



Vertiv™ Liebert®

PSI™5 UPS

High Performance Rack-Mount/Tower UPS
for Network Power Protection



FEATURES

Liebert® PSI™5 allows you to get more from your UPS and your protected equipment, with features normally found only on more expensive systems:

- The standard Liebert PSI5 UPS can accept external battery cabinets for long runtime application
- Liebert PSI5 UPS operates at a high 0.9 output power factor
- The optional Unity communications card provides remote monitoring and power management
- The rack/tower convertible PSI5 with its rotatable LCD display provides flexible installation options
- Controllable outlets enables users to power cycle connected equipment and drop non-critical loads so that runtime can be extended to critical loads
- Free *Trellis™* Power Insight management software
- Liebert PSI5 UPS is compliant with the Restriction of Hazardous Substances Directive (RoHS)



Liebert PSI5 is a compact, Automatic Voltage Regulation (AVR) line-interactive UPS system designed especially for IT applications such as network closets and small data centers.

The Liebert PSI5 UPS supports advanced pure sine wave output on battery to safeguard critical IT equipment and business electronics. It also provides reliable power protection for servers, critical nodes, network workstations, large network peripherals, network routers, bridges, and other electronic equipment.

Ideally suited for:

- Servers
- Network Closets
- Safety and Security systems
- Network Workstations
- Large Network Peripherals
- Storage
- VoIP
- Media Closet Equipment
- POS Systems



Reliable UPS Protection To Keep Your Network Up And Running

The flexible design of the Liebert® PSI™5 allows the UPS to be configured as a self-standing tower or to be rack-mounted within a 2U space. It is available in six capacities with both 120V or 208V models.

The Liebert PSI5 UPS features an innovative advanced line-interactive design incorporating buck/boost Automatic Voltage Regulation (AVR) 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.

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
- Adjustable 4 post rack mounting kit
- Support base for tower configuration

Liebert PSI5 UPS Standard Features

Flexibility:

Up to Seven Battery-Backed Outlets

Allows the Liebert PSI5 to be more flexible in accommodating additional equipment to be connected to the UPS via the receptacles.

Configurable Input Voltage Window

Allows the UPS to be properly matched to the incoming utility power and adjusts its input window and transfer points to supply regulated power to connected loads within the selected range.

Rotatable Display Panel

LCD monitor panel rotates 90° to make the readout of the LCD display easy to see in rack or tower position.

Programmable Outlet Group

Power cycle connected equipment and load shed on battery to extend run time.

