

### S4K2U-C and S4K2U-5C Industrial On-Line UPS

The new SolaHD S4KC is a single-phase, on-line (double-conversion) UPS system available in 500-3000VA, 120V and 230V. On-Line design means zero transfer time from external to internal power. When utility power fails, your critical load remains supported by a seamless flow of power. Rack or tower configurable, the SolaHD S4KC UPS offers customers a higher power factor, longer battery life, higher reliability and reduced cost of ownership. Housed in a slim 2U package, the SolaHD S4KC protects equipment from virtually all power disturbances due to blackouts, brownouts, sags, surges or noise interference. The UPS includes internal batteries. Optional, matching external battery cabinets, also in a slim 2U (3.5") size, offer extended battery runtime.

The LED display indicates battery capacity, percentage of UPS load, battery operation, bypass operation and UPS fault condition.

The rack-tower models are also supplied with securing flanges and rack slide mounting hardware. Units can be easily hardwired by removing the attached line cord and receptacle plate. All units include a conduit knockout cover in the box.

#### Features

- Hardwire capability for permanent installation
- Small 2U height maximizes available space
- Input and output noise suppression
- Higher Output Power Factor of 0.90
- PWM inverter reduces output voltage distortion
- Add on batteries for extended back-ups
- Integral sealed non-spillable batteries
- Hot swappable user replaceable battery
- Automatic restart
- Automatic and manual battery test
- Rack-mount or Stand-alone tower mounting
- Units are field configurable with a PC as a frequency converter (bypass will be disabled)
- Integral dynamic bypass reduces shutdowns
- Compatible with most standby generators
- Two-year limited warranty

#### Note:



The securing flanges do not support the weight of the UPS. Rack slides or shelves are required (sold separately).



#### Applications

- Industrial Automation Systems
- Critical Microprocessors and PC Based Systems
- Robotics and Process Control
- Programmable Logic Controllers (PLC)
- Mission Critical and High Speed Networks
- Enterprise Telecommunication Systems
- Pharmaceutical and Medical Diagnosis Equipment
- Printing and Publishing Machinery

Selection Table - S4K2U-C & S4K2U-5C Tower/Rack-Mount Models

Capacity (VA/W)	Catalog Number	Typical Back-up Times (minutes)*	Input Plug/Output Receptacle	Approx. Ship Weight – lbs (kg)
<b>120 Vac, 50/60 Hz Models</b>				
700/630	S4K2U700-C	6/14	5-15P / (6) 5-15R	52.9 (24)
1000/900	S4K2U1000-C	5/15	5-15P / (6) 5-15R	
1500/1350	S4K2U1500-C	5/16	5-15P / (6) 5-15R	57.3 (26)
2000/1800	S4K2U2000-C	4/11	5-20P / (6)5-20R (15/20 amp type)	61.7 (28)
3000/2700	S4K2U3000-C	4/14	L5-30P / (5)5-20R (15/20 amp type): (1) L5-30R	70.5 (32)
<b>230 Vac, 50/60 Hz International Models</b>				
1000/900	S4K2U1000-5C	5/15	IEC 320-C14 / (6) IEC 320/C13	44.0 (20)
2000/1800	S4K2U2000-5C	4/11	IEC 320-C20 / (6) IEC 320-C13	61.7 (28)
3000/2700	S4K2U3000-5C	4/14	IEC 320-C20 / (6) IEC 320-C13 (1) IEC 320-C19	70.5 (32)

\* Full/Half Load (in minutes).

