



Vertiv™ Power Systems Test Center

Power-Packed Testing Center Proves Business-Critical Reliability

The Vertiv™ Power Test Center for large UPS systems is a state-of-the-art test facility designed to provide customers with pre-installation testing of the performance, interoperability, and efficiency of Vertiv power modules and systems under a variety of conditions. Located in Delaware, Ohio, the 41,000 square-foot facility, including a 2,600 square-foot customer observation suite, is the largest and most comprehensive in the industry.



Testing includes individual UPS modules as well as the complete power system—including large UPS units and associated switchgear and ancillary products—and is essential to the smooth, rapid installation and commissioning of large power systems.

Customers leave the Power Test Center with documented test results and confidence that their complex power system will operate seamlessly and in accordance with business-critical availability requirements.

Test Capacity and Performance of Vertiv™ Power Solutions



The Power Test Center for large UPS systems consists of multiple test stations in each of seven test bays. Testing is customized based on the complexity, size and number of UPS components in the configuration, but always includes analysis of every module as well as the entire system. Module and system tests include:

- Steady-state – 0% to 100% plus overload, unbalanced loading; non-linear loading
- Dynamic – 0% to 100% step loads plus overload, unbalanced loading; non-linear loading
- Overload and faults – (>100%, 125%, 150%)
- Plus other customer-specified special test requirements

Testing on large UPS systems, may include UPS power modules, input and output switchgear, power distribution units, static transfer switches, and battery cabinets

Test results certify the input and output, AC and DC characteristics of the system. Performance comparisons against specifications include, but are not limited to:

- Voltage and waveform
- Voltage regulation
- Voltage and current harmonics
- Frequency
- Current and waveform
- I/O power factor
- Efficiency based on kW in and out
- System switching, control and monitoring functionality

Customers may request special tests in addition to the above.

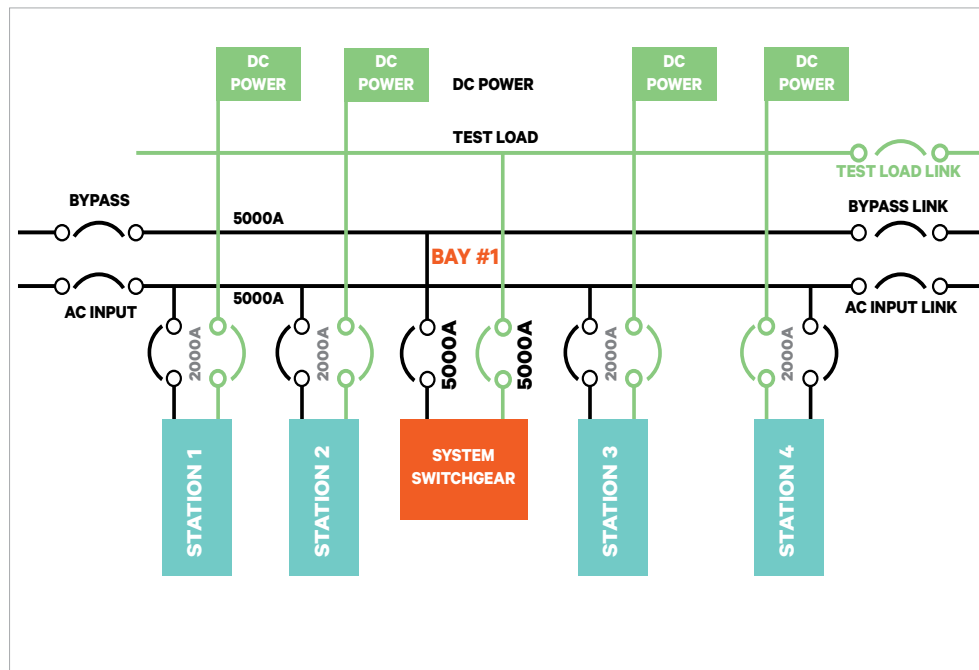
Factory Witness Testing: View the Entire Testing Process

Factory Witness testing for large UPS systems is usually conducted over a period of multiple days. During testing, customers and consulting engineers may oversee the entire process from one of the Power Test Center observation suites which overlook the test bays or in the specific test bay itself. Multiple flat-screen displays offer the ability to present presentations, test data, waveforms, testing procedures and results. Once testing is completed, a report of the results is provided.

The Power Test Center features seven test bays, each containing multiple test stations, where module and complete system analysis is conducted in full view of the customer.