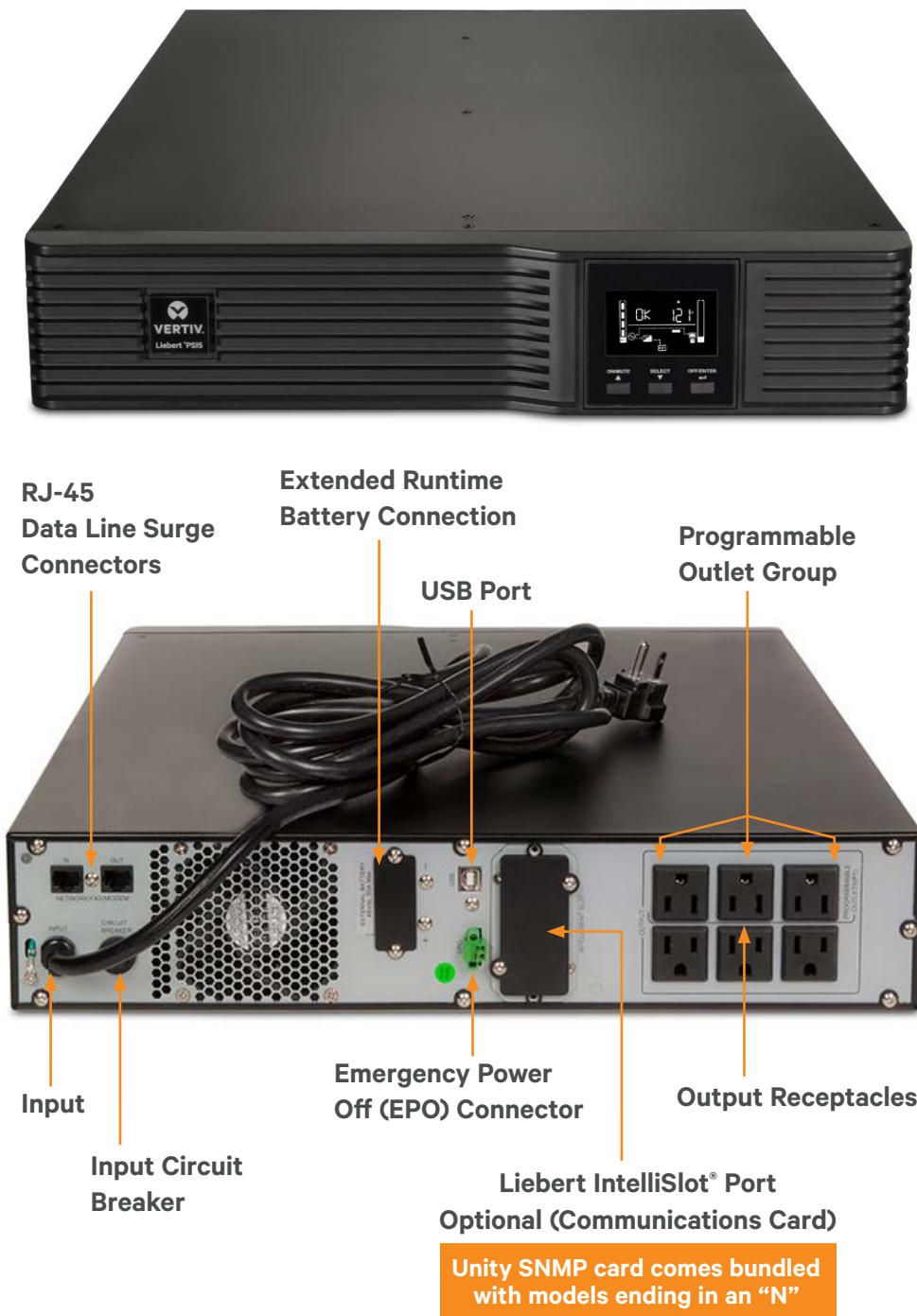
Rack or Tower Configurations

Telescoping rails and tower base included for flexible deployment solutions.

Higher Availability:

Advance Early Warning of UPS System Status

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



Battery Backup Time When Utility Fails

Provides ample runtime for an orderly shutdown of connected equipment or transfer to generator.

Full Sequenced Battery Testing

The Liebert® PSI™5 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.

Surge Protection

The transient voltage surge suppression (TVSS) circuitry inside the Liebert PSI5 UPS provides protection for the connected equipment from incoming spikes, surges, and other power anomalies present on the incoming utility power source.

Data Line Surge Protection

Network surge protection for equipment connected to the UPS via the RJ-45.

Hot Swappable Batteries

Increase product life and provide prolonged UPS reliability. Batteries are conveniently located behind the front bezel of the unit.

Lowest Total Cost Of Ownership:

0.9 Output Power Factor

Liebert PSI5 UPS operates at a higher output power factor provides more usable power to connected equipment.

Wider Input Voltage Window

Prolongs battery life by allowing the UPS to maximize the use of utility power before transferring to battery when input voltage exceeds specified limits.

Reduced Installation Time and Costs

UPS is shipped with batteries connected and charged.

Warranty Protection

Standard two-year warranty ensures UPS replacement if problems occur during the warranty period. Optional one-year and three-year extensions also available.

Multiple Choices For Communication, Shutdown And Reporting:

USB Communications

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. *Trellis™* Power Insight Shutdown Software is available at Vertiv.com.

SNMP Communication Option

Add an optional Liebert® IntelliSlot® IS-UNITY communications card to enable SNMP and web-based management for the Liebert PSI5 UPS. The Liebert IntelliSlot UNITY communication cards provide network integration connectivity and allow you to monitor and control your UPS from your network management station or any PC.

