



Pre-Configured NEMA 3R UPS Systems

SSG Industrial Wide-temp 1.5kVA to 3kVA



Ready to Install NEMA 3R UPS Solution for Indoor/Outdoor Use

Simply hang, hardwire and it is ready to go. Falcon's SSG pre-configured NEMA 3R-rated UPS systems provide the ideal wide-temperature range UPS solution for indoor and outdoor use. NEMA 4-rated enclosures are also offered. Both locking and non-locking enclosure systems are available. Simply specify at the time of order.

Harsh Temperature Range Protection -20°C to 55°C (-4°F to 131°F)

The SSG UPS is UL 1778, UL 508, cUL Listed and CE approved to operate from -20°C to 55°C (-4°F to 131°F). This wide-temperature, double conversion, on-line UPS family is unique in the industry. It has been specifically designed to withstand harsh temperature environments that would destroy other UPS products.

Designed for Long Service Life and High Reliability

Falcon has carefully selected a high-grade, powder coated NEMA 3R enclosure. We next integrated it with our wide-temperature SSG UPS models to provide turnkey systems that operate reliably in harsh temperature environments of -20°C to 55°C (-4°F to 131°F). The battery modules packaged inside the system contain batteries that were specifically selected for their wide operational temperature range. The batteries are rated to provide a 12-year service life when installed in a 25°C (77°F) environment. When installed in a 50°C (122°F) location, the projected battery life is 4 years. This is over four times the average UPS battery life.

The SSG UPS offers instant access to vital UPS and power information through its feature-rich, easy-to-use LCD MIMIC graphic display.

Optional Frequency Converter

The SSG is factory-configurable for use as a 50Hz or 60Hz frequency converter, making it the ideal choice for worldwide power applications.



Advanced Features:

- * True Double-Conversion On-line Sinewave Design
- * UL Listed for -20°C to 55°C Operation
- * Precision Output Voltage Regulation
- * High Temperature User-Replaceable, Hot-Swappable, Battery Pack
- * Hours of Battery Backup
- * UL, cUL Listed NEMA 3R and 4 Rated Enclosures (all sizes) with Cooling Fan
- * Add PLCs, VFDs, and other Devices
- * Dry Contact Relay Card Options
- * Hardwire Input and Output
- * Remote Emergency Power Off (Standard)
- * RS-232C, USB & Optional SNMP/HTTP Agent

Falcon Electric, Inc.
5116 Azusa Canyon Road
Irwindale, CA 91706
Toll-Free: 800-842-6940
Tel: 626-962-7770
Fax: 626-962-6850
Email: sales@FalconUPS.com
www.FalconUPS.com

