

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

The true on-line (double conversion) protection offered by the S4K2U Industrial UPS series eliminates a wider range of potential power problems (spikes, surges and extended overvoltage, noise and other transients, sags and extended brownouts), even difficult-to-track harmonics and dangerous frequency variations that are common with stand-by generator operation. These UPS modules are a true on-line design with a sinewave output in a slim 2U (3.5") package.

#### Features

- S4K2U offered at 120V, 50/60 Hz
- S4K2U-5 offers flexible L-N output voltage (220/230/240 V, 50/60 Hz for international applications)
- Hardwire capability for permanent installation
- Small 2U height maximizes available space
- Two step battery recharge extends battery life
- PWM inverter reduces output voltage distortion
- Add on batteries for extended Back-ups
- Integral sealed, non-spillable batteries for safe ground or air transportation.
- Hot swappable, user replaceable battery
- Automatic restart
- Automatic and manual battery test
- RS232 communication port easily interfaces with the PC.

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.



- Rack-mount or Stand-alone tower mounting for 700 - 3000 VA units
- 700 - 3000 VA 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
- Input and output noise suppression
- Limited two-year warranty

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

#### Selection Table - S4K2U & S4K2U-5 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>				
700/490	S4K2U700	17/44	5-15P / (4) 5-15R	50 (22.7)
1000/700	S4K2U1000	11/25	5-15P / (4) 5-15R	51 (23.1)
1500/1050	S4K2U1500	7/20	5-15P / (4) 5-15R	52 (23.6)
2000/1400	S4K2U2000	6/14	5-20P / (4)5-20R (15/20 amp type)	56 (25.4)
3000/2100	S4K2U3000	5/16	L5-30P / (4)5-20R (15/20 amp type), L5-30R	76 (34.5)
<b>230 Vac, 50/60 Hz International Models</b>				
1000/700	S4K2U1000-5	11/25	IEC 60320-10A / (4) IEC 60320/C13	51 (23.1)
2000/1400	S4K2U2000-5	6/14	IEC 60320-10A / (4) IEC 60320-10A	56 (25.4)
3000/2100	S4K2U3000-5	5/16	IEC 60320-16A / (4) IEC 60320-10A (1) IEC 60320-16A	76 (34.5)

\* Full/Half Load (in minutes).

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

Catalog Number	S4K2U700	S4K2U1000	S4K2U1500	S4K2U2000	S4K2U3000
Capacity (VA/Watts)	700/490	1000/700	1500/1050	2000/1400	3000/2100
<b>Dimensions – inches (mm)</b>					
Unit (H x W x D)	17 x 3.5 x 21.5 (432 x 89 x 546)				17 x 3.5 x 24.2 (432 x 89 x 618)
Shipping (H x W x D)	23 x 10 x 27 (584 x 254 x 685m)				
Approx. Shipping Weight – lbs (kg)	58 (26)	58 (26)	60 (27)	63 (28)	78 (35)
<b>Input AC Parameters</b>					
Voltage Range (typical)	120 Vac nominal; variable based upon output load				
100% – 90% Loading	80-83 Vac to 134-138 Vac		90-93 Vac to 134-138 Vac		
90% – 70% Loading			80-83 Vac to 134-138Vac		
70% – 30% Loading	70-73 Vac to 134-138 Vac				
30% – 0% Loading	60-63 Vac to 134-138 Vac				
Frequency	48.1-51.9 Hz or 57.6-62.4; auto sensing				
Input Connector	6 ft. Attached, w/ NEMA 5-15 Plug			10 ft. Attached, w/ NEMA 5-20 Plug	10 ft. Attached, w/ NEMA L5-30 Plug
<b>Output AC Parameters</b>					
Voltage	100/110/120/127 Vac; ±3% user configurable				
Receptacles	(4) NEMA 5-15R		(4) NEMA 5-20R T-slot, accepts 15A plug	(4) NEMA 5-20R T-slot (1) NEMA L5-30R on 12 in cord	
Frequency	50 Hz or 60 Hz				
Waveform	Sinewave				
Utility Mode Overload	200% for 8 cycles; 130% for 10 seconds with transfer to bypass				
<b>Battery Parameters</b>					
Battery Type	Valve-Regulated, non-spillable, lead acid				
Battery Qty x Voltage x Rating	4 x 12 V x 7 or 7.2 AH		4 x 12 V x 9AH	6 x 12 V x 9AH	
Back-up Time	See Battery Back-up Times Chart				
<b>Environmental</b>					
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. (3000 m) at 104°C (40°C) without derating				
Storage Elevation	15.000m (50,000 ft.) maximum				
Audible Noise	Less than 45 dBA @ 1 meter				
<b>Agency</b>					
Safety	UL 1778, c-UL Listed				
Emissions	FCC Part 15, Subpart B, Class B				
Surge Immunity	IEEE / ANSI C62.41 Category A & B				
Transportation	ISTA Procedure 1A				