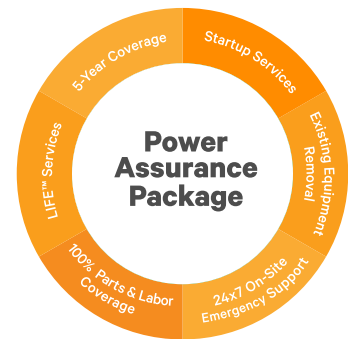
- Sends both SNMP traps and emails for event notification
- Auto-senses 10M/100M Ethernet
- Compatible with shutdown software to ensure graceful computer shutdown
- IS-UNITY-DP Communications Card also support Vertiv Liebert SN Series, Environmental Sensors
- Allows remote monitoring, start-up or restart for connected equipment.
- Select models include factory integrated network management card

Remote Emergency Power Off

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

Power Assurance Package Provides Comprehensive On-Site Services

- **Five-year protection plan** with 100% parts coverage and 7x24 emergency service
- **On-site installation and start-up** to provide pain-free site rollout and free you from disposal of your existing UPS
- **On-site service support** to free up time-strapped IT resources
- **Life Services** to deliver remote oversight, analysis, and proactive response for assured uptime



Optional Liebert MicroPOD Output Distribution and Maintenance Bypass Module

When your computer system can't be without power, even for scheduled UPS maintenance, the Liebert MicroPOD ensures continuous uptime. 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.

Features include:

- 2U height minimizes rack space requirements
- Installs with plug-and-play ease



Liebert® PSI™5 UPS Specifications

Standard Models	PSI5-800RT120	PSI5-1100RT120	PSI5-1500RT120	PSI5-2200RT120	PSI5-3000RT120	PSI5-5000RT208
Power Rating, VA/W	800VA/720W	1100VA/990W	1500VA/1350W	1920VA/1920W	2880VA/2700W	4250VA/3825W
DIMENSIONS, W X D X H, IN (MM)						
Unitwww	17.2 x 16.1 x 3.5 (438 x 410 x 88)	17.2 x 16.1 x 3.5 (438 x 410 x 88)	17.2 x 20 x 3.5 (438 x 510 x 88)	17.2 x 24.8 x 3.5 (438 x 630 x 88)	17.2 x 24.8 x 3.5 (438 x 630 x 88)	17.2 x 24.8 x 3.5 (438 x 630 x 88)
Shipping	10.2 x 22.9 x 21.7 (258 x 582 x 550)	10.2 x 22.9 x 21.7 (258 x 582 x 550)	10.2 x 26.5 x 21.7 (258 x 672 x 550)	10.2 x 26.7 x 21.7 (258 x 782 x 550)	10.2 x 26.7 x 21.7 (258 x 782 x 550)	10.2 x 26.7 x 21.7 (258 x 782 x 550)
WEIGHT, LB (KG)						
Unit	28.4 (12.9)	29.5 (13.4)	42.6 (19.3)	59.1 (26.8)	70.8 (32.1)	87.7 (39.8)
Shipping	32.2 (16.9)	37.9 (17.2)	51.8 (23.5)	70.1 (31.8)	81.8 (37.1)	98.8 (44.8)
INPUT/OUTPUT AC PARAMETERS						
Nominal Voltage Setting			100/110/115/120(default) / 125			200/208/220/230/240
Voltage Range Without Battery Operation	75 to 146 VAC	75 to 146 VAC	75 to 146 VAC	75 to 146 VAC	75 to 146 VAC	150 to 281 VAC
Frequency Range			55~65Hz (57~63Hz Battery to Normal comeback)			
Surge Protection	1372J	1372J	1372J	1372J	1372J	2064J
Input Power Cord, 10ft (3m) Attached	NEMA 5-15	NEMA 5-15	NEMA 5-15	NEMA L5-20 std 5-20 adapter included	NEMA L5-30P	NEMA L6-30R
Output Receptacles – Not Controllable	(3) NEMA5-15R	(3) NEMA5-15R	(3) NEMA5-15R	(3) NEMA5-15/20R, (1) NEMAL5-20R	(3) NEMA5-15/20R, (1) NEMAL5-30R	(3) L6-30R
Output Receptacles – Controllable	(3) NEMA5-15R	(3) NEMA5-15R	(3) NEMA5-15R	(3) NEMA5-20R	(3) NEMA5-20R	(1) NEMAL6-30R
Transfer Time				4-6 ms Typical		
Battery Waveform				Pure Sinewave		
BATTERY PARAMETERS						
Type			Valve-regulated lead-acid (VRLA) in compliance with UL 1989			
Recharge Time			4 hours to recover 90%			
INTERNAL BATTERY RUN TIME						
Full Load	3 min	2 min	4 min	4 min	3 min	3 min
Half Load	11 min	10 min	12 min	13 min	12 min	10 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			0 to 9,942 (0 to 3,000) without derating. Operating temperature reduced 9 °F (5 °C) for each additional 1,640ft (500m) of altitude.			
Audible Noise	< 45 dB	< 45 dB	< 45 dB@line mode < 55 dB@battery mode	< 45 dB@line mode < 55 dB@battery mode	< 45 dB@line mode < 55 dB@battery mode	< 45 dB@line mode < 55 dB@battery mode
AGENCY						
Safety			UL 1778, c-UL-us Listed			
Emissions			FCC Part 15, Class B			
Network Surge			UL 497 B			
Transportation			ISTA Procedure 1A Certification			

