



UPS

Uninterruptible
Power Supply

2.72 to 2.80



Uninterruptible Power Supplies:

UPS

Strong points 2.72

Liebert PSI XR 2.73

Liebert PSI 2.76

Liebert GXT3 2.78

Tower Solutions • 19" Chassis • Large Scale Systems

UPS

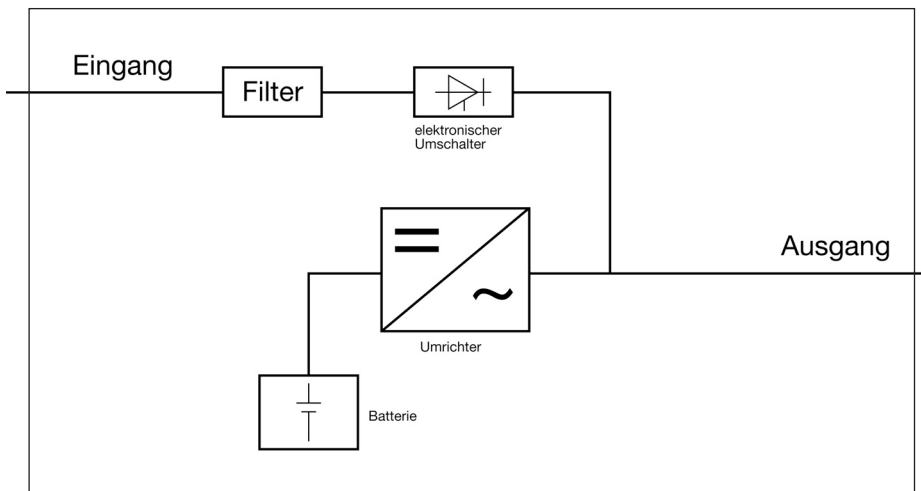


UPS20082

Uninterruptible Power Supplies Strong points

- **Safety:**
High-grade online and line interactive technology guarantees safe and uninterruptible operation of your systems.
- **Efficiency:**
The 19" modules provide high performance on minimum installation space with compact construction and modular setup.
- **Focus on the future:**
Our solutions grow with your requirements, can be flexibly used and are easily expanded.
- **Central UPS systems:**
Higher power classes, 10 kVA to 4800 kVA, with installation and maintenance on request.
- **Modularity:**
The individual components of this range can be combined according to requirements and consequently produce specifically defined solutions.
- **User-friendliness:**
Comprehensive displays and interactive interfaces for external analysis of status messages provide the user with current system information at all times.
- **Highest possible protection:**
Online UPS systems provide the highest possible protection against the 10 most frequent mains disturbances.

Line-InterActive / PowerSure PSI XR
IEC 62040-3 VI-SS-313



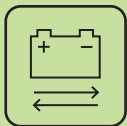
UPS20085

The line interactive UPS model uses an inverter in inverse operation to recharge the battery with stable mains supply. If the mains power supply fails, then the working direction changes and the battery powers the inverter. Because the transducer constantly monitors the mains input, it can react quicker to failures and correct voltage breaks. The transducer connected upstream from the consumer has a specific filtering effect against mains disturbances. This technology is highly recommendable for uninterruptible power supplies for many applications, particularly with regard to PC requirements.

Power Quality Systems

Liebert PSI XR

Protection in rack and tower use for networks, telecommunications and servers



Hot-swappable batteries



Line-InterActive Design



Universal communication options



Extendable bridging times



Professional desktop PCs



Switches, hubs, routers & bridges



Data center facilities



Telecommunication switchgear units

Liebert® PSI-XR

High-performance rack & tower UPS system for network protection

The **Liebert PSI-XR** is a compact UPS system with line-interactive technology, which was specially designed for IT applications, such as network racks and small data centers, for example.

The Liebert PSI-XR's flexible design allows the unit to be configured as a standalone tower and rack installation over 2 U.

The Liebert PSI-XR is available as both 230-V and 120-V model in four different power classes.

