Select accessories

The Vertiv™ Liebert® APS UPS offers high flexibility and scalability for a wide range of applications. Whether expanding an existing system to support rising power demands or adding redundancy to strengthen system availability, additional power modules or battery modules can be integrated into new or existing installations. Installation is simple: just slide the modules into the prewired slots. This can be done by your team or by Vertiv's expert service professionals.

Beyond these options, the system can be enhanced with external battery cabinets (EBCs) for extended runtime, maintenance bypass cabinets, communication cables, rail-mount kits, and a variety of Power Output Distribution (POD) unit configurations. These accessories help the Vertiv™ Liebert® APS UPS adapt seamlessly to evolving requirements.

What's Included:

- UPS
- Power and battery modules
- Quick Start Guide
- Vertiv™ Liebert® IntelliSlot™ RDU120 networking card
- Pre-installed casters and leveling feet
- Removable LCD display

FlexPower™ Module options



Vertiv™ FlexPower™ Modules enable quick and easy power capacity upgrades to Vertiv™ Liebert® APS UPS systems in 5 kVA / 4.5 kW increments. These hot-swappable modules can be installed without taking the unit offline.

Model number	Description
APS5KPWRMOD2	5 kVA/4.5 kW Power Module for AS1 and AS2 series Liebert APS systems

Battery and battery charger modules



Vertiv™ Liebert® APS UPS battery module

Each battery string consists of two battery modules and occupies two bays in the Vertiv™ Liebert® APS UPS system and must be installed as a full set. Partial installation is not supported. This approach maintains optimal performance, safety, and reliability.

Model number	Description
APSBATMODCU	Vertiv™ Liebert® APS VRLA Battery String (2 Battery Modules)

Vertiv™ Liebert® APS UPS charger module



The APSCHRGRMOD 10 A battery charger that operates in parallel with the chargers integrated in each power module. To increase runtime in the Vertiv™ Liebert® APS UPS, this 10 A charger should be used when battery string to power module ratio is greater than 3:1.

External Battery Cabinet (EBC) for Vertiv™ Liebert® APS UPS

When your critical applications demand longer runtime, the Vertiv™ Liebert® APS UPS External Battery Cabinet (EBC) delivers scalable energy storage without compromising flexibility. Designed for all Vertiv™ Liebert® APS UPS models, the EBC features a 14-bay cabinet that can accommodate 1 to 7 battery strings, allowing you to tailor backup duration to your specific needs. This modular approach enables easy expansion, optimized performance, and seamless integration with your Vertiv™ Liebert® APS UPS system–providing reliable power protection for edge and IT environments.



14 Bay EBC
17.3 W x 33.5 D x 38.2 H inches
(440 W x 850 D x 970 H mm)

Battery Strings	VRLA Part#
1 Battery String	AS7EBC1CCUBXNVM
2 Battery Strings	AS7EBC2CCUBXNVM
3 Battery Strings	AS7EBC3CCUBXNVM
4 Battery Strings	AS7EBC4CCUBXNVM
5 Battery Strings	AS7EBC5CCUBXNVM
6 Battery Strings	AS7EBC6CCUBXNVM
7 Battery Strings	AS7EBC7CCUBXNVM

Part number	Description
APSEBCCBL1M	1 m EBC cable
APSEBCCBL3M	3 m EBC cable
APSEBCCBL5M	5 m EBC cable

Power Output Distribution (POD) options

Add PODs to match the output configuration of your equipment. Each POD provides multiple receptacle layouts and installs quickly without rewiring. AS1 can support up to 1 POD and AS2 up to 2 POD.