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Model	SSG NEMA UPS Model Number Determined by Configuration Ordered		
UPS Nominal VA	1500	2200	3000
UPS 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 \pm 5% (Auto Tracking)		
Power Factor Correction	>0.97 (at full load)		
Surge Suppression	IEEE/ANSI C62.41		
Efficiency (Typ.)	88%		
UPS Electrical Output			
Watts	1050	1540	2100
AC Voltage (User Programmable)	-1 Models = 100, 110, 115 or 120Vac (sine wave) -2 Models = 208, 220, 230 or 240Vac (sine wave)		
Frequency	50/60 Hz (Auto Tracking)		
Frequency Stability	\pm 0.3% (Battery Mode), \pm 5% Synchronized to the input frequency in utility mode		
Voltage Regulation	\pm 2%		
Step Load Change	\pm 7% for 100% load variation, recovery in 5ms		
Harmonic Distortion	< 3% Linear Load, < 5% Non-Linear Load		
Overload	110% for 40 seconds, 125% for 18 seconds, 150% immediate		
Crest Ratio	3:1		
UPS Battery			
DC Bus Voltage	48Vdc	96Vdc	
Battery Pack Type	User-Replaceable, Hot-Swappable Pack Separate Enclosure from UPS Module (Internal Pack for 1.5kVA)		
Battery Type (Std. Battery Module)	12-Year Rated, Maintenance-Free, Sealed VRLA Batteries, 12Vdc, 7AH		
Backup Time (With SSGR VRLA) Full/Half Load in Minutes	6 / 18	10 / 27	6 / 18.9
Recharge Time	8 Hours to 90%		
Rated Battery Life vs. Temperature	12 Years @ 25°C (77°F) Operation 4 Years @ 50°C (122°F) Operation		
UPS Transfer Time			
Line Fails/Recovers	Zero		
UPS to Bypass or Reverse	< 4ms		
After Overload	Auto Transfer to UPS		
With Frequency Converter Option	Bypass Disabled		
System Electrical Connections			
Input	Hardwire Terminal Block		
Output	Hardwire Terminal Block		
System Environmental			
Temperature	Operational Storage	-20°C to 55°C (-4°F to 131°F) At temperatures above 25°C battery life will be reduced -20°C to 55°C (-4°F to 131°F) At temperatures above 25°C battery life will be reduced	
Humidity	10% to 95% Non – Condensing		
Altitude	10,000 Feet (3,000 meters) without derating		
Cooling	Low Velocity Forced Air Fan (UPS Only)		
Audible Noise (@ 1 Meter)	<50dBA (UPS only)		
Conformal Coating on UPS Circuit Boards	Optional upon customer request at an added cost		
UPS Controls & Indicators			
LCD Display	MIMIC Graphical Display, Input/Output Voltage, Frequency, Load, Alarm, Programmable settings & UPS state icons		
Audible Alarms	DC Mode, Low Battery, Over/Under Voltage, Over/Under Frequency, High Temp., Overload, Fault Alarm		
Load Segment Control	Two programmable load segments, one continuous load segment (Except on -2 models)		
Remote Emergency Power Off	(Standard)	Meets NFPA 70, NEC 645-11 (REPO hardwire connections located on the UPS rear panel)	
Communications	USB Port, RS-232C Serial Port, Optional SNMP/HTTP Agent Board (UPS Bundled UPSilon Software)		
System Enclosure Mechanical			
Sample Dimensions inches (mm) HxWxD (PP70399 NEMA 3R Enclosure) Note: All sizes available-contact factory	36.0 x 25.0 x 34.0 (914.4 x 635 x 863.6) (Rear mounted external mounting brackets extend beyond stated dimensional height and are supplied with the system)		
Sample Weight lb. (kg) (PP70399 NEMA 3R Enclosure)	204 (92.5)	262 (118.8)	
Agency Approvals	UPS - UL 1778, UL 508, cUL, CE, FCC Class B NEMA 3R Enclosure - UL, cUL Listed		

