VERTIV.

Product brochure

Vertiv™ PowerUPS 9000

Vertiv™ PowerUPS 9000 overview and benefits at a glance

High performance, modularity, resilience, reliability and efficiency for your power needs.

Vertiv's most efficient UPS in its product class

Innovative UPS control features for AI loads: Input Power Smoothing and Battery Shield

Available with the new Full AI power modules, enabling full power smoothing and Fault Ride Through (FRT) capability

Up to 32% space savings, compared to our offering

High-power solution designed for global standards and easy installation

Skid-mount and containerized power solutions for an easy deployment

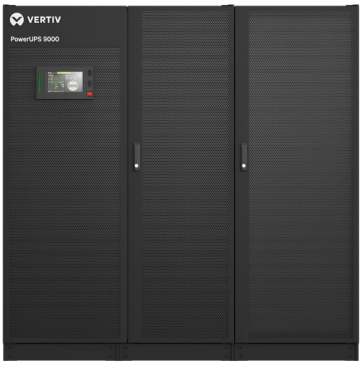
Modular system for maximum flexibility from room to pre-fabricated deployment

Ready to integrate different back up power sources, including lithium-ion and nickel-zinc

Designed, tested and available **across the globe**

Hot and easy serviceability for no interruption, even during maintenance or power upgrades

Service empowered by Vertiv™ Next Predict with an AI-powered, data-driven approach built for today's high-demand infrastructure



Vertiv™ PowerUPS 9000, 1250kW

Vertiv™ PowerUPS 9000, 1250kW, compact version

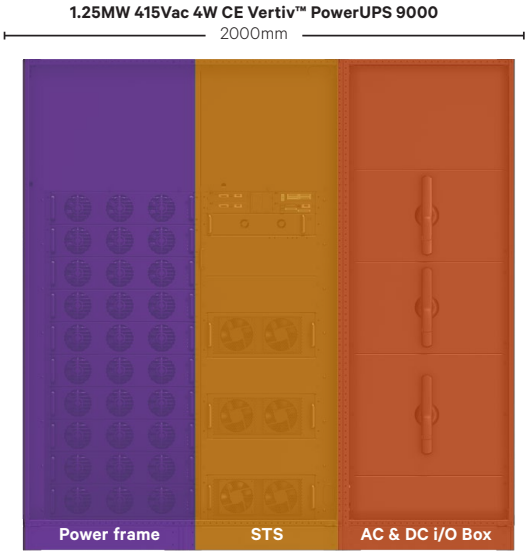
Vertiv™ PowerUPS 9000, 1800kW

Vertiv™ AI Load Simulator allows testing of AI load profiles on UPS systems at the Global Power Customer Experience Center. It supports both design and validation testing and demos, including on-site validation at customer location.

The Vertiv™ PowerUPS 9000, 1250 kW CE has received the PEP Ecopassport certification, which validates the product's environmental performance based on a life cycle assessment (LCA) and its product category rules. This recognition highlights the product's strong environmental credentials throughout its life cycle and supports customers in making more conscious purchasing decisions.

Modular design to meet the needs of each application

Vertiv™ PowerUPS 9000 scales the concept of modularity up to all levels of the UPS architecture.



125kW power modules

Each Power Module is independent and includes the components of an online UPS: inverter, rectifier and booster/charger.

It features one global design with options for 400V and 480V, compliant with both CE and UL standards.

Static switch cabinet

The bypass static switch is housed in a dedicated cabinet, power terminals for close-coupled applications. It follows a global design for 400V and 480V.

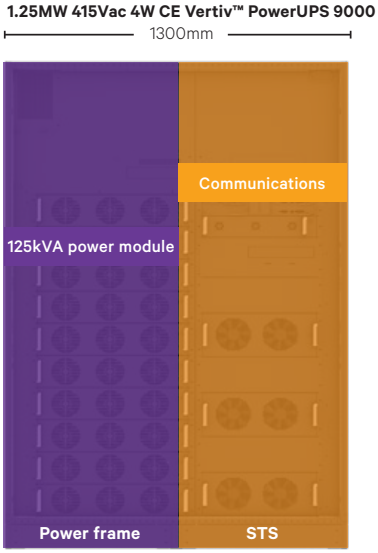
AC I/O cabinet

AC power connections are routed through a dedicated cabinet:

- **Top** and **bottom** power connection
- **Standard configuration** includes cable connection, with optional flange connections available upon request

Versatile system & compact design (380/400/415Vac 4W)

Experience customization to meet your unique needs.



250-1250kW UPS frame 125kW power modules

Each power module is **independent** and consists of the building blocks of a true **online UPS**:

- Inverter
- Rectifier
- Charger/Booster

One **global** design:

- 400V & 480V
- CE & UL

Static switch & communication control cabinet

The bypass static switch is hosted inside a dedicated cabinet with control comunication logic boards.

