

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

The SolaHD S4K4U6000D and S4K6U10KD Industrial UPS Series are the first true On-Line industrial UPS that provides higher output power factor, higher efficiency, flexible output voltage, an integrated maintenance bypass switch and internal batteries all in slim 4U (7.0") and 6U (10.5") enclosures respectively.

The S4K4UD and S4K6UD features true On-Line (double conversion) topology providing the ultimate in protection against a wide range of potential power problems. The S4K4UD design of two 3 kVA, 120 V 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. The standard maintenance bypass switch provides an additional level of protection.

The S4K4UD and S4K6UD 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.

Applications

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

Features

- True double conversion topology
- Both models offer 208/120 V or 240/120 V
- Configurable as a tower or rack mounting
- User replaceable, hot-swappable internal battery module
- Enhanced Load Capacity with an output power factor of 1
- Input power factor greater than .99
- Operation and Display panel with model specific color LCD offers simple configuration and control of UPS
- ECO Mode and smart sleep mode help to save the maximum amount of energy
- Integrated Maintenance Bypass
- Automatic internal bypass
- External Battery Cabinets with auto-detection



- Battery Health Status and replacement date prediction
- Optimized Thermal Management and variable speed fan
- Energy Star 2.0 Certified
- Integrated Dry Contacts with selectable definition
- RDU101 Network communications card with advanced features
- Two Year Limited Warranty

Certifications and Compliances

-  Listed, UPS Equipment
 - UL 1778
 - CSA C22.2 No. 107.3
- IEEE/ANSI C62.41 Category B
- ISTA Procedure 1A
- ABS Type Approved

Related Products

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

S4K 6 and 10 kVA Specifications

Table 1: UPS Specifications

Parameters	Model Number	
	S4K4U6000D	S4K6U10KD
Rating	6,000W/6,000VA	10,000W/10,000VA
Dimensions - W x D x H, in. (mm)		
Unit	25.6x16.9x6.8 (650x430x173)	25.6x16.9x10.2 (650x430x261)
Shipping	25.2x35x29.1 (640x890x740)	25.2x35x38.6 (640x890x980)
Weight - lbs. (kg)		
Unit	125.6 (57)	224.8 (102)
Shipping	189.6 (86)	295.4 (134)
Input AC Parameters		
Nominal Operating Frequency	50 or 60 Hz (Factory default is 60 Hz)	
Factory Default Vac	120/208 Vac @ 120°	
L1–L2 Factory Default Input Phase Angle	120°C	
Allowable Input Phase Angle	120, 180, 240 degrees; auto-sensing on application of alternating current (Restrictions for L–N voltage other than 120 Vac)	
Factory Default L1–N, L2–N Vac	120 Vac nominal	
User Configurable L1–N, L2–N Vac	100/173V, 100/200V, 110/190.5, 110/220, 115/199, 115/230, 120/208, 120/240, 125/216.5, 125/250	
Input Frequency w/o Battery Operation	40–70 Hz	
Input Power Connection	Hardwire terminal block 3W + G (L1-L2-N-G)	
L1–N, L2–N Maximum Allowable Vac	150 Vac	
Output AC Parameters		
Factory Default Vac	120/208 Vac @ 120°C	
L1–L2 Factory Default Output Phase Angle	120°C	
Allowable Output Phase Angle	120, 180, 240 degrees; auto-sensing on initial application of input alternating current	
Factory Default L1–N, L2–N Vac	120 Vac nominal	
User Configurable L1–N, L2–N Vac	100/110/115/120/127 Vac, ±2%	
L1-N, L2-N Overload Rating		
105% to 125%	5 minute	
125% to 150%	60 seconds	
>150% (impact load)	minimum 200 ms	

S4K 6 and 10 kVA Specifications - continued

Table 2: UPS Specifications

Parameters	Model Number	
	S4K4U6000D	S4K6U10KD
Bypass Protection Limits		
Re-enable Bypass Operation	If input voltage returns to within ±10% of nominal output voltage	
Disable Bypass Operation	When the input frequency prevents synchronous operation	
Environmental Requirements		
Operating Temperature	0°C to +40°C	
Extended Operating Temperature (derated)	0°C to 50°C output derated by 1% per 1°C over 40°C	
Storage Temperature	-15°C to +50°C	
Relative Humidity	0% to 95%, non-condensing	
Operating Elevation	Up to 10,000 ft. (3,000 m) at 25°C	
Audible Noise	<55 dBA @ 3.2 ft. (1 m) rear; <50 dBA @ 3.2 ft. (1 m) front & sides	
Standards		
EMC	FCC Part 15, Subpart B, Class A, FCC Class A	

Table 3: Internal Battery Specifications

Parameters	Model Number	
	S4K144INTBATD	S4K288INTBATD
Used with UPS Models	S4K4U6000D	S4K6U10KD
Battery Parameters		
Type	Valve-regulated, non-spillable, lead acid	
Qty x V x Rating	12 x 12V x 9.0AH	24 x 12V x 9.0 AH
Back-up Time	See Table 7	
Recharge Time	5 hours to 90% capacity after full discharge into 100% load	
Environmental Requirements		
Operating Temperature °F (°C)	32°F to 104°F (0°C to +40°C)	
Extended Operating Temperature (derated), °F (°C)	32°F to 122°F (0°C to 50°C) output derated by 1% per 1°C above 40°C	
Storage Temperature °F (°C)	5°F to 122°F (-15°C to +50°C)	
Relative Humidity	0% to 95%, non-condensing	
Operating Elevation °F (°C)	Up to 10,000 ft. (3,000 m) at 77°F (25°C) without derating	

