VERTIV™

UPS CATALOGUE

Solutions for Business Continuity

Vertiv™

Vertiv™ designs, builds and services mission critical technologies that enable the vital applications for data centers, communication networks, and commercial and industrial environments. We support today's growing mobile and cloud computing markets with our portfolio of power, thermal, infrastructure management products, software and solutions, all complemented by our global service network. Bringing together global reach and local knowledge, and our decades-long heritage including brands like ASCO®, Chloride®, Liebert®, NetSure™ and *Trellis*™, our team of experts is ready to take on your most complex challenges, creating solutions that keep your systems running-and your business moving. Together, we're building the future of a world where critical technologies always work.

YOUR VISION, OUR PASSION.
VertivCo.com

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SINGLE-PHASE OFFERING

LIEBERT® PSP 500 VA - 650 VA

Liebert® PSP is a full featured UPS that delivers cost-effective power protection in a compact package

The UPS provides battery-backed sockets and a surge protection-only outlet. The UPS battery offers four minutes of backup power at full load - ample time to shut down protected equipment if an outage occurs. Shutdown software and a USB cable are also included, to allow remote alerts and automated graceful shutdown of the connected equipment.

Liebert PSP UPS Supports Your Sensitive Electronics With These Standard Features:

Flexibility

- Three battery-backed UPS sockets, and one surge protection-only sockets differentiated by color
- USB port, Vertiv™ MultiLink™ Software shutdown software, and USB cable
- User replaceable batteries.

Higher Availability

- Up to four minutes of battery backup time at full load. Protects against lightning, spikes and surges
- Full sequenced battery testing to ensure batteries are available when needed
- Advance early warning of UPS shutdown
- RJ-45 port for data line surge protection.

Lowest Total Cost Of Ownership

- Two-Year replacement warranty
- Optional one year warranty extension.

The Liebert PSP Is Ideally Suited For:

- Professional workstations
- Small routers and bridges
- Point-of-sale terminals
- Other sensitive electronics.

Liebert PSP 500-650 VA

Liebert® PSP Specifications

MODEL NUMBER	PSP500MT3-230U	PSP650MT3-230U
Capacity VA/W	500 / 300	650 / 390
Net Weight: kg	3.9	
Shipping Weight: kg	4.8	
Dimensions: W x D x H, mm	87 x 215 x 251	
On-Line Mains Voltage	160-287VAC	
On-Line Frequency	50/60Hz ±5Hz	
Output Voltage (Mains Normal)	Typical 160-287VAC	
Output Voltage (Battery Operation)	230VAC ±5%	
On-Battery Wave Form	Stepped Sinewave	
Battery Type - VDC x Ah - Quantity	12V x 7.2Ah x 1	
Typical Recharge Time	6-8 hours to 90%	
Audible and Visual	Audible alarm / LED	
Backup Sockets	IEC 320 C13 (3)	
Surge Sockets	IEC 320 C13 (1)	
Operating Temperature, °C	0 to 40	
Storage Temperature, °C	-15 to 40	
Operating / Storage Relative Humidity	0%-90%, non-condensing	
EMI Classification	Class B	
AGENCY		
Safety	IEC/EN/AS 62040-1-1	
EMC	EN 62040-2:2005 Class B IEC 61000-4-2 Electrostatic discharge IEC 61000-4-3 Radiated E-RFI fields IEC 61000-4-4 Fast E transients IEC 61000-4-5 Surges/Lightning IEC 61000-4-6 Conducted RFI	
Transportation	ISTA Procedure 1A Certification	
Warranty	2 years standard (+ 1 year warranty extension available)	
Packaging	User Manual on CD, Software CD, USB cable, Safety Instruction Sheet, Environment protection sheet	

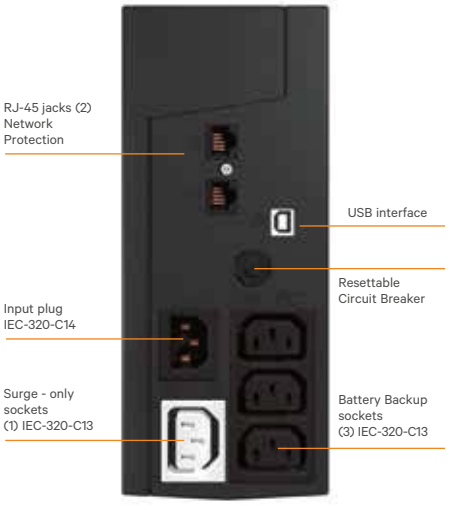
Load Autonomy

LOAD (WATTS)	PSP500MT3-230U	PSP650MT3-230U
50	55	56
100	18	18
150	11	12
200	8	8
250	5	5
300	3	4
350	0	3

Note: All run times are in minutes, assume fully charged batteries and are typical at 25°C (77°F) with resistive loads.

COMMUNICATIONS/ SHUTDOWN SOFTWARE

Windows built-in power management functions provide monitoring of UPS status and manage the automatic orderly shutdown of the computer if a power outage ever exceeds the battery capacity of the UPS. Vertiv™ MultiLink™ shutdown and monitoring software is also provided.



Back view

LIEBERT® PSA 500 VA - 1500 VA

The Liebert® PSA is a compact line-interactive UPS that offers cost-effective, full-featured power protection for small office computers and electronic equipment

Liebert PSA offers unique features and extraordinary performance.

Designed with simple controls for easy operation, the Liebert PSA provides up to five minutes of back-up time at full load... more than enough time to save work in process and shut down your system.

Shutdown software and a USB cable are also included, to allow remote alerts and automated graceful shutdown of the connected systems.

Liebert PSA UPS supports your sensitive electronics with these standard features:

Flexibility:

- Available in four sizes, including 500, 650, 1000 and 1500VA ; 120VAC or 230VAC
- Three to six battery-backed UPS sockets, depending on model size
- One to two surge-only sockets, differentiated by color
- USB communications/shutdown software and cable included
- User replaceable batteries.

Reliability:

- Up to five minutes of battery backup time at full load
- Full sequenced battery testing to ensure batteries are available when needed
- Advance early warning of UPS shutdown
- Lightning and surge protection (TVSS)
- RJ-45 port for data line surge protection.

Low total cost of ownership:

- Two-Year warranty standard.

The Liebert PSA is ideally suited for:

- Professional Desktop PC's
- Professional Workstations
- Small Routers, Bridges and Hubs
- Point-of-Sale Terminals
- Other Sensitive Electronics.

Liebert PSA 500 VA

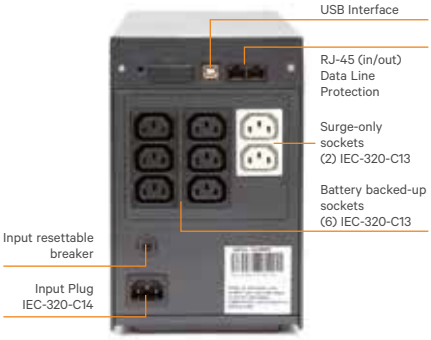
Liebert PSA 1000 VA

Liebert® PSA Specifications

MODEL NUMBER	PSA500MT3-230U	PSA650MT3-230U	PSA1000MT3-230U	PSA1500MT3-230U
Capacity VA/W	500/300	650/390	1000/600	1500/900
Net Weight: kg	5.4	5.9	9.5	11.6
Shipping Weight: kg	6.3	6.8	10.7	12.8
Dimensions: W x D x H, mm	95 x 356 x 171		147 x 360 x 234	
On-Line Mains Voltage	160-287VAC			
On-Line Frequency	50/60Hz ±5Hz			
Output Voltage (Mains Normal)	Typical 185-252VAC			
Output Voltage (Battery Operation)	230VAC ±5%			
On-Battery Wave Form	Stepped Sinewave			
Battery Type - VDC x Ah - Quantity	12V x 7.2Ah x 1		12V x 7.2Ah x 2	12V x 9Ah x 2
Typical Recharge Time	6-8 hours to 90%			
Battery Run Time* (Full load)	3-5 minutes			
Battery Run Time* (Half load)	10-13 minutes			
Audible and Visual	Audible alarm / LED			
Backup Sockets	IEC 320 C13 (3)		IEC 320 C13 (6)	
Surge Sockets	IEC 320 C13 (1)		IEC 320 C13 (2)	
Operating Temperature, °C	0 to 40			
Storage Temperature, °C	-15 to 40			
Operating / Storage Relative Humidity	0%-90%, non-condensing			
EMI Classification	**Class B**			
AGENCY				
Safety	IEC62040-1-1			
Transportation	ISTA Procedure 1A Certification			
Warranty	2 years standard (+ 1 year warranty extension available)			
Packaging	User Manual on CD, Software CD, USB cable, Safety Instruction Sheet, Environment protection sheet, (2) IEC output cables for 500/650VA, (3) IEC output cables for 1000/1500 VA			

*Battery run time may vary depending on load

500/650 VA back view



1000/1500 VA back view

Communications/Shutdown Software:

Windows (98 and later) built-in power management functions provide monitoring of UPS status and manage the automatic orderly shutdown of the computer if a power outage ever exceeds the battery capacity of the UPS. Liebert USB shutdown and monitoring software is provided.

LIEBERT® itON 400 VA - 2000 VA

Liebert® itON is a reliable line-interactive UPS designed for the protection of desktop computers and standalone IT equipment

Liebert itON comes complete with an automatic voltage regulator (AVR) allowing flexibility and reliability for PCs and other sensitive electronic equipment. With its compact design and easy to use controls, Liebert itON also provides sufficient back up time, allowing work in progress to be saved safely before proceeding with the system shutdown. Liebert itON also comes complete with automatic restart and cold start functions for increased continuity and availability.

Features

- Automatic voltage regulator (AVR)
- Compact size
- Light weight
- Easy operation.

Higher Availability

- Overload protection and alarm
- Auto re-start with AC recovery
- Fast charging
- Cold start function.

Flexibility

- Available in ratings from 400 VA up to 2000 VA
- USB port (for 1000 VA, 1500 VA, 2000 VA)
- Schuko sockets (for 400 VA, 600 VA, 800 VA)
- Schuko and IEC sockets (for 1000 VA, 1500 VA, 2000 VA).

Ideally Suited for:

- Desktop PCs
- Professional workstations
- Small routers, bridges and hubs
- Point-of-sale terminals
- PBXs
- Other sensitive electronics.

Liebert itON 600 VA *Liebert itON 1000 VA* *Liebert itON 2000 VA*

Liebert® itON 400 VA Specifications

MODEL NUMBER	Liebert iTON 400 VA	Liebert iTON 600 VA	Liebert iTON 800 VA
Power Rating	400 VA / 240 W	600 VA / 360 W	800 VA / 480 W
DIMENSIONS, W X D X H - MM			
Unit		101 x 279 x 142	
Shipping		143 x 327x 220	
WEIGHT - KG			
Unit	3.6	4.2	4.9
Shipping	3.9	4.7	5.4
INPUT AC PARAMETERS			
Line Input Nominal Voltage		220 - 240 V AC	
Line Frequency		50 / 60 Hz; Auto Sensing	
Input Socket		Schuko cord	
Output Sockets		(2) Schuko	
Output Voltage		230 V AC	
Waveform (Battery Operation)		Stepped sinewave	
BATTERY PARAMETERS			
Type		Valve-regulated, non-spillable, lead acid	
Quantity x Voltage x Rating	1 x 12V x 4.5 Ahr	1 x 12V x 7 Ahr	1 x 12V x 9 Ahr
Recharge Time		4 hours recovers to 90% capacity (Typical)	
ENVIRONMENTAL			
Operating Temperature		0°C to 40°C	
Relative Humidity		0% to 90% non condensing	
Operating Altitude		<1500 m without derating	
Standards and Certifications			
Safety		EN62040-1:2008	
EMC		EN62040-2:2006 class C2	
Compliance		CE	

MODEL NUMBER	Liebert iTON 1000 VA	Liebert iTON 1500 VA	Liebert iTON 2000 VA
Power Rating	1000 VA / 600 W	1500 VA / 900 W	2000 VA / 1200 W
Dimensions, W x D x H - mm			
Unit	146 x 341 x 164	146 x 391x 205	
Shipping	200 x 447 x 264	235 x 495 x 297	
WEIGHT - KG			
Unit	8.0	11.1	11.5
Shipping	9.0	12.1	12.5
INPUT AC PARAMETERS			
Line Input Nominal Voltage		220 - 240 V AC	
Line Frequency		50 / 60 Hz; Auto Sensing	
Input Socket	Schuko cord	IEC 320-C14	
Output Socket	(2) Schuko + (2) IEC 320-C13	(3) Schuko + (3) IEC 320-C13	
Output Voltage		230 V AC	
Waveform (Battery Operation)		Stepped sinewave	
BATTERY PARAMETERS			
Type		Valve-regulated, non-spillable, lead acid	
Quantity x Voltage x Rating	2 x 12V x 7 Ahr	2 x 12V x 9 Ahr	
Recharge Time		4-6 hours recovers to 90% capacity (Typical)	
ENVIRONMENTAL			
Operating Temperature		0°C to 40°C	
Relative Humidity		0% to 90% non condensing	
Operating Altitude		<1500 m without derating	
STANDARDS AND CERTIFICATIONS			
Safety		EN62040-1:2008	
EMC		EN62040-2:2006 class C2	
Compliance		CE	

Note: External battery cabinets are not permitted. Internal batteries only.

