



# SSG Series Industrial UPS

## 1.5kVA to 3kVA, 120/230Vac Tower



### Superior Protection for a Wide Range of Applications

Harsh industrial environments demand an on-line industrial UPS. Falcon's on-line industrial SSG® 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.

### On-line Industrial 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 (-4°F to 131°F) far beyond the limited 0°C to 40°C temperature range of office grade on-line UPSs. In addition, unlike off-line 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.

### 10-Year Rated Batteries Reduce Servicing

Batteries are the life blood of all UPSs. All SSG models are equipped with 10-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.

### Optional Frequency Converter

The SSG UPS is easily programmed for use as a 50Hz or 60Hz frequency converter, making it the ideal choice for worldwide power applications.

### 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 Windows® and other major platforms. For UNIX users, UPSilon is available as an option. Falcon also offers an optional SNMP/HTTP agent board.

### Remote Emergency Power Off (REPO)

The SSG is equipped with an NFPA-70, NEC 645-11 compliant REPO interface assuring code compliant integration. If REPO is not required, remote output receptacle control is a factory configurable option. This allows outlets to be remotely controlled using a wired connection with a remote switch.

### 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, 10-year rated batteries**
  - *Reduces battery replacements and costs*
- \* **External Battery Banks**
  - *Hours of battery backup time*
- \* **Unique optional SNMP Agent**
  - *Unlimited shutdown client license*

**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](mailto:sales@FalconUPS.com)  
[www.FalconUPS.com](http://www.FalconUPS.com)

# SSG Series Industrial UPS Tower

1.5kVA to 3kVA

Tower Model Number	SSG1.5K-1T SSG1.5K-2T	SSG2.2K-1T SSG2.2K-2T	SSG3K-1T SSG3K-2T
Nominal VA	1500	2200	3000
Electrical Input			
Nominal AC Voltage	-1 Models 120Vac, -2 Models 208, 220, 230, 240Vac		
AC Voltage Range	-1 Models 80-138Vac, -2 Models 160-276Vac		
Frequency	50/60 Hz ± 5% (Auto Tracking)		
Power Factor Correction	> 0.97 (at full load)		
Surge Suppression	IEEE/ANSI C62.41		
Efficiency (Typ.)	> 87%		
Electrical Output			
Watts	1050	1540	2100
AC Voltage (User Programmable)	-1 Models = 100, 110, 115 or 120Vac (sinewave), -2 Models = 208, 220, 230 or 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 10 Seconds		
Crest Ratio	3:1		
Battery			
DC Bus Voltage (nominal)	48Vdc	96Vdc	
Battery Pack Type	User-Replaceable, Hot-Swappable (Batteries are replaceable through the front panel)		
Battery Type	10-Year Rated, Maintenance-Free, Sealed VRLA Batteries, 12vdc,7AH		
Back Up Time Full/Half Load in Minutes	6 / 18	10 / 27	6 / 18
Recharge Time	8 Hours to 90%		
Transfer Time			
Line Fails/Recovers	Zero		
UPS to Bypass or Reverse	< 4ms		
After Overload	Auto Transfer to UPS		
With Frequency Converter Option	Bypass Disabled		
Electrical Connections			
Input	-1 Models = 6' Cord with 5-15P Plug -2 Models = 6' Cord with Schuko Plug	-1 Models = 6' Cord with 5-20P Plug -2 Models = 6' Cord with Schuko Plug	-1 Models = 6' Cord with L5-30P Plug -2 Models = 6' Cord with Schuko Plug
Output	(8) 5-15R (4) IEC320 C13 Outlets	(4) 5-15R & (1) Duplex 5-20R (4) IEC320 C13 Outlets	(4) 5-15R & (1) 5-20R & (1) L5-30R (4) IEC320 C13 Outlets
Environmental			
Temperature	Operational	-20°C to 55°C (-4°F to 131°F) At temperatures above 25°C battery life will be reduced	
	Storage	-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 (3000 meters) without derating	
Cooling		Low Velocity Forced Air Fan	
Heat Dissipation	BTU/Hour	535	784
Audible Noise (@ 1 Meter)		<50dBA	
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., Over Load, Fault Alarm		
Load Segment Control	Two programmable load segments, one continuous load segment (typical)		
Remote Emergency Power Off (or) Remote Output Receptacle Control	(Standard) Meets NFPA 70, NEC 645-11 (REPO connections located on the UPS rear panel) (Optional) 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			
UPS Dimensions HxWxD	inches (mm)	11.1 x 7.6 x 18 (280 x 197 x 457)	14 x 10 x 19.2 (354 x 253 x 487)
Weight	lbs. (kg)	UPS & Internal VRLA Batts - 55.2 (25)	UPS & Internal VRLA Batts - 92.6 (42)
Agency Approvals	UL 1778, UL 508, cUL, CE, FCC Class B		