One **global** design:

- 400V & 480V, CE & UL

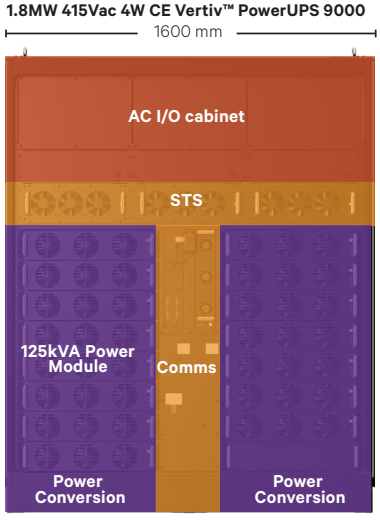
AC & DC connections

AC power connections are routed through the top side of the UPS without the I/O box:

- Top **power cable** connection
- **Single** input / **Dual** input
- Available with **no switches only**

High-capacity UPS system designed for AI-driven and high-density data centers

It delivers reliable power protection while maximizing floor space and reducing TCO.



1375-1800kW UPS frame 125kW power modules

Each Power Module hot swap, **independent** and consist of the building blocks of a true **online UPS**:

- Inverter
- Rectifier
- Charger/Booster

Available configuration:

- 380/400/415V
- CE

Static switch cabinet

The bypass static switch is hosted inside of the same cabinet with control communication logic boards

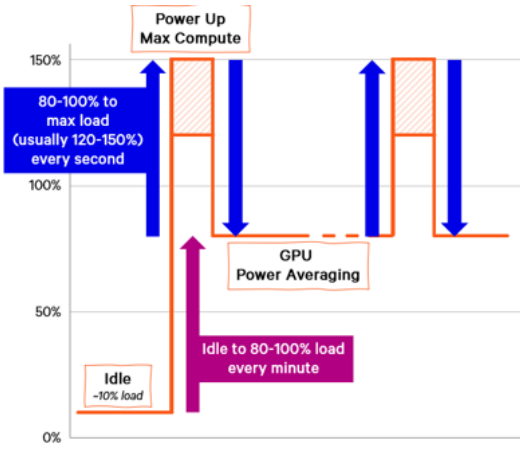
AC I/O cabinet

AC power connections are routed through the top of the frame without the I/O box:

- Top **power cable** connection
- **Single** input / **Dual** input

AI Workload Power Management for Large UPS Systems

As AI and HPC workloads continue to drive higher rack densities and rapidly fluctuating power demand, data center power infrastructure must adapt to maintain reliability, efficiency, and grid stability. Vertiv's AI-ready UPS solutions are designed to support dynamic AI loads while protecting critical power systems and maximizing infrastructure utilization.



Learn more in our technote:
Evaluating the performance of Vertiv™ large UPS systems with AI workloads

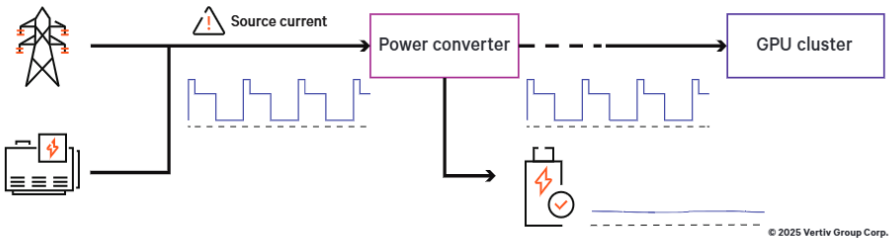
Advanced UPS Control for AI Workloads

Battery Shield

AI workloads can create frequent short-duration load fluctuations that may trigger repeated battery micro-discharges. Over time, this can accelerate battery aging, reduce available backup capacity, and increase maintenance requirements.

Advanced UPS control features whitepaper

Battery Shield dynamically manages internal UPS energy reserves to absorb rapid load variations without unnecessarily cycling the batteries.



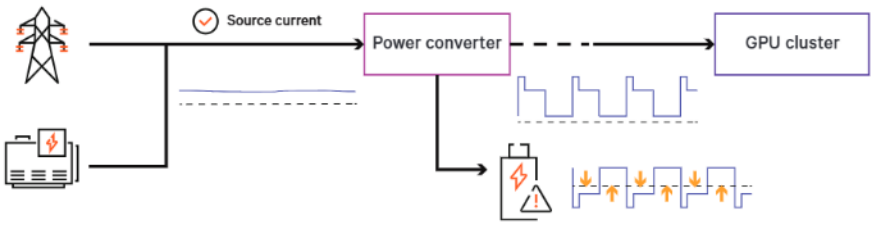
Key Benefits:

- Extends battery life by reducing micro-cycling.
- Preserves backup energy availability for actual outage events.
- Reduces battery maintenance and replacement needs.
- Improves resilience during highly dynamic AI load conditions.

Input Power Smoothing (IPS)

AI applications can generate fast and dynamic power fluctuation changes that propagate upstream to generators and the electrical grid. These fluctuations can create challenges, particularly in facilities with generator support or constrained utility connections.

Input Power Smoothing (IPS) uses the UPS energy storage system to compensate AI load variability, maintaining a controlled and predictable power draw from the upstream power source.