Liebert® itON 400 VA
Liebert itON 600 VA
Liebert itON 800 VA

Liebert itON 1000 VA

Liebert itON 1500 VA
Liebert itON 2000 VA

LIEBERT® PSI 750 VA - 3000 VA

Liebert® PSI is a compact, line-interactive UPS system designed especially for IT applications such as network closets and small data centers. It provides reliable power protection for servers, critical nodes, network workstations, large network peripherals, network routers, bridges, and other electronic equipment

The flexible design of Liebert PSI allows the UPS to be configured as a self-standing tower or to be rack-mounted within a 2U space. It is available in five capacities, and both 120 V or 230 V models.

The UPS features an innovative line-interactive design incorporating buck/boost automatic voltage regulation technology. This protects against utility voltage fluctuation by raising and lowering utility power to the level needed by the connected equipment. It also allows the UPS to prolong battery life by maximizing its time on utility power before going to battery.

Flexibility:

- Eight battery-backed sockets
- Configurable input voltage window
- Rotatable Display Panel
- Automatic Frequency Sensing
- Rack Rail Kit
- Multiple Communications Options (USB, SNMP and Contact Closure).

Higher availability:

- Data line surge protection
- Advance early warning of UPS system status
- Up to five minutes of battery backup time at full load when utility fails
- Full sequenced battery testing
- Surge protection
- Remote emergency power off
- Hot swappable batteries.

Lowest total cost of ownership:

- 0.9 Output Power Factor
- Wider input voltage window
- Reduced installation time and costs
- Warranty Protection.

Ideally suited for:

- PCs
- Network workstations
- Servers
- Network closets
- Large network peripherals
- VoIP.

Liebert PSI 2U Rack version

Liebert PSI 2U Tower version

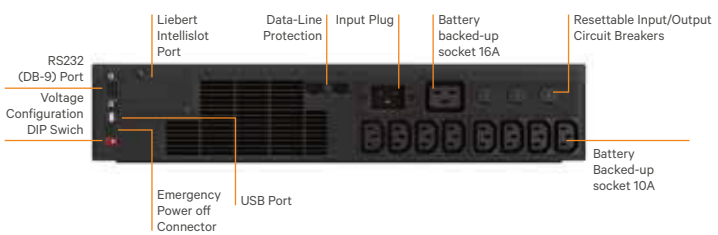
Liebert® PSI Specifications

MODEL NUMBER	P5750RT3-230	PS1000RT3-230	PS1500RT3-230	PS2200RT3-230	PS3000RT3-230
Power Rating	750 VA/675 W	1.000 VA/900 W	1.500 VA/1.350 W	2.200 VA/1.980 W	3.000 VA/2.700 W
DIMENSIONS, W X D X H - MM					
Unit	440 x 412 x 88				440 x 657 x 88
Shipping	560 x 595 x 228				560 x 776 x 228
WEIGHT - KG					
Unit	15	19,4	20,9	33,8	37,2
Shipping	18,2	22,6	24,1	38,3	41,5
INPUT AC PARAMETERS					
Surge Protection	220J				
Voltage Range Without Battery Operation	165-300, Configurable				
Frequency Range	45-65 Hz, (±0,5 Hz)				
Input Socket	IEC-320-C14				IEC-320-C20
Output Sockets	(8) IEC-320-C13				(8) IEC-320-C13 - (1) IEC-320-C19
Voltage, Normal Mode	220/230/240 VAC, Configurable, ±10%				
Voltage, Battery Mode	220/230/240 VAC, Configurable; ±5% Before Low Battery Warning				
Transfer Time	4-6 ms, Typical				
Waveform	Sinewave				
Overload Warning	> 100%				
BATTERY PARAMETERS					
Type	Valve-Regulated, Nonspillable, Lead Acid				
Quantity x Voltage x Ah	2 x 12 x 7,2	3 x 12 x 7,2	3 x 12 x 9	6 x 12 x 7,2	6 x 12 x 9
Backup Time	See Load Autonomy table below				
Recharge Time	5 hours to 90% of rated capacity, after full discharge into resistive load				
ENVIRONMENTAL					
Operating Temperature	0°C to 40°C (32°F to 104°F)				
Storage Temperature	-15°C to 40°C (5°F to 104°F)				
Relative Humidity	0% to 90%, non-condensing				
Operating Altitude	Up to 3000m (10,000 ft.) at 35°C (95°F) without derating				
Audible Noise	<45 dBA				
AGENCY					
Safety	IEC/EN/AS 62040-1-1				
Surge	IEC/EN/AS61000-4-2				
ESD	IEC/EN/AS61000-4-3				
Susceptibility	IEC/EN/AS61000-4-4				
Electrical Fast Transient	IEC/EN/AS 62040-2 2a Ed Clase A				
Emissions	IEC/EN/AS61000-4-6				
Conducted Immunity	IEC/EN/AS61000-3-2				
Harmonics	IEC/EN/AS61000-4-6				
Transportation	ISTA Procedure 1A Certification				
Environmental	ROHS compliant				
Warranty	2 years standard (+ 1 year warranty extension available)				
Packaging	Multi-Language User Manual on CD, Liebert MultiLink Software on CD, Contact Closure (ML9P9S) Cable USB Cable, Tower Stand, Mounting Hardware, Rack-Mount Handles, Fixed Mounting Rails, EPO Connector, Input Power Cord, 2200/3000 only: 2 - (1) Schuko to IEC-320-C19 and (1) UK plug to IEC-320- C19 input cord, IEC Output Cable, 750/1000/1500 only: 2 - (2) IEC-320-C13, IEC Output Cable, 2200/3000 only: 3 - (3) IEC-320-C13				

LOAD AUTONOMY - LIEBERT PSI 750VA-3000VA

	Load %	750 VA	1.000 VA	1.500 VA	2.200 VA	3.000 VA
INTERNAL BATTERY	10	84	93	76	82	76
	20	45	47	32	44	32
	30	25	26	17	19	17
	40	15	15	12	14	12
	50	11	12	9	11	9
	60	9	9	7	9	7
	70	7	7	5	7	5
	80	5	6	4	5	4
	90	4	5	3	4	3
	100	4	4	3	3	3

Note: All run times are in minutes, assume fully charged batteries and are typical at 25°C (77°F) with resistive loads.



LIEBERT® PSI-XR 1000 VA - 3000 VA

Liebert® PSI-XR is a compact, line-interactive UPS system designed especially for IT applications such as network closets and small data centers

The flexible design of Liebert PSI-XR allows the unit to be configured as a self-standing tower or to be rack-mounted within a 2U space. It is available in four capacities, in both 230 V or 120 V models.

The UPS features an innovative line-interactive design incorporating buck/boost automatic voltage regulation technology. This protects against utility voltage fluctuation by raising and lowering utility power to the level needed by the connected equipment. It also allows the UPS to prolong battery life by maximizing its time on utility power before going to battery.

Liebert PSI-XR Standard Features:

Flexibility:

- Six to seven battery-backed sockets
- Configurable input voltage window
- Rotatable Display Panel
- Automatic Frequency Sensing
- Multiple Communications Options (USB, SNMP and Contact Closure).

Higher Availability:

- Data line surge protection
- Advance early warning of UPS system status
- Full sequenced battery testing
- Lightning and surge protection
- Remote emergency power off
- User replaceable hot swappable batteries
- Ample battery backup time at full load when utility fails, for an orderly shutdown of connected equipment.

Lowest Total Cost Of Ownership:

- 0.9 Output Power Factor to provide more power for your protected load, and more energy efficient operation
- Wider input voltage window
- Reduced installation time and costs
- Two-Year Warranty Standard.

Ideally suited for:

- PC's
- Network workstations
- Servers
- Network closets
- Large network peripherals
- VoIP.

Liebert PSI XR 2U Rack version

Liebert PSI XR 2U Tower version

Liebert® PSI XR Specifications

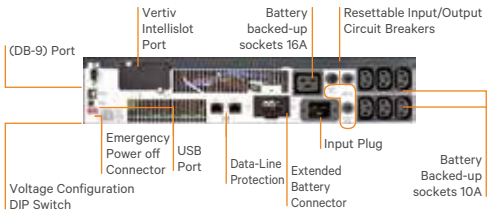
MODEL NUMBER	PS1000RT3-230XR	PS1500RT3-230XR	PS2200RT3-230XR	PS3000RT3-230XR
Power Rating, VA/W	1000VA/900W	1500VA/1350W	2200VA/1980W	3000VA/2700W
DIMENSIONS, W X D X H, MM				
Unit	440 x 490.5 x 88	440 x 490.5 x 88	440 x 700.5 x 88	440 x 700.5 x 88
Shipping	560 x 612 x 228	560 x 612 x 228	560 x 821 x 228	560 x 821 x 228
WEIGHT, KG				
Unit / Shipping	25/29	28/32	42/47	46/51
INPUT AC PARAMETERS				
Surge Protection	220J			
Voltage Range Without Battery Operation	165 to 300 VAC (configurable)			
Frequency Range	45~65Hz, (±0.5Hz)			
Input Socket	IEC-320-C14	IEC-320-C14	IEC-320-C20	IEC-320-C20
Output Sockets	(6) IEC-320-C13	(6) IEC-320-C13	(6) IEC-320-C13 (1) IEC-320-C19	(6) IEC-320-C13 (1) IEC-320-C19
Voltage (Normal Mode)	220/230/240 VAC (configurable)			
Voltage (Battery Mode)	220/230/240 VAC (configurable); ±5% before low-battery warning			
Transfer Time	4-6 ms typical			
On-Battery Waveform	Sinewave			
Overload Warning	>100%			
BATTERY PARAMETERS				
Type	Valve-regulated, nonspillable, lead acid			
Quantity x Voltage x Rating	4 x 12 x 7.2	4 x 12 x 9	8 x 12 x 7.2	8 x 12 x 9
Recharge Time	5 hours to 90% of rated capacity, after full discharge into resistive load			
Battery Backup Time				
ENVIRONMENTAL				
Operating / Storage Temperature, °C	0 to 40 / -15 to 40			
Relative Humidity	0% to 90%, non-condensing			
Operating Altitude	Up to 3000m at 35°C without derating			
Audible Noise	<40 dBA, internal fan(s) Off; <45 dBA, internal fan(s) On			
AGENCY				
Safety	IEC62040-1-1			
EMC	IEC/EN/AS 62040-2 2nd Ed Class A			
Transportation	ISTA Procedure 1A Certification			
Warranty	2 years standard (+ 1 year warranty extension available)			
Packaging	User Manual on CD, Software CD, DB9 Serial cable, USB Cable, Tower Stands, Rack Handles w/ mounting hardware, Safety Instruction Sheet, Environment protection sheet, REPO mate socket, (2) IEC output cables for 1000/1500VA and (3) IEC output cables for 2200/3000 VA, for PS2200/3000: (1) "Shucko" CEE 7/7 to IEC-320-C19 input cord and(1) UK plug to IEC-320-C19 input cord.			

Liebert PSI XR Battery Cabinet Specifications

MODEL NUMBER	PSRT3-24VBXR	PSRT3-48VBXR
Used w/UPS Model	PS1000RT3-230XR / PS1500RT3-230XR	PS2200RT3-230XR / PS3000RT3-230XR
DIMENSIONS, W XD X H, MM		
Unit / Shipping	440 x 490.5 x 88 / 560 x 675 x 228	
WEIGHT, KG		
Unit / Shipping	29 / 33	
BATTERIES		
Type	Valve-regulated, nonspillable, lead acid	
Quantity x Voltage x Rating	8 x 12 x 7.2	8 x 12 x 7.2
Battery Manufacturers	CSB, YUASA or Equivalent	
ENVIRONMENTAL		
Operating / Storage Temperature, °C	0 to 40 / -15 to 40	
Relative Humidity	0% to 90%, non-condensing	
Maximum Operating Altitude	3000m at 35°C without derating	
AGENCY		
Safety / Emissions	IEC/EN/AS 62040-1-1 / IEC/EN/AS 62040-2 2nd Ed Class A	
Transportation	ISTA Procedure 1A Certification	

Battery Runtime Chart (Runtimes are in minutes, assuming fully charged batteries at 25°C)

NUMBER OF BATTERIES	PS1000RT3-230XR	PS1500RT3-230XR	PS2200RT3-230XR	PS3000RT3-230XR
Internal Battery (half/full load)	15 / 6	13 / 5	14 / 5	13 / 5
1 Cabinet (half/full load)	73 / 31	55 / 18	45 / 15	31 / 12
2 Cabinet (half/full load)	129 / 65	95 / 46	67 / 29	56 / 18
3 Cabinet (half/full load)	181 / 96	131 / 64	95 / 48	73 / 31
4 Cabinet (half/full load)	233 / 124	167 / 82	143 / 72	95 / 47
5 Cabinet (half/full load)	285 / 151	203 / 106	167 / 84	113 / 56
6 Cabinet (half/full load)	336 / 179	239 / 124	191 / 102	131 / 65



LIEBERT® GXT4™ 700 VA - 3000 VA

Liebert® GXT4™ is a true on-line UPS that delivers continuous, high-quality AC power to connected equipment with no interruption when transferring to battery

It protects equipment from virtually all power disturbances caused by blackouts, brownouts, sags, surges or noise interference.

