

# Vertiv<sup>™</sup> Liebert<sup>®</sup> PSI5 Lithium-Ion UPS

High Performance Line Interactive UPS for Critical Network Power Protection



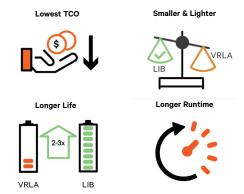




Liebert<sup>®</sup> Lithium-ion technology delivers up to 3 times the life of lead-acid batteries along with a lower total cost of ownership, making the Liebert<sup>®</sup> PSI5 Lithium-Ion line-interactive UPSs ideally suited for server rooms, network closets, and other edge or distributed IT applications.

# **Lithium-Ion Battery Technology**

Lithium-ion is a game-changing technology when it comes to UPS batteries. When compared to traditional valve-regulated-lead-acid (VRLA) batteries , Liebert PSI5 Lithium-Ion batteries have greater power density, up to 3 times longer, recharge much more quickly, and can endure up to 10x more discharge cycles. With a 5 year standard warranty, more than double the useful life, and significantly more runtime, the PSI5 Lithium-Ion UPS is at the top of its class.



# PSI5 Lithium-Ion Key Benefits vs VRLA

- up to 3x battery life
- Lowest TCO
- 5 year standard warranty on UPS and Batteries
- Longer Runtime
- Quicker recharge times
- Smaller and lighter:
  - · Greater power density
  - Reduced unit depth
- Up to 10x more discharge cycles













Feature	VRLA Battery	Li FePO4 Battery	Lithium-Ion Benefit
Standard battery life	3-5 years	8-10 years	up to 3 times longer life
Typical cycle life	200-260	2000	Up to 10x more discharge/recharge cycles available
Battery recharge time (to 90%)	3-6 hours	<2 hours	Fast recovery time, multiple outages can be handled over a short period
Battery weight	24lbs	13.2lbs	45% weight reduction, suited for smaller spaces and wallmount racks
Warranty	2-3 year	5 year	Install and go - ideal for remote or unmanned locations

Visit the TCO calculator at: https://www.vertiv.com/en-us/support/tools-and-application/tco-calculator to calculate the cost savings for your installation.

# **Lowest Total Cost of Ownership (TCO)**

The Liebert PSI5 Lithium-Ion line-interactive UPSs are ideally suited to protect critical infrastructure in edge or distributed IT applications. The life expectancy of lithium-ion batteries is up to three times that of VRLA batteries – up to 10 years. That delivers up to 50% or more in TCO savings vs. VRLA batteries, chiefly because the PSI5 Lithium-Ion requires fewer battery replacements over its lifespan. You save not only on the cost of batteries but on the labor required to replace them – an especially significant issue at remote locations with few or no IT personnel on site. In short, the PSI5 Lithium-Ion UPS is a true low-maintenance, set-it-and-forget-it solution.

## What's In The Box

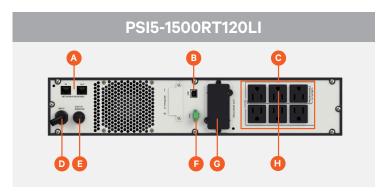
- UPS Unit
- USB Type A to USB Type B cable 1.8 meter (6ft) in length
- Printed quick start guide with safety instructions
- Rack mounting kit
  - 4-Post Kit with 2U Rack/Tower models
  - 2-Post Kit with 3U Short Depth Rack/Tower Model
- Rackmount Ears
- Support base for tower configuration (rack/tower models)
- Free download Power Assist, Power Insight software

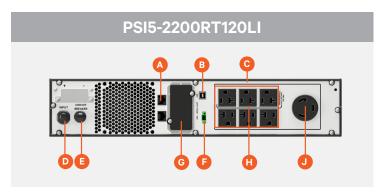
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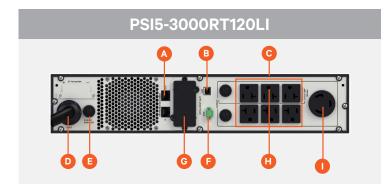


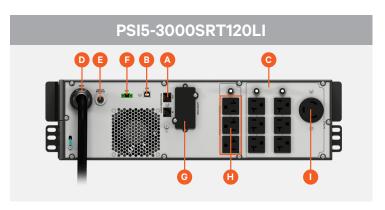
# Reliable UPS protection to keep your network up and running