Key Benefits:

- Delivers a stable power profile to the grid and generators.
- Reduces stress on upstream electrical infrastructure.
- Enhances generator compatibility.
- Supports compliance with utility and ramp limitations.
- Configurable to match site-specific operating requirements.

Fault Ride Through for Large Power UPS

What is Fault Ride Through and why it matters

Hyperscale data centers have evolved into **gigawatt-scale loads**, making them active participants in grid dynamics, and therefore must remain stable during disturbances to avoid fault propagation on the grid.

During grid faults, the conventional datacenter behavior that consists on disconnecting the IT load and delaying the recovery can create additional instability at grid level.

Fault Ride Through (FRT) enables datacenters to:

- Remain connected during grid disturbances.
- Limit their impact on the grid.
- Rapidly restore power after fault clearance.

Emerging TSO Expectations

Transmission System Operators (TSO) worldwide are introducing new expectations for large electrical loads, reflecting their growing impact on system stability. While requirements vary by region, there is a clear convergence around a few key performance areas:

- **Voltage Ride Through (VRT):** Ability to remain connected during deep voltage dips.
- **Controlled Current Behavior:** Limiting current during disturbances to maintain converter stability.
- **Post Faut Active Power Recovery (PFAPR):** Rapid restoration of power demand.
- **Frequency & Dynamic Stability:** Tolerance to frequency deviations, ROCOF, and phase angle jumps.

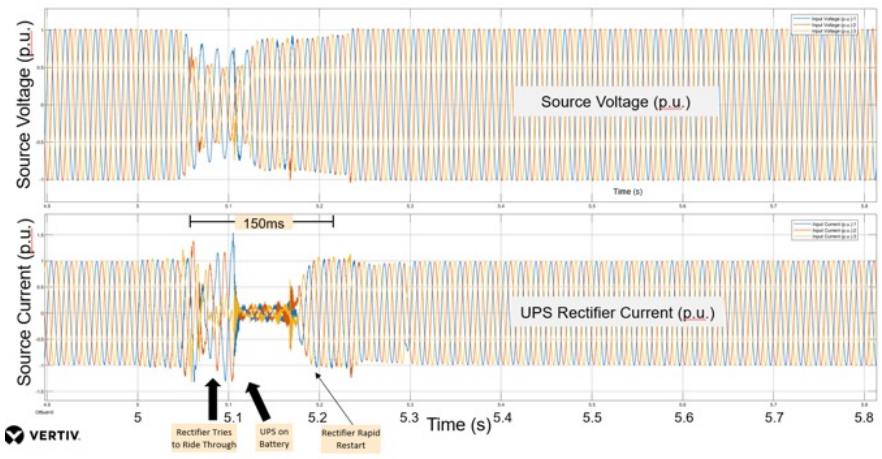
With these requirements TSOs are expecting predictable, stable, and grid-supportive behavior from large datacenters.

Implications for UPS Architecture and Control

FRT requirements introduce a new paradigm. UPS systems must now combine **load protection with grid-aware behavior**, enabled through advanced control strategies and firmware.

Key architectural and control implications include:

- **Extended ride-through operation:** Maintaining grid connection over a wider voltage thresholds using controlled operation modes.
- **Energy storage support:** Supporting the load during undervoltage events while still drawing controlled power from the grid.
- **Dynamic current limitation:** Ensuring converter stability during faults without triggering disconnection.
- **Fast Post-Fault Recovery (PFAPR):** Restoring grid power consumption within hundreds of milliseconds instead of seconds.



Continuous battery mode and continuous-duty static bypass switch

Vertiv™ PowerUPS 9000 Power Center stands out in the market for its **continuous battery mode**, a feature that secures uninterrupted power supply even at full load indefinitely.

Complementing its continous battery mode is Vertiv™ PowerUPS 9000's solid-state static bypass switch, enabling seamless power transitions. Vertiv™ PowerUPS 9000's continuous-duty performance opens doors to different applications beyond traditional UPS systems such as long duration batteries integration.

Reduced TCO

>97.5%

Double Conversion

Efficiency

CO_2

950 tons

of CO_2 saved every year

Neutral carbon footprint

Vertiv™ PowerUPS 9000's new generation architecture has been designed to reduce energy and heat dissipation, consequently minimizing the demand and consumption of air conditioning systems.

The combination of these factors, coupled with a double conversion efficiency of up to 97.5%, reduces CO2 emissions to a minimum. This contributes to your customers' data centers being a step closer to the industry's environmental and efficiency compliance standards.

Advanced control diagnostic, excellent operating efficiency, intelligent paralleling feature, minimum footprint and high energy density make Vertiv™ PowerUPS 9000 the perfect UPS to deliver secure power to all mission critical applications, maximum energy saving and rapid return on investment.

Furthermore, its **high power density** in a minimum space allows customers to maximize the number of racks and servers housed in their data center, thus granting more space for IT equipment.