# SSG Series Industrial UPS Tower

# 1.5kVA to 3kVA

SSG UPS Options				
Extended VRLA Battery Bank Options				
Extended Battery Bank Model Numbers		SSGB	SSGB-1	SSGB-2
Battery Type		10-Year Rated, Maintenance-Free, Sealed VRLA Batteries, 12Vdc, 7AH		
Temperature	Operational Storage	-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) -20°C to 55°C (-4°F to 131°F) (When operated in temperatures above 25°C the battery service life will be reduced)		
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)	14 x 10 x 19.2 (354 x 253 x 487)		
Weight	lb. (kg)	Extended Battery Module = 114 (51.7)	Extended Battery Module = 116 (52.7)	
Extended VRLA Battery Runtimes				
(Note: Stated backup times are identical for SSGB, SSGB-1, SSGB-2 battery banks and are stated by UPS models below)				
UPS Model Numbers		SSG1.5K-1T SSG1.5K-2T	SSG2.2K-1T SSG2.2K-2T	SSG3K-1T SSG3K-2T
Back Up Time by Model Full/Half Load in Minutes		1050W / 525W	1540W / 770W	2100W / 1050W
	UPS as Shipped	6 / 18	10 / 27	6 / 18
	One Extended Battery Bank	49 / 120	36 / 90	24 / 62
	Two Extended Battery Banks	105 / 260	71 / 170	48 / 120
Note: Back up time may vary depending on temperature, battery age and condition.				
Communications Options				
Internal COM Board Model Numbers	UA88376-SSG	UA88376-SSG-HW	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	Hardware Terminal Block	10/100 Ethernet (RJ45)	10/100 Ethernet (RJ45)
Communications Specifications	Dry contact for: Utility Loss, Low Battery, Summary Alarm & On Bypass, Remote Shutdown while on Battery		10/100 Ethernet (RJ45)	
External COM Board Model Numbers			SNMP-SG-5	SNMP-MEGA-EXT
Type			External Ultra Secure SNMP/HTTP	
COM Interface			10/100 Ethernet (RJ45)	
Communications Specifications			See SNMP/HTTP datasheets	
External Maintenance Bypass Switch Option*				
Bypass Switch Model Number	MB2K-1, MB2K-2		MB3K-1, MB3K-2	
Model Selection	MB2K-1 used with SSG1.5K-1T MB2K-2 used with SSG1.5K-2T		MB3K-1 used with SSG2.2K-1T MB3K-2 used with SSG2.2K-2T	MB3K-1 used with SSG3K-1T MB3K-2 used with SSG3K-2T
Nominal Input/Output Voltage	-1, 120Vac -2, 208Vac to 240Vac			
VA Rating	2000		3000	3000
Switch Type	Make-Before-Break			
Utility Input and Load Output Connection	Hardwire			
UPS Input Connection	-1, 5-15R/20R Combo -2, 6-15R/20R Combo		-1, 5-20R -2, L6-20R	-1, L5-30R -2, L6-30R
UPS Output Connection	-1, 6' Line Cord with 5-15P -2, 6' Line Cord with IEC320 C14		-1, 6' Line Cord with L5-20P -2, 6' Line Cord with IEC320 C14	-1, 6' Line Cord with L5-30P -2, 6' Line Cord with IEC320 C14
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 Approvals		UL 1778, UL 508, cUL, CE, FCC Class B		
*Note: Installation of MBS requires the installation of one US88376-SSG contact interface card inside the UPS communications card slot				

Typical Rear Panel Configuration



©2015 Falcon® Electric, Inc. All rights reserved. Falcon® and the Falcon Electric logo are registered trademarks of Falcon Electric, Inc. All other brand names and trademarks are the property of their respective owners. The information and specifications stated in this document are subject to change without notice. 8-2015



Falcon Electric, Inc. - 5116 Azusa Canyon Rd. - Irwindale, CA 91706 - 800-842-6940 Fax 626-962-6850

[www.FalconUPS.com](http://www.FalconUPS.com) - email: [sales@FalconUPS.com](mailto:sales@FalconUPS.com)

## Quick Facts: Falcon's SSG Industrial UPS Family

1. **Industrial Online 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, UL508, cUL and CE approved to operate from -20°C to 55°C (-4°F to 131°F) and -30°C to 65°C (-22°F to 149°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. Also, conformal coating of internal boards, powder coating of enclosures and more.
4. **Batteries that Reduce Servicing, Downtime and Costs** - 10-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 Online Sinewave Design** - Many UPSs are office-grade, including line-interactive UPS designs that are mislabeled as “industrial online.” These are not reliable to use in industrial settings. Falcon has a 25-year field-proven track record as a leader in online UPS design.