The Liebert® PSI5 Lithium-lon also includes automatic voltage regulation (AVR) technology, which protects against utility voltage fluctuation, extends battery life by maximizing time on utility power, and provides premium protection from power disturbances. In battery mode, the PSI5 delivers pure sine wave output to protect sensitive servers and networking equipment. With up to 9 minutes of runtime at full load and 20 minutes at half load – more than comparable competing models – the PSI5 Lithium-lon provides plenty of runtime during an outage for an orderly shutdown. It comes with a rotating LCD display to allow both rack and tower configurations, provides real time information regarding UPS status and operating conditions, and supports remote monitoring. It's also highly energy efficient, delivering up to 98% efficiency at full load in normal operating mode. You can rest assured your business is protected with this Vertiv™ solution, which includes a 5-year full standard warranty.









- A RJ-45 Data Line Surge Connectors

  B USB Port

  C Output Receptacles

  D Input Power Cord

  E Input Circuit Breaker

  F Emergency Power Off (EPO) Connector

  C Liebert® IntelliSlot
  (Optional Communications Card)

  H Programmable Outlet Group

  NEMA L5-30R Output Receptacle

  J NEMA L5-20R Output Receptacle
- PSI5-1500MT120LI

# Liebert® PSI5 Lithium-Ion UPS Key Features

## **High Availability**

#### **Fewer Battery Replacements:**

Liebert® PSI5 Lithium-Ion batteries on average last up to 3 times as long as traditional VRLA batteries. That means less scheduled maintenance, reduced operating costs, and lowest overall total cost of ownership.

#### **More Runtime:**

The Liebert PSI5 Lithium-Ion UPS's internal batteries offer up to 9 min. of runtime at full load, more than any comparable UPS model.

#### Higher power density:

Liebert® Lithium-ion batteries can pack more power into smaller spaces.

#### Quicker recharge:

Get back to max capacity quickly after an outage – the Liebert PSI5 Lithium-Ion UPS can recharge to 90% capacity in 2 hours or less.

#### More discharge cycles:

Lithium-ion batteries deliver up to 10x more charge/discharge cycles than VRLA batteries. Again, lowest TCO.

#### **High Availability 0.9 Output Power Factor:**

More usable power enables more connected loads, saving space and costs.

#### Wide Input Voltage Window:

Prolongs battery life by allowing the UPS to maximize the use of utility power before transferring to battery when input exceeds specified limits (76 to 146 VAC @120V).

#### **Full Sequenced Battery Testing:**

The Liebert PSI5 UPS includes an automatic and manual self-diagnostic test feature. This provides a comprehensive analysis of the condition of the batteries within the UPS and will notify you when the internal batteries need to be replaced.

#### **Advance Early Warning of UPS System**

**Status:** The Liebert PSI5 UPS offers audible and visual alarms to alert you to an input voltage fluctuation (buck/boost), output overload, low battery or replace battery condition.



FREE Power Insight Software



#### **Flexibility**

#### **Up to Ten Battery-Backed Outlets:**

Allows flexibility in accommodating additional equipment to be connected to the UPS.

#### **Optimized Form Factors:**

Liebert PSI5 Lithium-Ion offers Tower, 2U or 3U Short Depth Rack/Tower convertible solutions to meet your application needs. The 3U Short Depth model offers the greatest power capacity with the smallest chassis depth making it ideal for 2-Post and wall mount racks.

#### **Configurable Input Voltage Window:**

Properly match the UPS to incoming utility power and adjust input window and transfer points to ensure regulated power to connected loads is within the selected range.

#### **Programmable Outlet Group:**

Extend run time when on battery power by power-cycling connected equipment and shedding less-critical loads.

#### **Hot Swappable Batteries:**

Increase product life and provide prolonged UPS reliability. Batteries are easily replaced without disrupting power to connected equipment.



# Manageability

#### **Communications:**

Power management functions through the USB port provide monitoring of UPS status and manage the automatic, orderly shutdown of attached equipment if power outage duration ever exceeds the battery capacity of the UPS or configured shutdown parameters.

#### **Power Management Software:**

Vertiv<sup>™</sup> Power Assist provides intelligent monitoring and management software that is easy to connect and control directly connected USB / Serial devices in personal or general business.

Vertiv<sup>™</sup> Power Insight provides on-premises and remote monitoring through the IntelliSlot networking cards that supports up to 100 devices with notification and control of your network-based devices.

For more details and Free downloads of Vertiv Power Assist or VertivPower Insight go here.