The Vertiv™ PowerUPS 9000 technology, has brought extraordinary benefits in terms of:

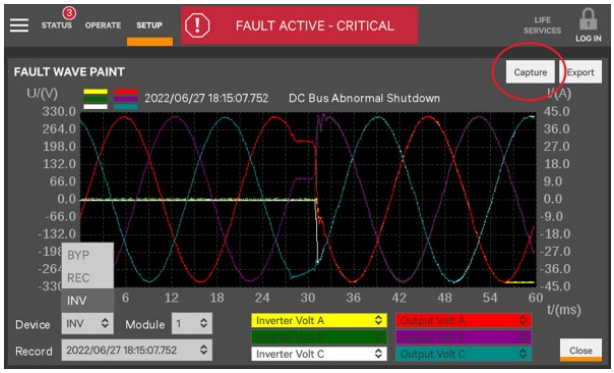
- Compatibility with modern mission critical loads
- Enhanced performances for maximum energy saving
- CO2 emission reduction
- System flexibility for all installations
- Reduced TCO

Waveform capture: Enhancing power quality analysis and system reliability

Waveform Capture is a diagnostic tool that records the electrical waveforms of voltage and current. This capability is needed to understand and analyze power quality issues at critical moments (such as during power disturbances or faults) and to mintain the reliability of the power supply system.

The main advantages of Waveform Capture in Vertiv™ PowerUPS 9000 are:

- **Precise event analysis:** By capturing the waveforms of both voltage and current during irregularities, the exact nature and cause of the disturbance can be understood. This includes recording events during and after an anomaly occurs.
- **Troubleshooting support:** In the event of a failure, the stored waveform data provides valuable insight that can be used to troubleshoot issues, reducing the time required to restore normal operations.
- **Customizable data capture:** Users can tailor the feature to their needs by selecting specific time frames and choosing the channels relevant to their power monitoring requirements.



Improved efficiency

Vertiv™ PowerUPS 9000 delivers an outstanding **double conversion efficiency of up to 97.5%**, which further increases **up to 99% with the dynamic online mode**, consequently reducing operating costs and energy dissipation (kW) to a minimum. This significantly minimizes the consumption of the cooling system, providing an overall TCO reduction and rapid payback time. Furthermore, through its intelligent **ECO mode** efficiency and the intelligent paralleling feature Vertiv PowerUPS 9000 can optimize efficiency even at partial load achieving additional superior cost savings.

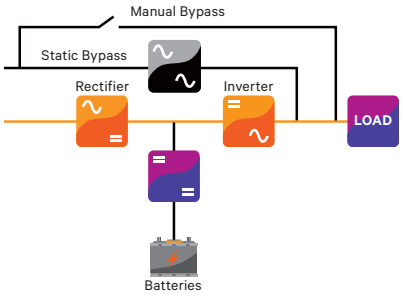
Vertiv PowerUPS 9000 levels of efficiency and consequent electricity cost savings can be attributed to:

- Hybrid SiC power module design
- Adoption of a three-level topology for inverter
- DC controlled fan speed
- Intelligent paralleling mode
- Advanced digital technology and fast transfer

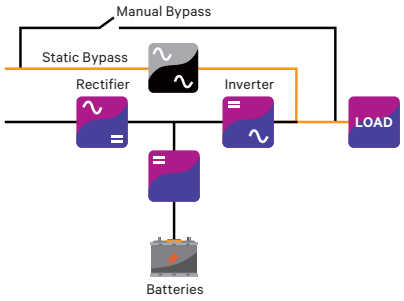
The seamless activation of Vertiv PowerUPS 9000 functioning modes offers the highest level of efficiency without compromising power quality and availability.

The dynamic online mode provides Class 1* output performance under most stringent conditions such as network faults (voltage variation, high/low impedance mains failures).

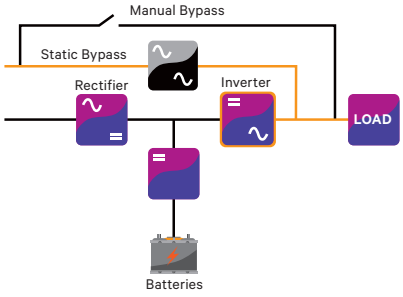
The unit is able to discriminate between various types of interferences and rapidly respond, while at the same time providing compatibility with downstream equipment such as servers, transformers, STS or mechanical loads.



Maximum power control (VFI)
Provides the highest level of power conditioning and protects the load from all electrical network disturbances.



Maximum energy saving (VFD)
Detects when conditioning is not required and allows the energy flow to passthrough he bypass line.

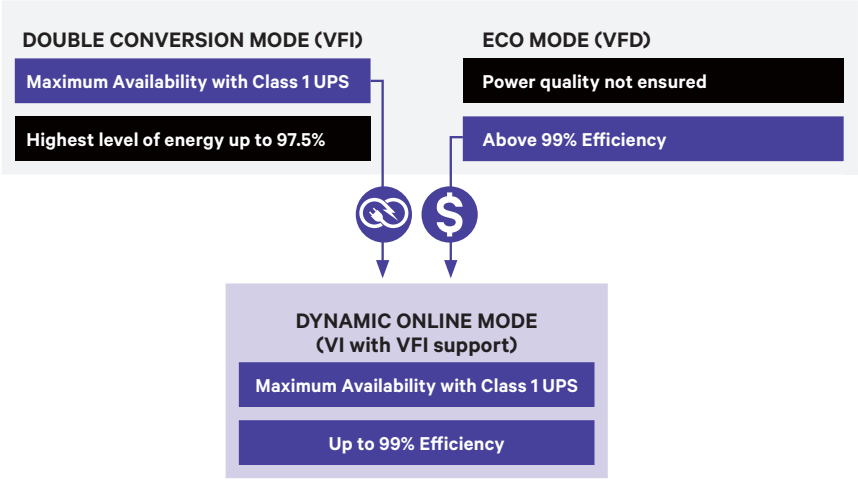


Dynamic Online, high efficiency & power conditioning (VI)
Compensates the load THDi, PF and main sags and swells, ensuring fast transfer output performance.

