

S4K4U 6 kVA and S4K6U 10 kVA Industrial On-Line UPS

The S4K4U6000 and the S4K6U10000 Industrial UPS Series are the first true On-Line industrial UPS that provide flexible output voltage, an integrated maintenance bypass switch and internal batteries all in slim 4U (7.0") and 6U (10.5") enclosures respectively.

The S4K4U and S4K6U features true On-Line (double conversion) topology providing the ultimate in protection against a wide range of potential power problems. The S4K4U design of two 3 kVA, 120V inverters allow flexible output voltage to meet mixed load voltage requirements. The UPS automatically configures the output voltage to match the input configuration without requiring tap selections. Self diagnostics simplify maintenance and troubleshooting, and the UPS can be serviced by the end-user. The standard maintenance bypass switch provides an additional level of protection.

The S4K4U and S4K6U also feature a wide input voltage window to support the critical load without having to transfer to the battery. This extends system availability when back-up is truly needed.

Features

- True double conversion topology
- Both models offer 208/120V or 240/120V
- Configurable as a Tower or Rack mounting
- Highest density, 6 kVA in only 4U and 10 kVA in only 6U of rack space
- Easily installed in 18" to 32" deep rack using rack mount kit # SRS1832
- User replaceable, hot-swappable internal battery module
- Extended Battery Cabinets
- Includes both automatic and manual maintenance bypass switch
- Automatic frequency detection (60 or 50 Hz)
- Power Factor Correction
- Self-Diagnostics simplify maintenance and troubleshooting
- Remote Emergency Power Off (REPO)
- Intellislot™ Communication port
- Built in Serial Communications and Closure Signals
- Compatible with most standby generators
- Two year Limited warranty



Applications

- Industrial Computers
- Robotics and Process Controls
- Industrial Automation Systems
- Network Servers
- Enterprise Telecommunication Systems
- Printing and Publishing Machinery
- Industrial and Commercial Machinery
- Pharmaceutical and Medical Diagnosis Equipment
- Micro-processor Controlled Equipment
- Mission Critical Devices

Related Products

- Portable MCR Power Conditioners
- Surge Protective Devices
- Active Tracking® Filters

S4K4U 6 kVA and S4K6U 10 kVA Models Specifications

Catalog Number	S4K4U6000	S4K6U10000
Model Rating	4200W/6000 VA at 120/240 (180° only - phase angle)	8000W/8660 VA at 120/208 (120 or 240° only)
	4200W/5200 VA at 127/220 (120 or 240° only - phase angle) *	8000W/10000 VA at 120/240 (180° only)*
	4200W/5200 VA at 120/208 (120 or 240° only - phase angle)	8000W/8660 VA at 127/220 (120 or 240° only)
	4200W/6000 VA at 115/230 (180° only - phase angle) *	8000W/10000 VA at 115/230 (180° only)*
	3780W/5400 VA at 110/220 (180° only - phase angle) *	7200W/9000 VA at 110/220 (180° only)*
	3360W/4800 VA at 100/200 (180° only - phase angle) *	6400W/8000 VA at 100/200 (180° only)*
Dimensions – inches (mm)		
Unit (H x W x D)	16.9 x 6.9 x 24.2 (430 x 176 x 615)	16.93 x 10.5 x 29 (430 x 267 x 737)
Shipping (H x W x D)	20.9 x 13.2 x 27.8 (530 x 335 x 705)	22.8 x 16.5 x 34.3 (580 x 420 x 870)
Approx. Shipping Weight – lbs (kg)	76.3 (34.6)	118 (53.6)
Input AC Parameters		
Nominal Operating Frequency	50 or 60 Hz (Factory Default = 60)	
Factory Default Vac	208 Vac at 120° phase angle (neutral required)	
L1–L2 Factory Default Input Phase Angle	120°	
Allowable Input Phase Angle	120, 180, 240°, Auto-sensing on application of AC (Restrictions for L-N voltages other than 120 Vac)	
Factory Default	L1-N, L2-N Vac 120 Vac nominal	
User Configurable L1–N, L2–N Vac	100/110/115/120/127 Vac (May be modified using configuration program)	
L1–N, L2–N, Operating Voltage Range Without Battery Operation (Except 100 Vac L–N Operation)		
100% – 90% loading	90 Vac - 140 Vac	
90% – 70% loading	80 Vac - 140 Vac	
70% – 30% loading	70 Vac - 140 Vac	
30% – 0% loading	60 Vac - 140 Vac	
L1–N, L2–N, Operating Voltage Range Without Battery Operation (100 Vac L–N Operation)		
100% – 70% loading	80 Vac - 140 Vac	
70% – 30% loading	70 Vac - 140 Vac	
30% – 0% loading	60 Vac - 140 Vac	
L1–N, L2–N Max. Allowable Vac	150 Vac	
Input Frequency w/o Battery Operation	40 - 70 Hz	
Input Power Connection	Hardwire Terminal Block 3W + G (L-L-N-G)	
Output AC Parameters		
Factory Default Vac	120/208 Vac @ 120° phase angle	
L1–L2 Factory Default Output Phase Angle	120°	
Allowable Output Phase Angle	120, 180, 240° Auto-sensing on initial application of input AC	
Factory Default L1–N, L2–N Vac	120 Vac nominal	
User Configurable L1–N, L2–N Vac	100/110/115/120/127 Vac, ±3%	
Output Connections	Hardwire Terminal Block 3W + G (L-L-N-G)	
Frequency	50 Hz or 60 Hz, Nominal	
Waveform	Sinewave	
Main Mode Overload	200% for 8 cycles; 130% for 10 seconds with transfer to bypass	

