

Vertiv™ Liebert® Hipulse-U

30 kVA to 500 kVA



Key Features

- Fully Digital, twin DSP controlled
- Rated at 0.9 output power factor to deliver more active power
- On-Line Double Conversion IGBT-based Inverter
- Wide input voltage tolerance i.e. 323-478 VAC
- Wide input frequency range of 45 Hz to 65 Hz
- Higher overload capability of static bypass switch
- Capability to handle:
 - High crest factor loads
 - 100% non-linear loads
 - 100% unbalanced loads
- Built-in maintenance bypass
- Front access for spares replacement and preventive maintenance
- Easy Dual bus configuration architecture
- Adjustable frequency synchronization window up to 6% in the static bypass
- Field protocols ModBus / Jbus
- Network protocols SNMP
- Overload capability of the UPS:
 - 110% full load for 60 minutes
 - 125% full load for 10 minutes
 - 150% full load for 1 minutes
- Compact footprint

Utmost Reliable Power Solution for Critical Business Applications

Feature-Loaded UPS

The Liebert Hipulse-U offers a reliable, scalable and user-friendly solution to ensure availability of various critical applications. The Liebert Hipulse-U offers protection to your investment, and provide lower cost of ownership through its digital architecture and range of options which you can customize specifically for your needs.

Built Investment Protection

- Automatic battery testing
- Field setability of EOD of the battery
- Selectable times for boost charging duration of the battery (15 steps with each step of 1 hour)
- Protection against deep discharge of battery
- Short-circuit proof inverter
- Integrated back-feed potential free contacts
- D-level lightning protection (Optional)
- Embedded with 3 auxiliary power supply to ensure redundancy under any condition*
- Standard dry contacts
- Choice of array of input harmonic filter options
- Temperature-compensated battery charging (Optional).

* Applicable for capacity above 200 kVA.



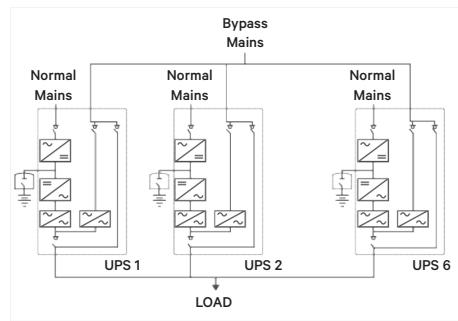
Hipulse-U 30kVA - 500kVA

Vertiv™ Liebert® Hipulse-U

Supported Configurations

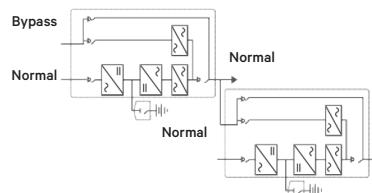
Hipulse-U is scalable up to maximum 6 units using any of the following configurations to achieve either scalability or redundancy of desired percentage.

1+N Configuration with distributed bypass System



- Up to 6 units in parallel.
- 1+N configuration without any kind of centralized static switch.
- Augment the system reliability increasing the availability of quality power following the load demand even if it was not forecasted or planned at the beginning of the project: ease of techno-economic expandability.
- Enhanced the maintainability.
- The total load is less than or equal to the rating of the single UPS (depending on the desired redundancy level) and is shared among all units.

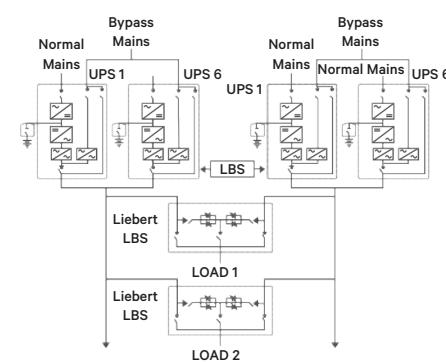
Hot Stand-by Configuration



- Increase the reliability of the priority load.
- Enhanced the maintainability and reliability.
- Easy connection.

- Can be implemented in the existing installation regardless of the UPS size, manufacturer and its control.

Dual Bus System with Liebert® LTS and STS2



- Provide supply to the loads from two independent power sources.
- Synchronizes the output of two independent bus.
- Automatic transfer of the load between the two sources in case of fault using Liebert LTS or STS2.
- Eventually increasing the maintainability and reliability.

Liebert Hipulse-U Accessories

Liebert® Active Filter

- Optional super filter to reduce THDi to <5% and improve input PF up to 0.93 without additional system footprint.*

Isolation Transformer

- Configured optional external transformer for output or bypass supply depending on the applications.