Dynamic Online mode: No more availability tradeoff with efficiency

Dynamic Online mode is developed for those that do not want to trade off any level of availability for incremental gains in efficiency. Dynamic Online mode enables **operating efficiency up to 99% without sacrificing availability.** While in this mode, the inverter can instantaneously assume the load and maintain the output voltage within the IEC 62040 Class 1* specification in most operating conditions, offering the same level of availability typically achieved in a double conversion operating mode.

Dynamic Online mode is therefore able to combine the **superior availability of a double conversion operating mode with the excellent energy cost savings of a high efficiency mode for a reduced total cost of ownership.**



*Conditions apply

Reliable, resilient and efficient UPS

Data centers face mounting pressures to secure unfailing uptime and reliability. Responding to these exigencies, Vertiv™ PowerUPS 9000 is designed to meet the contemporary resilience benchmarks. This is not just a response to market trends and needs but is deeply rooted in the lessons learnt and end user necessities, reflecting a commitment to address and integrate user feedback into tangible enhancements.

Design reliability

- **Dedicated segregated controls for each power module:** This design choice enhances the system's overall reliability, allowing each power module to operate independently with its control logic.
- **Self-isolating power module through relays:** In the event of a fault, affected power module can isolate themselves to prevent the spread of issues, providing the continuity of power supply from the remaining operational cores.
- **Continuous-duty solid state static bypass switch:** For the maximum performances on the bypass line.
- **Hot service and hot swap static bypass and power modules:** Facilitates maintenance and upgrades without necessitating system downtime, directly contributing to enhanced operational availability and reducing the risk of unplanned outages.
- **Enhanced diagnostic tools (Waveform capture, history log):** Enable preemptive identification and resolution of potential issues before they impact system performance, offering a deep insight into system health and preempting failures.

Each of these features is designed to satisfy the needs of customers for resilience and availability.

Verification & validation tests

For the verification and validation of Vertiv™ PowerUPS 9000 30 MW of Power Module prototypes have been built.

This approach enables the development of certain product features that enhance the operational integrity and also offer substantial benefits to customers.

Verification and validation tests are critical in securing that UPS systems adhere to stringent performance standards. Engineering Validation Tests (EVT) and Design Validation Tests (DVT) rigorously assessed and confirmed the product specifications.

Through this process, Vertiv™ PowerUPS 9000 has been validated against a spectrum of operational conditions to establish its capability to perform reliably in real-world scenarios. Additional tests have been performed to simulate critical conditions that a Vertiv™ PowerUPS 9000 might encounter. Some of the additional tests performed are:

- **Structural tests** to verify seismic resilience and general durability
- **Debris protection testing** for environmental robustness
- **Voltage surge & sag tests** to ascertain electrical resilience

Read our white paper:
Enabling uninterrupted power: design for reliability in UPS system.

Vertiv™ EnergyCore battery cabinet

The Vertiv™ EnergyCore is the first optimized battery cabinet designed by datacenter experts for data center users. The Vertiv EnergyCore system has successfully completed a UL 9540A fire test. According to NFPA 855's ESS installation standards, when successfully completing a UL9540A test, three feet (92cm) spacing requirements between racks can be waived by the Authorities Having Jurisdiction (AHJ).

The Vertiv EnergyCore is engineered to provide safe, reliable, and cost effective energy that improves critical infrastructure performance over traditional valve-regulated lead-acid systems.

Not only do users enjoy the longer life, more cycles and fewer replacements of this system, they also benefit from its compact, smaller size and lower weight These advantages directly impact an impressive total cost of ownership experience.

Vertiv™ EnergyCore battery cabinet

Reduce battery replacement cycles

VRLA	→	**3-5 years**
LIB	→	**10-15 years**

VRLA = valve regulated lead-acid
LIB = data center lithium-ion

Fewer facility disruptions
Lower total cost of ownership

Rely on integrated project and lifecycle UPS services for superior critical infrastructure protection

Offer continuity to your business activities with a service partner who stands by you throughout your critical equipment lifecycle. From the project phase with start-up and testing, to lifecycle maintenance contracts and operational support, Vertiv secures your solution performs optimally. Global presence & local resources With the broadest, most comprehensive service presence in the industry and more than 3,500 engineers dedicated to servicing the entire world, Vertiv secures that your business is always protected, and that service is available whenever needed 24 hours a day.