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



Catalog Number	S4K2U1000-5	S4K2U2000-5	S4K2U3000-5
Capacity (VA/Watts)	1000/700	2000/1400	3000/2100
<b>Dimensions – inches (mm)</b>			
Unit (H x W x D)	17 x 3.5 x 21.5 (432 x 89 x 546)		17 x 3.5 x 24.2 (432 x 89 x 618)
Shipping (H x W x D)	23 x 10 x 27 (584 x 254 x 685)		
Approx. Shipping Weight – lbs (kg)	58 (26)	63 (28)	78 (35)
<b>Input AC Parameters</b>			
Voltage Range (typical)	230 Vac nominal; variable based upon output load		
100% – 90% Loading	159 Vac / 280 Vac	176 Vac / 280 Vac	
90% – 70% Loading	159 Vac / 280 Vac		
70% – 30% Loading	139 Vac / 280 Vac		
30% – 0% Loading	119 Vac / 280 Vac		
Frequency	40-70 Hz; auto sensing		
Input Connector	IEC 60320-10A		IEC 60320-16A
<b>Output AC Parameters</b>			
Output Receptacles	(4) IEC 60320/C13	(4) IEC 60320-10A	(4) IEC 60320-10A, (1) (4) IEC 60320-16A
Voltage	200/208/220/230/240 (user configurable) Vac; ±3%		
Frequency	50 Hz or 60 Hz		
Waveform	Sinewave		
Main Mode Overload	200% for 8 cycles; 130% for 10 seconds with transfer to bypass		
<b>Battery Parameters</b>			
Type	Valve-Regulated, non-spillable, lead acid		
Qty x Voltage x Rating	4 x 12V x 7.2 AH	4 x 12V x 9 AH	6 x 12V x 9 AH
Back-up Time	See Battery Back-up Times Chart		
Recharge Time	5 Hours to 95% capacity after full discharge into 100% load (Internal Batteries Only)		
<b>Environmental</b>			
Operating Temperature	0°C to +40°C (+32°F to +104°F)		
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. (3000 m) at 104°C (40°C) without derating		
Storage Elevation	15,000m (50,000 ft.) maximum		
Audible Noise	<50 dBA, at 1 meter from the rear <45 dBA, at 1 meter from the front or sides		
<b>Agency</b>			
Safety	CE compliance mark for both Low Voltage and EMC Directives; TUV certified		
Emissions	EN 50091-2, Class B		
Surge Immunity	EN 61000 4-2, 4-3, 4-4, 4-5		
Transportation	ISTA Procedure 1A		