## S4K2U-C, 120 Vac, 50/60 Hz Tower/Rack-Mount Models Specifications

Catalog Number	S4K2U700-C	S4K2U1000-C	S4K2U1500-C	S4K2U2000-C	S4K2U3000-C
<b>Dimensions, D x W x H, in. [mm]</b>					
Unit	19.7 x 16.9 x 3.4 [497 x 430 x 85]				23.7 x 16.9 x 3.4 [602 x 430 x 85]
Shipping	25.5 x 23.9 x 10.6 [647 x 607 x 270]				29.4 x 23.4 x 10.6 [747 x 5607 x 270]
<b>Weight, lb. [kg]</b>					
Unit	37.0 [16.8]		51.1 [23.2]	51.1 [23.2]	71.4 [32.4]
Shipping	44.1 [20.0]		57.3 [26.0]	57.3 [26.0]	79.4 [36.0]
<b>Input AC Parameters</b>					
Voltage Range (typical)	120 Vac nominal; variable based on output load				
90% to 100% Loading	90 Vac/140 Vac		102 Vac/140 Vac		
70% to 90% Loading	86 Vac/140 Vac		96 Vac/140 Vac		
30% to 70% Loading	77 Vac/140 Vac		84 Vac/140 Vac		
0% to 30% Loading	60 Vac/140 Vac		60 Vac/140 Vac		
Power Factor	0.99				
Frequency	40 Hz to 70 Hz; auto sensing				
Input Power Cord <sup>1</sup>	10 ft. attached with NEMA 5-15P plug			10 ft. attached with NEMA 5-20P plug	10 ft. attached with NEMA L5-30P plug
<b>Output AC Parameters</b>					
Output Receptacles <sup>1</sup>	5-15R x 6		5-20R x 6	L5-30R x 1 + 5-20R x 6	
Voltage	110/115/120/127 Vac (user-configurable) ±3%				
Waveform	Sine wave				
Utility (Vac) Mode Overload	200% for 2 seconds; 150% for 50 seconds with transfer to bypass				
Power Factor	0.90				
<b>Battery</b>					
Type	Valve-regulated, non-spillable, lead acid				
Qty x V x Rating	4 x 12 V x 5.0 Ah		4 x 12 V x 7.2 Ah	4 x 12 V x 9.0 Ah	6 x 12 V x 9.0 Ah
Battery Mfr./Part Number	YUASA/NPH5-12; CSB/HR 1221W		Panasonic/UP-RW1236; CSB/GP 1272	Panasonic/UP-RW1245; CSB/HR 1234W F2	
Backup Time <sup>2</sup>	6/14	5/15	5/16	4/11	4/14
Recharge Time	3 hours to 90% capacity after full discharge with 100% load until UPS auto shutdown (internal batteries only)				
<b>Environmental Requirements</b>					
Operating Temperature	0°C to +40°C [+32°F to +104°F]; See Operating Temperature Parameters				
Storage Temperature	-15°C to +50°C [+5°F to +122°F]				
Relative Humidity	0% to 95%, non-condensing				
Operating Elevation	Up to 10,000 ft. [3,000 m] at +40°C [+104°F] without derating				
Storage Elevation	50,000 ft. [15,000 m] max.				

**Notes:**

1. Full/half load (in minutes.) See selection table for more information.
2. Input power cord and receptacles can be removed for hardwired applications.

Visit our website at [www.solahd.com](http://www.solahd.com) or  
contact **Technical Services** at (800) 377-4384 with any questions.

S4K2U-C, 120 Vac, 50/60 Hz Tower/Rack-Mount Models Specifications cont.

Catalog Number	S4K2U700-C	S4K2U1000-C	S4K2U1500-C	S4K2U2000-C	S4K2U3000-C
<b>Audible Noise</b>	<43 dBA max. @ 3 ft. [1 m] front & sides; <46 dBA max. @ 3 ft. [1 m] rear	<45 dBA max. @ 3 ft. [1 m] front & sides; <50 dBA max. @ 3 ft. [1 m] rear	<46 dBA max. @ 3 ft. [1 m] front & sides; <45 dBA max. @ 3 ft. [1 m] rear	<48 dBA max. @ 3 ft. [1 m] front & sides; <48 dBA max. @ 3 ft. [1 m] rear	
<b>Agency</b>					
<b>Safety</b>	UL1778, cUL Listed				
<b>RFI/EMI</b>	FCC Part 15, Class A = CISPR22 Class B				
<b>Surge Immunity</b>	IEC62040-2 2 <sup>nd</sup> Ed.				
<b>Transportation</b>	ISTA Procedure 1A				