Vertiv™ LIFE™ Services

Vertiv™ LIFE™ Services provides continuous monitoring and data analysis by remote system engineers that quickly, accurately, and safely restore equipment to its proper operating condition. It connects critical systems with Vertiv engineers who continuously monitor and analyze real-time operating data to identify trends, predict behaviours, and respond immediately to out-of-norm conditions, either resolving issues remotely or dispatching a field engineer within minutes. The result is a connected service experience that leverages data and expertise to optimize equipment performance and maximize availability.

Vertiv™ Next Predict

Using AI-powered analytics, Vertiv™ Next Predict continuously monitors equipment condition and flags risks before they cause disruption. This insight fuels smarter maintenance schedules, reduces unnecessary site visits, and prioritizes uptime when it matters most Delivered through our global service network of engineers and service centers, Vertiv™ Next Predict is part of a fully integrated lifecycle approach - supporting everything from installation and optimization to modernization and asset planning.

Customer monitoring interfaces

LCD touch screen features

- High security access with separate password levels for users and service engineers
- User-friendly graphical interface
- Single-line mimic diagram showing system status
- Dedicated warning/fault and event log page used to monitor UPS status and important events
- Dedicated measurements page for all UPS internal functional blocks

Hardware connectivity

Vertiv™ PowerUPS 9000 allows for the monitoring and control of networked UPS, through different protocol options:

- The integration of UPS with Building Monitoring and Automation Systems via MODBUS RTU, MODBUS/TCP or JBUS protocols
- The integration of UPS in Network Management Systems through SNMP protocol
- Two slots for additional connectivity cards are available for specific protocol requirements

Software connectivity

Vertiv connects and protects your network with core-to-edge solutions and remarkable expertise. For maximum visibility and effective monitoring in one view, pair your Vertiv™ UPS with a software solution.

Vertiv™ Environet™ Alert

Vertiv™ Environet™ Alert provides industry companies with critical facility monitoring software that is affordable and easy to use. This solution delivers superior monitoring, alerting, trending and data organization. Get monitoring, alerting and trending at a price that's right for your business.

Technical data Vertiv™ PowerUPS 9000

New Full AI Module available: The Full AI power modules enable 100% charger capacity, smooth continuous power transfer, and full load sharing between mains and battery, ensuring advanced power smoothing. They enhance fault ride-through performance, support AI loads up to 150%, and allow continuous overload at 110% in VFI mode, delivering a more robust and flexible solution for dynamic AI workloads.

Parameter		1250kW Standard module	1250kW compact Standard module	1250kW Full AI module	1250kW compact Full AI module	1800kW Full AI module
Primary input						
Parallel operation data		Up to 4 units	Up to 4 units	Up to 4 units	Up to 4 units	Up to 2 units
Nominal mains input voltage	(V)	305-478, 3Ph+N+PE	305-478, 3Ph+N+PE	323-478,3Ph+N+PE	323-478,3Ph+N+PE	323-478,3Ph+N+PE
Nominal Frequency	(Hz)	Selectable 50 or 60	Selectable 50 or 60	Selectable 50 or 60	Selectable 50 or 60	Selectable 50 or 60
Input Power Factor (>50% load)		≤0.99	≤0.99	1	1	1
Input current distortion (THDv<2%)	(%)	≤3	≤3	≤3	≤3	≤3
Walk-in / soft start	(seconds)	2 (0.5–5 selectable)	2 (0.5–5 selectable)	2 (0.5–5 selectable)	2 (0.5–5 selectable)	2 (0.5–5 selectable)
Rectifier hold-off	(seconds)	4 (1–120 selectable)	4 (1–120 selectable)	4 (1–120 selectable)	4 (1–120 selectable)	4 (1–120 selectable)
Inverter Output						
Nominal Apparent power	(kVA)	1250	1250	1250	1250	1800
Nominal Active power	(kW)	1250	1250	1250	1250	1800
Nominal Output current @400V	(A)	1830	1830	1830	1830	2600
Max active power @40°C	(kW)	1250	1250	1250	1250	1800
Inverter Overload capacity[1]		<105% Continuous 105%-110%: 1hour 110%-125%: 10min 125%-150%: 1min >150%: 200ms	<105% Continuous 105%-110%: 1hour 110%-125%: 10min 125%-150%: 1min >150%: 200ms	<110% Continuous 110%-125%: 10min 125%-150%: 1min >150%: 200ms	<110% Continuous 110%-125%: 10min 125%-150%: 1min >150%: 200ms	<110% Continuous 110%-125%: 10min 125%-150%: 1min >150%: 200ms
Nominal Output voltage	(V)	380/400/415 (three-phase and sharing neutral with the bypass input)	380/400/415 (three-phase and sharing neutral with the bypass input)	380/400/415 (three-phase and sharing neutral with the bypass input)	380/400/415 (three-phase and sharing neutral with the bypass input)	380/400/415 (three-phase and sharing neutral with the bypass input)
Nominal Output frequency	(Hz)	Selectable 50 or 60	Selectable 50 or 60	Selectable 50 or 60	Selectable 50 or 60	Selectable 50 or 60
Load PF (no derating)		0.6 lagging to 0.7 leading	0.6 lagging to 0.7 leading	0.6 lagging to 0.7 leading	0.6 lagging to 0.7 leading	0.6 lagging to 0.7 leading
Voltage stability steady state (100% balanced load (100,100,100))	(%)	±1	±1	±1	±1	±1
Voltage dynamic		Complies with IEC/EN 62040-3 Class 1	Complies with IEC/EN 62040-3 Class 1	Complies with IEC/EN 62040-3 Class 1	Complies with IEC/EN 62040-3 Class 1	Complies with IEC/EN 62040-3 Class 1
Voltage stability in steady state for 100% load unbalance (0, 0, 100)	(%)	±3	±3	±3	±3	±3
Frequency slew rate	(Hz/sec)	0.6 default (selectable up to 3 for single system, 2 for parallel system)	0.6 default (selectable up to 3 for single system, 2 for parallel system)	0.6 default (selectable up to 3 for single system, 2 for parallel system)	0.6 default (selectable up to 3 for single system, 2 for parallel system)	0.6 default (selectable up to 3 for single system, 2 for parallel system)
Voltage distortion linear load	(%)	<1	<1	<1	<1	<1
Voltage distortion non-linear load	(%)	≤3	≤3	≤3	≤3	≤3
Phase angle precision balanced	(degrees)	±1	±1	±1	±1	±1
Phase angle unbalanced	(degrees)	±1.5	±1.5	±1.5	±1.5	±1.5

