Vertiv[™] PowerNexus



Vertiv[™] PowerNexus is a new step in powering data centers and other critical applications. Close-coupled UPS and Switchgear systems optimize space, installation and commissioning time.

The compact Vertiv™ PowerNexus power system combines the robust power of Vertiv™ Trinergy™ and Vertiv™ PowerBoard Switchgear integrated in one single block connected by internal busbars. Such integration reduces equipment footprint, cabling materials, and installation labor costs.

The compact Vertiv[™] PowerNexus solution enables data center industries to expedite IT deployment; specifically enabling hyperscale and colocation clients deploying power modules and power skids.

Vertiv™ PowerNexus provides a dedicated solution to datacenter owners most important priorities: Simplicity of installation, and space optimization for income generating IT equipment.

Vertiv[™] PowerNexus can be pre-commissioned in the factory and delivered to the work-site fully operational and pre-tested. Vertiv[™] Unify is a standard feature providing active controls and monitoring to provide reliable power quality for maximum uptime.

There are three possible options:

- Work-site integration Products designed for interconnection electrically, mechanically and digitally connected.
- **2. Skid integration** Products optimally arranged on a skid electrically, mechanically and digitally connected.
- Enclosure integration Products prefabricated in an enclosure, electrically, mechanically and digitally connected.

In addition, there are two possible arrangements:

Back-to-Back: No external connections between UPS and Switchgear required. Suitable for worksite and skid integration deployments.



Front-to-Front: Optimized Switchgear and UPS connections by busbar. Suitable for any deployment method (Work-Site, Skid, Enclosure)



Key Features of Vertiv™ PowerNexus

- UPS power range: 1500, 2000, 2500 kVA
- Switchgear with up to 5000A total load
- Dual-Power inputs for utility power redundancy
- Direct and protected (UPS) outputs
- Vertiv[™] Unify comes standard onboard every PowerNexus
- Robust, modular, and highly efficient UPS
- Safe and reliable power distribution technology
- Easy configurable system
- No long-run cables needed
- Predictive maintenance and distributed energy resources ready

Intelligent onboard monitoring & control

Vertiv™ Unify is an embedded intelligence solution that delivers advanced monitoring, control, and automation directly to Vertiv's PowerNexus. Pre-installed and pre-configured as standard, it comes in three scalable options—Essential, Advanced, or Premium—allowing users to select the right level of functionality for their needs.

With plug-and-play integration into Vertiv[™] Unify at the site level, it creates a seamless, scalable data center management system (DCMS) for unified operations across equipment, site, and enterprise layers.

For sites where Vertiv™ Unify is not deployed, Vertiv™ Unify enable interoperability by integrating with third-party systems through standard industrial interfaces, providing a vendor-agnostic approach to data center management.

With standardized interfaces, intuitive controls, and flexible deployment options, Vertiv™ Unify simplifies operations, enhances efficiency, and accelerates the path to a fully unified digital infrastructure.

The platform is customizable with three scalable options:

| | Essential | Advance | Premium |
|------------|-----------|---------|---------|
| Monitoring | X | X | X |
| Control | | X | X |
| Redundancy | | | Χ |





Technical Specifications

| Vertiv™ PowerNexus | | | | |
|--|--|-----------|------|--|
| Rating [kVA] | 1500 | 2000 | 2500 | |
| Inputs | 2 (grid and generator) | | | |
| Operating temperature | Up to 35°C @ 100% load | | | |
| Relative humidity @ 20 °C (non condensing) | Up to 95% | | | |
| Frame color (RAL scale) | RAL7021 | | | |
| IP protection | IP20 for UPS, IP31 for SWB | | | |
| Integration | Assembly on site or preassembled on skid or inclosure in factory | | | |
| Grounding | TN-C or TN-S | | | |
| Certification | CE and UL | CE and UL | UL | |
| Nominal voltage [V] | 400/480 | | | |
| Input breaker @480V [A] | 2500 | 3000 | 4000 | |
| Input breaker @400 [A] | 3000 | 4000 | 5000 | |
| Short circuit rating | 100 kAIC | | | |
| UPS | | | | |
| Core rating [kVA] | 500 | | | |
| Inverter Overload Capacity | 110% continuous, 125% for 10 mins, 150% for 1 min | | | |
| Input factor | ≥0.99 | | | |
| UPS modes | Online (VFI), Dynamic Online (VI), ECO Mode (VFD) | | | |
| UPS efficiency @ VFI mode | ≥97% | | | |
| UPS efficiency @ VFD mode | ≥99% | | | |
| Frequency range [Hz] | 40 - 70 | | | |
| UPS serviceability | Complete UPS isolation by using external bypass | | | |
| Battery voltage range [V] | 397 - 700 | | | |

Vertiv[™] Trinergy[™] UPS is the next-gen UPS built on a history of exceeding Tier IV data center power chain availability and over 40 years of technical innovation and proven global deployment successes.

Vertiv™ Trinergy™ Overview and Benefits At a Glance

Elevating performance, modularity, resilience and efficiency for your power needs



Most robust UPS in the market

for unparalleled reliability and resilience



Supports High-Density and Artificial Intelligence Applications

providing increased power in a single power block compared to existing market products



The ultimate optimized high-power solution for global standards and easy installation



Best-in-class modular UPS for maximum flexibility from room to pre-fabricated deployment



Ready to integrate alternative energy and back up power

sources, including lithium-ion and nickel-zinch



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



Skid-mount and enlosure power solutions for an easy deployment



Rich Digital Experience Service empowered by data across entire life-cycle with Vertiv™ Life™ Advanced Incident Management and Condition Based Maintenance



Hot and easy serviceability

for no interruption, even during maintenance or power upgrades

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