For robust UPS protection of up to 3 kVA, the Liebert GXT4 provides industry-leading features in a compact 2U design:

- On-line design means zero transfer time. If utility power fails, your critical load will be supported by a seamless flow of power
- ECO mode option allows improved energy efficiency
- Easy serviceability with replaceable, hot-swappable batteries
- Controllable power to multiple devices via two independently programmable pairs of sockets
- Optional Liebert MicroPOD™ allows for maintenance
- Compatible with Vertiv™ monitoring suite, racks and rack PDUs.

Flexibility:

- Two controllable socket groups
- Rotatable multi-language LCD display
- Automatic frequency sensing
- Rack and tower mounting flexibility
- Multiple communication options (SNMP, Modbus and Relay)
- Frequency conversion capability.

High Availability:

- Advance early warning of UPS system status
- Integrated and extended backup time
- Overload capability
- Periodic battery testing
- Replaceable hot-swappable batteries
- Input power-factor correction
- Internal automatic and manual bypass capability
- Intelligent battery management
- Input circuit breaker
- Lighting and surge protection.

Lower Total Cost of Ownership:

- High output power factor (0.9) to maximize power availability
- ECO mode for increased efficiency
- ENERGY STAR® qualified models
- Wider input voltage minimizes battery use
- Intelligent fan operation
- Two-year standard and extended warranty protection.

Communications for Power Monitoring, Control and Preventive Maintenance:

Liebert GXT4 offers a variety of communication options, providing flexible monitoring, control capabilities and preventive maintenance. These include:

- Optional SNMP/Webcard for UPS monitoring and control
- Optional Modbus and Relay cards
- Vertiv MultiLink™ automated system shutdown software
- Vertiv Nform™ monitoring system.

Ideally suited for:

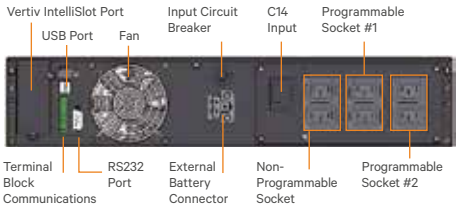
- Mission critical applications and systems
- Network workstations
- Servers
- Network closets
- Large network peripherals
- VoIP
- PCs.

Liebert GXT4 700 - 3000 VA

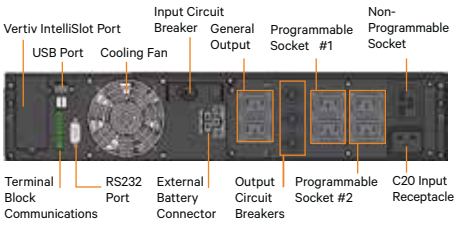
Liebert® GXT4™ Specifications

MODEL NUMBER	GXT4-700RT230E	GXT4-1000RT230E	GXT4-1500RT230E	GXT4-2000RT230E	GXT4-3000RT230E
Power Rating	700 VA / 630 W	1000 VA / 900 W	1500 VA / 1350 W	2000 VA / 1800 W	3000 VA / 2700 W
INPUT AC PARAMETERS					
Voltage Range without Battery Operation (V)	230 AC nominal (115 - 280 V AC, variable based on output load)				
Frequency Range (Hz)	40 - 70; Auto sensing				
Input Socket	IEC320-C14	IEC320-C14	IEC320-C14	IEC 320-C20	IEC 320-C20
Output Sockets	(6) IEC320-C13	(6) IEC320-C13	(6) IEC320-C13	(6) IEC320-C13	(6) IEC320-C13 (1) IEC320-C19
Voltage (V)	200 / 208 / 220 / 230 / 240 AC (user configurable); ±3%				
Waveform	Pure Sinewave				
BATTERY PARAMETERS					
Type	Valve-regulated, non-spillable, lead-acid				
Quantity x Voltage x Rating (Ahr)	4 x 12 V x 5.0	4 x 12 V x 5.0	4 x 12 V x 7.2	4 x 12 V x 9.0	6 x 12 V x 9.0
Recharge time	5 hours to 90% capacity after full discharge with 100% load till UPS auto-shutdown (internal batteries only)				
ENVIRONMENTAL					
Operating/Storage Temperature	0° C - to +40°C (+32°F to +104°F) /-15°C to +40°C (5°F to +122°F)				
Relative Humidity (%)	0% RH to 95% RH, non-condensing				
Operating Altitude	Up to 3000 m (10,000 ft) at 25°C (77°F) without derating				
Audible Noise (dBA) at 1 meter (3.2 ft) from the front or sides	<43		<46		<48
AGENCY					
Safety	IEC/EN/AS 62040 -1: 2008; GS Mark				
Safety (UL 1778 Listed)	Yes		-	-	Yes
RFI/EMI	IEC/EN/AS 62040 -2 2nd Ed (C2)				
Transportation	ISTA Procedure 1A				
Compliance	CE, RoHS				
DIMENSIONS (W X D X H /MM)					
Unit	430 x 408 x 85		430 x 497 x 85		430 x 602 x 85
Shipping	570 x 617 x 262		570 x 617 x 262		570 x 717 x 262
WEIGHT (KG)					
Unit	18.2	18.2	23.2	25.5	32.4
Shipping	20	20	26.0	28.0	35.0
COMPATIBLE EXTERNAL BATTERY CABINET	**GXT4-48VBATTE**				**GXT4-72VBATTE**
Type	Valve-regulated, non-spillable, lead acid				
Quantity x Voltage x Rating (Ahr)	2 x 4 x 12 V x 9.0				2 x 6 x 12 V x 9.0
ENVIRONMENTAL					
Operating/Storage Temperature, °C	0° C - to +40°C (+32°F to +104°F) /-15°C to +50°C (5°F to +122°F)				
Relative Humidity	0% RH to 95% RH, non-condensing				
Maximum Operating Altitude	Up to 3000 m (10,000 ft) at 40°C (77°F) without derating				
AGENCY					
Safety	IEC/EN/AS 62040 -1: 2008; GS Mark				
Transportation	ISTA Procedure 1A				
DIMENSIONS (W X D X H /MM)					
Unit	430 x 497 x 85				430 x 602 x 85
Shipping	570 x 617 x 262				570 x 717 x 262
WEIGHT (KG)					
Unit	32				42
Shipping	35				46

(*) Note: check user manual for details.



Liebert GXT4 1500 VA



Liebert GXT4 3000 VA

Liebert MicroPOD™

Vertiv™ Intellislot® Communication Card

LIEBERT® GXT MT+ 1000 VA - 3000 VA Gen. 2

Liebert® GXT MT+ Gen. 2 features true on-line double conversion technology, delivering best-in-class power protection for critical applications

The new Liebert GXT MT+ Gen. 2 has been designed according to comprehensive technical specifications, allowing it to provide a high level of availability for connected IT equipment. Its ECO mode function is in charge of delivering high levels of efficiency, leading to optimized total cost of ownership (TCO) advantages Liebert GXT MT+ furthermore offers intelligent monitoring and network management functions for improved system shutdown and control.
This high performance UPS with proven reliability is available in a compact tower design.

Flexibility:

- Multiple communication options (USB, RS232)
- Network and volt-free contact cards (optional)
- Schuko and IEC output sockets
- Frequency converter operation 50/60 Hz.

Higher Availability:

- Wide input voltage range
- Input circuit breaker
- Automatic frequency detection.

Optimized Total Cost of Ownership:

- ECO mode for high efficiency
- Minimized installation time and costs.

Ideally Suited for:

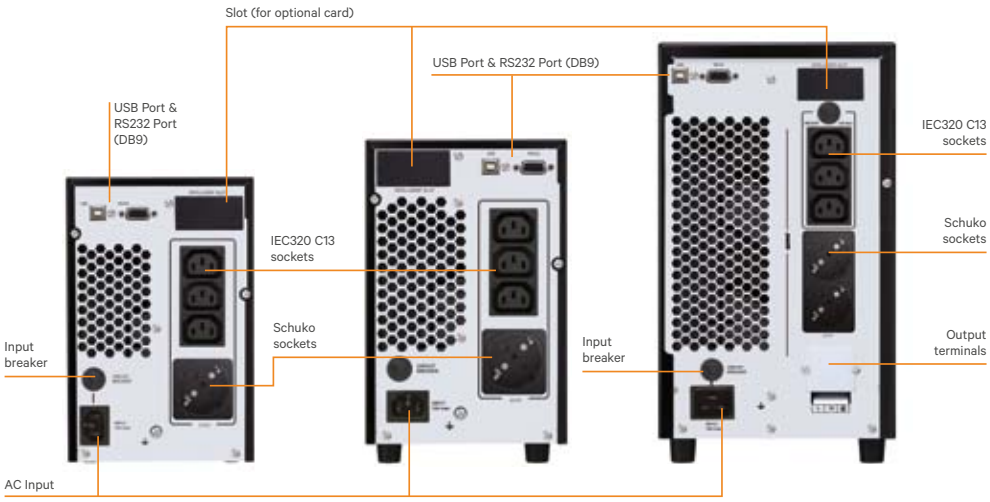
- VoIP equipment
- Small office networks
- Computer rooms
- Process automation equipment
- Network storage devices.

Liebert GXT MT+ 1 kVA - 3 kVA Gen. 2

Liebert® GXT MT + 1 kVA - 3 kVA Gen. 2 Specifications

MODEL NUMBER	GXT MT+ 1 KVA G2 ES	GXT MT+ 2 KVA G2 ES	GXT MT+ 3 KVA G2 ES
Power Rating	1000 VA / 800 W	2000 VA / 1600 W	3000 VA / 2400 W
DIMENSIONS, W x D x H - mm			
Unit	145 x 282 x 223	145 x 397 x 238	190 x 421 x 336
Shipping	230 x 360 x 325	230 x 472 x 325	320 x 560 x 460
WEIGHT - KG			
Unit	9.7	17.3	27.5
Shipping	10.7	18.7	29.5
INPUT AC PARAMETERS			
Voltage Range Without Battery Operation[1]	From 110 to 300 V AC		
Frequency Range (synchronization)	47 - 53 or 57 - 63 Hz; Autosensing		
Input Socket	1 x IEC 320 - C14		1 x IEC 320 C20
Output Sockets	3 x IEC320 C13 & 1 x Schuko		3 x IEC 320 C13 & 2 x Schuko & Terminals
Voltage	220 / 230 / 240 V AC		
Waveform	Sinewave		
BATTERY PARAMETERS			
Type	Valve-regulated, non-spillable, lead acid		
Internal Batteries	Yes		
Quantity x Voltage x Rating	2 x 12 V x 9 Ahr	4 x 12 V x 9 Ahr	6 x 12 V x 9 Ahr
Recharge Time	4 hours recovers to 90% capacity (Typical)		
External Battery Cabinets	Not permitted		
ENVIRONMENTAL			
Operating Temperature	0 °C to 40 °C		
Relative Humidity	20% to 90% non condensing		
Operating Altitude	<1000 m without derating		
Audible Noise	<50 dBA @ 1 meter		
STANDARDS AND CERTIFICATIONS			
Safety	EN62040-1:2008		
EMC	EN62040-2:2006 class C2		
Compliance	CE		

[1] From 110 V to 175 V AC, and 280 V to 300 V AC, derating applies.
Note: External battery cabinets are not permitted. Internal batteries only.



Liebert GXT MT+ G2 - 1 kVA *Liebert GXT MT+ G2 - 2 kVA* *Liebert GXT MT+ G2 - 3 kVA*

LIEBERT® GXT4™ 5000 VA - 10000 VA

Liebert® GXT4™ UPS meets the need for higher power capacities in small spaces

This true on-line double conversion UPS system is available in larger capacity models of 5 kVA - 10 kVA, featuring integrated maintenance bypass as well as optional extended battery runtime.

The **Liebert GXT4 UPS** is designed for use in either rack or tower configurations. It maintains a compact footprint in all ratings, with 5000 - 6000 VA models with a height of 5 U, and 10000 VA with a height of 6 U, as well as a short depth of <600 mm.

Flexibility:

- Rotatable multi-language LCD display panel
- Compact 5Us or 6Us height and short depth (<600 mm)
- Automatic frequency sensing
- Frequency conversion capability
- Rack & tower mounting flexibility
- User replaceable hot-swappable internal batteries
- Extended backup time with additional battery cabinets
- Vertiv™ IntelliSlot® communication port available
- Includes Windows®-based configuration program
- Built-in USB communication ports for use with Vertiv MultiLink™ automated shutdown software
- Built-in closure signals
- Emergency power-off (EPO).

High Availability:

- Internal automatic and manual bypass
- Self-diagnostics
- Input power-factor correction
- Advance early warning of UPS systems status
- 10 kVA parallel/redundant up to 2+1
- Periodic battery testing
- Intelligent battery management.