Parameter		1250kW Standard module	1250kW compact Standard module	1250kW Full AI module	1250kW compact Full AI module	1800kW Full AI module
DC SOURCE						
Battery types		VRLA, Li-Ion, Ni-Zn	VRLA, Li-Ion, Ni-Zn	VRLA, Li-Ion, Ni-Zn	VRLA, Li-Ion, Ni-Zn	VRLA, Li-Ion, Ni-Zn
Voltage range	(V)	384–681	384–681	384-720	384-720	384-720
VRLA cells		Maximum: 300=[50×6-cell (12V) blocks] Minimum: 240=[40×6-cell (12V) blocks] 180-240 with derating	Maximum: 300=[50×6-cell (12V) blocks] Minimum: 240=[40×6-cell (12V) blocks] 180-240 with derating	Maximum: 300=[50×6-cell (12V) blocks] Minimum: 240=[40×6-cell (12V) blocks] 180-240 with derating	Maximum: 300=[50×6-cell (12V) blocks] Minimum: 240=[40×6-cell (12V) blocks] 180-240 with derating	Maximum: 300=[50×6-cell (12V) blocks] Minimum: 240=[40×6-cell (12V) blocks] 180-240 with derating
Float voltage	(V/cell)	2.27	2.27	2.27	2.27	2.27
End voltage	(V/cell)	1.6	1.6	1.6	1.6	1.6
Float voltage stability in steady state	(%)	≤1	≤1	≤1	≤1	≤1
Recharge current (240 cells)	(A)	550	550	2350[2]	2350[2]	2350[2]
Static Bypass						
Nominal voltage	(V)	400 (380 to 415 selectable), 3Ph+N+PE	400 (380 to 415 selectable), 3Ph+N+PE	400 (380 to 415 selectable), 3Ph+N+PE	400 (380 to 415 selectable), 3Ph+N+PE	400 (380 to 415 selectable), 3Ph+N+PE
Voltage range	(%)	±10 (-10 to -15 selectable)	±10 (-10 to -15 selectable)	Upper limit: +10,+15, or +20, default: +15 Lower limit: -10, -15, -20, -30, -40, default: -20	Upper limit: +10,+15, or +20, default: +15 Lower limit: -10, -15, -20, -30, -40, default: -20	Upper limit: +10,+15, or +20, default: +15 Lower limit: -10, -15, -20, -30, -40, default: -20
Frequency	(Hz)	Selectable 50 or 60	Selectable 50 or 60	Selectable 50 or 60	Selectable 50 or 60	Selectable 50 or 60
Frequency range	(%)	±10	±10	±10	±10	±10
Overload 10 min	(%)	110–130 @< 30°C 110–125 @ 30-40°C	110–130 @< 30°C 110–125 @ 30-40°C	110–130 @< 30°C 110–125 @ 30-40°C	110–130 @< 30°C 110–125 @ 30-40°C	110–130 @< 30°C 110–125 @ 30-40°C
Overload 1 min	(%)	130–160 @< 30°C 125–150 @ 30-40°C	130–160 @< 30°C 125–150 @ 30-40°C	130–160 @< 30°C 125–150 @ 30-40°C	130–160 @< 30°C 125–150 @ 30-40°C	130–160 @< 30°C 125–150 @ 30-40°C
General System Data						
Efficiency VFI	(%)	Up to 97.5	Up to 97.5	Up to 97.5	Up to 97.5	Up to 97.5
Efficiency VI (dynamic online)	(%)	Up to 99	Up to 99	Up to 99	Up to 99	Up to 99
Efficiency ECO	(%)	Up to 99	Up to 99	Up to 99	Up to 99	Up to 99
Short circuit current	(kAIC)	Up to 150	Up to 150	Up to 150	Up to 150	Up to 150
Heat dissipation @ nominal input conditions and nominal output load[3]						
Float mode VFI	(kW)	36.25	36.25	36.25	36.25	59.5
	(BTU/h)	123690.15	123690.15	123690.15	123690.15	203022.5
Float mode VFD	(kW)	10.625	10.625	10.625	10.625	11.78
	(BTU/h)	36254.01	36254.01	36254.01	36254.01	40195
Height	(mm)	2000	2000	2000	2000	2000
Width	(mm)	2000	1300	2000	1300	1600
Depth	(mm)	1000	1150[4]	1000	1150[4]	1200
Net Weight (with power modules)	(kg)	1729 w/o BFD 2026 with BFD	1298	1729 w/o BFD 2026 with BFD	1298	2058
Noise @1m	(dBA ± 2dBA)	79[5]	79[5]	79[5]	79[5]	79[5]
Protection		IP20	IP20	IP20	IP20	IP20
Cable entry		Top/Bottom	Top	Top/Bottom	Top	Top
Service access		Front and top	Front and top	Front and top	Front and top	Front and top
Access		Front and top (no rear access required)	Front and top (no rear access required)	Front and top (no rear access required)	Front and top (no rear access required)	Front and top (no rear access required)
Cooling		Forced ventilation	Forced ventilation	Forced ventilation	Forced ventilation	Forced ventilation