POD model number	Output Connections
PD2-200	(4) IEC320-C19, (4) IEC320-C13
PD2-201	(2) IEC320-C19, (8) IEC320-C13
PD2-202	(12) IEC320-C13
PD2-204	(4) IEC320-C13, (2) IEC309-32A
PD2-205	(12) IEC320 C13/C19 combination outlets

Maintenance bypass cabinet option

The Vertiv™ Liebert® MBC 20 kVA (VMBC-20KIRT4U) is a 4U rack-mountable maintenance bypass cabinet with integrated power output distribution. Designed for Vertiv™ Liebert® APS AS1 and AS2 UPS systems, this accessory enables maintenance or UPS replacement without interruption to the connected load. The MBC is hardwired to the UPS and includes three (3) IEC 60309 32 A outlets, twelve (12) IEC C13/C19 combination outlets via the integrated PD2-205 power distribution module, and input/output terminal blocks for hardwired AC input and output when required.





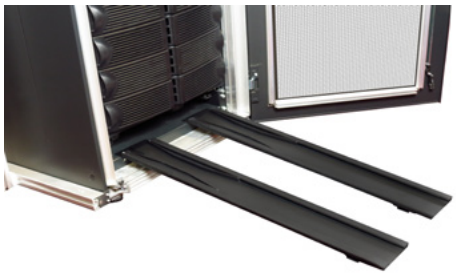
Vertiv™ Maintenance Bypass Cabinet Option

Suitable for use with all Vertiv™ 5-20 kVA single phase UPS.
Integrated lock out/tag out arm for maximum site and personnel safety.

MBC model number	Dimensions	Input	Output
VMBC-20KIRT4U	16.9W x 21.6D x 6.8H (in) 430W x 549D x 173H (mm)	Hardwired (L-L-N-G)	3x IEC 60309 32A, Hardwired, PD2-205 POD Included (12 x C13/19 combo sockets)

Rack mount kit

Each Vertiv™ Liebert® APS UPS includes factory-installed casters and levelling feet. For rack installations, an optional rack mount kit allows the unit to roll into the bottom of a 600 mm four-post rack. The kit includes ramps, brackets, and a bezel.



Model number	Application	Model(s) supported	Style	Description
APSRACKKIT	4-Post rack	AS1 and AS2	Shelf & bracket	Includes all necessary hardware to mount the Vertiv™ Liebert® APS UPS in a 600 mm wide 4-Post rack. Included with the kit is a shelf, two sets of ramps, rackmount brackets, and a bezel.

RDU120 Network communication card

The factory-installed Vertiv™ Liebert® UPS APS Intellislot RDU120 card enables communication between Vertiv products such as Vertiv™ Environet™ Alert, Vertiv™ Power Insight, Vertiv™ Power Assist and Vertiv™ LIFE™ Services. It provides web access, data via SNMP, Modbus and BACNet for Vertiv equipment. Environmental sensor data access is provided via web and SNMP.



Benefits

- Secure data transport across connected systems (Certified to UL2900-1)
- Secure boot with a hardware trust anchor
- Advanced security protcols
- Real-time view of parametric data and system statuses
- Insight into environmental conditions for efficient decision-making
- Flexible communication across diverse device protocols
- Seamless integration with IT and building management platforms
- Remote monitoring and control via web, SNMP, Modbus, and BACnet
- Streamlined configuration and firmware upgrades for simpler fleet management
- UL2900-1 and IEC 62443-4-2 Cybersecurity certified for peace of mind knowing that you are securely communicating online
- 1Gb Ethernet supports modern network environments

Vertiv™ UPS software benefits ladder

Feature	Vertiv™ Power Assist	Vertiv™ Power Insight	Vertiv™ Environet™ Alert	Vertiv™ Avocent® DSView™ Solutions	Vertiv™ Environet™ Connect
Management					
Hypervisor plugin		vCenter, vXRail, Nutanix			
Automated server shutdown	●	●			
Reporting					
Analytics and reporting			●		●
Historical data		●	●		●
Thresholds and alerts		●	●	●	●
Alarm management	●	●	●	●	●
Monitoring					
IT device monitoring				●	
Thermal monitoring			●		●
Power monitoring	UPS only	UPS and Rack PDU	●	UPS, Rack PDU, Servers	●
Specifications					
Protocol support	USB/SNMP	SNMP	SNMP, Modbus TCP, BACnet IP	SNMP, IPMI, Redfish	SNMP
Equipment support	Vertiv only	Vertiv only	Multi-vendor	Multi-vendor	Multi-vendor
Max. devices support	2	100	Scalable	Scalable	Scalable
Software architecture	On-prem	On-prem	On-prem	On-prem	Multi-tenant cloud based
Licensing	Free	Free	Perpetual	Subscription	Subscription