Total Cost of Ownership:

- High output power factor
- ECO mode for increased efficiency
- ENERGY STAR® qualified models
- Wider input voltage minimizes battery use
- Battery cutoff voltage to prevent from over discharge of batteries and to prolong battery life.

Communications for Power Monitoring, Control and Preventive Maintenance:

- Liebert GXT4 offers a variety of communication options, providing flexible monitoring, control capabilities and preventive maintenance. These include:
- Optional SNMP/Webcard for UPS monitoring and control
- Optional Modbus and Relay cards
- Vertiv MultiLink automated system shutdown software
- Vertiv Nform™ monitoring system
- Vertiv LIFE™ Services compatibility for UPS preventive maintenance and remote diagnostics.

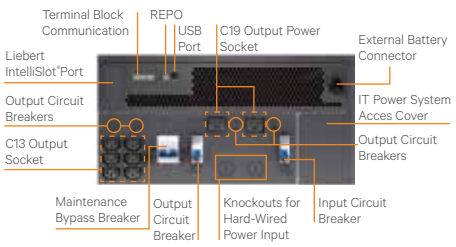
Ideally Suited for Mission-Critical Applications:

- LAN and WAN servers
- Network equipment
- IP telephony deployments
- Office telecommunication systems
- Test and diagnostic equipment
- Finance applications.

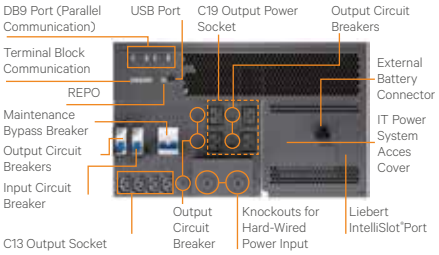
Liebert GXT4 5 - 10 kVA

Liebert® GXT4™ Specifications

MODEL NUMBER	GXT4-5000RT230E	GXT4-6000RT230E	GXT4-10KRT230E
Power Ratings (VA/W)	5000 VA / 4000 W	6000 VA / 4800 W	10000 VA / 9000 W
INPUT AC PARAMETERS			
Voltage Range (VAC)		176 - 280	
Frequency Range (Hz)		40~70; Auto sensing	
Input Socket		Hardwired input on PD2-CE6HDWRMBS standard power distribution box	Hardwired input on PD2-CE10HDWRMBS standard power distributions box
Output Sockets		6 x IEC320-C13 + 2 x IEC320-C19 + hardwired on PD2-CE6HDWRDMBS standard power distribution	4 x IEC320-C13 + 4 x IEC320-C19 + hardwired on PD2-CE10HWRDMBS standard power distribution
Voltage (V)		230 factory default	
Waveform		Pure Sinewave	
BATTERY PARAMETERS			
Type		Valve-regulated, non-spillable, lead-acid	
Quantity x Voltage x Rating		20 x 12 V x 5 Ahr	20 x 12 V x 9 Ahr
Recharge time		5 hours to 90% capacity after full discharge with 100% load	
ENVIRONMENTAL			
Operating		0° C - to +40°C (+32°F to +104°F) (no derating)	
Relative Humidity		0% RH to 95% RH, non-condensing	
Operating Altitude		Up to 1000m (3281ft) at 25°C (77°F) without derating	
Audible Noise		<50 dBA, at 1 meter (3.2 ft) from the front or sides	
AGENCY			
Safety		IEC/EN/AS 62040-1: 2008; GS Mark	
EMI/EMC/C-Tick EMC		IEC/EN/AS 62040-2 2nd Ed (C2)	
Transportation		ISTA Procedure 1A	
Compliance		CE, RoHS	
DIMENSIONS (W X D X H /MM)			
Unit / Shipping		430 x 574 x 217 / 516 x 745 x 530	430 x 581 x 261 / 530 x 745 x 563
WEIGHT (KG)			
Unit / Shipping	60 / 71	60 / 71	70 / 92
COMPATIBLE EXTERNAL BATTERY CABINET			
Type		Valve-regulated, non-spillable, lead-acid	
Quantity x Voltage x Rating		1 x 20 x 12 V x 9 Ahr	
ENVIRONMENTAL			
Operating / Storage Temperature		0° C - to +40°C (+32°F to +104°F) / 15° C - to +50°C (5°F to +122°F)	
Relative Humidity		0% RH to 95% RH, non-condensing	
Maximum Operating Altitude		Up to 1000 m (3281 ft) at 25°C (77°F) without derating	
AGENCY			
Safety / Emissions		IEC/EN/AS 62040-1: 2008	
Transportation		ISTA Procedure 1A	
DIMENSIONS (W X D X H /MM)			
Unit / Shipping		430 x 581 x 173 / 530 x 745 x 475	
WEIGHT (KG)			
Unit / Shipping		65 / 76	



Liebert GXT4 5000/6000 VA



Liebert GXT4 10000 VA

Front view Power Distribution (PD2-CE10HDWRMBS)

Vertiv Intellislot Communication Card

LIEBERT® GXT3 10000 VA T MODEL

Liebert® GXT3 is designed to deliver higher power capacities for applications with limited floor space

This true on-line double conversion UPS system is available in two different 10000 VA versions featuring an integrated maintenance bypass, as well as optional extended battery back up time.

Liebert GXT3 T230 is the standard version free of integrated isolation transformer which can be configured as either 1/1 or 3/1, providing increased flexibility.

The Liebert GXT3 range also offers the possibility of integrated full galvanic isolation with the Liebert GXT3 T220 which houses an output isolation transformer allowing it to be used at 110, 120 phase to neutral or 208, 220 phase to phase voltages, for dual input with phases shifted by 180 degrees.

Communications For Power Monitoring And Control:

Liebert GXT3 offers a variety of communications options providing flexible monitoring and control capabilities.

- Vertiv™ IntelliSlot™ web card providing SNMP and web-based monitoring and control of the UPS
- Vertiv MultiLink™ automated system shutdown software
- Vertiv Nform™ monitoring system
- Third-party monitoring systems.

Ideally suited for Mission-Critical Applications such as:

- LAN & WAN servers
- Network equipment
- IP telephony deployments
- Office telecommunications systems
- ISDN & frame relay applications
- Test and diagnostic equipment
- Micro Processor-controlled equipment
- Finance applications.

Flexibility:

- Automatic frequency detection
- User replaceable hot-swappable internal batteries
- Extended back up time with additional battery cabinets
- Vertiv IntelliSlot communications port
- Includes Windows-based configuration program
- Built-in USB communications for use with Vertiv MultiLink automated shutdown software
- Built-in closure signals
- Emergency power off (EPO)
- Parallelable up to three units (2+1).

Higher Availability:

- Wider input voltage window minimizes battery use
- Internal automatic and manual bypass
- Self-diagnostics.

Reduced Total Cost Of Ownership:

- Standard two-year warranty
- Compact footprint
- Batteries shielded from heat generating electronic components
- Battery cutoff voltage to prevent from overdischarge of batteries.

0.9 PF More Power Available!

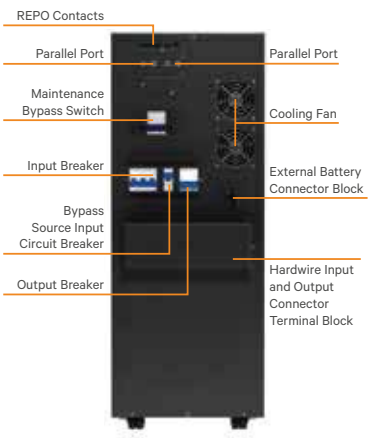
Liebert GXT3 10000 VA Tower

Liebert® GXT3 Specifications

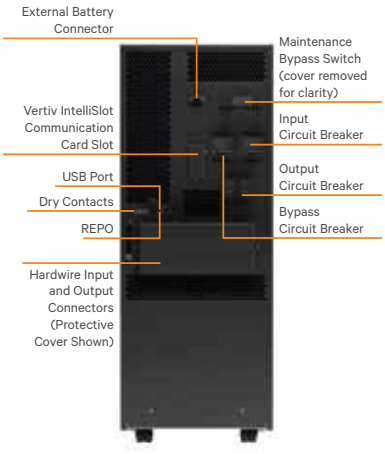
MODEL NUMBER	GXT3-10000T230	GXT3-10000T220
Power Rating	10000 VA/9000 W	
DIMENSIONS, W x D x H - mm		
Unit / Shipping	300 x 675 x 800 / 426 x 866 x 1062	
WEIGHT - KG		
Unit	105	140
INPUT AC PARAMETERS		
Voltage Range Without Battery Operation	176-280VAC (for 1/1) 304-485VAC (for 3/1)	100 - 185 ±5VAC (for 1/1)
Frequency Range	50 - 60Hz autoselection	
Input Socket	terminal block	
Output Sockets	terminal block	
Voltage	220/230/240VAC	208VAC
Waveform	Sinewave	
BATTERY PARAMETERS		
Type	HR 1234W F12	CSB HR1234R or Panasonic UP-RW1245
Quantity x Voltage	20 x 12V	
Recharge Time	3 hours to 90% capacity after full discharge with 100% load (Internal Batteries Only)	
ENVIRONMENTAL		
Operating Temperature	0 to 30 °C with 0.9 pf 30 to 40 °C with 0.8 pf	
Storage Temperature	- 15 to 50 °C	
Relative Humidity	0%RH to 95%RH, non-condensing	
Operating Altitude	Up to 1000m	
Audible Noise	< 55 dBA, at 1 meter from the rear < 50 dBA, at 1 meter from the front or sides	
Standards and Certifications	CE	UL 1778, c-UL
RFI/EMI	IEC/EN/AS 62040-2 2nd Ed (Cat 2 – Table 6)	FCC Part 15, Subpart B, Class A
Surge Immunity	EN61000-4-5, Level 3, Criteria A	IEC/EN 61000-4-5, ANSI C62.41 (for North America)
Transportation	ISTA Procedure 1A	ISTA Procedure 1B

Liebert GXT3 Battery Cabinet Specifications

MODEL NUMBER	GXT3-240TBATT CE
DIMENSIONS, W x D x H - mm	
Unit / Shipping	300 x 675 x 800 / 426 x 866 x 1062
WEIGHT - KG	
Unit / Shipping	110/140
BATTERIES	
Type	Valve-regulated, non-spillable, lead acid
Quantity x Voltage	2 x 20 x 12V
ENVIRONMENTAL	
Operating / Storage Temperature, °C	0 to 40/-15 to 40
Relative Humidity	0% to 95%, non-condensing
Maximum Operating Altitude	Up to 10000m (40°C)
STANDARDS AND CERTIFICATIONS	
Safety / Emissions	CE
Transportation	ISTA Procedure 1A



Liebert GXT3-10000T230



Liebert GXT3-10000T220

LIEBERT® GXT MT+ 6000 VA - 10000 VA TOWER

Liebert® GXT MT+ features true on-line double conversion technology, delivering best-in-class power protection for critical applications

Liebert GXT MT+ features an attractive design style, together with an LCD display and synoptic scheme in the front panel for easy use. Load protection is ensured with DSP control technology, wide input voltage operation and high output power factor (0.8).
Its small size, the shutdown software included and the maintenance bypass make the Liebert GXT MT+ the perfect and safest choice to protect your critical load.

Flexibility:

- Multiple communication options (USB, RS232)
- Network and volt-free contact cards (optional)
- LCD display and intuitive synoptic in the front panel for easy UPS status.

Higher Availability:

- Wide input voltage range
- Input circuit breaker
- Maintenance bypass
- Automatic frequency detection.

Optimized Total Cost of Ownership:

- Minimized installation time and costs
- Small and compact footprint and size.

Ideally Suited for:

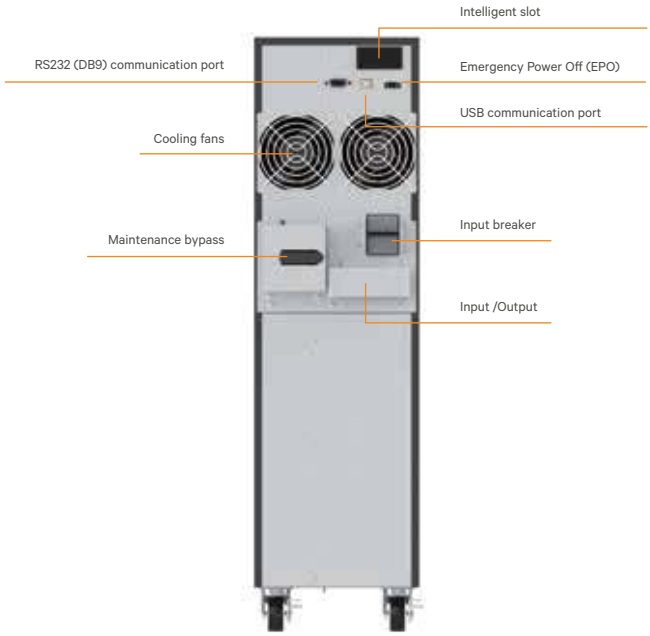
- VoIP equipment
- Small office networks
- Computer rooms
- Process automation equipment
- Network storage devices.

