



SSG-RP Series™ Ultra-Wide Temperature UPS 1kVA-3kVA, 120/230Vac Rack/Tower



Ultra-Wide Temperature Range Protection to 65°C

UL and cUL Listed for operation up to 65°C, Falcon Electric's SSG-RP Series ultra-high temperature, double conversion, on-line UPS family is unique in the industry. It has been specifically designed to withstand temperature environments that would destroy other UPS products.

Designed to Provide Reliability and a Long Service Life

Falcon has carefully and precisely designed, selected components and optimized the cooling to create a UPS family that operates reliably in ultra-wide temperature environments of -30°C to 65°C (-22°F to 149°F). The batteries used inside the UPS were specifically selected due to their wide operational temperature range of -40°C to 80°C (-40°F to 176°F), far in excess of the maximum 65°C UPS specification. The batteries also have a 10-year service life rating when operated in a normal ambient temperature environment of 72°F.

LED Display & Microprocessor Control

The SSG Series offers instant access to vital UPS and power information through its feature-rich, easy-to-use LED MIMIC graphic display. Through the UPS's next-generation microprocessor technology, users can quickly perform various important functions including load segment control, monitoring and setting the output voltage.

Optional Frequency Converter Capability

Thanks to Falcon's flexible design platform, the SSG Series can be configured as a frequency converter for worldwide power applications. Accepting a 50/60Hz input and providing a fixed 60Hz or 50Hz output, the SSG Series supplies a tightly regulated output of $\pm 2\%$ and excellent extended brownout protection.

RS-232, USB & SNMP/HTTP UPS Management

With the supplied UPSilon® software, all models support unattended shutdown, UPS management, data logging and a power diagnostic tool. The software supports all Windows® platforms including Version 7 and Server Version 2008 R2, Novell NetWare® 5 & 6, LINUX and FreeBSD. UPSilon for UNIX is available at an additional cost and supports most popular UNIX platform and OS versions.

Falcon's optional SNMP/HTTP agent board provides IPv4 and IPv6 addressable remote management and monitoring over any 10/100 Ethernet LAN, WAN or the Internet. The agent board installs via a communications expansion slot located on the back of every SSG Series model. Client software is supplied that supports the shutdown of multiple workstations and servers via the network.

Remote Emergency Power Off (REPO)

The SSG-RP Series is equipped with an NFPA-70, NEC 645-11 compliant REPO interface assuring easy integration. Remote output receptacle control is an option to REPO, allowing the load segment outlets to be remotely controlled using a wire connected, remote switch.

Typical Rear Panel Configuration



Advanced Features:

- * True Double-Conversion
On-line Sinewave Design
- * UL Listed for -30°C to +65°C
Operation
- * Ultra-High Temperature User-
Replaceable, Hot-Swappable,
Battery Packs
- * LED Display with
Advanced Monitoring for
Easy UPS Management
- * Load Segment Control
- * Remote Emergency Power
Off (Standard) or Remote
Output Receptacle Control
- * Input Power Factor
Correction
- * Wide Input Voltage Window
- * Precision Output Voltage
Regulation
- * Extended Brownout, Surge &
Transient Protection
- * Optional Extended Battery
Banks & Chargers
- * UPSilon® UPS Monitoring
& Management Software
- * RS-232C, USB & Optional
SNMP/HTTP Agent

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SSG-RP Series™ Ultra-Wide Temperature UPS 1kVA - 3kVA