#### IntelliSlot:

Optional UNITY networking cards are available to enable SNMP and web-based management for SNMP or environment sensor support.

IS-UNITY communications card can enable SNMP and web-based management for the Liebert PSI5 Lithium-Ion UPS. The UNITY card allows monitoring and control of the UPS from a network management station or any PC.

The IS-UNITY-SNMP card provides the following features:

- Sends SNMP traps and emails for event notification
- Auto-senses 10M/100M Ethernet Compatible with shutdown software to ensure graceful computer shutdown.
- IS-Unity-DP Communications Card also supports Vertiv Liebert® SN Series.

#### **Environmental Sensors:**

Allows remote monitoring, start-up, or restart for connected equipment.

#### **Remote Emergency Power Off:**

Allows the UPS to be remotely shut down during an emergency.



# **Technical Specifications**

Standard Models*	Liebert PSI5-1500MT120LI	Liebert PSI5-1500RT120LI	Liebert PSI5-2200RT120LI	Liebert PSI5-3000RT120LI	Liebert PSI5-3000SRT120L	
Form Factor	Mini Tower	2U Rack/Tower	2U Rack/Tower	2U Rack/Tower	3U Rack/Tower	
Power Rating	1500VA / 1350W	1500VA / 1350W	1920VA / 1920W	3000VA / 2700W	3000VA / 2700W	
Dimensions, W X D X H, IN (MM)						
Unit	6.3 x 15.6 x 8.7 (158 x 397 x 220)	17.2 x 16.2 x 3.4 (438 x 411 x 86)	17.2 x 20.1 x 3.4 (438 x 510 x 86)	17.2 x 24.8 x 3.4 (438 x 630 x 86)	17.3 × 16.9 × 5.14 (438 × 430 × 130.6)	
Rackmount depth	-	15 (380)	18.9 (480)	23.62 (600)	15.7 (400)	
Shipping	9.1 x 19.5 x 12.8 (230 x 495 x 325)	10.2 x 22.9 x 22.4 (258 x 582 x 570)	10.2 x 26.5 x 22.4 (258 x 672 x 570)	10.2 x 30.8 x 21.7 (258 x 782 x 550)	26.4 x 22.4 x 11.1 (670 x 570 x 282)	
Weight, LB (KG)						
Unit	27.9 (12.7)	28.3 (12.9)	39.5 (18.0)	53.5 (24.3)	56 (25.4)	
Shipping	31.2 (14.2)	42.1 (19.1)	53.8 (24.4)	67.9 (30.8)	67.9 (30.8)	
Input/Output AC Parameters						
Input Plug	NEMA 5-15P (90deg type)	NEMA 5-15P	NEMA L5-20P (5-20 Adapter included)	NEMA L5-30P	NEMA L5-30P	
Input Cord	6ft (1.8m) Atttached	10ft (3m) Attached	10ft (3m) Attached	10ft (3m) Attached	10ft (3m Attached)	
Non-Programmable Receptacles	(3) NEMA 5-15R	(3) NEMA 5-15R	(1) NEMA L5-20R, (3) NEMA 5-20R	(1) NEMA L5-30R, (3) NEMA 5-20R	(1) NEMA L5-30R, (6) NEMA 5-15/20R	
Programmable Receptacles	(3) NEMA 5-15R	(3) NEMA 5-15R	(3) NEMA 5-20R	(3) NEMA 5-20R	(3) NEMA 5-15/20R	
Nominal Voltage Setting		120VAC	Default; 100/110/115/125VAC User S	electable		
Voltage Range Without Battery Operation			75 - 146VAC			
Frequency Range		55~65Hz (57~63Hz Batte	ery to Normal Comeback)		45 to 65Hz (57~63Hz Battery to Normal Comeback)	
Surge Protection		ANSI C62.41, Car	tegory A, Level 3		ANSI C62.41, Category B	
Transfer Time			4 - 6ms Typical			
Battery Waveform			Pure Sine Wave			
Efficiency						
Normal (Line) Mode	97.1%	97.1%	97.1%	97.3%	97.3%	
Battery Parameters						
Туре		Lithium-lon	(LiFePO4)			
Recharge Time (from full discharge)	2hrs to 90%	2hrs to 90%	2hrs to 90%	2hrs to 90%	2hrs to 90%	
Full-Load Runtime	7.5 min	7.5 min	8.6 min	8.9 min	7.7 min	
Half-Load Runtime	17.7 min	17.7 min	19.0 min	20.0 min	18.3 min	
Environmental						
Operating Temperature,°F (°C)			32° to 104° (0° to 40°)			
Storage Temperature °F (°C)			5° to 120° (-15° to 50°)			
Relative Humidity			20% - 90%, non-condensing			
Operating Altitude, ft (m)			to 9,942 (0 to 3,000) without derational duced 9°F (5°C) for each additional	-		
Audible Noise		< 45 (	dB @ line mode, < 55 dB @ battery	mode		
Certifications						
Safety		UL 1642 (LiFe ce	ells), UL 1973 (LiFe pack), UL 1778, C	SA 22.2 no. 107.3		
Agency		UL	. 1778, c-UL, NOM, FCC Part 15, Clas	s B		
Environmental			RoHS2 / REACH / WEEE			
Network Surge			ANSI C62.41, Category A, Level 3			
Transportation		ISTA Procedure 2A UN 38.3 (Lithium-ion)				
Warranty			5 years on UPS and Battery			
Protection Plan						
Equipment Protection Plan			\$400,000			