Liebert GXT MT+ 6 kVA - 10 kVA Tower

Liebert® GXT MT + 6 kVA - 10 kVA Tower Specifications

MODEL NUMBER	GXT-MT+ 6 KVA ES	GXT-MT+ 10 KVA ES
Power Rating	6000 VA / 4800 W	10000 VA / 8000 W
DIMENSIONS, W x D x H - mm		
Unit	190 x 369 x 688	190 x 442 x 688
Shipping	290 x 495 x 910	320 x 580 x 910
WEIGHT - KG		
Unit	60	75
Shipping	65	81
INPUT AC PARAMETERS		
Voltage Range Without Battery Operation(1)	From 110 to 300 V AC	
Frequency Range (synchronization)	46 - 54 or 56 - 64 Hz; Autosensing	
Input Socket	Hardwired (L-N-G)	
Output Sockets	Hardwired (L-N-G)	
Voltage	208 / 220 / 230 / 240 V AC	
Waveform	Sinewave	
BATTERY PARAMETERS		
Type	Valve-regulated, non-spillable, lead acid	
Internal Batteries	Yes	
Quantity x Voltage x Rating	16 x 12 V x 9 Ahr	20 x 12 V x 9 Ahr
Recharge Time	9 hours recovers to 90% capacity (Typical)	
External Battery Cabinets	Not permitted	
ENVIRONMENTAL		
Operating Temperature	0 °C to 40 °C	
Relative Humidity	<95% non condensing	
Operating Altitude	<1000 m without derating	
Audible Noise	<55 dBA @ 1 meter	<58 dBA @ 1 meter
STANDARDS AND CERTIFICATIONS		
Safety	EN62040-1:2008	
EMC	EN62040-2:2006 class C3	
Compliance	CE	

(1) From 110 V to 176 V AC derating applies.
Note: External battery cabinets are not permitted. Internal batteries only.



Liebert GXT MT+ 6 kVA - 10 kVA Tower

LIEBERT® APS 5 kVA - 20 kVA

Modular Power Protection for Immediate and Future Load Demands

The Liebert® APS is a modular, single phase output UPS, with both single and three phase input options, designed for the protection of IT equipment such as workstations, servers and networks, as well as telecommunications-related applications.

The modular, scalable architecture of the Liebert APS is specifically designed to meet immediate load requirements as well as efficiently adapt to future increase needs, allowing expansion in increments of 5 kVA up to a total of 20 kVA with the simple installation of additional power modules.
Featured FlexPower technology™ ensures that such power expansions can be carried out without the need for transferring the load to bypass (hot swap) thus extending the load protection and system availability during service and upgrade operations.
Maximized system availability can be further achieved in all Liebert APS configurations with redundant power modules reaching the maximum configuration of 20 kVA with an additional 10 kVA of redundancy.

The Liebert APS 5 kVA/4.5 kW power modules deliver an enhanced level of active power when compared to UPS of equal size in both standard and extended autonomy configurations, thus providing customers with more power to support larger loads. Increased active power also contributes to minimizing initial investment costs and optimizing TCO.
Optimization of TCO is further extended to batteries which can be housed inside the UPS cabinet together with power modules.
The compact battery modules allow significant extension of back up time without increasing the overall cabinet footprint.
With a double conversion efficiency of 92% coupled with an output power factor of 0.9, Liebert APS rises to the top of its class delivering both optimized CAPEX and OPEX

Features and Performances:

- 5 kVA / 4.5 kW single phase output power modules
- Site configurable as single or three phase input
- Stand alone or rack mountable
- Hot-Swappable power and battery modules
- Intelligent battery modules
- Double conversion efficiency: 92%
- Integrated autonomy up to 1h @ 4.5 kW
- 1.8 A charging current per module
  Optional 10 A charger module
- Terminal block or output socket
- Fully rated @ 40°C.

Liebert APS with matching modular battery cabinet for extended autonomy applications.

Liebert® APS Specifications

RATINGS	
Frame Rating (kVA/kW)	20/18
Power Module rating (kVA/kW)	5/4.5
Maximum number of power module per frame	6
INPUT DATA	
Nominal Input Voltage (V)	220/230/240; Single-Phase - 380/400/415; Three-Phase
Input voltage range without battery discharge at 70% load (V)	140-280 Single-Phase; - 242-485 Three-phase
Nominal Input Frequency (Hz)	50/60
Input Frequency Range (Hz)	40 to 70 auto-sensing
Input Power Factor (kW/kVA)	Single-Phase Input, > 0.99 - Three-phase Input, > 0.95
Input Current Distortion, THDi (%)	< 5
BATTERY MODULE	
Battery Cells Per String	72
Backup Time, Minutes, Full Load (for non-redundant system which has equal number of battery strings and power modules) (min)	5
Maximum Charge Current (Full, Load) (A)	Power module internal charger: 1.8 - Extra Charger module: 10
Voltage temperature compensation	Yes
OUTPUT DATA	
Nominal Output Voltage (V)	220/230/240 Single-Phase
Voltage Regulation (%)	±3
Voltage Stability (100% Step Load) (%)	±7
Voltage Recovery Time (ms)	≤ 60
Output Voltage Distortion, THDv (%)	≤ 3, linear load ≤ 5, non-linear load
Output Frequency (Hz)	50/60
Nominal load power factor (kW/kVA)	0.9
Output Overload Capability (s)	130% for 60s; 150% for 10s - 200% for 1s; > 201% for 0.25s
DIMENSIONS AND WEIGHT	
Unit Weight (empty frame) (kg)	145
Power Module Weight (kg)	8.2
Battery Module Weigth (kg)	16.4
Dimensions, W x D x H (mm)	440 x 850 x 970
GENERAL & ENVIRONMENTAL	
Operating Temperature, continuous, without derating (°C)	0 - 40
Double conversion Efficiency (AC-AC) (%)	92
Eco Mode Efficiency (AC-AC) (%)	>98
Environmental	WEEE and ROHS2 (6 by 6), REACH Compliant
Acoustic Noise Level @ 1 meter (dBA)	< 55dB (< 50% load), < 65dB (51-100% load)
UPS Classification According to IEC EN 62040-3	VFI-SS-111
Protection Degree IEC60529	IP 20
Color	RAL 7021

THREE-PHASE OFFERING

LIEBERT® NXC 10 kVA - 200 kVA

Compact and Reliable Power in a Fully Integrated Packaged Solution

To ensure superior protection for critical loads, the Liebert® NXC range has been designed to optimize specific rating requirements, thus enhancing flexibility and installation space needs.

Continuous Reliability:
The Liebert® NXC 10 - 200 kVA range offers reliable and flexible secure power in a fully integrated package solution.
Its highly efficient transformer-free double conversion technology delivers installation and running cost savings. With a rated output power factor up to 1, Liebert® NXC is also able to provide greater active power than a traditionally rated 0.9 power factor UPS.
Liebert® NXC achieves up to 96% efficiency in double conversion mode and up to 99% in ECO mode, thus ensuring effective load protection, while reducing the total cost of ownership (TCO)
Continuous Reliability
The Liebert® NXC 10 - 200 kVA range offers reliable and flexible secure power in a fully integrated package solution. Its highly efficient transformer-free double conversion technology delivers installation and running cost savings. With a rated output power factor up to 1, Liebert® NXC is also able to provide greater active power than a traditionally rated 0.9 power factor UPS.
Liebert® NXC achieves up to 96% efficiency in double conversion mode and up to 99% in ECO mode, thus ensuring effective load protection, while reducing the total cost of ownership (TCO) and environmental impact.
Liebert® NXC's combination of performance features, impressive integrated autonomy and compact footprint make it ideal for guaranteeing clean, continuous power for a wide range of applications from IT and manufacturing to retail and transport.
Its low THDi and active input power factor correction ensure that the current absorbed from the upstream distribution network is near equal to its nominal output current, hence eliminating the need for oversizing gensets and other equipment.

Features and Performances:

- Output power factor up to 1
- Double conversion efficiency up to 96%
- ECO mode efficiency up to 99%
- Input current total harmonic distortion correction (THDi) < 3%
- Battery charger up to 50 A
- Integrated manual bypass
- Integrated input and output breakers/ switches (10-60 kVA)
- Integrated parallel load bus and synchronization port (LBS)

Liebert NXC Family

Liebert® NXC Specifications

RATINGS (KVA)		10	15	20	30	40	60	80	100	120	160	200
INPUT												
Nominal input voltage (V)							380/400/415					
Input voltage range without battery discharge (V)							305 to 477					
Nominal frequency (Hz)							50/60					
Input frequency range (Hz)							40 to 70					
Input power factor (kW/kVA)							0.99					
Current THD at full linear load (THDI%)					<5					<3		
Bypass voltage tolerance (%)							selectable from +20 to -40					
Bypass frequency tolerance (%)							±20 (±10 selectable)					
BATTERY												
Number battery cells per string			Max: 240; Min: 180			Max: 240; Min: 192				Max: 264; Min: 180		
Voltage temperature compensation (mV/°C/Cell)			-3.0 (selectable 0 to -5.0 around 25°C or 20°C or inhibit)						-3.0 (selectable from 0 to -5.0 around 25°C to 30°C, or inhibit)			
Battery charger max. power (kW)			4.5			6	7.5	12	18		24	30
OUTPUT												
Nominal output voltage (V)			380/400/415 (three-phase) or 220/230/240 (single-phase)						380/400/415 (three-phase)			
Nominal output frequency (Hz)							50/60					
Nominal active power (kW)		9	13.5	18	27	36	54	80	100	120	160	200
THDv with 100% linear load (%)							2					
Inverter overload capacity			105% for 60 min; 125% for 5 min; 150% for 1 min; >150% for 200ms						105% with continuous operation; 125% for 10 min; 150 for 1min; >150% for 200ms			
Double conversion efficiency	**100%**	94.4%	94.5%	94.2%	94.7%	94.4%	95.3%	95.7%	95.7%	95.6%	95.5%	95.3%
	75%	94.0%	94.4%	94.5%	94.8%	94.7%	95.5%	95.9%	95.9%	95.8%	95.7%	95.7%
	50%	93.5%	94.0%	94.4%	94.6%	94.8%	94.0%	95.9%	95.8%	95.9%	95.8%	95.8%
	25%	90.5%	92.9%	93.5%	91.7%	93.6%	94.0%	95.0%	94.7%	95.0%	94.9%	94.9%
ECO mode efficiency (%)					98.0%					99.0%		
DIMENSIONS												
Dimensions (W x D x H) mm			500 x 860 x 1240			600 x 850 x 1600			600 x 1000 x1600		600 x 1000 x 2000	
WEIGHT												
(excluding battery) kg			115/145			210/245	225/260	385/435	430/480		475/525	520/570
(including 32 batteries) kg			215/245			600/635	615/650		N/A			
GENERAL												
Noise at 1 m (dBA)		≤56	≤56	≤58	≤56	≤58	≤58	≤59	≤60	≤60	≤61	≤62
Protection level IEC (60529)							IP20					
General and safety requirements for UPS							EN/IEC/AS 62040-1					
EMC requirements for UPS							EN/IEC/AS 62040-2					
UPS classification according to CEI EN 6240-3							VFI-SS-111					

LIEBERT® ITA 10 kVA - 40 kVA

Remarkable Efficiency and Flexibility Characterize the Liebert® ITA UPS Family

Featuring true on-line double conversion technology, the Liebert ITA UPS series from Vertiv provides a highly efficient and reliable power protection solution for your computer rooms, storage and network equipment.

With a 0.9 output power factor, **Liebert ITA** perfectly matches the needs of modern IT loads, and with its wide input voltage and frequency range, it effectively reduces the need for battery intervention, thus prolonging battery life.

It is also endowed with intelligent fans with automatic speed adaptation, which effectively save energy and reduce noise.

Liebert ITA supports common battery configurations between paralleled UPS and the number of batteries per string, which can be arranged flexibly, facilitating the utilization of different battery systems and saving on battery investment.

An extra powerful battery charger across all models capable of recharging high capacity battery strings ensures a fast charge-restoration even after a prolonged power outages.

Liebert ITA offers enhanced flexibility with a wide range of accessories for both stand-alone and rack-mount installations. When rack mounted, it allows to install up to 40 kVA in just 4 U of space, achieving a remarkable space saving. Parallelability and maintenance are facilitated through the use of dedicated bypass and power distribution options while extended backup time can be provided with matching battery modules for a neat rack-mounted installation.

Liebert ITA features a multi-lingual LCD user interface allowing close control and monitoring of system status and performance.

The Liebert ITA series is ideally suited for:

- Small computer rooms
- Long backup time (>30 minutes) applications
- Branch offices
- Servers
- Network computers and peripherals
- Storage device
- VoIP.

Product Features:

- Rack-tower design for installation flexibility
- Able to deliver both three-phase and single-phase output (10-20 kVA)
- Ultra high power density
- 0.99 input power factor for better grid or generator compatibility
- 0.9 output power factor for additional power availability
- Efficiency in double conversion exceeding 95%
- ECO mode operation with efficiency up to 98% and remarkable energy-saving performance
- Powerful charging capability with consequent reduction of the battery recharging time.