## External Battery Cabinets Specifications

Catalog Number	S4K2U48BAT		S4K2U96BAT
<b>Used with UPS Model</b>	S4K2U700 S4K2U1500	S4K2U1000 S4K2U1000-5	S4K2U2000 S4K2U2000-5
<b>Dimensions – inches (mm)</b>			
<b>Unit (H x W x D)</b>	17 x 3.5 x 21.5 (432 x 89 x 546)		17 x 3.5 x 24.2 (432 x 89 x 618)
<b>Shipping (H x W x D)</b>	23 x 10 x 27 (584 x 254 x 685)		23 x 10 x 27 (584 x 254 x 685)
<b>Approx. Shipping Weight – lbs (kg)</b>	71.1 (32.3)		102.5 (46.5)
<b>Battery Parameters</b>			
<b>Type</b>	Valve-regulated, non-spillable, lead acid		
<b>Battery (Qty x Voltage x Rating)</b>	(2 x 4) 12 V x 7.2 AH		(2 x 6) 12 V x 9 AH
<b>Back-up Time</b>	See Battery Back-up Times Chart		
<b>Recharge Time</b>	5 Hours to 95% capacity after full discharge into 100% load		
<b>Environmental</b>			
<b>Operating Temperature</b>	+32°F to +104°F (0°C to +40°C)		
<b>Storage Temperature</b>	+5°F to +122°F (-15°C to +50°C)		
<b>Relative Humidity</b>	0% to 95%, non-condensing		
<b>Operating Elevation</b>	Up to 10,000 ft. (3000 m) at 104°C (40°C) without derating		
<b>Storage Elevation</b>	15,000 m (50,000 ft.) maximum		
<b>Agency</b>			
<b>Safety</b>	UL 1778, c-UL listed (Suitable for computer room applications) EN50091-1-1, CE compliance mark, for both Low Voltage and EMC Directives		
<b>Emissions</b>	FCC part 15, Subpart B, Class B EN50091-2		
<b>Transportation</b>	ISTA Procedure 1A		

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

	Load %	700VA	1000VA	1500VA	2000VA	3000VA
<b>Internal Battery (minutes)</b>	10%	248	191	144	56	91
	20%	115	87	63	33	46
	30%	79	48	38	26	30
	40%	68	34	28	19	21
	50%	44	26	20	14	16
	60%	35	19	15	12	11
	70%	29	16	12	10	9
	80%	24	13	10	8	8
	90%	20	12	8	7	7
	100%	17	11	7	6	5
<b>Internal Battery +1 External Battery Cabinet (minutes)</b>	10%	992	764	576	328	364
	20%	460	348	212	159	184
	30%	316	192	152	88	120
	40%	232	136	112	67	84
	50%	176	100	80	52	64
	60%	140	76	60	36	44
	70%	116	64	48	30	36
	80%	96	52	40	24	32
	90%	80	48	32	21	28
	100%	68	44	28	18	20
<b>Internal Battery +2 External Battery Cabinets (minutes)</b>	10%	1984	1528	1152	392	728
	20%	920	696	424	231	368
	30%	632	384	304	182	240
	40%	464	272	224	133	168
	50%	352	200	160	98	128
	60%	280	152	120	84	88
	70%	232	128	96	70	72
	80%	192	104	80	56	64
	90%	160	96	64	49	56
	100%	136	88	56	42	40

	Load %	700VA	1000VA	1500VA	2000VA	3000VA
<b>Internal Battery + 3 External Battery Cabinets (minutes)</b>	10%	2976	2292	1728	560	1092
	20%	1380	1044	636	330	552
	30%	948	576	456	260	360
	40%	696	408	336	190	252
	50%	528	300	240	140	192
	60%	420	228	180	120	132
	70%	348	192	144	100	108
	80%	288	156	120	80	96
	90%	240	144	96	70	84
	100%	204	132	84	60	60
<b>Internal Battery + 4 External Battery Cabinets (minutes)</b>	10%	3968	3056	2304	840	1456
	20%	1840	1392	848	495	736
	30%	1264	768	608	390	480
	40%	928	544	448	285	336
	50%	704	400	320	210	256
	60%	560	304	240	180	176
	70%	464	256	192	150	144
	80%	384	208	160	120	128
	90%	320	192	128	105	112
	100%	272	176	112	90	80