Rectifier or Bypass supply

- This allows the UPS to be configured in Single or Dual Main supply to ensure system adaptability and reliability.

DC Ground Fault Indications

- This provides indication of occurrence of battery ground fault detection.

Ingress Protection (IP)

- To address harsh environmental conditions, Hipulse-U UPS with higher than IP20 protection can be made available for most of the kVA ratings.

Top Cable Entry

- Available for a few capacities of Hipulse-U UPS.

Load Bus Synchronisation (LBS)

- Ensures the synchronisation of outputs of two independent UPS systems to form Dual Bus Architecture for High availability of Critical BUS.

Liebert® LTS and STS2

- This allows critical load to be automatically transferred between two independent synchronized AC power sources without any risk of load drop-out.

Technical Specifications

Nominal Ratings (kVA)	30	40	60
Rectifier Type	6P	6P	6P
Input			
Nominal input voltage	380/400/415 Vac -wire plus ground		
Input voltage range	323 to 478 Vac		
Nominal input frequency	50/60 Hz		
Input frequency range	45 to 55 Hz/55 to 65 Hz		
Output Capacity			
Nominal output voltage	380/400/415 Vac - 3 Phase with Neutral		
Output Power Factor	0.9		
Frequency			
Voltage stability	±1% (Steady state); ±5% (Transient state)		
Transient recovery time	20 milliseconds to 1%		
Frequency stability	±0.1% (Synchronized with internal clock); ±6% (max)(Synchronized with bypass)		
Overload capability	101 to 110%, 60 minutes; 111 to 125%, 10 minutes; 126 to 150%, 1 minute		
Voltage distortion with linear load	<1%		
Voltage distortion with 100% Non- linear load	<5%		
Permissible load unbalance	100%		
Non linear load capability	100%		
Load handing capability without kVA derating	0.5 lagging to 0.9 lagging		
Phase angle displacement accuracy	100% balanced load	±1°	
	100% unbalanced load	±1°	
Dimensions and weight			
Depth (mm)	810		
Width (mm)	715		
Height (mm)	1250		
General			
General and safety requirements for UPS	IEC 62040-1-1		
EMC requirements for UPS	IEC 62040-2		
UPS Classification according to IEC 62040-3	VFI-SS-111		

Communication Options

When choosing the best system to protect your mission critical applications, an important consideration would be the software and communication options. As part of our commitment to provide the best solution, we have a wide range of sophisticated software and communication options for Hipulse-U.

- Control through Building Management
- Systems via Modbus and Jbus protocols
- Web-enabled Monitoring and Management through SNMP protocols
- Network Management Systems ready (HP OpenView, CA unicenter, Novell Managewise, etc)
- Software Solutions

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.

*Conditions apply

*Specifications are subject to change without any prior notification.

*Specifications considering 400 V nominal voltage.

Technical Specifications

Nominal Ratings (kVA)	80	120	160	200	300	400	500
Rectifier Type	6P	6P	6P	6P	6P	6P	12P

Input

Nominal input voltage	380/400/415 Vac 4-wire plus ground
Input voltage range	323 to 478 Vac
Nominal input frequency	50/60 Hz
Input frequency range	45 to 55 Hz/55 to 65 Hz
Input current distortion with linear load (with filter)	3 to 10% with optional filter
Power factor (with filter)	0.88 to 0.97 with optional filter

Output Capacity

Nominal output voltage	380/400/415 Vac 4-wire plus ground
Output Power Factor	0.9

Frequency

Voltage stability	±1% (Steady state); ±5% (Transient state)	
Transient recovery time	20 milliseconds (max)	
Frequency stability	±0.1% (Synchronized with internal clock); ±6% (max)(Synchronized with bypass)	
Overload capability	101 to 110%, 60 minutes; 111 to 125%,10 minutes; 126 to 150%, 1 minute;	
Voltage distortion with linear load	<1%	
Voltage distortion with 100% Non- linear load	<5%	
Permissible load unbalance	100%	
Non linear load capability	100%	
Load handing capability without kVA derating	0.5 lagging to 0.9 lagging	
Phase angle displacement accuracy	100% balanced load	±1°
	100% unbalanced load	±1°

Dimensions

Depth (mm)	875	855
Width (mm)	900	1250
Height (mm)	1900	1640
	2280	2640

General

General and safety requirements for UPS	IEC 62040-1
EMC requirements for UPS	IEC 62040-2
UPS Classification according to IEC 62040-3	VFI-SS-111

*Conditions apply

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