*Available from select distributor.

*PSI5 UPS + Unity SNMP card bundles available - Add an "N" to the end of the model number. Available through select distributors.

Liebert® PSI™5 UPS accessories and options

REPLACEMENT INTERNAL BATTERY KITS

Liebert Part Number	Description	Shipping Weight lbs.
PSI5-800BATKIT	PSI5-800 Replacement battery kit	13.6
PSI5-1100BATKIT	PSI5-800 Replacement battery kit	14.1
PSI5-1500BATKIT	PSI5-1500 Replacement battery kit	25.5
PSI5-2200BATKIT	PSI5-2200 Replacement battery kit	37.8
PSI5-3000BATKIT	PSI5-3000 Replacement battery kit	38.8
PSI5-5000BATKIT	PSI5-5000 Replacement battery kit	41

EXTERNAL BATTERY CABINETS

Liebert Part Number	Description	Shipping Weight lbs.
PSI5-24VBATT	External Battery Cabinet for Liebert PSI5-800RT120 and PSI5-1100RT120	51.8
PSI5-48VBATT	External Battery Cabinet for Liebert PSI5-1500RT120	70.3
PSI5-72VBATT	External Battery Cabinet for Liebert PSI5-2200RT120, PSI5-3000RT120 and PSI5-5000RT208	96.1

Note: Runtime with EBC are shown on page 8

EXTENDED BATTERY CABINET INTERCONNECT CABLE

Liebert Part Number	Description	Shipping Weight lbs.
PSI5-24VCBL1	PSI5-24VCBL1 PSI5 24V 2 ft cable for 800/1100VA UPS	1.56
PSI5-24CBL6	PSI5-24VCBL6 PSI5 24V 6 ft cable for 800/1100VA UPS	2.8
PSI5-48VCBL1	PSI5-48VCBL1 PSI5 48V 2 ft cable for 1500/2200VA UPS	1.56
PSI5-48VCBL6	PSI5-48VCBL6 PSI5 48V 6 ft cable for 1500/2200VA UPS	2.8
PSI5-72VCBL1	PSI5-72VCBL1 PSI5 72V 2 ft cable for 3000VA UPS	1.56
PSI5-72VCBL6	PSI5-72VCBL6 PSI5 72V 6 ft cable for 3000VA UPS	2.8

TELECOM / RELAY RACK MOUNTING KITS

Part No.	Description
2POSTRMKIT	Four pieces, two-post telecom rack kit
RS500	Flush-mount shelf for 19" wide telecom/relay racks
RS600	Center-mount shelf for 19" wide telecom/relay racks
RS700	Flush-mount shelf for 23" wide telecom/relay racks
RS800	Flush-mount shelf for 23" wide telecom/relay racks

INTELLISLOT™ COMMUNICATIONS OPTIONS

Part No.	Description
IS-UNITY-DP	10/100 Mbit Ethernet SNMP, Device Web Page, SN series environmental sensor support with MIB and configuration cable
IS-UNITY-SNMP	10/100 Mbit Ethernet SNMP, Device Web Page, with MIB and configuration cable