The UPS is compatible with any Building Management System (BMS) by offering the following communication features:

- Voltage-free contact ports
- USB interface
- Optocoupler based interfaces
- Vertiv™ IntelliSlot™ for SNMP, Modbus or Relay communication.

Liebert ITA 10 - 40 kVA

Liebert® ITA 10 - 40 kVA Specifications

NOMINAL RATINGS (KVA)	10	15	20	30	40
INPUT					
Nominal input voltage (V)			380/400/415		
Input voltage range without battery discharge (V)			229~478		
Nominal input frequency (Hz)			50/60		
Input frequency range (Hz)			40-70		
Bypass voltage tolerance (%)			Upper limit: +10%, +15%, or +20% default: +15% Lower limit: -10%, -20%, -30% or -40% default: -20%		
Bypass frequency tolerance (%)			+/- 10% or +/- 20% default: +/- 20%		
Input power factor (kW/kVA)	0.98	0.99	0.99	0.99	0.99
Current THD at full linear load, 3 ph. output (THDI%)			<4%		
BATTERY MANAGEMENT					
Number battery cells per string (max - min)		30-40		32-40	
Battery Modules			32*12 V*7 Ah or 32*12 V*9 Ah		
Voltage temperature compensation (mV/°C/Cell)			0-5mV°C/Cell; 3mV°C/Cell		
Battery charger max. power (A)		11		14	
OUTPUT					
Nominal output voltage (V)		380/400/415 (three-phase) or 220/230/240 (single-phase)		380/400/415 (three-phase)	
Nominal output frequency (Hz)			50/60		
Nominal active power (kW)	9	13.5	18	27	36
THDv with 100% linear load (%)			≤1		
Inverter overload capacity			105% for 60 min; 125% 5min; 150% for 1 min, > 150%, 200ms		
EFFICIENCY					
Double conversion efficiency 100%	94.4%	94.5%	94.2%	95.1%	94.9%
Double conversion efficiency 75%	94.0%	94.4%	94.5%	94.8%	95.1%
Double conversion efficiency 50%	93.5%	94.0%	94.4%	94.3%	94.7%
Double conversion efficiency 25%	90.5%	92.9%	93.5%	93.0%	93.4%
Eco Mode Efficiency	98.0%	98.0%	97.8%	98.5%	98.5%
DIMENSIONS AND WEIGHT					
Dimensions (W x D x H) (mm)		435 x 750 x 133 (3U)		435 x 770 x 178 (4U)	
Weight (kg)		35		50	
GENERAL					
Noise at 1 m (dBA)	≤56	≤56	≤58	≤56	≤58
Ventilation			front to back		
Protection level IEC (60529)			IP20		
UPS classification according to CEI EN 6240-3			VFI-SS-111		

LIEBERT® EXL 100 kVA - 1200 kVA

Secure Power and Maximized Energy Saving for Mission Critical Applications

Liebert EXL, the new generation of 80-NET UPS, delivers unsurpassed performance to medium-large data centers as a result of proven track record, successes, a reliable large installed base (>2.5 GW worldwide) and more than 10 years of acquired experience with the 80-NET technology.

The new Liebert EXL is a monolithic product that features a transformer-free design with a full IGBT three-level topology, providing extraordinary features including a double conversion efficiency of up to 97% plus intelligent paralleling to optimize efficiency at partial load, thus achieving superior running cost savings. Furthermore, its higher power density in a minimum footprint optimizes the availability of IT space and reduces related costs.
Liebert EXL is also compatible with previous 80-NET generation, allowing installation cost savings and an easier legacy system upgrade to increase UPS parallel capacity.

Availability - Uptime Enhancement:

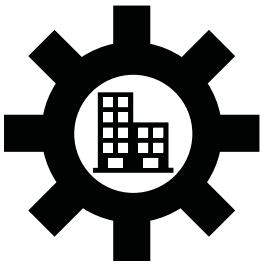
- Advanced diagnostic; making your mission critical space a peaceful place
- Enhanced DSP control board and intelligent colored multi-language touch-screen display
- Enhanced event analysis and waveform capturing highlights external phenomena that may impact data center availability
- Vertiv™ LIFE™ Services remote diagnostic and preventive monitoring service increases system uptime and operational efficiency.

Capacity - Installation Flexibility

- Compact footprint for optimum space utilization allows more free space for IT equipment
- Backward compatibility with previous 80-NET generation for an easier power system upgrade
- Maximized active power at unity power factor operation permits compatibility with modern mission critical loads - both leading and lagging - without any derating
- Parallel system configuration up to 8 units
- Centralized and distributed parallel capabilities
- Three and four-wire electrical distribution system compatibility allowing effortless replacement of legacy equipment
- Seismic compliance, ensuring power protection in any geographical location.

Efficiency - Reduced TCO

- Among the highest double conversion (VFI) efficiency UPS on the market - up to 97% for reduced TCO and rapid payback time
- Intelligent ECO mode (VFD) efficiency above 99%
- Adoption of three-level full IGBT NPC2 inverter and rectifier topology
- Intelligent paralleling feature optimizes efficiency at partial load by switching excess units to standby mode, thus achieving superior running cost savings
- CO_2 emission reduction; environmental friendly unit
- Excellent T-free input performances allow for significant electrical infrastructure saving.



Engineered versions for Railways and Smart Grid Services

Liebert EXL 100-500 kW

Liebert® EXL Specifications

UPS RATING (kVA)	100	120	160	200	300	400	500	600	800	1000	1200
Output active power at 35 °C*(kW)	100	120	160	200	300	400	500	600	800	1000	1200
Output active power at 40 °C (kW)	90	108	144	180	270	360	450	540	720	900	1080
INPUT											
Nominal mains input voltage / voltage range* (V)	400 (250 to 460), 3Ph or 3Ph + N										
Nominal bypass input voltage / voltage range* (V)	400 (380/415 selectable), 3Ph or 3Ph + N										
Nominal frequency / frequency tolerance (Hz)	50±10%(60 selectable)										
Input Power Factor	≥ 0.99										
Input current distortion (THDi) (%)	≤3										
OUTPUT											
Nominal output voltage (V)	400 (380/415 selectable), 3Ph or 3Ph + N										
Nominal output frequency (Hz)	50 (60 selectable)										
Output voltage stability by load variation 0-100% (%)											
- static	±1										
- dynamic	Complies with IEC/EN 62040-3, Class 1										
Output frequency stability											
- synchronized with bypass mains (%)	±2 (2, 3, 4, 5 selectable)										
- synchronized with internal clock (%)	±0.1										
Inverter Overload Capacity*	110% continuous, 125% for 10mins, 150% for 1min										
Short circuit current for 200 ms (%)	2.2 In										
Load crest factor handled without derating the ups (Ipk/Irms)	3:1										
Compatibility with loads	Any power factor (leading or lagging) up to 1										
BATTERY											
Permissible battery voltage range (V)	396 to 700										
Float voltage for VRLA @ 20 °C (V/cell)	2,27										
End cell voltage for VRLA (V/cell)	1.65										
Float Voltage stability in steady state condition (%)	≤1										
DC ripple voltage without battery (%)	≤1										
GENERAL AND SYSTEM DATA											
Classification according to IEC/EN 62040-3	VFI-SS-111										
Operating Temperature (°C)	0-40										
Maximum relative humidity @ 20 °C (non condensing) (%)	up to 95										
Protection degree with open doors	IP 20										
Frame colour (RAL scale)	7021										
Noise @ 1 metre as per ISO 3746 (dBA ± 2dBA)	65	65	66	68	69	71	73	76	76	78	78
Noise @ 1 metre as per ISO 3746 (dBA ± 2dBA) (at partial load)	64	64	65	65	65	65	65	70	70	72	72
Parallel configuration	up to 8 units in parallel										
Access	Front and Top (no rear access required)										
AC/AC efficiency:											
- VFI according to IEC/EN 62040 definition (%)	up to 97%										
- VFD according to IEC/EN 62040 definition (%)	up to 99%										
DIMENSION AND WEIGHT											
Height (mm)	1950										
Width (mm)	500		750		1000		1250		2000		2650
Depth (mm)	900										
Net Weight (kg)	370		510		725		990		1550		2275

*Conditions apply

LIEBERT® APM 30 kW - 300 kW

The Compact Row-Based UPS With FlexPower Technology™

The Liebert APM is a compact, row-based, transformer-free UPS designed to operate with a maximum energy efficiency of up to 96% for the protection of medium sized business-critical applications.

Its modular rack configuration houses both power and battery modules inside the same UPS cabinet*, allowing for scalability while delivering the ideal balance of high availability, reliability and efficiency without increasing the system footprint.
The in-built scalability of the Liebert APM also allows for fast, simple increases in system capacity through featured FlexPower technology™. Each 30 kW power module combines scalable power with independent DSP control to auto-regulate operation, thus enhancing overall availability.
The Liebert APM is able to reach a total of 300 kW* of active power in a single unit and up to a maximum of 600 kW in a complete parallel configuration. At the same time it delivers an excellent integrated autonomy of up to 30 minutes for a 30 kW configuration and up to five minutes in the 90 kW configuration.

*on selected configurations

Features and Performances:

- Industry's highest double conversion efficiency - up to 96%
- Flat efficiency curve
- Highest power density in the market
- Rack architecture
- Modular and scalable
- Hot-swappable power modules
- Independent module control system
- Unitary output power factor and symmetrical power factor diagram
- Integrated parallel and load bus synchronization
- 4.5 kW battery charger per power module
- Integrated autonomy for ratings up to 90 kW

Liebert APM Family

Liebert® APM Specifications

RATINGS		
Power (kVA)	30 - 150	120 - 300
Power (kW)	30 - 150	120 - 300
System Efficiency		
AC - AC on-line double conversion efficiency (%)	Between 95% and 96% for load >30%	
AC - AC Eco mode efficiency (%)	>98%	
INPUT PARAMETERS		
Rated input voltage	380/400/415 VAC, three-phase four-wire	
Rated operating frequency (Hz)	50/60 Hz	
Input voltage range (Hz)	477 V - 305V at full load, 477 V - 228V at 70% load	
Input frequency range	40 Hz - 70 Hz	
Input power factor	>0.99 at full load, >0.98 at half load	
Input THDI (%)	<5%	
DC PARAMETERS		
Battery number	30, 32, 34, 36, 38, 40	
Battery Compensation	Yes	
Maximum runtime with internal battery	30 kVA: 30' 60 kVA: 10' 90 kVA: 5'	N/A N/A N/A
DC ripple current	≤0.05C_{10}	
OUTPUT PARAMETERS		
Inverter output voltage	380/400/415 VAC, three-phase four-wire	
Inverter output frequency (Hz)	50/60 Hz	
Output frequency stability (Hz)	50Hz/60 Hz ±0.02%	
Voltage stability in steady state	±1%	
Voltage stability in transient state	Complies with IEC/EN 62040-3, class 1	
Inverter overload capacity	1 hour for 105%, 10 mins for 125%, 1 min for 150%, 200 ms for >150%	1 hour for 110%, 10 mins for 125%, 1 min for 150%, 200 ms for >150%
THDv		
100% linear load	<1	
100% non-linear load	<4	
BYPASS PARAMETER		
Bypass input voltage	380/400/415 VAC, three-phase four-wire	
Bypass voltage range settable through software	Default: -20% to + 15%, other values, such as -40%, -30%, -10% to + 10%, +15%	
Bypass overload capacity	135% long term, 170% for 1 hour, 1000% for 100 ms	
ENVIRONMENTAL CONDITIONS		
Operating temperature range (°C)	0 - 40 °C*	
Storage temperature (°C)	-25 to 70 °C	
Maximum Operating altitude	≤1 000 m, when operating at 1000 - 2000 m, derated by 1% for every 100 m increase of altitude	
Relative Humidity	≤95%	
Noise (1m)	52 - 62 dBA, adjusted according to load rate and number of modules	60 - 65 dBA, adjusted according to load rate and number of modules
Protection Level	IP20	
STANDARDS		
Low Voltage Directive	2006/95/EC with the Amendment Directive 93/68/EEC Directive for electromagnetic compatibility 2004/108/EC	
General and safety requirements for UPS used in operator access areas	IEC/EN 62040-1:2008	
Electromagnetic compatibility (EMC) requirements for UPS	IEC/EN 62040-2: Immunity category C2, Emission category C2	
DIMENSIONS AND WEIGHT		
Dimension, w x h x d (mm)	600 x 1996 x 1100	1200 x 2000 x 1100
Weight (kg)	30 kVA: 280 60 kVA: 315 90 kVA: 350 120 kVA: 385 150 kVA: 420	120 kVA: 465 150 kVA: 500 180 kVA: 535 210 kVA: 570 240 kVA: 600 270 kVA: 635 300 kVA: 670

*Conditions apply

LIEBERT® NXL UPS 400 kVA - 800 kVA

Enterprise-Scale UPS Protection For Medium and Large Data Centers

The Liebert® NXL transformerbased UPS is designed to deliver reliable, efficient power protection for medium and large enterprise data centers, as well as government, healthcare, finance, telecom, manufacturing and transportation applications.