The UPS is especially impressive with its innovative line-interactive design and automatic voltage regulation. This protects against voltage fluctuations by increasing or reducing the power supply to the level required by the connected devices. The UPS system also ensures longer battery service life, as the devices are supplied for as long as possible via the mains.

■ Liebert PSI-XR standard equipment: Flexibility:

- Six or seven battery backed-up outputs
- Configurable input voltage range
- Free swivel display panel
- Automatic frequency scanning
- Several communication options (serial, USB, SNMP and contact closure)

■ Higher availability:

- Data cable overvoltage (surge) protection
- UPS system status early warning system
- Fully automatic battery test
- Lightning and overvoltage (surge) protection
- Remote emergency stop
- Hot-swappable batteries the user can change
- Sufficient battery run time under full charge with power failures for proper shut down of the connected equipment

■ Lowest possible TCO (Total Cost of Ownership)

- The 0.9 power factor for more power for protected devices and more energy-efficient operation.
- Wide input voltage range
- Reduced installation input (costs and time)
- Standard two year warranty

■ Ideal for:

- PCs
- Networked workstations
- Servers
- Network racks
- Big network peripheries
- VoIP



PSI XR 2U Rack version

PSI XR 2U Tower version

Liebert® PSI XR specifications

Model	PS1000RT3-230XR	PS1500RT3-230XR	PS2200RT3-230XR	PS3000RT3-230XR
Power data				
VA	1000VA	1500VA	2200VA	3000VA
W	900W	1350W	1980W	2700W
Dimensions and weight				
Device (WxDxH mm)	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 size (WxDxH mm)	560 x 612 x 228	560 x 612 x 228	560 x 821 x 228	560 x 821 x 228
Weight - device (kg)	25	28	42	46
Shipping weight (kg)	29	32	47	51
Input parameters				
Frequency	220			
Voltage range without battery operation	165 to 300 VAC (configurable)			
Frequency range	45 - 65 Hz, (± 0.5 Hz)			
Input connection	IEC320-C14	IEC320-C14	IEC320-C20	IEC320-C20
Output parameters				
Output connections	(6) IEC320-C13	(6) IEC320-C13	(6) IEC320-C13 (1) IEC320-C19	(6) IEC320-C13 (1) IEC320-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	Sine wave			
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° without derating			
Audible Noise	≤ 40 dBA, internal fan(s) Off; ≤ 45 dBA, internal fan(s) On			
Agency				
Safety	IEC 62040-1-1			
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 1000/1500 VA and (3) IEC output cables for 2200/3000 VA, for PS 2200/3000; (1) "Schuko" CEE 7/7 to IEC-320-C19 input cord and (1) UK plug to IEC-320-C19 input cord			
Order no.	06.099.027.1	06.099.028.1	06.099.029.1	06.099.030.1
Order no. SNMP Card	06.099.022.1			

Liebert® PSI XR Battery Cabinet Specifications

Model	PSRT3-24VBXR	PSRT3-48VBXR
Used w/UPS Model	PS1000RT3-230XR / PS1500RT3-230XR	PS2200RT3-230XR / PS3000RT3-230XR
Dimensions, W x D x H, mm		
Unit / Shipping	440 x 490.5 x 88 / 560 x 675 x 228	
Weight, kg	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 Manufacturer	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° 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	
Order no.	06.099.034.1	06.099.035.1

Battery runtime chart (runtimes in minutes; with fully charged batteries; ambient temperature 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



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Liebert® PSI High-performance rack & tower UPS system for network protection

The Liebert PSI is a compact UPS system with line-interactive technology, which was specially designed for IT applications, such as network racks and small data centers, for example.

The Liebert PSI's flexible design allows the unit to be configured as a standalone tower and rack installation over 2 U.

The Liebert PSI-XR is available as both 230-V and 120-V model in four different power classes.