STEP DOWN TRANSFORMER OPTIONS (USE WITH PSI5-5000RT208)

Part No.	Description
TDU-6000RTL630	6000VA step-down transformer with L630 Input with 8 x NEMA 5-15/20 and 2 x L530
TDU-4000RTL630	4000VA step-down transformer with L630 Input with 8 x NEMA 5-15/20 and 2 x L520

Liebert® PSI™5 Services & Power Assurance Packages

START UP INSTALLATION - ONLY

Equipment Model Number	Part Number	Description
Liebert PSI5 UP TO 3KVA	SUPSI-1K3K	START UP Liebert PSI5 UP TO 3KVA 7X24
PSI5 5KVA	SUPSI-5K	START UP Liebert PSI5 5KVA 7X24
Liebert PSI5 EXTERNAL BATTERY CABINETS	SUPSI-EXTBTCB	START UP Liebert PSI5 EXT BT CB 7X24

START UP INSTALLATION WITH REMOVAL - ONLY

Equipment Model Number	Part Number	Description
Liebert PSI5UP TO 3KVA	SUPSI-1K3KRMV	START UP Liebert PSI5 UP TO 3KVA 7X24 WR
PSI5 5KVA	SUPSI-5KRMV	START UP Liebert PSI5 5KVA 7X24 WR
Liebert PSI5 EXTERNAL BATTERY CABINETS	SUPSIEXTBTCBRMV	START UP Liebert PSI5 EXT BT CB 7X24 WR

POWER ASSURANCE PACKAGE

Equipment Model Number	Part Number	Description
Liebert PSI5 UP TO 3KVA	PAPPSI-1K3K	PAPPSI-UP TO 3K WSTARTUP
Liebert PSI5 UP TO 3KVA with LIFE	PAPPSI-1K3KLF	PAPPSI-UP TO 3K WSTARTUP w LIFE
PSI5 5KVA	PAPPSI-5K	PAPPSI 5K WSTARTUP
PSI5 5KVA with LIFE	PAPPSI-5KLF	PAPPSI 5K WSTARTUP w LIFE
Liebert PSI5 EXTERNAL BATTERY CABINETS	PAPPSI-BATT	PAPPSI BATT WSTARTUP

POWER ASSURANCE PACKAGE WITH REMOVAL

Equipment Model Number	Part Number	Description
Liebert PSI5 UP TO 3KVA	PPPAPPSI-1K3KRMV	PAPPSI-UP TO 3K WSTARTUP
Liebert PSI5 UP TO 3KVA with LIFE	PAPPSI-1K3KRMV	PAPPSI-UP TO 3K WSTARTUP w LIFE
PSI 5KVA	PAPPSI-5KRMV	PAPPSI 5K WSTARTUP
PSI 5KVA with LIFE	PAPPSI-5KRLF	PAPPSI 5K WSTARTUP w LIFE
Liebert PSI5 EXTERNAL BATTERY CABINETS	PAPPSI-BATTRMV	PAPPSI BATT WSTARTUP

Start Up Installation Includes:

- Installation includes mounting and start-up of new UPS and internal batteries (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 equipment, if selected

Power Assurance Package:

- On Site Service Support
- 100% labor and travel coverage 7 days/week, 24 hours/day
- One Preventive Maintenance Visit (5 kVA Only)

- Full-service five (5) year contract term commencing upon the start-up date
- 100% parts coverage, including internal batteries, POD and web card
- 24-Hour Customer Resolution Center via 1-800-LIEBERT
- Access to Liebert Customer Services Network On-Line Internet portal

Power Assurance Package with Life includes* all of the above plans

- Continuous Monitoring, Expert Analysis, and Proactive Response
- Note: LIFE Services option and SN Sensor support requires Unity card purchased separately

PSI5 EXTENDED WARRANTY (800-5000 VA; 120 VAC & 208 VAC)