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Extended VRLA Battery Bank Options				
Extended Battery Bank Model Numbers		SSGR	SSGR-1	SSGR-2
Battery Type		12-Year Rated, Maintenance-Free, Sealed VRLA Batteries, 12Vdc, 7AH		
Temperature Operational Storage		-20°C to 55°C (-4°F to 131°F) When operated in temperatures above 25°C the battery service life will be reduced -20°C to 55°C (-4°F to 131°F) Batteries stored at 50°C will require monthly recharging and have about a 1 year service life		
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 19 x 21.3 (88.9 x 482.6 x 541)		
Weight lb. (kg)		Extended Battery Module = 70.6 (32)		Extended Battery Module = 72.6 (32.9)
For mounting dimensions, contact factory.				
Extended VRLA Battery Runtimes				
(Note: Stated backup times are identical for SSGR, SSGR-1, SSGR-2 battery banks and are stated by UPS models below)				
UPS Model Numbers		SSG1.5KRM-1 SSG1.5KRM-2	SSG2.2KRM-1 SSG2.2KRM-2	SSG3KRM-1 SSG3KRM-2
Backup Time by Model Full/Half Load in Minutes		1050W / 525W	1540W / 770W	2100W / 1050W
UPS as Shipped		6 / 18	10 / 27	6 / 18.9
One Extended Battery Bank		23.7 / 60.5	20.6 / 52	13 / 34.4
Two Extended Battery Banks		48.6 / 118	36.3 / 90	23.8 / 60.6
Three Extended Battery Banks		76.9 / 178	54 / 128.3	35.5 / 88.9
Four Extended Battery Banks		106 / 241	73 / 170	48.5 / 118.1
Note: Backup time may vary depending on temperature, battery age and condition. 5U height, 40Ah battery bank/charger option supports long backup requirements.				
Lithium-ion Battery option available on SSG1.5KRM-1 and -2. Contact factory.				
Communications Options				
Internal COM Board Model Numbers		UA88376-SSG	UA88376-SSG-HW	SNMP-SG-4 SNMP-MEGA-INT
Type		Dry Relay Signal Interface		Ultra Secure SNMP/HTTP Secure SNMP/HTTP
COM Interface		DB-9F	Hardwire Terminal Block	10/100 Ethernet (RJ45)
Communications Specifications		Dry contact for: Utility Loss, Low Battery, Summary Alarm & On Bypass, Remote Shutdown while on Battery		Internet-based remote UPS monitoring and management via SNMP/HTTP
External COM Board Model Numbers				SNMP-SG-5 SNMP-MEGA-EXT
Type				Ultra Secure SNMP/HTTP Secure SNMP/HTTP
COM Interface				10/100 Ethernet (RJ45)
Communications Specifications				Internet-based remote UPS monitoring and management via SNMP/HTTP
External Maintenance Bypass Switch Option*				
Bypass Switch Model Numbers		MB2K-1, MB2K-2		MB3K-1, MB3K-2
Model Selection		MB2K-1 used with SSG1.5KRM-1 MB2K-2 used with SSG1.5KRM-2		MB3K-1 used with SSG2.2KRM-1 MB3K-2 used with SSG2.2KRM-2 MB3K-1 used with SSG3KRM-1 MB3K-2 used with SSG3KRM-2
Nominal Input/Output Voltage		-1, 120Vac and -2, 208Vac to 240Vac		
VA Rating		2000	3000	3000
Switch Type		Make-Before-Break		
Utility Input and Load Output Connection		Hardwire		
UPS Input Connection		Hardwire		
UPS Output Connection		Hardwire		
Dimensions H x W x D inches (mm)		9.9 x 12.6 x 5.3 (251.5 x 320 x 134.6)		
Weight lb. (kg)		11 lbs. (5 kg)		
Agency Approvals		UPS - UL 1778, UL 508, cUL, CE, FCC Class B NEMA 3R Enclosure - UL, cUL Listed		
*Installation of Maintenance Bypass Switch requires the installation of one UA88376-SSG contact interface card inside the UPS communications card slot.				



Quick Facts: Falcon's SSG Industrial Wide-temperature UPS Family

- 1. Industrial On-line UPS**– Ruggedly designed for harsh environments. All plastics, batteries and electronics are rated to operate in extreme temperatures.
- 2. Wide-temperature Range**– **Agency Certified:** UL 1778, UL 508, cUL and CE approved to operate from -20°C to 55°C (-4°F to 131°F).
Many UPSs are rated from 0°C to 40°C, or are not agency certified at the wide-temperature range listed in their specs; they offer no guarantee to operate reliably in harsh environments.
- 3. NEMA-Rated Enclosures and Many Other Options**– **Ready-to-install** indoor/outdoor UPS systems – one of the only UPSs with all agency certifications. Other options: conformal coating of internal boards, powder coating of enclosures and more.
- 4. Batteries that Reduce Servicing, Downtime and Costs**– 12-year rated batteries with a **4-year life at 50°C**. In industrial environments, other UPSs typically require battery replacements every 1 to 2 years.

Extended Battery Runtimes– Add minutes, hours or days of backup time.
- 5. True On-line UPS Design**– Many UPSs are office-grade, including line-interactive UPS designs that are mislabeled as “industrial on-line.” These are not reliable to use in industrial settings. Falcon has a 25-year field-proven track record as a leader in on-line UPS design.