Model Number	SSG1KRP-1 SSG1KRP-2	SSG1.5KRP-1 SSG1.5KRP-2	SSG2KRP-1 SSG2KRP-2	SSG2.5KRP-1 SSG2.5KRP-2	SSG3KRP-1 SSG3KRP-2
Nominal VA	1000	1500	2000	2500	3000
Electrical Input					
Nominal AC Voltage	-1 Models 120Vac -2 Models 208, 220, 230, 240Vac				
AC Voltage Range	-1 Models 80Vac to 138Vac -2 Models 160Vac to 276Vac				
Frequency	50/60 Hz ± 5% (Auto Tracking)				
Power Factor Correction	> 0.98 (at full load)				
Surge Suppression	IEEE/ANSI C62.41				
Efficiency (Typ.)	> 88%				
Electrical Output					
Watts	700	1050	1400	1750	2400
AC Voltage (User Programmable)	-1 Models 100, 110, 115 or 120Vac (sinewave) -2 Models 208, 220, 230 & 240Vac (sinewave)				
Frequency	50/60 Hz (Auto Tracking)				
Frequency Stability	± 0.3% (Battery Mode), ±5% Synchronized to the input frequency in utility mode				
Voltage Regulation	± 2%				
Step Load Change	± 7% for 100% load variation, recovery in 5ms				
Harmonic Distortion	< 3% Linear Load, < 5% Non-Linear Load				
Overload	105% for 120 Seconds, 110% for 50 Seconds, 150% for 20 Seconds				
Crest Ratio	3:1				
Battery					
DC Bus Voltage	48Vdc	96Vdc			
Battery Pack Type	Hot-Swappable Pack Separate Enclosure from the UPS Module, User-Replaceable, Hot-Swappable				
Battery Type	Std. & Universal Extended Battery Module				
Back Up Time	5 Minutes / 16 Minutes	12.5 Minutes / 28 Minutes	8.5 Minutes / 24 inutes	5 Minutes / 18 Minutes	3.5 Minutes / 11.5 Minutes
Recharge Time	6 Hours to 90%				
Battery Life vs. Temperature	10 Years @ 25°C (77°F) Operation 1 Year @ 55°C (122°F) Operation				
Transfer Time					
Line Fails/Recovers	Zero				
UPS to Bypass or Reverse	< 4ms				
After Overload	Auto Transfer to UPS				
With Frequency Converter Options	Bypass Disabled				
Electrical Connections					
Input	-1 -2	6' Cord with 5-15P Plug 6'Cord with Schuko	6' Cord with 5-15 P 6'Cord with Schuko	6' Cord with 5-20P 6'Cord with Schuko	6'Cord with L5-30P 6'Cord with Schuko
Output	-1 -2	(8) 5-15R (8) IEC320			(4) 5-15R & (1) L5-20R (8) IEC320
Environmental					
Temperature	Operational Storage	-30°C to 65°C (-22°F to 149°F) (SSGKRP-3K-x, -30°C to 60°C) Note: with Lithium-Ion battery option -20° to +58°C all models -30°C to 65°C (-22°F to 149°F) At temperatures above 25°C battery life will be reduced			
Humidity		10% to 95% Non – Condensing			
Altitude		10,000 Feet (3000 meters) without derating			
Cooling		Low Velocity Forced Air Fans			
Audible Noise	(@ 1 Meter)	<50dBA			
Controls & Indicators					
LED Display	MIMIC Graphical Display, Input/Output Load Percentage, Alarm, Inverter, Battery Level				
Audible Alarms	DC Mode, Low Battery, Over/Under Voltage, Over/Under Frequency, High Temp., Over Load, Fault Alarm				
Load Segment Control	Two programmable load segments, one continuous load segment				
Remote Emergency Power Off (or)emote Output Receptacle Control	(Standard) (Optional)	Meets NFPA 70, NEC 645-11 (REPO connections located on the UPS rear panel) UPS Load Segment Controlled Output Receptacles can be turned off and on using a remote isolated switch contact.			
Communications	USB Port, RS-232C Serial Port, Optional SNMP/HTTP Agent Board (UPS Bundled UPSilon Software)				
Mechanical					
Dimensions	inches (mm), H x W x D (2U) UPS Module SSGH-B Ten-Year VRLA Battery Module	(2U) 3.5 x 16.8 x 18.8 (88.5 x 426 x 477) (Industrial grade, rugged construction) (2U) 3.5 x 16.8 x 18.8 (88.5 x 426 x 477) (Industrial grade, rugged construction)			
Weight	lb. (kg) (2U) UPS Module SSGH-B Ten-Year VRLA Battery Option	28.7 (13.01) 38.55 (17.49)	35.24 (16) 58.15 (26.4)		
Agency Approvals	UL 1778, cUL, CE, FCC Class B				

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SSG-RP Series™ Ultra-Wide Temperature UPS 1kVA - 3kVA

SSG-RP UPS Options

Lithium-Phosphate Battery Options

(Lithium-Phosphate battery options available for SSG1KRP-1 and SSG1KRP-2 models only)

SSGLi-4 Internal Lithium-Ion Battery Option		(4) 10-Year Rated, Lithium-Ion 12Vdc, 4.6AH
SSGLi-8 External Lithium-Ion Bank Option		(8) 10-Year Rated, Lithium-Ion 12Vdc, 4.6AH
Back Up Time	SSGLi-4	9.5 minutes / 20 minutes
	SSGLi-8	28.5 minutes / 60 minutes
Recharge Time		8 Hours to 90%
Battery Pack Type		User-Replaceable, Hot-Swappable (Batteries are replaceable through the UPS or battery bank front panels)
Temperature	Storage	-10°C to 55°C (-4°F to 131°F)
	Operational	-10°C to 55°C (-4°F to 131°F)
Dimensions	inches (mm)	Inside the UPS Enclosure (2U) 3.47 x 16.75 x 18.68 (88.14 x 425.45 x 474.5) (Mil. Std. rugged construction)
H x W x D	SSGLi-4	
	SSGLi-8	
Weight lb. (kg)	Internal Lithium batteries = 25.4 (11.48)	
SSGLi-4 Internal Lithium-Ion Battery Option		External Lithium Battery Bank = 32.9 (13.93)
SSGLi-8 External Lithium-Ion Bank Option		
Agency Approvals		FCC Class B