Warranty Extension List Price		
Additional 1 Year		Additional 3 Years
UPS Model Number	Warranty Part Number	Warranty Part Number
120 VAC Rack-Tower Unit		
PSI5-800RT120	1WEPSI5-800	3WEPSI5-800
PSI5-1100RT120	1WEPSI5-1100	3WEPSI5-1100
PSI5-1500RT120	1WEPSI5-1500	3WEPSI5-1500
PSI5-2200RT120	1WEPSI5-2200	3WEPSI5-2200
PSI5-3000RT120	1WEPSI5-3000	3WEPSI5-3000
PSI5-5000RT208	1WEPSI5-5000	3WEPSI5-5000
External Battery Cabinets		
PSI5-24VBATT	1WEPSI5-24VBATT	3WEPSI5-24VBATT
PSI5-48VBATT	1WEPSI5-48VBATT	3WEPSI5-48VBATT
PSI5-72VBATT	1WEPSI5-72VBATT	3WEPSI5-72VBATT

Note: Extended warranties can only be ordered when ordering the UPS and prior to shipment.

PSI5 UPS Runtime Tables
PSI5-800RT120

LOAD			NUMBER OF EXTERNAL BATTERY CABINETS (EBCS)						
			INTERNAL BATTERY ONLY	1	2	3	4	5	6
%	VA	W	MINUTES						
100	800	720	3	22	45	70	97	125	154
75	600	540	5	30	60	93	129	165	202
50	400	360	11	53	107	166	226	287	350
25	200	180	25	109	215	326	438	551	665
10	80	72	69	285	539	796	1053	1311	1569

PSI5-1100RT120

LOAD			NUMBER OF EBCS	
			INTERNAL BATTERY ONLY	1
%	VA	W	MINUTES	
100	1100	990	2	17
75	825	743	4	24
50	550	495	10	44
25	275	248	23	91
10	110	99	65	244

LOAD			NUMBER OF EBCS				
			2	3	4	5	6
%	VA	W					
100	880	792	45	68	92	118	144
75	660	594	65	98	133	168	205
50	440	396	107	160	215	272	328
25	220	198	219	321	426	531	636
10	88	79	534	768	1003	1238	1473

PSI5-1500RT120

LOAD			NUMBER OF EXTERNAL BATTERY CABINETS (EBCS)						
			INTERNAL BATTERY ONLY	1	2	3	4	5	6
%	VA	W	MINUTES						
100	1500	1350	4	24	50	78	107	138	169
75	1125	1013	6	33	66	102	141	181	222
50	750	675	12	59	119	183	249	316	383
25	375	337.5	28	122	240	363	486	611	736
10	150	135	81	330	619	911	1203	1496	1790

PSI5-2200RT120

LOAD			NUMBER OF EBCS	
			INTERNAL BATTERY ONLY	1
%	VA	W	MINUTES	
100	1920	1920	4	27
75	1440	1440	7	40
50	960	960	13	66
25	480	480	30	137
10	192	192	84	358

LOAD			NUMBER OF EBCS				
			2	3	4	5	6
%	VA	W					
100	1536	1536	72	111	152	194	237
75	1152	1152	104	159	216	274	333
50	768	768	170	257	346	435	525
25	384	384	336	497	661	824	989
10	153.6	154	835	1213	1592	1971	2350

PSI5-3000RT120

LOAD			NUMBER OF EBCS	
			INTERNAL BATTERY ONLY	1
%	VA	W	MINUTES	
100	3000	2700	3	20
75	2250	2025	5	27
50	1500	1350	12	50
25	750	675	26	102
10	300	270	76	282

LOAD			NUMBER OF EBCS				
			2	3	4	5	6
%	VA	W					
100	2400	2160	52	78	106	134	164
75	1800	1620	74	112	151	191	232
50	1200	1080	122	182	244	306	370
25	600	540	244	358	473	589	705
10	240	216	619	887	1156	1425	1695

PSI5-5000RT208 @ 208V NOMINAL

LOAD			NUMBER OF EBCS	
			INTERNAL BATTERY ONLY	1
%	VA	W	MINUTES	
100	4250	3825	3	15
75	3188	2869	4	20
50	2125	1913	10	36
25	1063	956	26	82
10	425	383	69	215

LOAD			NUMBER OF EBCS				
			2	3	4	5	6
%	VA	W					
100	4000	3600	30	44	60	76	92
75	3000	2700	43	63	85	108	131
50	2000	1800	70	104	139	175	212
25	1000	900	156	228	301	375	449
10	400	360	358	511	665	819	974



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