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Network communication cards and environmental sensors

Optional Intellislot cards are compatible with all Vertiv™ Liebert® APS UPS systems

RDU120 Card environmental sensors

A2D-10	Analog to digital converter provides the ability to connect a dry contact, 0-10V, or 4-20mA sensor to a Plug-n-Play sensor port. Includes a 10ft / 3m cable.
A2D-50	Analog to digital converter provides the ability to connect a dry contact, 0-10V, or 4-20mA sensor to a Plug-n-Play sensor port. Includes a 10ft / 3m cable.
GT3HD	Temperature, humidity, and dew point sensor with dual inputs for included 3ft / .9m and 6ft / 1.8m temperature sensors for monitoring top, middle, and bottom of a rack or cabinet. Includes a supplementary input for daisy-chaining additional sensors. Includes 10ft / 3m cable.
GT3HD-50	Temperature, humidity, and dew point sensor with dual inputs for included 3ft / .9m and 6ft / 1.8m temperature sensors for monitoring top, middle, and bottom of a rack or cabinet. Includes a supplementary input for daisy-chaining additional sensors. Includes 50ft / 15.2m cable.
GTHD	Temperature, humidity, and dew point sensor. Includes a supplementary input for daisy-chaining additional sensors. Includes 10ft / 3m cable.
GTHD-50	Temperature, humidity, and dew point sensor. Includes a supplementary input for daisy-chaining additional sensors. Includes 50ft / 15.2m cable.
SRT-12	Temperature sensor used to monitor temperature in critical environments. Includes a 12ft/ 3.6m cable.
SRT-20	Temperature sensor used to monitor temperature in critical environments. Includes a 20ft / 6.1m cable.
SRT-50	Temperature sensor used to monitor temperature in critical environments. Includes a 50ft /15.2m cable.
SRT-100	Temperature sensor used to monitor temperature in critical environments. Includes a 100ft /30.4m cable.
RTAFHD3-12	Temperature, airflow, humidity, and dew point sensor. Includes 12ft / 3.6m cable.
RTAFHD3-20	Temperature, airflow, humidity, and dew point sensor. Includes 20ft / 6.1m cable.
RTAFHD3-50	Temperature, airflow, humidity, and dew point sensor. Includes 50ft / 15.2m cable.
RTAFHD3-100	Temperature, airflow, humidity, and dew point sensor. Includes 100ft / 30.4m cable.
FS-15	0-5VDC conductivity based flood sensor used to detect the presence of water. Includes a 15ft/ 4.5m cable.
FS-100	0-5VDC conductivity based flood sensor used to detect the presence of water. Includes a 100ft / 30.4m cable
RDPS	Magnetic normally-closed dry-contact sensor used to monitor remote door position. Includes 30ft / 9.1m cable.
RDPS-50	Magnetic normally-closed dry-contact sensor used to monitor remote door position. Includes 50ft / 15.2m cable.
RDPS-100	Magnetic normally-closed dry-contact sensor used to monitor remote door position. Includes 100ft / 30.4m cable.
PFS-100 US	0-5V power failure sensor to monitor the presence of utility power. Includes a 100ft / 30.4m cable and US NEMA power supply



Services

Power startup service - Power and battery modules installation and start-up only

- Expands the Vertiv™ Liebert® APS UPS warranty to include on-site parts and labor for the full two-year warranty period
- Startup of new UPS performed by Vertiv factory trained technician
- Services performed Monday thru Friday 8-5 pm or 7 X 24, excluding national holidays
- The site trip includes the following services for each UPS system:
  - UPS integration (frame + power module(s) + battery module(s))
  - Non powered inspection
  - UPS electrical and operational checkout
  - Full parts and labor for any work required on the UPS
  - Customer operation training at time of start-up
    NOTE: UPS frame must be installed and hardwired by customer with a certified electrician.
- **Start-up Plus:** Adds 1 full Preventive Maintenance (PM) visit during the standard warranty period