Parameter		1250kW Standard module	1250kW compact Standard module	1250kW Full AI module	1250kW compact Full AI module	1800kW Full AI module
Enviromental						
Location		Indoor (free from corrosive gases and conductive dust)	Indoor (free from corrosive gases and conductive dust)	Indoor (free from corrosive gases and conductive dust)	Indoor (free from corrosive gases and conductive dust)	Indoor (free from corrosive gases and conductive dust)
Operating Temperature	(°C)	0 to 50 with automatic derating from 40°C	0 to 50 with automatic derating from 40°C	0 to 50 with automatic derating from 40°C	0 to 50 with automatic derating from 40°C	0 to 50 with automatic derating from 40°C
Maximum relative humidity @ 20 °C (non condensing)	(%)	Up to 95 with humidity control and correction	Up to 95 with humidity control and correction	Up to 95 with humidity control and correction	Up to 95 with humidity control and correction	Up to 95 with humidity control and correction
Max altitude above sea level without derating	(m)	1500 (for higher altitudes complies with IEC/EN 62040-3)	1500 (for higher altitudes complies with IEC/EN 62040-3)	≤3000 above sea level derate power by 1% per each 100m increase,rise between 1500 and 3000m	≤3000 above sea level derate power by 1% per each 100m increase,rise between 1500 and 3000m	≤3000 above sea level derate power by 1% per each 100m increase,rise between 1500 and 3000m
Immunity to electrical interface		IEC / EN / BS 62040-2	IEC / EN / BS 62040-2	IEC / EN / BS 62040-2	IEC / EN / BS 62040-2	IEC / EN / BS 62040-2
EMC Class		IEN / EN 62040-2 Class C3	IEN / EN 62040-2 Class C3	IEN / EN 62040-2 Class C3	IEN / EN 62040-2 Class C3	IEN / EN 62040-2 Class C3
Environmental Aspects		PEP Eco passport 62040-4				PEP Eco passport 62040-4
Classification according to IEC/EN 62040-3		VFI-SS-111	VFI-SS-111	VFI-SS-111	VFI-SS-111	VFI-SS-111
Network Protocols with Monitoring Card		Modbus TCP BACnet/WS BACnet/IP SNMP v.1, v.3, IPv6	Modbus TCP BACnet/WS BACnet/IP SNMP v.1, v.3, IPv6	Modbus TCP BACnet/WS BACnet/IP SNMP v.1, v.3, IPv6	Modbus TCP BACnet/WS BACnet/IP SNMP v.1, v.3, IPv6	Modbus TCP BACnet/WS BACnet/IP SNMP v.1, v.3, IPv6
Options						
Integrated Backfeed		Standard option	Available upon ETO request	Standard option	Available upon ETO request	Available upon ETO request
DC Ground Fault Detection		Standard option	Available upon ETO request	Standard option	Available upon ETO request	Available upon ETO request
Flange connection		Available upon ETO request	Available upon ETO request	Available upon ETO request	Available upon ETO request	Available upon ETO request
Vertiv™ Life™ Services Remote Diagnostic and Preventive Monitoring		Standard option	Standard option	Standard option	Standard option	Standard option
Battery Trip Option		Standard option	Standard option	Standard option	Standard option	Standard option

Note:

[1] Value obtained at 25°C

[2] Max charging current (load depended)

[3] Values obtained @ 480Vac

[4] Includes 150mm optional box used to force airflow from front to top. Without the optional box the depth of the system is 1000mm and can be used as front to rear ventilation with a minimum clearance of at least 150mm

[5] Increase up to 82dB when ambient temperature is >30°C

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MKA4L0UKPOWU9-CE (R08/2026)