 $<sup>{^*} \</sup>textit{Liebert} \\ {^*} \textit{PSI5 2U Rack/Tower UPS + IS-UNITY-SNMP card bundles available - Add an "N" to the end of the model number. Available through select distributors."}$ 

# **UPS Battery Runtime Tables**

Liebert'	Liebert* PSI5-1500MT120LI, PSI5-1500RT120LI				
Load%	VA	Watts	Runtime (min)		
100	1500	1350	7.5		
90	1350	1215	8.9		
80	1200	1080	10.3		
70	1050	945	12.1		
60	900	810	14.6		
50	750	675	17.7		
40	600	540	22.8		
30	450	405	30.6		
20	300	270	45.3		
10	150	135	89.0		

	Liebert* PSI5-2200RT120LI				
Load%	VA	Watts	Runtime (min)		
100	1920	1920	8.6		
90	1728	1728	9.9		
80	1536	1536	11.5		
70	1344	1344	13.5		
60	1152	1152	16.1		
50	960	960	19.0		
40	768	768	24.5		
30	576	576	33.2		
20	384	384	48.1		
10	192	192	93.6		

	Liebert PSI5-3000RT120LI				
Load%	VA	Watts	Runtime (min)		
100	3000	2700	8.9		
90	2700	2430	10.5		
80	2400	2160	11.9		
70	2100	1890	13.9		
60	1800	1620	16.5		
50	1500	1350	20.0		
40	1200	1080	25.5		
30	900	810	34.2		
20	600	540	49.1		
10	300	270	96.6		

# **Accessories and Options**

#### **Mounting Kit Options**

These mounting kits are only applicable to PSI5 Rack/Tower Products

Application	Model Supported	Style	Part Number	Description
		Bracket	2POSTRMKIT	Flexible installation capability on typical 2 post network equipment racks. Securely mount the UPS into a typical 3-6" rail width solution
2 Post-Telecom rack	PSI5 Rack/Tower	Shelf	RS500	Flush-mount shelf for 19" rack wide
2 Post-Telecom rack	2U UPS	Shelf	RS600	Center-mount shelf for 19" rack wide
		Shelf	RS700	Flush-mount shelf for 23" rack wide
		Shelf	RS800	Center-mount shelf for 23" rack wide
4 Post Rack	PSI5 Rack/Tower 3U Short	4-Post Rail Kit	RMKIT12-18	4-Post Fixed Shallow Depth 12-18" rail kit
	Depth UPS	4-Post Rail Kit	201193G1L	4-Post Fixed 18-32" rail kit

	Liebert* PSI5-3000SRT120LI				
Load%	VA	Watts	Runtime (min)		
100	3000	2700	7.7		
90	2700	2430	8.9		
80	2400	2160	10.4		
70	2100	1890	12.3		
60	1800	1620	14.8		
50	1500	1350	18.3		
40	1200	1080	23.4		
30	900	810	31.7		
20	600	540	43.2		
10	300	270	84.9		

Note: RS600 and RS800 kits include adapter brackets for installation of up to (2) Liebert PSI5 2U model

#### **Intellislot Communication Cards**

Model Number	Description
IS-UNITY-SNMP	10/100 Mbit Ethernet SNMP, Device Web Page, with MIB and configuration cable
IS-UNITY-DP	Same as IS-UNITY-SNMP, plus SN Series environmental sensor support
IS-RELAY	Intellislot Interface Kit for Relay Contacts