The UPS is especially impressive with its innovative line-interactive design and automatic voltage regulation. This protects against voltage fluctuations by increasing or reducing the power supply to the level required by the connected devices. The UPS system also ensures longer battery service life, as the devices are supplied for as long as possible via the mains.

■ Flexibility:

- Battery backed-up outputs
- Configurable input voltage range
- Free swivel display panel
- Automatic frequency scanning
- Rack runner rails
- Several communication options
Contact closure, USB and SNMP

■ Higher availability:

- Data cable overvoltage (surge) protection
- UPS system status early warning system
- Up to five minutes battery runtime with power failures (fully charged)
- Fully automatic battery test
- Overvoltage (surge) protection
- Remote emergency stop
- Hot-swappable batteries

■ Lowest possible TCO (Total Cost of Ownership):

- Power factor 0.9
- Wide input voltage range
- Reduced installation input (costs and time)
- Warranty

■ Ideal for:

- PCs
- Networked workstations
- Servers
- Network racks
- Big network peripherals
- VoIP



PSI 2U Rack version

PSI 2U Tower version

Liebert® PSI specifications

Model	PS750RT3-230	PS1000RT3-230	PS1500RT3-230	PS2200RT3-230	PS3000RT3-230
Power Rating	750VA/675W	1000VA/900W	1500VA/1350W	2200VA/1980W	3000VA/2700W
Dimensions, W x D x H - mm					
Unit	440 x 412 x 88			446 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	45-65Hz, (+ 0.5Hz)				
Input Socket	IEC-320-C14			IEC-320-C20	
Output Receptacles	(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	Sine wave				
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° 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/FN/AS 62040-1-1				
Surge	IEC/FN/AS 61000-4-2				
ESD	IEC/FN/AS 61000-4-3				
Susceptibility	IEC/FN/AS 61000-4-4				
Electrical Fast Transient	IEC/EN/AS 62040-2 2nd Ed class A				
Emissions	IEC/FN/AS 61000-4-6				
Conducted Immunity	IEC/EN/AS 61000-3-2				
Harmonics	IEC/FN/AS 61000-4-6				
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 Multi inkk. Software on CD, Contact Closure (MI9P9S) Cable USB Cable, Tower Stand, Mounting Hardware, Rack-Mount-Handles, Fixed Mounting Rails, FPO Connector, Input Power Cord. 2200/3000 only: 2- (1) Schuko to IEC-320-C19 and (1) UKplug 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				
Order no.	06.099.061.1	06.099.062.1	06.099.063.1	06.099.064.1	06.099.065.1
Order no. SNMP Card	06.099.022.1				

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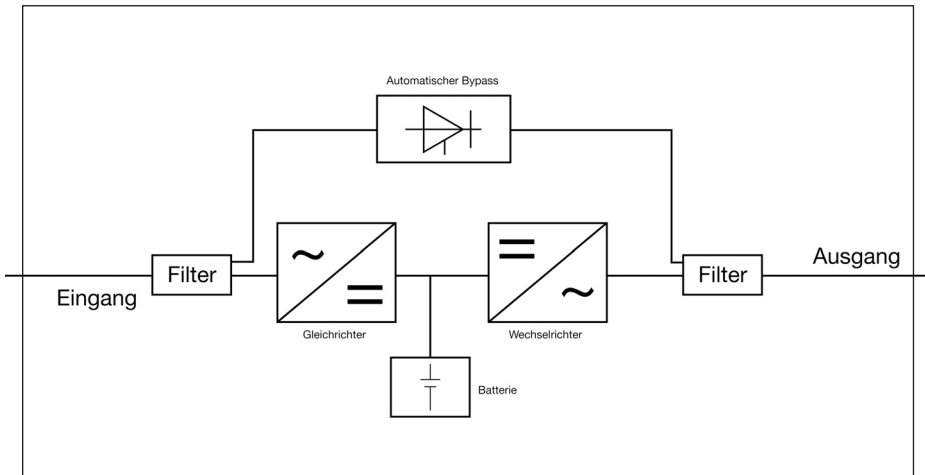
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Load Autonomy - Liebert PSI 750VA-3000VA

Load %	750VA	1000VA	1500VA	2200VA	3000VA
10	84	93	76	82	76
20	45	47	32	44	32
30	25	26	17	19	17
40	15	15	12	14	12
Internal Battery					
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.