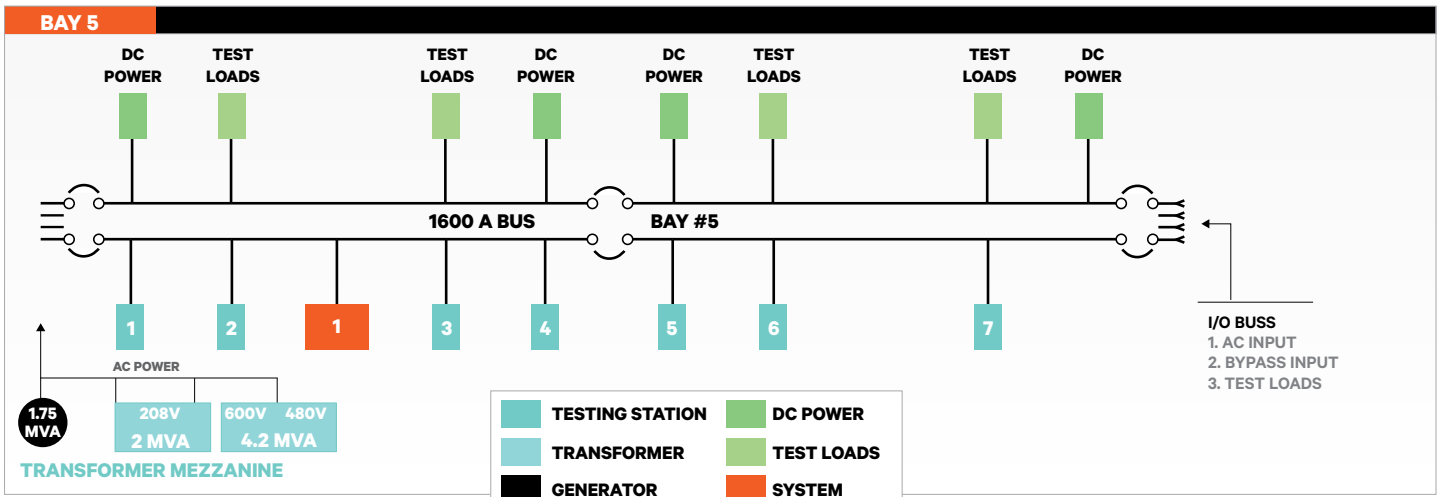
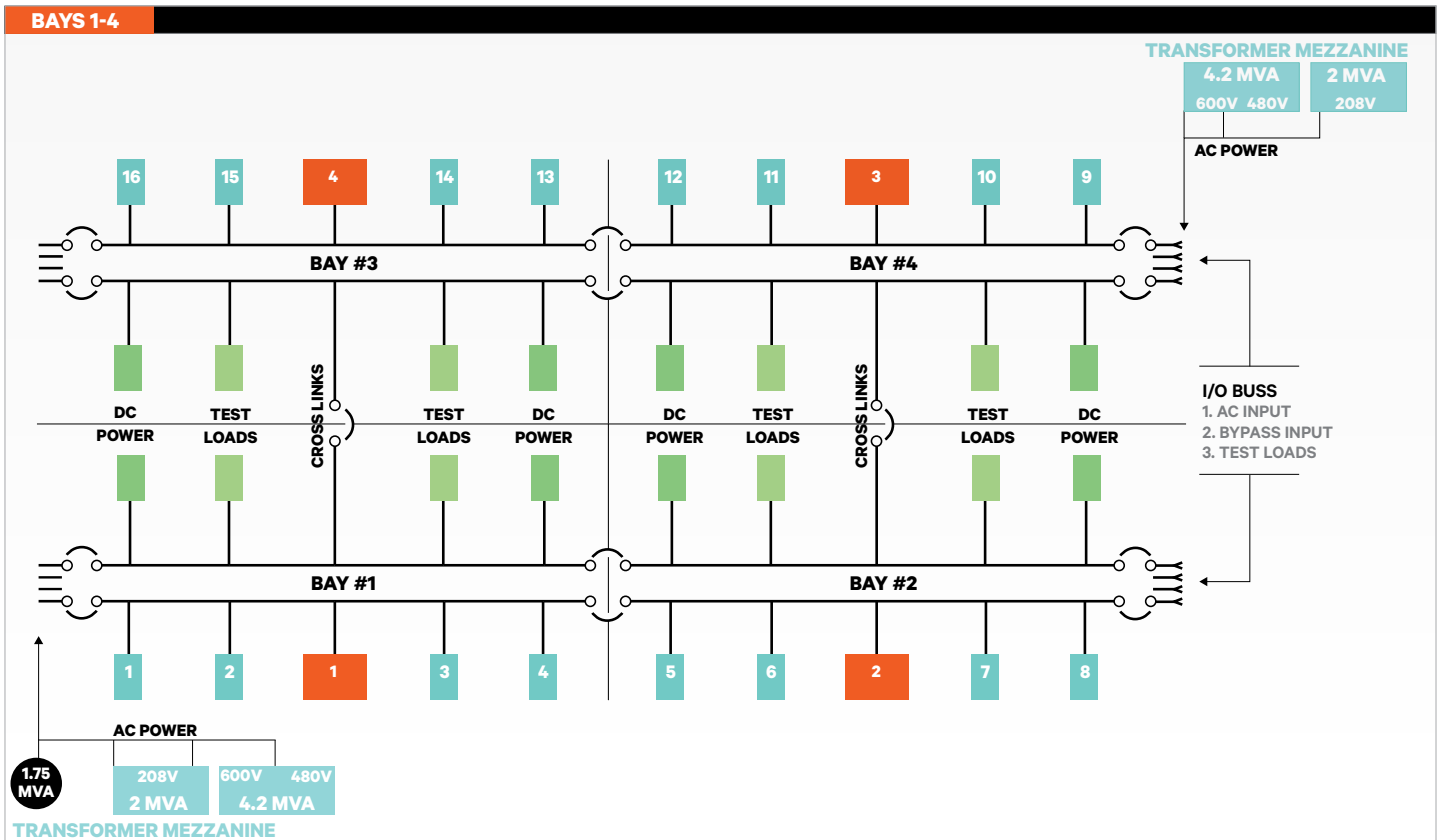
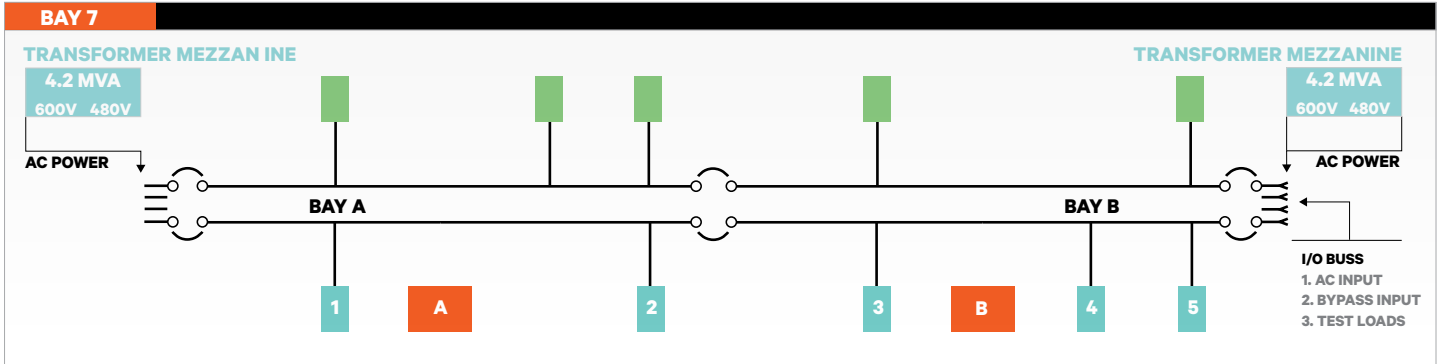
Vertiv Power Test Center Features