Featuring online double conversion technology, the Liebert® NXL provides excellent dynamic performance and flexibility, responding to all input conditions while maintaining high output power quality for critical loads. The Liebert® NXL furthermore achieves significant levels of energy efficiency through its intelligent parallel feature, delivering significant results at partial load, particularly in high availability parallel configurations.
The transformer-based technology of the Liebert® NXL further delivers superior reliability in critical installation environments as a result of its extremely robust architecture.
At the same time this technology ensures galvanic isolation while operating online.

Features and Performances:

- Transformer-based architecture
- 12 pulse Silicon Controlled Rectifier (SCR) for 400-800 kVA units
- Input power factor >0.95 with automatic disconnection for input power factor control also at partial load
- Input THDi <5%
- Permanent 100% kVA - no derating with any load (leading or lagging)
- Temperature compensated battery charging/battery load test
- Continuous duty static bypass switch
- Automatic output power upgrade up to 10%
- Liebert® ActiveStar® Digital Signal Processor (DSP) control
- Interactive color touch screen user interface

Liebert NXL 400-500 kVA

Liebert® NXL Specifications

RATINGS	400	500	600	800
Apparent nominal output power at 25° C (kVA)	440	550	660	880
Apparent nominal output power at 40° C (kVA)	400	500	600	800
Maximum output active power at 40° C (kW)	360	450	540	720
INPUT PARAMETERS				
Nominal mains input voltage/voltage tolerance (V)	400 (285 to 460), three phase			
Nominal bypass input voltage/voltage tolerance (V)	400 ± 10% (380 V, 415 V selectable) three-phase + neutral			
Nominal input frequency/frequency tolerance (Hz)	50 ± 10% (60 Hz selectable)			
Input Power Factor	> 0,95			
Input current distortion at maximum input power THD (%)	<5			
OUTPUT PARAMETERS				
Output voltage stability by load variation 0 - 100% (%) - static - dynamic	 ± 1 Complies with IEC/EN 62040-3, Class 1			
Output frequency (nominal) (Hz)	50 (60 Hz selectable)			
Output frequency variation (%) - with mains synchronization - with internal reference	 ± 0.75 (1.5, 2.5, 6.0 selectable) ± 0.05			
Inverter overload capacity	125% for 10 min., 150% for 1 min.			
Compatibility with loads	Any power factor (leading or lagging) up to 0.9; crest factor up to 3:1			
Automatic adjustment of nominal output power with temperature	110% at 25°C, 100% at 40°C			
GENERAL				
Operating temperature (°C)	0 - 40			
Recommended battery temperature (°C)	+15/+25			
Relative humidity (without condensation at 20°C)	<95%			
Protection level	IP 20			
Color	ZP 7021			
Noise at 1 m (dBA)*	70	72	75	76
AC/AC efficiency (%)*	Up to 94			
Parallel configuration	Up to 6 units in modular or centralized parallel configuration			
DIMENSIONS AND WEIGHT				
Height (mm)	1900			
Width (mm)	1620	2020	3270	3270
Depth (mm)	860			
UPS weight (kg)	2380	2780	4100	4100

*Conditions apply

LIEBERT® TRINERGY™ CUBE 150 kW - 3400 kW

The Hot Scalable UPS with the Industry's Highest Operating Efficiency

Liebert Trinergy™ Cube - the new generation of Trinergy UPS - delivers unsurpassed performance to enterprise data centers. Designed around your IT space, Liebert Trinergy Cube is ready to evolve with growing business demands. It offers the highest level of power availability, together with reduced TCO, energy consumption and CO_2 emissions.

Liebert Trinergy Cube boasts unparalleled features including an average operational efficiency of 98.5 % and power density per core running up to 400 kVA. Its optimized efficiency at partial load conditions and hot scalability up to 3.4 MW, means that Liebert Trinergy Cube delivers adaptability not available anywhere else in the market. Liebert Trinergy Cube can furthermore meet any power system requirement from 150 kW up to over 27 MW.
The architecture of the Liebert Trinergy Cube UPS allows great advantages in terms of Availability, Capacity, Smart Capacity and

Efficiency:

Availability - Uptime Enhancement:

- Advanced diagnostics, making your mission critical space a peaceful place
- Event analysis, waveform capturing and harmonic spectrum analyses highlight external phenomena that may impact data center availability
- Data logging (efficiency, uptime, PUE), maintain control of physical space and efficiently track data
- Vertiv™ LIFE™ Services technology embedded in the UPS enables remote diagnosis 24/7.

Availability - Uptime Enhancement:

- Configurable in various layouts
- Adapts to physical space constraints
- Simplified cable routing with unlimited input/output power connection availability
- Ideal for all sites: any geographical location and new or existing buildings
- Increased energy density allows more free space for IT equipment.

Smart Capacity - Adaptive Power Rating:

Trinergy Cube adapts the power supplied to the load based on the environmental conditions in which the UPS is installed:

- I/O Box and core rated to operate continuously up to 55°C and are capable of providing increased power down to 20°C
- Maximum input current of the UPS is adjustable to meet specific protection rating requirements.

Efficiency - Optimized TCO:

- The market's most efficient technology delivering 98.5% average operating efficiency
- Adoption of three-level NPC2 inverter and rectifier topology
- Single unit configuration up to 3.4 MW for significant electrical infrastructure and space savings.

Liebert Trinergy Cube 1200 kVA

Liebert® TRINERGY CUBE Specifications

SYSTEM RANGE	150 KW - 27 MW	
Core Adaptive Power Rating (kVA)	up to 200 / 400	
Core Power Rating at 35°C (kW)	up to 200 / 400	
GENERAL		
Average Operating Efficiency	98.5%	
Maximum Efficiency	up to 99.5%	
Airflow (m^3/h)	up to 1450 (200 kW Core) / 2600 (400 kW Core)	
Heat Dissipation at Full Load in VFI (kW)	7.7 (200 kW Core) / 15.4 (400 kW Core)	
Paralleling	up to 10 cores in one unit, up to 8 units in parallel	
Hot Swappable core	Yes	
Withstand Rating (kAIC)	up to 100	
Audible Noise (dB)	65 dBA (at partial load)	
Altitude Max (m)	1000 m without derating	
Operating Temperature (°C)	0-55	
INPUT		
Input Wiring	3 ph + N + PE, 3 ph + PE	
Input Voltage Range (V)	200-480	
Input Frequency Range (Hz)	45-65	
Input Power Factor	0.99	
Input THDi	3%	
Soft Start Capability	Yes	
Internal Backfeed Protection	Optional	
OUTPUT		
Output Wiring	3 ph + N + PE, 3 ph + PE	
Configurable Voltage Rating	380, 400, 415 V, 440 V, 50/60 Hz	
Permitted Load Power Factor	up to 1, any PF leading or lagging without derating; crest factor up to 3:1	
Output UTHD	<1% (100% linear load); <3% (reference non linear load)	
Overload on Inverter	see Trinergy Cube APP dynamic specification	
Short Circuit Current (A)	up to 650 A (200 kW Core) / 1300 A (400 kW Core)	
GENERAL CHARACTERISTICS		
HMI	12-inch Color Touchscreen Including Web, SNMP, MODBUS/Jbus Protocols	
Multi-language	Standard	
BATTERY		
Type	VRLA (Li-Ion, Pure Lead, Flywheel upon Request)	
Charging Method	ABM Technology or Float	
Battery Voltage Range	396-700	
DIMENSION AND WEIGHT	**(W X D X H MM)**	**(KG)**
Core 200 kW	500 x 910 x 1950	515
Core 400 kW	675 x 910 x 1950	660
I/O Box 600 A	1150 x 910 x 1950	800
I/O Box 1200 A	1625 x 910 x 1950	1190
I/O Box 2400 A	2150 x 910 x 1950	1575
I/O Box 3000 A	3800 x 910 x 1950	Upon request
I/O Box 4000 A	2650x1820x1950 (back to back configuration)	Upon request
I/O Box 5000 A	26 50x1820x1950 (back to back configuration)	Upon request
ACCESSORIES		
	External Battery Cabinets with Long-life Batteries, Li-Ion Batteries, Pure Lead Batteries and Flywheel upon Request, Intellislot Connectivity, Maintenance Bypass Switch	
COMMUNICATIONS		
Slots	2 Intellislots	
Protocols	SNMP, MODBUS TCP/IP, MODBUS RTU	
Inputs/Outputs	9/8 Programmable	
COMPLIANCE WITH STANDARDS		
Safety	IEC 62040-1, IEC 60950-1	
EMC	IEC 62040-2	
Performance	IEC 62040-3	

STATIC SWITCHES

LIEBERT® CROSS RACK 16 A, 32 A AND 63 A

Secure Power Always

Vertiv's™ Liebert® CROSS Rack family of system static switches are available in single-phase double-pole 16 A, 32 A and 63 A versions.
Liebert CROSS ensures maximum reliability to critical loads by eliminating system failures caused by problems in distribution rather than by the failure of the power source itself. Double-pole operations ensure optimal flexibility for all the different types of electrical distributions.

Flexibility for Customised Solutions:

Liebert CROSS Rack has been designed to allow the hot swapping of all the solid-state components (power and control), dramatically reducing repair times while keeping the load powered.
Liebert CROSS Rack's flexibility allows complete compatibility with customers' load and environment requirements.
Standard features include priority mode operation allowing users to select the preferred power source.
Liebert CROSS Rack features a fully redundant forced ventilation system with fan failure alarm, allowing mission-critical reliability whilst taking up a minimum amount of rack space (2 HU).
Front-to-back ventilation ensures perfect compatibility with state-of-the-art cooling systems for Data Centres.

Leading Technology

A crucial function of Liebert CROSS is the Break Before Make transfer.
This ensures that the two live feeds are never connected in parallel.
The Liebert CROSS static switch also ensures that switching between the two power supplies occurs safely under both synchronous and asynchronous conditions relative to input waveforms.

Reliability

Employing a Liebert CROSS static switch adds another layer of security for mission critical loads.
Ensure a redundant power supply by enabling controlled switching between two independent AC power supply sources.
Switching is performed whenever the line that supplies power to the load goes out of tolerance. The distribution downstream from a Liebert CROSS is not only protected against the failure of the sources, but also against any failure in upstream lines.

Communication

Voltage free contact ports are available in standard assembly versions and facilitate communication with installed power protection equipment.
LED displays offer complete and easy interaction with Liebert CROSS Rack and provide detailed reports on the operational status of your equipment.

Applications

Liebert CROSS provides additional security for a wide range of mission critical applications including:

- Data centres /ISPs
- Call Centres
- Manufacturing Process Control
- Signalling Systems
- Transportation Signalling Systems
- Health Care.

Secure Power Always

Simply supplying equipment will never deliver the level of business continuity our customers require. Vertiv™ offers a range of maintenance plans which will:

- Help deliver reliability to the load
- Extend the life of your power protection equipment
- Optimise your capital expenditure
- Provide risk management at a fixed cost
- Help to control your business environment
- Provide a pro active approach to disaster recovery.

Liebert CROSS Rack from 16 to 63 A

Liebert® CROSS RACK (A) Specifications

TECHNICAL DATA	
Number of switching poles	2
Nominal Voltage (V)	230 (220/240 selectable)
Nominal Voltage (V) - LV model	120 (110/115 selectable)
Input phases	1 + N
Nominal frequency (Hz)	50/60
Efficiency at nominal power %	≥99
Overload capacity	
for 10 minutes (%)	125
for 1 minutes (%)	150
for 0,6 seconds (%)	700
Fuses	660 VAC, fast fuse 100 A Pre-arc: 2050 A^2 s Total I^2 t @230V: 3740 A^2 s
Temperature range (°C)	0 - 40
Cooling	Forced, fully redundant, front to back
Transfer Mode	Break before make
Transfer Time	
source failure, worst case (msec)	≤6
source failure, typical (msec)	≤4
Additional transfer delay for non-synchronous transitions (msec)	10 ± 2 (0 - 20 selectable)
DIMENSIONS AND WEIGHT	
Width (mm)	430 (19")
Height (mm)	85 (2U)
Depth (mm)	700
UPS weight (kg)	23
ENVIRONMENT	
Safety	CE marking, IEC/EN 62310-1
EMC Compatibility	IEC/EN 62310-2
Protection degree	IP20
Acoustic Noise (dBA)	<45

LIEBERT® CROSS CHASSIS/CABINET FROM 160 A TO 1250 A

Secure Power Always

Vertiv's™ family of Liebert® CROSS static switches are available in Cabinet versions from 160 to 1250 A and in both three and four pole versions. Liebert CROSS Chassis is available in 160 to 450 A, in the four pole version only. Liebert CROSS ensures maximum reliability to critical loads by eliminating system failures that are caused by problems in distribution rather than from the failure of the power source itself.

Flexibility for Customised Solutions:

Liebert CROSS can be fully customised according to customers' load and environment requirements.
Options include priority mode operation, allowing users to select the preferred power source, selectable switching and tolerance features, galvanic isolation transformers, tripping coil switches, RFI filters, top cable entry connections and remote display units.

Leading Technology

A key function of Liebert CROSS is the Break Before Make transfer. This ensures that the two live feeds are never connected in parallel.
The Liebert CROSS static switch also ensures that switching between two power supplies occurs safely under both synchronous and asynchronous conditions relative to input waveforms.