**Note:**

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

## 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
<b>Model Rating</b>	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)*
<b>Dimensions – inches (mm)</b>		
<b>Unit (H x W x D)</b>	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)
<b>Shipping (H x W x D)</b>	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)
<b>Approx. Shipping Weight – lbs (kg)</b>	76.3 (34.6)	118 (53.6)
<b>Input AC Parameters</b>		
<b>Nominal Operating Frequency</b>	50 or 60 Hz (Factory Default = 60)	
<b>Factory Default Vac</b>	208 Vac at 120° phase angle (neutral required)	
<b>L1–L2 Factory Default Input Phase Angle</b>	120°	
<b>Allowable Input Phase Angle</b>	120, 180, 240°, Auto-sensing on application of AC (Restrictions for L-N voltages other than 120 Vac)	
<b>Factory Default</b>	L1-N, L2-N Vac 120 Vac nominal	
<b>User Configurable L1–N, L2–N Vac</b>	100/110/115/120/127 Vac (May be modified using configuration program)	
<b>L1–N, L2–N, Operating Voltage Range Without Battery Operation (Except 100 Vac L–N Operation)</b>		
<b>100% – 90% loading</b>	90 Vac - 140 Vac	
<b>90% – 70% loading</b>	80 Vac - 140 Vac	
<b>70% – 30% loading</b>	70 Vac - 140 Vac	
<b>30% – 0% loading</b>	60 Vac - 140 Vac	
<b>L1–N, L2–N, Operating Voltage Range Without Battery Operation (100 Vac L–N Operation)</b>		
<b>100% – 70% loading</b>	80 Vac - 140 Vac	
<b>70% – 30% loading</b>	70 Vac - 140 Vac	
<b>30% – 0% loading</b>	60 Vac - 140 Vac	
<b>L1–N, L2–N Max. Allowable Vac</b>	150 Vac	
<b>Input Frequency w/o Battery Operation</b>	40 - 70 Hz	
<b>Input Power Connection</b>	Hardwire Terminal Block 3W + G (L-L-N-G)	
<b>Output AC Parameters</b>		
<b>Factory Default Vac</b>	120/208 Vac @ 120° phase angle	
<b>L1–L2 Factory Default Output Phase Angle</b>	120°	
<b>Allowable Output Phase Angle</b>	120, 180, 240° Auto-sensing on initial application of input AC	
<b>Factory Default L1–N, L2–N Vac</b>	120 Vac nominal	
<b>User Configurable L1–N, L2–N Vac</b>	100/110/115/120/127 Vac, ±3%	
<b>Output Connections</b>	Hardwire Terminal Block 3W + G (L-L-N-G)	
<b>Frequency</b>	50 Hz or 60 Hz, Nominal	
<b>Waveform</b>	Sinewave	
<b>Main Mode Overload</b>	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
<b>Bypass Protection Limits</b>		
<b>Disable Bypass Operation</b>	If input voltage exceeds $\pm 15\%$ of the nominal voltage	
<b>Re-enable Bypass Operation</b>	If input voltage returns to within $\pm 10\%$ of the nominal output voltage	
<b>Disable Bypass Operation</b>	When the input frequency prevents synchronous operation	
<b>Environmental</b>		
<b>Operating Temperature</b>	+32°F to +104°F (0°C to +40°C)	
<b>Storage Temperature</b>	+5°F to +122°F (-15°C to +50°C)	
<b>Relative Humidity</b>	0% to 95%, non-condensing	
<b>Operating Elevation</b>	Up to 10,000 ft. (3000m) at 104°F (40°C) without derating	
<b>Storage Elevation</b>	50,000 ft. (15,000 m) maximum	
<b>Audible Noise</b>	<55 dBA, at 1 meter from the rear; <50 dBA, at 1 meter from the front or sides	
<b>Agency</b>		
<b>Safety</b>	UL 1778, c-UL Listed (Suitable for computer room applications)	
<b>Emissions</b>	FCC Part 15, Subpart B, Class A	
<b>Surge Immunity</b>	IEEE/ANSI C62.41 Category A & B	
<b>Transportation</b>	ISTA Procedure 1A	

**Internal Battery Specifications**

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



## External Battery Specifications

Model Number	S4K144BAT	S4K288BAT
Used w/ UPS Model	S4K4U6000	S4K4U10000
<b>Dimensions – inches (mm)</b>		
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)
<b>Weight – lbs (kg)</b>		
Unit	93.6 (42.5)	41.6 (18.9)
Shipping	105 (47.6)	50.6 (23)
<b>Battery Parameters</b>		
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	
<b>Environmental</b>		
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	
<b>Agency</b>		
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	
<b>Output Power Connection</b>			
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)
<b>Weight – lbs (kg)</b>			
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
<b>Internal Battery</b>	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
<b>Internal Battery + 1 External Battery Cabinet</b>	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
<b>Internal Battery + 2 External Battery Cabinets</b>	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
<b>Internal Battery + 3 External Battery Cabinets</b>	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
<b>Internal Battery + 4 External Battery Cabinets</b>	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.