#### **Internal Battery Replacement Kits**

	,	-
Model Number	Applicable To	Shipping Weight (lbs)
PSI5-1500LIBATKIT	PSI5-1500MT120LI PSI5-1500RT120LI	10.0 lbs
PSI5-2200LIBATKIT	PSI5-2200RT120LI	14.6 lbs
PSI5-3000LIBATKIT	PSI5-3000RT120LI	14.6 lbs
PSI5-3000SLIBATKIT	PSI5-3000SRT120LI	17.2 lbs



Liebert PSI5 2U with 2POSTRMKIT



#### **Liebert® MicroPod Features & Benefits:**

- Power continuity during UPS maintenance
- 2U height minimizes rack space requirements
- Plug-and-play installation

Critical IT infrastructure should never be without power. The Liebert® MicroPod ensures continuous uptime, including during scheduled UPS maintenance. It allows you to manually transfer connected equipment to utility power permitting scheduled service or UPS replacement without the need to shut down connected equipment.



#### MicroPod - Maintenance Bypass and Output Distribution

UPS Model Number	MicroPod Model Number	Plug to Utility	Output Receptacles
PSI5-1500RT120LI	MP2-115HW	Hardwired	Hardwired
	MP2-115A	5-15P	8 x 5-15R
PSI5-2200RT120LI	MP2-120HW	Hardwired	Hardwired, 5-20R
	MP2-120C	5-20P	5-20R, 8 x 5-15/20R
	MP2-120E	5-20P	L5-20R, 5-20R, 4 x 5-15/20R
PSI5-3000RT120LI PSI5-3000SRT120LI	MP2-130HW MP2-130C MP2-130E MP2-130P	Hardwired L5-30P L5-30P L5-30P	Hardwired, L5-30R 8 x 5-15/20R 2 x 5-15/20R; 1 x L5-30R, 4 x 5-15/20R 4 x 5-15/20R; 2 x L5-20R



# Liebert® PSI5 UPS Lithium-Ion - Power Assurance Services

#### **Power Assurance Package**

Bundled Start-up Service AND 5-Year On-site Emergency Response	Standard	With LIFE™ Services	With Removal	With LIFE™ and Removal
Equipment Model / Type	Part Number	Part Number	Part Number	Part Number
Liebert PSI5 Lithium-Ion UP TO 3KVA	PAPPSI-1K3KLI	PAPPSI-1K3KLILF	PAPPSI-1K3KLIRMV	PAPPSI-1K3KLIRLF

#### **Power Start-up Services**

Startup service Only	Standard	With Removal
Equipment Model / Type	Part Number	Part Number
Liebert PSI5 Lithium-Ion UP TO 3KVA	SUPSI-1K3K	SUPSI-1K3KRMV

#### **Power Emergency Services**

5-Year On-site Emergency Coverage - Only	Standard	With LIFE Services
Equipment Model / Type	Part Number	Part Number
Liebert PSI5 Lithium-Ion 1500VA	PEPPSI-1500LI5Y	PEPPSI-1500LILF
Liebert PSI5 Lithium-Ion 2200VA	PEPPSI-2200LI5Y	PEPPSI-2200LILF
Liebert PSI5 Lithium-Ion 3000VA	PEPPSI-3000LI5Y	PEPPSI-3000LILF

#### **Power Assurance Package - Summary**



Includes all "Power Start-up Services" and "Power Emergency Services" support

## **Power Startup Services - Summary**

- Installation includes mounting and start-up of new UPS (excludes hard-wired applications)
- Services performed by Vertiv factory trained technician
- Services performed 7 X 24, excluding national holidays within the 48 contiguous states and Hawaii
- Removal and disposal of existing UPS or equipment, if selected

#### **Power Emergency Services - Summary**

- On Site Service Support
- Full-service five (5) year contract term commencing upon the start-up date
- 100% parts coverage, including internal batteries, POD and web card
- 100% labor and travel coverage 7 days/week, 24 hours/day
- 24-Hour Customer Resolution Center via 1-800-LIEBERT
- Access to Customer Services Network portal

#### LIFE™ Services includes above plus:

Continuous Monitoring, Expert Analysis, and Proactive Response

Note: LIFE Services requires an UNITY card.

Please refer to the appropriate Scope of Work for additional details.

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