



# SSG Industrial Wide-temperature UPS

## 6kVA, 230Vac Rackmount



### Superior Protection for a Wide Range of Applications

Harsh industrial environments demand an on-line industrial UPS. Falcon's on-line industrial SSG<sup>®</sup> UPS is specifically designed with high-grade components, plastics and batteries to provide superior protection in stressful environments. The SSG delivers continuous, clean power required by sensitive microprocessor-based equipment, SCADA, PLCs, VFDs and networks.

### Industrial Wide-temperature UPS Operates from -20°C to 55°C (-4°F to 131°F)

The SSG is one of the only UL 1778, UL 508, cUL and CE approved UPSs to operate from -20°C to 55°C, far beyond the limited 0°C to 40°C temperature range of office-grade UPSs. In addition, unlike standby and line-interactive designs, Falcon's on-line UPS acts as an electronic firewall between the incoming "dirty" power source and your sensitive equipment. Its double-conversion, on-line design regenerates continuous, clean, tightly regulated power regardless of the incoming power anomalies.

### 12-Year Rated Batteries Reduce Servicing

Batteries are the lifeblood of all UPSs. All SSG models are equipped with 12-year rated batteries when installed in an ambient 25°C (77°F) environment and offer a 4-year battery life in a 50°C (122°F) location. In contrast, most UPSs typically need batteries replaced every 1 to 2 years in high temperature environments. The SSG's batteries reduce costly battery replacements, servicing and downtime.

When battery replacement is required, simply slide out the user-replaceable, hot-swappable battery pack and replace with a new one. Replacement is accomplished while the UPS continues to power the critical load and without having to remove the UPS from the equipment rack.

### RS-232, USB & SNMP/HTTP UPS Management

With the supplied UPSilon<sup>®</sup> software, all models support unattended shutdown, UPS management, data logging and a power diagnostic tool. The software supports Windows<sup>®</sup> and other major platforms. For UNIX users, UPSilon is available as an option. Falcon also offers an optional SNMP/HTTP agent board.

### Many Options:

- Ready-to-install NEMA 3R and 4 rated enclosures
- Galvanic isolation transformer lowers common mode noise and eliminates ground loops
- 50 Hz or 60 Hz frequency converter is factory-configurable
- Conformal coating of circuit boards
- Many other options to meet application requirements

### Features & Benefits:

- \* **Certified UPS:** UL 1778, UL 508, cUL and CE approved from -20°C to 55°C (-4°F to 131°F)
  - Avoids product safety and liability risks
- \* **On-line industrial UPS design**
  - Prevents costly failures ensuring the highest level of uptime
- \* **Tested and designed with robust components and plastics**
  - Assures reliable operation in stressful environments
- \* **Hot-swap, 12-year rated batteries**
  - Reduces battery replacements and costs
- \* **External battery banks & 40Ah battery bank**
  - Hours of battery backup time
- \* **Remote Emergency Power Off**
  - REPO interface is NFPA-70, NEC 645-11 compliant

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# SSG Industrial Wide-temp UPS

