



SSG Industrial Wide-temperature 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.

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, (-4°F to 131°F) far beyond the limited 0°C to 40°C temperature range of office-grade 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.

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.

Optional Frequency Converter

The SSG UPS is factory-configurable 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, 12-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
www.FalconUPS.com

SSG Industrial Wide-temp 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.)		88%		
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		± 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		110% for 40 seconds, 125% for 18 seconds, 150% immediate		
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		12-Year Rated, Maintenance-Free, Sealed VRLA Batteries, 12Vdc, 7AH		
Backup Time Full/Half Load in Minutes		6 / 18	10 / 27	6 / 18.9
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	6' Cord with 5-15P Plug	6' Cord with 5-20P Plug	6' Cord with L5-30P Plug
	-2	6' Cord with Schuko Plug	6' Cord with Schuko Plug	6' Cord with Schuko Plug
Output	-1	(8) 5-15R	(4) 5-15R & (1) Duplex 5-20R	(4) 5-15R & (1) 5-20R & (1) L5-30R
	-2	(4) IEC320 C13 Outlets	(6) IEC320 C13 Outlets	(6) IEC320 C13 Outlets
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		
Heat Dissipation	BTU/Hour	535	784	1071
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., Overload, Fault Alarm		
Load Segment Control		Includes programmable and/or continuous load segment(s); varies by model.		
Remote Emergency Power Off (or)		(Standard) Meets NFPA 70, NEC 645-11 (REPO connections located on the UPS rear panel)		
Remote Output Receptacle Control		(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 H x W x D inches (mm)		11.1 x 7.6 x 18 (281.9 x 193 x 457.2)	14 x 10 x 19.2 (355.6 x 254 x 488)	
Weight lb. (kg)		UPS & Internal VRLA Batts - 55.2 (25)	UPS & Internal VRLA Batts - 92.6 (42)	UPS & Internal VRLA Batts - 92.6 (42)
Agency Approvals		UL 1778, UL 508, cUL, CE, FCC Class B		

S&S UPS Options				
Extended VRLA Battery Bank Options				
Extended Battery Bank Model Numbers	SSGB		SSGB-1	SSGB-2
Battery Type	12-Year Rated, Maintenance-Free, Sealed VRLA Batteries, 12Vdc, 7AH			
Temperature	Operational	-20°C to 55°C (-4°F to 131°F) When operated in temperatures above 25°C the battery service life will be reduced		
	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		
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 (355.6 x 254 x 488)		
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
Backup Time 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	48.7 / 118		36.3 / 90	23.8 / 60.6
Two Extended Battery Banks	106 / 241		73 / 170	48.5 / 118.1
Note: Backup 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	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 SSG1.5K-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	L5-20R	L5-30R
	-2	6-15R/20R Combo	L6-20R	L6-30R
UPS Output Connection	-1	6' Line Cord with 5-15P	6' Line Cord with L5-20P	6' Line Cord with L5-30P
	-2	6' Line Cord with IEC320 C14	6' Line Cord with IEC320 C14	6' Line Cord with IEC320 C14
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, UL 508, cUL, CE, FCC Class B			
*Note: Installation of MBS requires the installation of one UA88376-SSG contact interface card inside the UPS communications card slot.				

Typical 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.