Reliability

Employing a Liebert CROSS static switch adds another layer of security for mission critical loads.
It ensures a truly redundant power supply by enabling controlled switching between two independent AC power supply sources.
Switching is performed whenever the line that supplies power to the load goes out of tolerance.
Distribution downstream from Liebert CROSS is not only protected from failure of the power sources, but also against any failure in upstream lines.

Communication

An RS232 serial port and a voltage-free contact port are available in standard assembly versions and facilitate communication with installed power protection equipment.
LED and LCD displays offer complete and easy interaction with installed equipment and provide detailed information on the operational status of your equipment.

Applications

Liebert CROSS provides additional security for a wide range of mission critical applications including:

- Data centres /ISPs
- Call Centres
- Manufacturing Process Control
- Signalling Systems
- Safety Systems and Emergency Lighting
- Life Support Systems.

Secure Power Always

Simply supplying equipment will never deliver the level of business continuity our customers require. Vertiv™ offers a range of maintenance plans which will:

- Help deliver reliability to the load
- Extend the life of your power protection equipment
- Optimise your capital expenditure
- Provide risk management at a fixed cost
- Help to control your business environment
- Provide a pro active approach to disaster recovery.

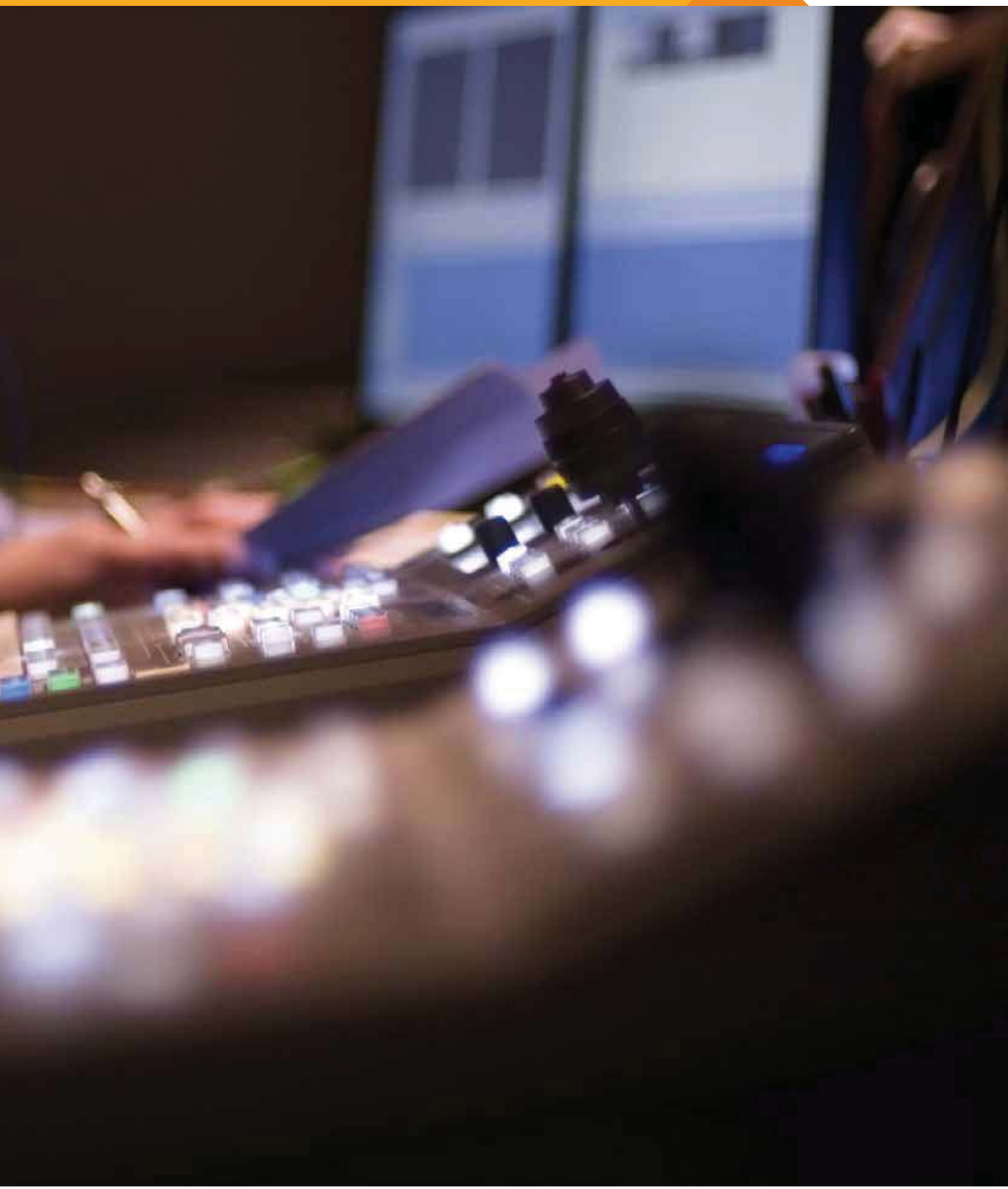
Liebert CROSS Chassis/Cabinet from 160 A to 1250 A

Liebert® CROSS CABINET Specifications

CROSS CABINET (A)	160	250	400	600	800	1250
Default Input Voltage (V)			400			
Nominal frequency (Hz) [selectable]			50/60			
Input phases			3+N			
Number of poles	3-4	3-4	3-4	3-4	3-4	3-4
Transfer Mode			Break Before Make Switching (No source overlap)			
Overload capacity						
for 10 minutes (%)			125			
for 1 minutes (%)			150			
for 10 seconds (%)			200			
for 1 seconds (A)	5300	5300	5300	5300	5300	9200
Transfer Time worst condition zero voltage source failure (msec)			≤ 5			
Static Switch Fault detector			Yes			
Ventilation	Natural	Natural	Natural	Forced	Forced	Forced
Neutral sized (*in)	2	2	1.7	1.3	1	1.28
DIMENSIONS AND WEIGHT						
Height (mm)	1780	1780	1780	1780	1780	1780
Width (mm)	620	620	820	1220	1220	1620
Depth (mm)	830	830	830	830	830	830
Weight (kg)	450	450	570	590	700	880
ENVIRONMENT AND STANDARDS						
Safety			CE marking, IEC EN 62310-1			
EMC Compatibility			IEC EN 62040-2 Class C3			
Degree of Protection			IP20			
Operating temperature (°C)			0-40			
Acoustic noise (dBA)	<45	<45	<45	<45	<73	<76

CROSS CHASSIS (A)	160	250	450
Default Input Voltage (V)		400	
Nominal frequency (Hz)		50-60	
Input phases		3+N	
Number of poles		4	
Transfer Mode (for Phases)		Break Before Make Switching (No source overlap)	
Overload capacity (without fuses)			
for 10 minutes (%)		125	
for 1 minutes (%)		150	
for 10 seconds (%)		200	
for 1 seconds (A)		5300	
Transfer Time worst condition zero voltage source failure (msec)		≤ 5	
Static Switch Fault detector		Yes	
Ventilation		Natural	
Neutral sized	2*In	2*In	1.7*In
DIMENSIONS AND WEIGHT			
Width (mm)		700	
Depth (mm)		600	
Height (mm)		1200	
Weight (kg)	135	150	160
ENVIRONMENT AND STANDARDS			
Safety		IEC EN 62310-1 if used inside a cubicle compliant to safety standard IEC EN 62310-1	
EMC Compatibility		IEC EN 62040-2 Class C3	
Degree of Protection		IP00 (IP20 available on demand)	
Operating temperature (°C)		0-40	
Acoustic noise (dBA)		<45	

REMOTE DIAGNOSTICS



VERTIV™ LIFE™ SERVICES

Stay in Contact for LIFE, Stay in Contact through LIFE

Uptime Assurance

Our Vertiv™ LIFE™ Services experts constantly monitor all relevant parameters related to your critical assets. This allows our experts to operate for immediate resolution in the case of an early warning condition. This fast, effective incident response capability maximizes the availability of you critical infrastructure and delivers uptime assurance.

Proactive Analysis

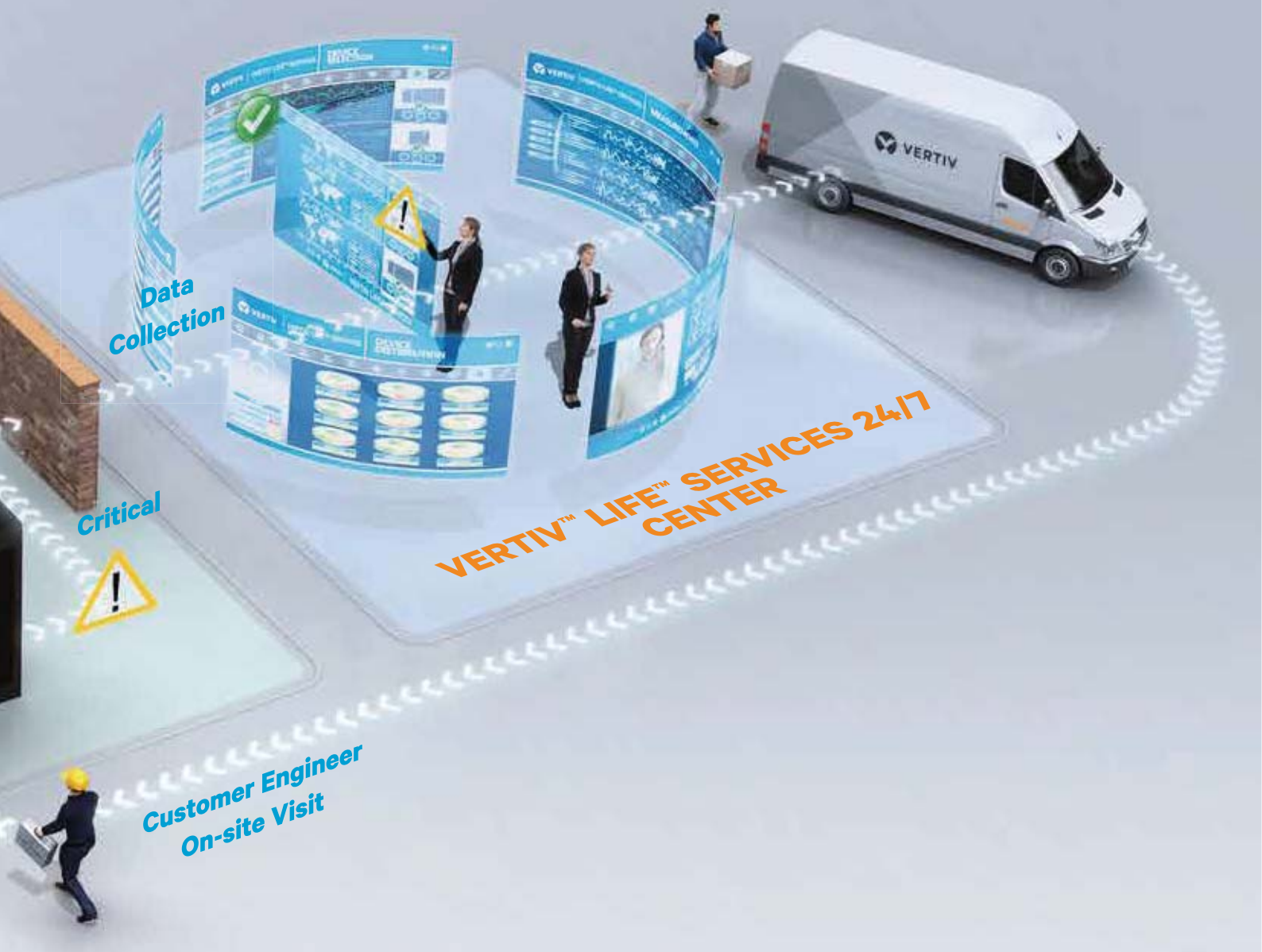
Vertiv remote service experts monitor your equipment from the Vertiv LIFE Services centers, proactively analyzing data and trends, to recommend actions for ensuring equipment always performs at its best.

Report

The unit parameters continuously monitored and measured through Vertiv LIFE Services are delivered in periodic status reports. You will receive a comprehensive report detailing the working order of your equipment and its operational performance, as well as demonstration that it is under continuous remote surveillance.

First Time Fix Rate

Extensive parametric data and measurements received from the unit, enable Vertiv LIFE Services experts to accurately isolate and diagnose any operational condition. This ensures that in the case customer engineers are dispatched on-site, they arrive prepared for first time resolution.



Fast Incident Response

Through Vertiv LIFE Services, your installed units maintain constant contact with our service centers. The units are programmed to communicate and transfer data at regular intervals, or at the activation of an alarm.

This allows for immediate definition of the best course of action, thus ensuring fast incident response and timely intervention either remotely, or if necessary, with the on-site visit of a customer engineer.

Minimized Total Cost of Ownership of your Equipment

Having Vertiv LIFE Services embedded in our UPS and thermal management units is like having a virtual customer engineer on site 24/7. The continuous monitoring of all relevant parameters in turn maximizes unit performance, reducing on-site maintenance and extending the life of your equipment.

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