* Other voltage ratings.

S4K4U 6 kVA and S4K6U 10 kVA Models Specifications - continued

Catalog Number	S4K4U6000	S4K6U10000
Bypass Protection Limits		
Disable Bypass Operation	If input voltage exceeds ±15% of the nominal voltage	
Re-enable Bypass Operation	If input voltage returns to within ±10% of the nominal output voltage	
Disable Bypass Operation	When the input frequency prevents synchronous operation	
Environmental		
Operating Temperature	+32°F to +104°F (0°C to +40°C)	
Storage Temperature	+5°F to +122°F (-15°C to +50°C)	
Relative Humidity	0% to 95%, non-condensing	
Operating Elevation	Up to 10,000 ft. (3000m) at 104°F (40°C) without derating	
Storage Elevation	50,000 ft. (15,000 m) maximum	
Audible Noise	<55 dBA, at 1 meter from the rear; <50 dBA, at 1 meter from the front or sides	
Agency		
Safety	UL 1778, c-UL Listed (Suitable for computer room applications)	
Emissions	FCC Part 15, Subpart B, Class A	
Surge Immunity	IEEE/ANSI C62.41 Category A & B	
Transportation	ISTA Procedure 1A	

Internal Battery Specifications

Model Number	S4K144INTBAT	S4K288INTBAT (2 Required)
Used w/ UPS Model	S4K4U6000	S4K4U10000 AND S4K288BAT
Shipping (H x W x D) – in. (mm)	13.4 x 27.2 x 13.4 (340 x 690 x 340)	16.5 x 11.0 x 24.8 (420 x 280 x 630)
Unit Weight – lbs (kg)	79 (35.8)	78.1 (35.5)
Shipping Weight – lbs (kg)	84 (38.1)	83.6 (38)
Type	Valve-regulated, non- spillable, flame retardant, lead acid	
Quantity x V x Rating	12 x 12V x 9.0 AH	(2) x 12 x 12V x 9.0 AH
Back-Up Time	See Battery Back-up Times Charts	
Recharge Time	6 Hours to 90% capacity after full discharge into 100% load	