Online / GXT3 IEC 62040-3 VFI-SS-111



USV20086

On-line UPS systems have the advantage of effectively filtering out spikes and drop outs by converting alternating voltage into direct voltage and back into alternating voltage.

Our online UPS systems are series equipped with interfaces, so that unattended computers can be specifically powered down automatically and powered up again after the mains supply has returned.

If faults occur in the system itself due to battery aging processes, an automatic by-pass switch ensures bridging and direct connection to the mains without interruption. The user is acoustically and optically informed about defective functions and power failures.

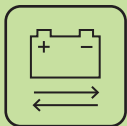
The accumulator takes over from the rectifier without any interruption when there is a mains failure and provides the necessary energy for a certain length of time. On-line systems provide high levels of security and are particularly recommended for high-grade and sensitive consumers.



Systems for quality power

GXT3

True Online Power Full energy for your company



Hot-swap batteries



Online technology



Diverse communication options



Extendable back-up times



Professional PC workstations



Small hubs, routers & bridges



Data center



Telecom equipment

Liebert® GXT3, 700VA - 3000VA Model Reliable online UPS protection in compact 2 U package

The **Liebert GXT3** is a true online UPS, which continuously supplies the IT equipment with quality alternating current. No interruption with changeover to batteries. They protect devices from almost all power supply faults – be they caused by power failures, voltage spikes, voltage drops or whatever other faults. The UPS is available as rack and tower version.

One of the most economical and reliable UPS systems in its class: The Liebert GXT2 is the industry leader in terms of dimensions, performance and reliability.

The 0.9 power factor ensures more power for protected devices and more energy-efficient operation.

The optionally available MicroPOD Output Distribution And Maintenance Bypass Module guarantees operation – even during planned UPS maintenance work.

Flexibility:

- Up to six battery backed-up outputs
- Free swivel display panel
- Automatic frequency scanning
- Installation flexibility:
- Several communication options (SNMP/WEB & USB)
- Compatible with Liebert MultiLink, Liebert Nform, Liebert Multiport and the Liebert Intellislot Relay Interface card

Higher availability:

- Advance early warning of UPS system status
- 4-8 minutes of battery backup time at full load
- Scalable runtime
- Full sequenced battery testing
- User replaceable hot swappable batteries

Lowest possible TCO (Total Cost of Ownership)

- Power factor 0.9
- Wide input voltage range
- Intelligent fan operation
- Efficient operation
- Warranty

Ideal for:

- PCs
- Networked workstations
- Servers
- Network racks
- Big network peripherals
- VoIP



The Liebert GXT3 can be configured for rack or tower installation. The LED display swivels and can be easily read in all positions.

The Liebert GXT3 has internal batteries and can also supply up to four external battery racks (2 U).

