

# SGI® UPSafe® Solutions

## UPSafe® 9170+ Uninterruptible Power System

### Features and Benefits

- N+X redundancy for both power and logic which eliminates system-level single point of failure
- Easily scalable to adapt to changing IT environments by simply adding power and/or battery modules
- True double-conversion online design
- Advanced Battery Management (ABM®) which doubles battery service life
- Universal components to fit in any order without affecting uninterruptible power supplied operation
- Protection against all nine power problems:
  - Power failure
  - Power sag
  - Power surge (spike)
  - Undervoltage (brownout)
  - Overvoltage
  - Electrical line noise
  - Frequency variation
  - Switching transient
  - Harmonic distortion

The e-business economy has demonstrated a new standard in system availability: zero downtime. This standard ranges from the largest data centers of the Internet and e-business infrastructure to the server farms, networks, and telecommunications and Internet service providers (ISP) that have become the foundation of all business worldwide. This, in turn has driven the most aggressive wave of innovation in power technologies, specifically UPS, in decades. The new e-business economy is also driving a requirement that technological solutions be quickly and easily deployed on a global basis.

Unique to UPSafe 9170+ is its global deployment capability. Because of its high-frequency design, which houses both logic and power in the power module, and its single-cabinet design, distributors and purchasing departments around the world will have fewer system components to contend with, regardless of where the system is deployed.

UPSafe 9170+ is a scalable, modular, flexible solution that combines the highest level of reliability with the lowest cost of ownership in the 3–18 kVA range. UPSafe 9170+ enables customers to “build” a power solution specific to their needs, with an expandable level of redundancy and the ability to increase runtimes through plug-and-play 3 kVA UPS and battery modules. The UPSafe 9170+ system can be configured to fit three-, six-, nine-, or twelve-slot enclosures, and is available for rack-mountable applications. The 9170+ system also features a new “power-saver” high-efficiency mode, a user-selectable feature that increases unit efficiency from 88% in normal operating mode to 97% in Power-Saver mode. The combination of low initial investment, double-conversion online technology, ABM, and new high-efficiency power-saver mode means you never have to compromise reliability for efficiency.



## UPSafe 9170+ Model Selection Guide

SGI Part Number	Power Rating	Input Connection	Output Connections	Dimensions H x W x D [in.]	Weight [lb.]
MAS-UPS-3200D: [1] 3-slot enclosure [1] power module [2] battery modules	3 kVA	L14-20P	[2] 6-20R, [6] 5-20R, [1] L6-30R	19.5 x 17.0 x 25.5155	
MAS-UPS-750R: 3 kVA [1] 3-slot enclosure [1] power modules [4] battery modules	L14-20P	[2] 6-20R,	19.5 x 17.0 x 25.5220 [6] 5-20R, [1] L6-30R		
MAS-UPS-2100: 6 kVA [1] 6-slot enclosure [2] power modules [4] battery modules	I4-50P	[4] L6-30R,	33.3 x 17.0 x 25.5 [4] 6-20R, [6] 5-20R	270	
MAS-UPS-STOR: 6 kVA [1] 6-slot enclosure [2] power modules [6] battery modules	I4-50P	[4] L6-30R,	33.3 x 17.0 x 25.5 [4] 6-20R, [6] 5-20R	320	
MAS-UPS-3400RL: [1] 6-slot enclosure [2] power modules [8] battery modules	6 kVA	I4-50P	[4] L6-30R, [4] 6-20R, [6] 5-20R	33.3 x 17.0 x 25.5	380
MAS-UPS-0300TR or MAS-UPS-3400RH: [1] 6-slot enclosure [3] power modules [6] battery modules	9 kVA	Hardwired	[4] L6-30R, [4] 6-20R, [6] 5-20R	47.0 x 24.0 x 28.5	340
MAS-UPS-0NYX: [1] 9-slot enclosure [3] power modules [10] battery modules	9 kVA	Hardwired	[4] L6-30R, [4] 6-20R, [6] 5-20R	60.7 x 24.0 x 28.5	510
MAS-UPS-3800RH: [1] 12-slot enclosure [5] power modules [14] battery modules	15 kVA	Hardwired	[6] L6-30R, [4] 6-20R, [12] 5-20R	60.7 x 24.0 x 28.5	550
MAS-UPS-0NYX3K: [1] 12-slot enclosure [5] power module [14] battery modules [1] 12-slot battery enclosure [8] battery modules	15 kVA	Hardwired	[6] L6-30R, [4] 6-20R, [12] 5-20R	60.7 x 24.0 x 28.5	705
MAS-UPS-COMBO1: [1] 12-slot enclosure [6] power module [12] battery modules	18 kVA	Hardwired	[6] L6-30R, [4] 6-20R, [12] 5-20R	60.7 x 24.0 x 28.5	660
MAS-UPS-COMBO2: [1] 12-slot enclosure [6] power modules [12] battery modules [1] 12-slot battery enclosure [24] battery modules	18 kVA	Hardwired	[6] L6-30R, [4] 6-20R, [12] 5-20R	33.3 x 17.0 x 25.5 60.7 x 24.0 x 28.5	660 910

