



Outdoor UPS Systems

with SSG Industrial Wide-temp UPS, 1.5 to 3kVA



Key Advantages:

- **Ready-to-install**

Falcon's SSG pre-configured NEMA 3R-rated UPS systems provide the ideal solution for outdoor and indoor use. The UPS enclosures are available in various sizes.

- **-20°C to 55°C temperature range**

The SSG UPS is **agency-certified** (UL, cUL, CE) to operate reliably in demanding environments. All 120V UPS models are also UL 508 listed.

- **High-reliability: true on-line, industrial UPS**

Tested and designed with robust components and materials, the SSG assures reliable operation and a long service life in stressful environments. It is a true on-line industrial UPS.

- **12-year rated batteries cut service costs**

The long-life batteries cut frequent battery replacements and maintenance costs. They have a 12-year life at 25°C and **4 years** at 50°C.

- **Extended battery banks & other options**

The battery banks are easily expandable to provide minutes to hours of extra battery runtime. Other options include: environmental protection, remote UPS management, environment sensors, relay cards – and much more.

- **Falcon – recognized for quality and reliability**

Falcon Electric is a recognized authority in industrial UPS solutions. Our technical expertise assures you find the right solution – the first time.

Outdoor UPS Systems with SSG Industrial UPS 1.5kVA to 3kVA

Model	SSG Outdoor UPS System 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		
Battery Runtimes (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		
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) 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 a reduced service life.	
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 Note: Various sizes available-contact factory	41.0 x 24.0 x 12.0 (1041 x 610 x 305) (Rear mounted external mounting brackets extend beyond stated dimensional height and are supplied with the system)		
Sample Weight lb. (kg)	265 (120)	313 (142)	
Agency Approvals	-1 Models: UL 1778, UL 508, cUL, FCC Class B; -2 Models: CE, UL 1778, cUL; NEMA 3R Enclosure - UL, cUL Listed		

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Extended Battery Bank Options - VRLA			
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 a reduced 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 Battery Runtimes - VRLA			
(Note: Stated battery runtimes 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
Battery Runtimes by Model	1050W / 525W	1540W / 770W	2100W / 1050W
Full/Half Load in Minutes			
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: Battery runtimes may vary depending on temperature, battery age and condition. To extend battery runtime for many hours, 40Ah battery bank/charger option is available (5U height). See datasheet.			
Lithium Iron Phosphate (LiFePO₄) Battery option also available. See datasheet.			
Communications Options			
Internal COM Board Model Numbers	UA88376-SSG	UA88376-SSG-HW	SNMP-SG-4
Type	Dry Relay Signal Interface		Ultra 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
Type			Ultra 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	Pre-Configured		
UPS Output Connection	Pre-Configured		
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	UL 1778, cUL		
*Installation of Maintenance Bypass Switch requires the installation of one UA88376-SSG contact interface card inside the UPS communications card slot.			