<b>Operating Temperature Parameters</b>			
<b>Ambient temperature</b>	+25°C to +30°C [+77°F to +86°F]	+30°C to +35°C [+86°F to +95°F]	+35°C to +40°C [+95°F to +104°F]
<b>Maximum output power factor derating at maximum load</b>	100% to 93%	93% to 86%	86% to 79%

## S4K2U-5C, 230 Vac, 50/60 Hz Tower/Rack-Mount Models Specifications

Catalog Number	S4K2U1000-5C	S4K2U2000-5C	S4K2U3000-5C
<b>Dimensions, D x W x H, in. [mm]</b>			
Unit	497 x 430 x 85 [19.6 x 16.9 x 3.3]		602 x 430 x 85 [23.7 x 16.9 x 3.3]
Shipping	717 x 570 x 262 [28.2 x 22.4 x 10.3]		717 x 570 x 262 [28.2 x 22.4 x 10.3]
<b>Weight, lb. [kg]</b>			
Unit	37.0 [16.8]	51.1 [23.2]	71.4 [32.4]
Shipping	44.1 [20.0]	57.3 [26.0]	79.4 [36.0]
<b>Input AC Parameters</b>			
Voltage Range (typical)	230 Vac nominal; variable based on output load		
90% to 100% Loading	177 Vac/280 Vac		196 Vac/280 Vac
70% to 90% Loading	168 Vac/280 Vac		184 Vac/280 Vac
30% to 70% Loading	150 Vac/280 Vac		161 Vac/280 Vac
0% to 30% Loading	115 Vac/280 Vac		115 Vac/280 Vac
Power Factor	0.99		
Frequency	40 Hz to 70 Hz; auto sensing		
Input Power Receptacle <sup>1</sup>	IEC 320 C14	IEC 320 C20	
<b>Output AC Parameters</b>			
Output Receptacles <sup>1</sup>	IEC 320 C13 x 6		IEC 320 C13 x 6; IEC 320 C19 x 1
Voltage	220/230/240 Vac (user-configurable) ±3%		
Frequency	50 Hz or 60 Hz		
Waveform	Sine wave		
Overload	200% for 2 seconds; 150% for 1 minute with transfer to bypass	200% for 2 seconds; 150% for 50 seconds with transfer to bypass	200% for 2 seconds; 150% for 55 seconds with transfer to bypass
Power Factor	0.90		
<b>Battery</b>			
Type	Valve-regulated, non-spillable, lead acid		
Qty x V x Rating	4 x 12 V x 5.0 Ah	4 x 12 V x 9.0 Ah	6 x 12 V x 9.0 Ah
Battery Mfr./Part Number	YUASA/NPH5-12; CSB/HR 1221W	Panasonic/UP-RW1245; CSB/HR 1234W F2	
Backup Time <sup>2</sup>	5/15	4/11	4/14
Recharge Time	3 hours to 90% capacity after full discharge with 100% load until UPS auto shutdown (internal batteries only)		
<b>Environmental Requirements</b>			
Operating Temperature	0°C to +40°C [+32°F to +104°F]; See Operating Temperature Parameters		
Storage Temperatures	-15°C to +50°C [+5°F to +122°F]		
Relative Humidity	0% to 95%, non-condensing		
Operating Elevation	Up to 3,000 m [10,000 ft.] at +40°C [+104°F] without derating		
Storage Elevation	15,000 m [50,000 ft.] max.		

**Notes:**

1. Full/half load (in minutes.) See selection table for more information.
2. Input power cord and receptacles can be removed for hardwired applications.