6kVA

Model Number		SSG6KRM-2
Nominal VA		6000
<b>Electrical Input</b>		
Nominal AC Voltage		208-240Vac
AC Voltage Range		176-276Vac
Frequency		50/60 Hz $\pm$ 5% Auto Tracking (45-65Hz)
Power Factor Correction		>0.97 (at full load)
Surge Suppression		IEEE/ANSI C62.41
Efficiency (Typ.)		88%
<b>Electrical Output</b>		
Watts		4200
AC Voltage (User Programmable)		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%
Overload		110% for 40 seconds, 125% for 18 seconds, 150% immediate
Crest Ratio		3:1
<b>Battery</b>		
DC Bus Voltage (nominal)		192Vdc
Battery Pack Type		User-Replaceable, Hot-Swappable Pack, Separate Enclosure from UPS Module
Battery Type		12-Year Rated, Maintenance-Free, Sealed VRLA Batteries, 12Vdc, 7AH
Backup Time Full/Half Load in Minutes		5 / 10
Recharge Time		4 Hours to 90%
<b>Transfer Time</b>		
Line Fails/Recovers		Zero
UPS to Bypass or Reverse		< 4ms
After Overload		Auto Transfer to UPS
With Frequency Converter Option		Bypass Disabled
<b>Electrical Connections</b>		
Input		Hardwire
Output		Hardwire
<b>Environmental</b>		
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
Audible Noise (@ 1 Meter)		<50dBA
Heat Dissipation BTU/Hour		2457
<b>Controls &amp; Indicators</b>		
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
Remote Emergency Power Off		Meets NFPA 70, NEC 645-11 (REPO connections located on the UPS rear panel)
Communications		RS-232C Serial Port, Optional SNMP/HTTP Agent Board (UPS Bundled UPSilon Software)
<b>Mechanical - For mounting dimensions, contact factory.</b>		
UPS Dimensions H x W x D inches (mm)		7 x 19 x 21.8 (177.8 x 482.6 x 553.7)
SSGR Battery Module (each)		3.5 x 19 x 21.3 (88.9 x 482.6 x 541)
Weight lb. (kg)		(4U) UPS Module = 62.5 (28.3)
12-Year VRLA Batteries		2 Each (2U) External Battery Module = 70.6 (32) Total System Weight = 203.7 (92.4)
<b>Agency Approvals</b>		UL 1778, UL 508, cUL, CE, FCC Class B

SSG UPS Options				
Extended VRLA Battery Bank Options				
Battery Bank Model Numbers	SSGR	SSGR-2	SSGB-1S40-5U-2	
Battery Type	12-Year Rated, Maintenance-Free, Sealed VRLA, 12V, 7Ah Battery		Deep Cycle, Sealed VRLA, 12V, 40Ah	
Temperature	-20°C to 55°C (-4°F to 131°F)			
Internal Charger	No	Yes		
Charger Input & Current	N/A	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)		(5U) 8.72 x 19 x 28 (222.3 x 482.6 x 711.2)	
Weight lb. (kg)	70.6 (32)	72.6 (32.9)	270 (122.5)	
<b>Note: When operated in temperatures above 25°C the battery life will be reduced. Batteries stored at 50°C will require monthly recharging and have a shortened service life.</b>				
Extended VRLA Battery Runtimes				
Battery Bank Model Numbers	SSGR or SSGR-2		SSGB-1S40-5U-2	
Full/Half Load in Minutes	4200W / 2100W		4200W / 2100W	
UPS as Shipped	5 / 10		60 / 152	
One Extended Battery Bank Pair	14 / 34.5		152 / 333	
Two Extended Battery Bank Pairs	23 / 62.5		240 / 509	
Three Extended Battery Bank Pairs	34 / 95.5		332 / 705	
Four Extended Battery Bank Pairs	46 / 128.5		418 / 894	
Five Extended Battery Bank Pairs	62 / 166.5		508 / 1083	
<b>Note: Backup time may vary depending on temperature, battery age and condition.</b>				
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	
UPS Transformer Module				
Model Number	XM6KRM-2/2			
Nominal VA	6000			
Electrical Input				
Nominal AC Voltage & Frequency	208Vac or 240Vac; 50/60 Hz ± 5%			
Electrical Output				
Watts	4200			
AC Voltages & Frequency	User-configurable 208-240Vac or 240/120Vac Split-phase (Default); 50/60 Hz			
Electrical Connections				
Input & Output	Hardwire			
Environmental				
Temperature Operational & Storage	-20°C to 55°C (-4°F to 131°F)			
Humidity & Altitude	10% to 95% Non-condensing; 10,000 Feet (3,000 meters) without derating			
Integral Maintenance Bypass				
Bypass Type / Control	Make-Before-Break / Manual Knob			
Mechanical				
Dimensions H x W x D inches (mm)	(4U) 7 x 19 x 22.1 (177.8 x 482.6 x 561.3)			
Weight lb. (kg)	118 (53.5 kg)			
Agency Approvals	UL 1778, UL 508, cUL, CE, FCC Class B			

Typical SSG6KRM-2 Rear Panel Configuration



# 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.