Installation and startup only	**Standard**		**Plus**	
Equipment model / type	**M-F, 8-5**	**7x24**	**M-F, 8-5**	**7x24**
All Liebert® APS UPS Models	SUAPSXXMF	SUAPSXX24	SUPAPSXXMF	SUPAPSXX24

Power assurance package summary — 5-year on-site emergency response

- Full-service five (5) year contract term commencing upon the start-up date
- On-site service support
- Includes all above “Power Startup Services” and 5-year on-site services
- Services performed 7 X 24, excluding national holidays
- One Preventive Maintenance visit after 3rd year scheduled by the customer (excluding national holidays)
- 100% parts coverage, including internal batteries, POD and web card
- 100% labor and travel coverage 7 days/week, 24 hours/day
- Access to Customer Services Network portal

VRLA models include a 2-year warranty coverage for the system and batteries.

Power assurance package options

Bundled start-up service and 5-year on-site emergency response

Equipment model /type	**Part Number**	**Description**
Vertiv™ Liebert® APS AS1 5 kVA	RUPS-PA5-008	Power Assurance 5YR-PM8X5-8HR RESP8X5 Group 8
Vertiv™ Liebert® APS AS1 10 kVA	RUPS-PA5-008	Power Assurance 5YR-PM8X5-8HR RESP8X5 Group 8
Vertiv™ Liebert® APS AS1 15 kVA	RUPS-PA5-009	Power Assurance 5YR-PM8X5-8HR RESP8X5 Group 9
Vertiv™ Liebert® APS AS2 5 kVA	RUPS-PA5-008	Power Assurance 5YR-PM8X5-8HR RESP8X5 Group 8
Vertiv™ Liebert® APS AS2 10 kVA	RUPS-PA5-008	Power Assurance 5YR-PM8X5-8HR RESP8X5 Group 8
Vertiv™ Liebert® APS AS2 15 kVA	RUPS-PA5-009	Power Assurance 5YR-PM8X5-8HR RESP8X5 Group 9
Vertiv™ Liebert® APS AS2 20 kVA	RUPS-PA5-009	Power Assurance 5YR-PM8X5-8HR RESP8X5 Group 9

Technical specification

Run-time

Vertiv™ Liebert® APS UPS

Standard catalog numbers				VRLA run-times			
Frame	**Power rating**	**VRLA Part#**	**# Battery strings**	**Run-time 25% Load**	**Run-time 50% Load**	**Run-time 75% Load**	**Run-time 100% Load**
AS1	5 kVA (4.5 kW)	AS1A0NCUMNNXNVM	1	35 min	15 min	8 min	5 min
	10 kVA (9 kW)	AS1B0NCVMNNXNVM	2	35 min	15 min	8 min	5 min
	15 kVA (13.5 kW)	AS1C0NCWMNNXNVM	3	35 min	15 min	8 min	5 min
AS2	5 kVA (4.5 kW)	AS2A0NCUMNNXNVM	1	34 min	15 min	8 min	5 min
	10 kVA (9 kW)	AS2B0NCVMNNXNVM	2	35 min	15 min	8 min	5 min
	15 kVA (13.5 kW)	AS2C0NCWMNNXNVM	3	35 min	15 min	8 min	5 min
	20 kVA (18 kW)	AS2D0NCXMNNXNVM	4	36 min	15 min	8 min	5 min