S4K2U-5C, 230 Vac, 50/60 Hz Tower/Rack-Mount Models Specifications

Catalog Number	S4K2U1000-5C	S4K2U2000-5C	S4K2U3000-5C
<b>Audible Noise</b>	<43 dBA max. @ 1 m [3 ft.] front & sides; <46 dBA max. @ 1 m [3 ft.] rear	<48 dBA max. @ 1 m [3 ft.] front & sides; <48 dBA max. @ 1 m [3 ft.] rear	
<b>Agency</b>			
<b>Safety</b>	EC/EN/AS 62040-1-1:2008		
<b>RFI/EMI</b>	IEC/EN/AS 62040-2 2 <sup>nd</sup> Ed. = CISPR22 Class A		
<b>Surge Immunity</b>	IEC62040-2 2 <sup>nd</sup> Ed.		
<b>Transportation</b>	ISTA Procedure 1A		

<b>Operating Temperature Parameters</b>			
<b>Ambient temperature</b>	+25°C to +30°C [+77°F to +86°F]	+30°C to +35°C [+86°F to +95°F]	+35°C to +40°C [+95°F to +104°F]
<b>Maximum output power factor derating at maximum load</b>	100% to 93%	93% to 86%	86% to 79%

## External Battery Cabinets Specifications

Catalog Numbers	S4K2U48BATC	S4K2U96BATC
Used with UPS models	S4K2U700C, S4K2U1000C (-5), S4K2U1500C, S4K2U2000C (-5)	S4K2U3000C (-5)
<b>Dimensions, D x W x H, in. [mm]</b>		
Unit	19.7 x 16.9 x 3.4 [497 x 430 x 85]	23.7 x 16.9 x 3.4 [602 x 430 x 85]
Shipping	24.3 x 22.4 x 10.3 [617 x 570 x 262]	28.2 x 22.4 x 10.3 [717 x 570 x 262]
<b>Weight, lbs. [kg]</b>		
Unit	70.5 [32.0]	93.5 [42.4]
Shipping	77.2 [35.0]	101.4 [46.0]
<b>Battery</b>		
Type	Valve-regulated, non-spillable, lead acid	
Qty x V x Rating	2 x 4 x 12 V x 9.0 Ah	2 x 6 x 12 V x 9.0 Ah
Battery Mfr./Part Number	Panasonic/UP-RW1245; CSB/HR 1234W F2	
Backup Time	Battery Back-up Times Chart	
<b>Environmental Requirements</b>		
Operating Temperature	0°C to +40°C [+32°F to +104°F]	
Storage Temperatures	-15°C to +50°C [+19°F to +122°F]; High ambient temperatures will reduce battery life	
Relative Humidity	0% to 95%, non-condensing	
Operating Elevation	Up to 10,000 ft. [3,000 m] at +40°C [+104°F] without derating	
Storage Elevation	50,000 ft. [15,000 m] max.	
<b>Agency</b>		
Safety	UL1778, cUL Listed	
RFI/EMI	FCC Part 15, Class A = CISPR22 Class B	
Surge Immunity	IEC62040-2 2 <sup>nd</sup> Ed.	
Transportation	ISTA Procedure 1A	

S4K2U-C and S4K2U-5C Battery Back-up Times<sup>1</sup>

Number of Batteries	Model VA <sup>1</sup>	Backup Time (minutes) at Load (watts) <sup>2</sup>												
		200 W	400 W	600 W	800 W	1000 W	1200 W	1400 W	1600 W	1800 W	2000 W	2500 W	100% Load	
		Minutes												Min.
Internal battery	700	26	14	6	--	--	--	--	--	--	--	--	6	630
	1000	28	15	9	5	--	--	--	--	--	--	--	4	900
	1500	--	26	16	10	8	5	--	--	--	--	--	4	1350
	2000	--	--	20	11	10	8	6	5	4	--	--	4	1800
	3000	--	--	--	25	20	14	10	9	8	5	4	4	2700
Internal battery + 1 external battery cabinet	700	126	78	54	--	--	--	--	--	--	--	--	50	630
	1000	128	74	52	41	--	--	--	--	--	--	--	27	900
	1500	--	110	72	48	36	28	--	--	--	--	--	24	1350
	2000	--	--	54	34	34	26	22	17	15	--	--	15	1800
	3000	--	--	--	102	80	56	50	44	38	26	22	18	2700
Internal battery + 2 external battery cabinets	700	264	122	88	--	--	--	--	--	--	--	--	82	630
	1000	252	126	84	60	--	--	--	--	--	--	--	58	900
	1500	--	208	132	94	74	54	--	--	--	--	--	48	1350
	2000	--	--	120	82	60	52	44	36	29	--	--	29	1800
	3000	--	--	--	124	114	106	92	74	66	62	46	44	2700
Internal battery + 3 external battery cabinets	700	280	140	120	--	--	--	--	--	--	--	--	116	630
	1000	320	148	118	80	--	--	--	--	--	--	--	78	900
	1500	--	310	204	138	102	90	--	--	--	--	--	82	1350
	2000	--	--	180	126	92	72	62	52	45	--	--	45	1800
	3000	--	--	--	174	150	122	110	105	104	76	62	62	2700
Internal battery + 4 external battery cabinet	700	560	300	146	--	--	--	--	--	--	--	--	140	630
	1000	600	250	138	116	--	--	--	--	--	--	--	109	900
	1500	--	400	256	180	144	110	--	--	--	--	--	100	1350
	2000	--	--	240	166	130	108	94	84	64	--	--	64	1800
	3000	--	--	--	184	172	150	128	120	119	105	92	84	2700