Table 4: External Battery Cabinet Specifications

Parameters	Model Number	
	S4K144BATD	S4K288BATD
Used with UPS Models	S4K4U6000D	S4K6U10KD
Dimensions - W x D x H, in. (mm)		
Unit (with bezel)	3.5 x 26.5 x 17.5 (85 x 650 x 430)	7.1 x 26.5 x 17.5 (180.34 x 673 x 444)
Shipping	25.7 x 35.5 x 19.8 (630 x 845 x 485)	25.7 x 35.5 x 23.2 (630 x 570 x 845)
Weight - lbs. (kg)		
Unit	81.6 (37)	189.6 (86)
Shipping	123.5 (56)	233.7 (106)
Battery Parameters		
Type	Valve-regulated, non-spillable, lead acid	
Qty x V x Rating	2 x 6 x 12 V x 9.0 Ah	2 x 12 x 12 V x 9.0 Ah
Battery Mfr./Part Number	CSB type UPS12460F2	
Back-up Time	See Table 6	
Environmental Requirements		
Operating Temperature	0°C to +40°C	
Storage Temperature	-15°C to +50°C	
Relative Humidity	0% to 95%, non-condensing	
Operating Elevation	Up to 10,000 ft. (3,000 m) at +40°C without derating	

Uninterruptible Power Supplies

Series
S4K4U-D 6 kVA
S4K6U-D 10 kVA

Table 5: Power Distribution Specifications for S4K4U6000D

Parameters	Model Number					
	S4KPAD2-001D	S4KPAD2-002D	S4KPAD2-003D	S4KPAD2-004D	S4KPAD2-005D	S4KPAD2-006D
Dimensions - W x D x H, in. (mm)						
Unit	5.20 x 15.50 x 3.50 (132.0 x 393.0 x 88.0)					
Shipping	9.50 x 20.70 x 9.10 (242.0 x 527.0 x 230.0)					
Weight - lbs. (kg)						
Unit	8.8 (4.00)	8.6 (3.90)	8.6 (3.90)	9.9 (4.50)	10.6 (4.80)	9.5 (4.30)
Shipping	11.0 (5.00)	10.8 (4.90)	10.8 (4.90)	12.1 (5.50)	12.8 (5.80)	11.7 (5.30)
Electrical Specifications						
Amp Rating	30 A 2-pole input breaker					
Input Power Connections	(1) L14-30R on a 300 mm cord					
Output Power Connections	(4) 5-20R (1) L14-30R (1) L6-30R	(2) 5-20R (2) L6-20R	(4) 5-20R (2) L6-30R	(4) L5-20R (2) L5-30R	(4) L5-20R (2) L6-30R	(4) L6-20R

Uninterruptible Power Supplies

Series
S4K4U-D 6 kVA
S4K6U-D 10 kVA

Table 6: S4K4U6000D Battery Run Time, 6 kVA Models

Load			Internal Battery Only	Number of External Battery Cabinets									
				1	2	3	4	5	6	7	8	9	10
%	VA	W	Minutes										
10	600	600	72.5	160	258.5	357.5	456.5	555	654	752.5	851.5	950.5	1049
20	1200	1200	33	77.5	122	172	224.5	277	329.5	382	434.5	487	539.5
30	1800	1800	19	49.5	80	110	142	178	213.5	249.5	285.5	321.5	357.5
40	2400	2400	13	35	58.5	81.5	104.5	128	154	181.5	209	236.5	263.5
50	3000	3000	9.5	25.5	44.5	63.5	82	100.5	119	138.5	160.5	182.5	204.5
60	3600	3600	7.5	20	35.5	51	66.5	82	98	113.5	129	146.5	165
70	4200	4200	6	16	28.5	42	56	69	82.5	96	109	122.5	136.5
80	4800	4800	4.5	13.5	24	35.5	47.5	59.5	71	82.5	94.5	106	118
90	5400	5400	4	11.5	20	30.5	41	51.5	62	72.5	83	93.5	104
100	6000	6000	3.5	9.5	17.5	26	35.5	45.5	55	64.5	73.5	83	92.5

Table 7: S4K6U10KD Battery Run Time, 10 kVA Models

Load			Internal Battery Only	Number of External Battery Cabinets									
				1	2	3	4	5	6	7	8	9	10
%	VA	W	Minutes										
10	1000	1000	94	211	335.5	460	584.5	708.5	833	957.5	1082	1206	1330.5
20	2000	2000	44	99	157.5	222.5	288	353	418	483	548	613.5	678.5
30	3000	3000	25.5	63.5	100.5	138.5	182.5	226.5	270.5	314.5	358.5	402.5	446.5
40	4000	4000	17	45	73	101	129	161.5	195	228	261	294.5	327.5
50	5000	5000	12.5	33.5	56.5	79	101.5	124	149	175.5	202.5	229	255.5
60	6000	6000	9.5	26	45.5	64.5	83	102	121	140.5	163	185.5	207.5
70	7000	7000	7.5	21	37	54	70	86	102	118.5	135	154	173
80	8000	8000	6.5	17.5	31	45.5	60	74	88	102.5	116.5	131	147
90	9000	9000	5.5	15	26.5	39.5	52	65	77.5	90	102.5	115.5	128
100	10000	10000	4.5	13	23	34.5	46	57.5	69	80.5	91.5	103	114.5

The factory default is programmed for internal batteries only. Table 7 shows the estimated battery back-up times at different loads. The user may specify the number of external battery cabinets attached to the UPS.

Note: Run times in this table are approximate. They are based upon new, fully charged standard battery modules at a temperature of 25°C (77°F) with 100% resistive UPS loading. Run times listed above can vary by +/-5% due to manufacturing variances of the individual batteries

Availability, design and specifications are subject to change without notice.
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