- Eight test bays, each containing multiple distinct test stations.
- Power test viewing suites overlooking test bays and equipped with displays that project relevant information.
- Results are provided at the conclusion of each test.
- All I/O circuit breakers can be remotely controlled.
- Voltage, current, frequency and watts monitored on all I/O circuit breakers.
- Total power of >12 MW available via the facility utilities.
- Higher capacities supported through a 1.75 MVA, 750 kVA, and 350 kVA 50/60 Hz engine generator as well as plug-ins for additional generators.



Typical Testing Capabilities per Station

- 1.1 MVA UPS Module
- 1.5 MW Resistive Load
- 0.8 pf Lagging Inductive Load
- 0.9 pf Leading Capacitive Load
- Non-Linear Load
- 208, 480 or 600 VAC I/O
- 5000A Load Bus Capacity
- DC Battery Simulators



On-Site or Remote Viewing of Your Power System Test

The ability to test individual UPS modules as well as complete UPS systems is essential to a smooth, rapid installation and commissioning of large UPS power systems.

Customers and consulting engineers are encouraged to witness the testing in person or to participate in the testing process remotely via the Internet, as an alternate to attending in person. This process allows customers to understand the installation configuration and document the performance of multimodule UPS systems prior to installation. Offering you the UPS industry's largest power systems testing center is another way that Vertiv™ strives to make sure our product solutions are a perfect match for your critical power requirements.

Testing To UL 1778 Fifth Edition

Testing your large UPS systems to UL Standard 1778 fifth edition will provide you with the assurance that your critical power systems will meet agency requirements throughout the world. This more harmonized global standard requires testing of every major international specification, for a more stringent and reliable UPS.

The best power protection equipment deserves the best testing facility in the business

The Liebert® Power Systems Test Center is fully equipped to test all of our large UPS systems and related power equipment. These products may include:



Liebert EXM



Liebert NXL UPS



Liebert EXL S1 UPS



Liebert Trinergy Cube UPS



Switchgear



Battery Cabinets
(VRLA and Lithium-ion)



Liebert STS2



Liebert STS2/PDU

Learn More About The Vertiv™ Power Test Center

The Power Test Center is just one more reason Vertiv is the global leader in enabling Business-Critical availability. Contact your local Vertiv Representative or Solutions Partner to learn more about the Power Test Center.

Benefits of Power System Testing

- Provides complete pre-installation testing of large UPS systems and associated support equipment.
- Tests the performance, interoperability and efficiency of critical power systems.
- Assures rapid installation and commissioning of large UPS power systems.
- Confirms the functionality of all subsystems.
- Allows customers to document performance of multi-module UPS systems prior to installation.
- Optimizes the testing process with the use of the latest agency standards.



Shipping and Staging

A related benefit of utilizing our Power Test Center is the ability to leverage our logistics teams. We can receive, unpack and reship all key testing equipment — saving customers time and shipping costs.



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