<sup>1</sup>Backup times are valid for all models rated with the listed VA

<sup>2</sup>Approximate backup times are in minutes and at +25°C [+77°F] with a resistive load

**Note:**

S4K2U-5C models are not available in 700VA or 1500VA.



UPC Code	Catalog Number	Item Description	Shipping Weight lbs (kg)	US List Price
078347200607	S4K2U700-C	UPS ON LINE 700VA 120V 3G	44.1 (20)	\$1,010.43
078347200608	S4K2U1000-C	UPS ON LINE 1000VA 120V 3G	44.1 (20)	\$1,283.93
078347200609	S4K2U1500-C	UPS ON LINE 1500VA 120V 3G	57.3 (26)	\$1,613.30
078347200610	S4K2U2000-C	UPS ON LINE 2000VA 120V 3G	57.3 (26)	\$2,028.16
078347200611	S4K2U3000-C	UPS ON LINE 3000VA 120V 3G	79.4 (36)	\$3,290.00
078347200612	S4K2U1000-5C	UPS ON LINE 1000VA 230V 3G	44.1 (20)	\$1,410.91
078347200613	S4K2U2000-5C	UPS ON LINE 2000VA 120V 3G	57.3 (26)	\$2,133.16
078347200614	S4K2U3000-5C	UPS ON LINE 3000VA 120V 3G	79.4 (36)	\$3,390.00
078347200615	S4K2U48-BAT-C	EXT BATT 48V FOR S4KC UPS	77.2 (35)	\$800.00
078347200616	S4K2U96-BAT-C	EXT BATT 96V FOR S4KC UPS	101.4 (46)	\$990.00

	SolaHD S4K2UC	Powerware 9130	MGE Pulsar	APC Smart-UPS RT	Tripp Lite Smart Online
<b>Scalability</b>	700 - 3000VA	700 - 3000VA	700 - 3000VA	1000 - 3000VA	750 - 3000VA
<b>AC-AC Efficiency</b>	88%	86%	86%	88%	87%
<b>Hardwired Capability</b>	Yes	No	No	Hardwire option kit only for 3kVA	No
<b>Output Power Factor</b>	0.9	0.9	0.8 - 0.9	0.7	0.8
<b>Warranty</b>	2 years	2 years	2 years	2 years	2 years
<b>Run-Time (0.7pf)</b>	5	5	6	5	5
<b>Rackmount U Space</b>	2U	2U	2U	2U to 3U	2U to 3U
<b>Maintenance Bypass</b>	Micro PAD	PowerPass	PowerPass	No	No
<b>Communications</b>	Serial / Contacts, SNMP, USB	Serial / Contacts, SNMP, USB	Serial / Contacts, SNMP, USB	Serial / Contacts, SNMP, USB	Serial / Contacts, SNMP, USB





### S4K2UC Weight & Dimensions are ≤ S4K2U

Model	Weight (lbs)				
	700VA	1000VA	1500VA	2000VA	3000VA
S4K2UC	37	37	51	51	71
S4K2U	49	49	51	54	69