Weight

Vertiv™ Liebert® APS UPS

Frame	**Power rating**	**VRLA Part#**	**VRLA UPS Unit weight kg (lbs)**	**VRLA UPS shipping weight kg (lbs)**
AS1	5 kVA (4.5 kW)	AS1A0NCUMNNXNVM	170 (375)	193 (425)
	10 kVA (9 kW)	AS1B0NCVMNNXNVM	213 (470)	240 (530)
	15 kVA (13.5 kW)	AS1C0NCWMNNXNVM	256 (565)	288 (635)
AS2	5 kVA (4.5 kW)	AS2A0NCUMNNXNVM	188 (415)	211 (465)
	10 kVA (9 kW)	AS2B0NCVMNNXNVM	231 (510)	259 (570)
	15 kVA (13.5 kW)	AS2C0NCWMNNXNVM	275 (605)	306 (675)
	20 kVA (18 kW)	AS2D0NCXMNNXNVM	318 (700)	354 (780)

Vertiv™ Liebert® APS UPS

	AS1 Series	AS2 Series
Description	10-Bay, Transformer-free	16-Bay, Transformer-free
Frame Rating	15 kVA / 13.5 kW	20 kVA / 18 kW
Mechanical W x D X H		
Dimension in (mm)	17 x 32 x 27 (440 x 800x 695)	17 x 34 x 38 (440 x 850 x 970)
Component Weight (frame fully populated)		
Frame weight without power and battery modules kg (lbs)	127 (280)	145 (320)
Frame weight without power and battery modules shipping weight kg (lbs)	145 (320)	163 (360)
Power module kg (lbs)	9 (20)	9 (20)
Power module shipping weight kg (lbs)	11 (25)	11 (25)
VRLA battery string two modules kg (lbs)	34 (75)	34 (75)
VRLA battery string two modules shipping weight kg (lbs)	36 (80)	36 (80)
Charger module	6.8 (15)	6.8 (15)
Charger module shipping weight kg (lbs)	9 (20)	9 (20)
Environmental		
Operating temperature	0 - 40°C (32 - 104°F)	
Relative humidity	0 - 95%, non-condensing	
Altitude	3000 m (10000 ft.), 25°C (77°F)	
Nominal heat dissipation	4208 BTU/Hr (max)	5747 BTU/Hr (max)
Input data		
Default input voltage	230 VAC	
Configurable input voltage	200/208/220/230/240 VAC single-phase or 380/400/415 VAC three-phase	
Input power factor	Single-Phase Input ≥ 0.99 Three-phase Input ≥ 0.95	
Input frequency range	40 Hz to 70 Hz auto-sensing	
Recommended input protection circuit breaker		
Power Rating	5 kVA (4.5 kW) 10 kVA (9 kW) 15 kVA (13.5 kW)	5 kVA (4.5 kW) 10 kVA (9 kW) 15 kVA (13.5 kW) 20 kVA (18 kW)
Input Breaker Size	50 A 63 A 100 A	50 A 63 A 100 A 125 A

	AS1 Series	AS2 Series
Output data		
Default output voltage	230 VAC	230 VAC
Configurable output voltage	200/208/220/230/240 VAC Single-Phase	200/208/220/230/240 VAC Single-Phase
Voltage regulation	±3%	±3%
Voltage stability (100% step load)	±7%	±7%
Voltage recovery time	≤60 ms	≤60 ms
Voltage distortion	≤ 3%, linear load ≤ 5%, non-linear load	≤ 3%, linear load ≤ 5%, non-linear load
Output frequency	50Hz default; 50/60Hz user-configurable	
Output overload capability	< 104% continuous; 105% - 130% for 1 min; 131% - 150% for 10 sec; 151% - 200% for 1 sec; > 201% for 250 msec	
Compliance		
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 5th Ed and CSA 22.2 No. 107.3	
Compliant immunity standards	IEC/EN/AS 61000-4-2, 3, 4, 5, 6	
Environmental	WEEE and ROHS2 (6 by 6), REACH Compliant	
VRLA battery module		
Backup time (full load)	5 mins. (for non-redundant system which has equal number of battery strings and power modules)	
Maximum charge current (full load)	Power module internal charger: 1.8A / Charger module: 10A	
Nominal voltage	144 VDC	144 VDC
Recharge time	< 5hrs. to 90% capacity (PM internal charger with 1:1 ratio of PM to Battery Strings)	

Build-to-order systems are available, please contact your local Vertiv office for details.



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