Liebert® GTX3, 700VA-3000VA Model specifications

Model	GXT3-700RT230	GXT3-1000RT230	GXT3-1500RT230	GXT3-2000RT230	GXT3-3000RT230
Power Rating	700VA/630W	1000VA/900W	1500VA/1350W	2000VA/1800W	3000VA/2700W
Dimensions, W x D x H - mm					
Unit	497 x 430 x 85		497 x 430 x 85		602 x 430 x 85
Shipping	617 x 570 x 262		617 x 570 x 262		717 x 570 x 262
Weight - kg					
Unit	16.8	16.8	23.2	28	32
Shipping	20	20	26	24	28
Input AC Parameters					
Voltage Range Without Battery Operation	230VAC nominal; variable based on output load				
Frequency Range	40Hz - 70Hz; Auto Sensing				
Input Socket	IEC-320-C14	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	(6) IEC-320-C13 (1) IEC-320-C19	(6) IEC-320-C13 (1) IEC-320-C19
Voltage	220/230/240 VAC (user configurable) +3%				
Waveform	Sine wave				
Battery Parameters					
Type	Valve-Regulated, Nonspillable, Lead Acid				
Quantity x Voltage x Rating	4 x 12V x 5.0Ah		4 x 12V x 7.2Ah		4 x 12V x 9.0Ah
Recharge Time	3 hours to 90% capacity after full discharge with 100% load till UPS auto-shutdown (Internal Batteries Only)				
Battery Backup Time	See table below				
Environmental					
Operating	0°C to 40°C (32°F to 104°F)				
Storage Temperature	-15° to 50°C (5°F to 122°F)				
Relative Humidity	0% RH to 90% RH, non-condensing				
Operating Altitude	Up to 3000m (10,000 ft.) at 40°C (104°F) without derating				
Audible Noise	< 45 dBA max at: 1 meter < 46 dBA, at 1 meter 3.2 ft from the rear < 48 dBA max, at 1 meter 3.2 ft front and side < 46 dBA, at 1 meter 3.2 ft from the front or sides < 46 dBA, at 1 meter < 48 dBA, at 1 meter 3.2 ft rear 3.2 ft rear				
Agency	IEC/FN/AS 62040-1-2008				
Safety	IEC/FN/AS 62040-2 2nd Ed=CISPR22 Class A				
RFI/FMI	IEC 62040-2 2nd Ed				
Surge Immunity	ISTA Procedure 1A				
Transportation					
Compliance					
Order no.	06.099.070.1	06.099.071.1	06.099.072.1	06.099.073.1	06.099.075.1
Order no. SNMP Card	06.099.039.1				
Order no. Relay Card	06.099.037.1				
Bundles	06.099.170.1*	06.099.171.1*	06.099.172.1*	06.099.173.1*	06.099.175.1*

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- Services
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Liebert® GXT3 Battery Cabinet Specifications

Model	GXT3-700RT230	GXT3-1000RT230	GXT3-1500RT230	GXT3-2000RT230	GXT3-3000RT230
Used w/UPS Model	GXT3-48VBAT1		GXT3-VBAT1		
Dimensions, W x D x H - mm					
Unit	497 x 430 x 85		602 x 430 x 85		
Shipping	617 x 570 x 262		717 x 570 x 262		
Weight - kg					
Unit	32		42		
Shipping	35		46		
Batteries					
Type	Valve-regulated, nonspillable, lead acid				
Quantity x Voltage x Rating	2 x 4 x 12V x 9.0Ah		2 x 6 x 12V x 9.0Ah		
Environmental					
Operating / Storage Temperature, °C	0°C to 40°C (32°F to 104°F) / -15°C to +40°C (19°F to 104°F)				
Relative Humidity	0% to 95%, non-condensing				
Maximum Operating Altitude	Up to 3000m (10,000 ft.) at 104°F (40°C) without derating				
Agency	IEC/FN/AS 62040-1-1:2008 / FCC Part 15, Class A=CISPR22 Class B				
Safety / Emissions	ISTA Procedure 1A				
Transportation					
Order no.	06.099.074.1		06.099.076.1		
Order no. Bundles	06.099.174.1*		06.099.176.1*		

*incl. 19" install. kit

Battery runtime chart (runtimes in minutes; with fully charged batteries; ambient temperature 25 °C)

Number of batteries	700VA	1000VA	1500VA	2000VA	3000VA
Internal Battery (full load)	6	4	4	4	4
Internal Battery + 1 External Cabinet (full load)	50	27	24	15	18
Internal Battery + 2 External Battery Cabinets (full load)	82	58	48	29	44
Internal Battery + 3 External Battery Cabinets (full load)	116	78	82	45	62
Internal Battery + 4 External Battery Cabinets (full load)	140	109	100	64	84