Model	Dimensions (H x D x W, in.)				
	700VA	1000VA	1500VA	2000VA	3000VA
S4K2UC	3.3 x 19.6 x 16.9				3.3 x 23.7 x 16.9
S4K2U	3.4 x 21.5 x 16.9				3.4 x 24.2 x 16.9

*Dimensions are the same for both UPS & external battery cabinet and include front bezel.*

Model	Output PF	Runtime (minutes)				
		700VA	1000VA	1500VA	2000VA	3000VA
S4K2UC	0.9	6	4	4	4	4
	0.7	11	7	7	6	5
S4K2U	0.7	17	11	7	6	5

1. **Runtime** reduced due to increased output PF.

2. **Recharge Time** 3 Hours to 90%.

3. **Battery Management** includes efficient three-stage charging technique and comprehensive discharging protection.

## Performance Enhancement S4K2UC vs. S4K2U

Feature	S4K2UC	S4K2U
Output PF	0.9	0.7
Input PF	0.99	0.97
Input Protection	Circuit Breaker (700 - 3000VA)	Fuse (700 - 1500VA) Circuit Breaker (2000 - 3000VA)
Input THDi	5%	8%
Audible Noise	≤ 47dBA	≤ 55dBA
Recharge Time	3 hours to 90%	5 hours to 950%
Overload	105% to 125% - 60 seconds 125% to 150% - 50 seconds 150% to 200% - 2 seconds >200% - 250ms	112% to 130% - 10 seconds 130% to 200% - 2 seconds >200% - 96ms



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### ***SolaHD S4K2UC 700-3000 VA Industrial UPS Features a Compact 2U Design***

Rosemont, IL, March 1, 2010 - SolaHD has introduced the new S4K2UC Uninterruptible Power System (UPS) which offers customers a unique combination of advanced true on-line, double conversion features in an ultra compact package that is a perfect fit for industrial applications. It is available in 120V or 230V models from 700VA to 3000VA of capacity.



The compact SolaHD S4K2UC UPS delivers continuous, high quality power to connected equipment with no break or transferring to battery. The UPS rated output power factor of 0.9 is a better match with switch mode power supplies, which allows for more efficient utilization of the UPS. The S4K2UC Series can be mounted directly into a standard 19" rack, taking only 2U (3.5") of rack space, or floor mounted for standalone applications.

The S4K2UC Series combines flexible output voltage, internal batteries and an integral dynamic bypass switch. Matching external battery cabinets in 2U height are also offered to achieve additional backup time. These online double conversion units in slim enclosures provide perfect protection for applications such as Industrial Computers, Automation Systems, Robotics and Process Controls.

Other features contributing to the outstanding performance of the SolaHD S4K2UC UPS include:

- Self-diagnostic capabilities
- Rotating LED display panel for easy readout in rack or tower position
- Multiple and simultaneous communication ports
- Wide input voltage range to minimize battery operation
- Hot swappable, user replaceable batteries
- Automatic internal bypass and optional manual maintenance bypass
- Continuous sine wave output to allow full compatibility with variety of power supplies
- Power factor corrected input to reduce reflected distortion while optimizing utility power



### **WARRANTY**

The SolaHD S4K2UC UPS is backed by a two-year limited warranty.

### **PRICING AND AVAILABILITY**

The SolaHD S4K2UC UPS will ship May, 2010. List pricing will vary depending on options selected.

### **About SolaHD**

SolaHD is the premium line of power quality products under the EGS Electrical Group family of brands. EGS Electrical Group is a worldwide manufacturer of electrical products for virtually every type of environment. For over 150 years, our brands have been providing a rich tradition of long-term, practical, high quality solutions. EGS Electrical Group is a division of Emerson Industrial Automation and is headquartered in Rosemont, IL. For more information, please email us at [sales@solahd.com](mailto:sales@solahd.com) or call 800-377-4384. You may also visit our website at [www.solahd.com](http://www.solahd.com).

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