External Battery Specifications

Model Number	S4K144BAT	S4K288BAT
Used w/ UPS Model	S4K4U6000	S4K4U10000
Dimensions – inches (mm)		
Unit (with bezel) (H x W x D)	17 x 3.5 x 24.2 (430 x 87 x 618)	16.93 x 7.0 x 27 (430 x 178 x 686)
Shipping (H x W x D)	23 x 10.5 x 27.2 (585 x 268 x 692)	22.8 x 13.0 x 34.3 (580 x 330 x 870)
Weight – lbs (kg)		
Unit	93.6 (42.5)	41.6 (18.9)
Shipping	105 (47.6)	50.6 (23)
Battery Parameters		
Type	Valve-regulated, non-spillable, flame retardant, lead acid	
Qty x V x Rating	12 x 12V x 9.0 AH	(2) x 12 x 12V x 9.0 AH
Back–Up Time	See Back-up Times Chart	
Environmental		
Operating Temperature	+32°F to +104°F (0°C to +40°C)	
Storage Temperature	+5°F to +122°F (-15°C to +50°C)	
Relative Humidity	0% to 95%, non-condensing	
Operating Elevation	Up to 10,000 ft. (3000m) at 104°F (40°C) without derating	
Storage Elevation	50,000 ft. (15,000m) maximum	
Agency		
Safety	UL 1778, c-UL Listed (Suitable for computer room applications)	
Emissions	FCC Part 15, Subpart B, Class A	
Transportation	ISTA Procedure 1A	

S4K4U 6kVA and S4K6U 10 kVA Models Optional Output Distribution Specifications

Model Number	S4KPAD-001	S4KPAD-101	S4KPAD-102
Used w/ UPS Model	S4K4U6000	S4K6U10000	S4K6U10000
Amp Rating	24 Amps	40 Amps	40 Amps
Input Power Connections	L14-30P on 10 ft. cord	Internal Hardwired Connectors	
Output Power Connection			
L1–L2–G	(1) L6-30R on a 300 mm. cord	(2) L6-30R on a 300 mm. cord	(4) L6-20R on a 300 mm. cord
L1–L2–N–G	(1) L14-30R on a 300 mm. cord	N/A	N/A
L1–N–G	(2) 5-15/20R, T-type, receptacles with (2) 20A circuit breakers	(4) 5-15/20R, T-type, receptacles with (2) 20A circuit breakers	(2) 5-15/20R, T-type, receptacles with (1) 20A circuit breakers
L2–N–G	(2) 5-15/20R, T-type, receptacles with (2) 20A circuit breakers	(4) 5-15/20R, T-type, receptacles with (2) 20A circuit breakers	(2) 5-15/20R, T-type, receptacles with (1) 20A circuit breakers
Input Branch Circuit Breaker	30 Amp, Supplied by User	50 Amp, Supplied by User	50 Amp, Supplied by User
Shipping (H x W x D) – in. (mm)	17 x 3.5 x 24.2 (430 x 87 x 618)	17 x 3.5 x 24.2 (430 x 87 x 618)	10.43 x 7.87 x 8.85 (265 x 200 x 225)
Weight – lbs (kg)			
Unit	3.8 (1.7)	3.8 (1.7)	4.6 (2.1)
Shipping	5.1 (2.3)	5.1 (2.3)	6.0 (2.7)

S4K4U 6kVA and S4K6U 10 kVA Models Battery Back-up Times

Battery/ External Cabinets	Load %	6000VA Back-up Time in Minutes	10000VA Back-up Time in Minutes
Internal Battery	10%	75	107
	20%	38	52
	30%	25	31
	40%	18	22
	50%	14	16
	60%	11	13
	70%	9	10
	80%	7	9
	90%	6	7
	100%	5	6
Internal Battery + 1 External Battery Cabinet	10%	156	251
	20%	90	118
	30%	62	74
	40%	44	52
	50%	34	39
	60%	28	32
	70%	23	26
	80%	19	22
	90%	16	19
	100%	14	17
Internal Battery + 2 External Battery Cabinets	10%	235	333
	20%	137	216
	30%	99	118
	40%	74	85
	50%	58	66
	60%	47	53
	70%	39	44
	80%	33	38
	90%	28	32
	100%	25	28

Battery/ External Cabinets	Load %	6000VA Back-up Time in Minutes	10000VA Back-up Time in Minutes
Internal Battery + 3 External Battery Cabinets	10%	313	494
	20%	183	265
	30%	133	191
	40%	103	119
	50%	82	92
	60%	67	75
	70%	55	62
	80%	47	54
	90%	41	74
	100%	36	41
Internal Battery + 4 External Battery Cabinets	10%	391	590
	20%	229	295
	30%	166	236
	40%	129	178
	50%	105	119
	60%	87	98
	70%	73	82
	80%	63	71
	90%	54	61
	100%	47	54

Note:

Back-up times are at 25°C, 77°F, with 100% capacity batteries and resistive loads.