Extended VRLA Battery Bank Options

Extended Battery Bank Model Numbers	SSGH-B	SSGH-B1	SSGH-B2
Battery Type	10-Year Rated, Maintenance-Free, Sealed VRLA Batteries, 12Vdc, 7AH		
Temperature	Storage	-30°C to 65°C (-22°F to 149°F) (Batteries stored at 50°C will require monthly recharging and have about a 1 year service life) -30°C - 65°C (-22°F to 149°F) (When operated in temperatures above 25°C the battery service life will be reduced)	
	Operational		
Internal 2A Charger	No	Yes	
Charger Input Voltage & Current	None	120Vac, 2.5A	208Vac to 240Vac, 2.5A
Dimensions H x W x D	inches (mm)	(2U) 3.5 x 16.8 x 18.8 (88.5 x 426 x 477)	
Weight	lb. (kg)	Extended Battery Module = 58.15 (26.4)	Extended Battery Module = 60.15 (27.3)

Extended VRLA Battery Runtimes

(Note: Stated backup times are identical for SSGH-B, SSGH-B1, SSGH-B2 battery banks and are stated by UPS models below)

UPS Model Numbers	SSG1KRP-1 SSG1KRP-2	SSG1.5KRP-1 SSG1.5KRP-2	SSG2KRP-1 SSG2KRP-2	SSG2.5KRP-1 SSG2.5KRP-2	SSG3KRP-1 SSG3KRP-2
Back Up Time by Model	700W / 350W	1050W / 525W	1400W / 700W	1540W / 770W	2100W / 1050W
Full / Half Load	5 Minutes / 16 Minutes	12.5 Minutes / 28 Minutes	8.5 Minutes / 24 Minutes	5 Minutes / 18 Minutes	3.5 Minutes / 11.5 Minutes
UPS as Shipped	33 Minutes / 75 Minutes	31 Minutes / 72 Minutes	23 Minutes / 50 Minutes	16 Minutes / 43 Minutes	12.5 Minutes / 32 Minutes
One Extended BatteryBank	98 Minutes / 200 Minutes	50 Minutes / 120 Minutes	41 Minutes / 84 Minutes	28 Minutes / 70 Minutes	23 Minutes / 51 Minutes
Two Extended Battery Banks	135 Minutes / 260 Minutes	72 Minutes / 155 Minutes	55 Minutes / 118 Minutes	39 Minutes / 100 Minutes	33 Minutes / 71 Minutes
Three Extended Battery Banks	270 Minutes / 330 Minutes	100 Minutes / 210 Minutes	68 Minutes / 155 Minutes	55 Minutes / 130 Minutes	45 Minutes / 97 Minutes
Four Extended Battery Banks					

Note: Back up time may vary depending on temperature, battery age and condition.

Communications Options

Internal COM Board Model Numbers	UA88376-SSG	SNMP-SG-4	SNMP-MEGA-INT
Type	Internal Dry Relay Signal Interface	Internal Ultra Secure SNMP/HTTP	Internal Secure SNMP/HTTP Agent
COM Interface	DB-9F	10/100 Ethernet (RJ45)	
External COM Board Model Numbers	UA88376-SSG-HW	SNMP-SG-5	SNMP-MEGA-EXT
Type	Internal Dry Relay Signal Interface	External Secure SNMP/HTTP	
COM Interface	Hardwire Terminal Block	10/100 Ethernet (RJ45)	10/100 Ethernet (RJ45)
Common Specifications	Dry contact for: Utility Loss, Low Battery, Summary Alarm & On Bypass, Remote Shutdown while on battery	See SNMP/HTTP datasheets for these models	See SNMP/HTTP datasheets for these models

External Maintenance Bypass Switch Option

Bypass Switch Model Number	MB2K-1, MB2K-2	MB3K-1, MB3K-2
Model Selection	MB2K-1 used with SSG1KRP-1 to SSG2KRP-1 MB2K-2 used with SSG1KRP-2 to SSG2KRP-2	MB3K-1 used with SSG2.2KRP-1 to SSG3KRP-1 MB3K-2 used with SSG2.2KRP-2 to SSG3KRP-2
Nominal Input/Output Voltage	-1, 120Vac and -2, 208Vac to 240Vac	
VA Rating	2000	3000
Switch Type	Make-Before-Break	
Utility Input and Load Output Connection	Hardwire	
UPS Input Connection	-1, 5-15R, -2, 6-15R	-1, L5-30P, -2, L6-30P
UPS Output Connection	-1, 6' Line Cord with 5-15P -2, 6' Line Cord with 6-15P	-1, 6' Line Cord with L5-30P -2, 6' Line Cord with L6-30P
Dimensions H x W x D	inches (mm)	9.9 x 12.6 x 5.3, (250.1 x 319.8 x 133.4)
Weight	lb. (kg)	11 lbs. (4.98 kg)
Agency	UL, cUL Listed	