All of the above solutions come with a 2-year repair/replace warranty; next-business day, onsite service available. The UPSafe 9170+ model is configurable according to the customer's specification. The number of power/battery modules as well as type of input/output receptacles may be customized.

## UPSafe 9170+ Battery Runtimes [in minutes: full load/half load] Split-Phase Module ASY-0673

Load [VA]	Number of Internal Battery Modules											
	2 Modules	4 Modules	6 Modules	8 Modules	10 Modules	12 Modules	14 Modules	16 Modules	18 Modules	20 Modules	22 Modules	24 Modules
3 kVA	6.5/16	16/40	27.5/67.5	40/98	53.5/132	67.5/167	83/204	98/242	115/283	132/324	149/365	167/408
6 kVA	6.5/16	16/40	11/27.5	16/40	21.5/53.5	27.5/68	33.5/83	40/98	46.5/115	53.5/132	60.5/149	67.5/167
9 kVA			65/16	9.5/23.5	13/31.5	16/40	20/49	23.5/58	27.5/67.5	31.5/78	35.5/88	40/98
12 kVA				6.5/16	9/21.5	11/27.5	13.5/33.5	16/40	19/46.5	21.5/53.5	24.5/60.5	27.5/68
15 kVA					6.5/16	8/20.5	10/25	12/30	14/35	16/40	18.5/45	20.5/50.5
18 kVA						6.5/16	8/20	9.5/23.5	11/27.5	18/44	14.5/35.5	16/40

## Universal Module ASY-0674

Load [VA]	Number of Internal Battery Modules											
	2 Modules	4 Modules	6 Modules	8 Modules	10 Modules	12 Modules	14 Modules	16 Modules	18 Modules	20 Modules	22 Modules	24 Modules
3 kVA	8/24	24/59	43/95	58/140	80/175	95/215	119/240	135/290	155/335	165/365	200/395	215/450
6 kVA		8/24	16/40	24/59	32/83	40/103	49/114	58/140	69/156	83/175	90/190	103/205
9 kVA			8/24	13/35	18/46	24/59	29/63	35/86	40/103	46/115	54/125	58/140
12 kVA				8/24	13/33	16/40	19.5/43.5	24/59	29/70	33/80	36/90	41/100
15 kVA					8/24	11.5/31	14.5/31.5	18/46	20.5/51	24/58	28/66	31/73
18 kVA						8/24	11/31.5	13/36	15.5/41	18/45	20.5/51	24/58

\* Battery strings above and to the right of the dark line require additional [N+X] power modules or an auxiliary charger. Battery runtimes are approximate and may vary with equipment, configuration, battery age, temperature, etc. Additional battery runtimes available up to 8 hours. Please contact your sales representative.

## UPSafe 9170+ Technical Specifications<sup>1</sup>

### Electrical Input

- Voltage: 208–240 Vac or 200/100, 208/120, 220/110, 240/120 Vac 176–276V
- Voltage range: ±3% of nominal
- Input power factor: 0.98
- Frequency: 50/60 Hz [±3Hz]

### Electrical Output

- On utility voltage regulation: ±3% of nominal
- On battery voltage regulation: ±3% of nominal
- Efficiency: 88% normal operation, 97% high performance (optional programmable)
- Frequency regulation: ±3 Hz online; ±0.1 Hz on battery

### Communications

- LCD display: 4x20 character backlit display, programmable
- Language support: English, French, Spanish, and German
- Communication slots: 2 slots [standard]
- Communication ports: RS-232, [DB-9] contact closures [standard]
- SNMP capability: SNMP/Web enabled
- Emergency power off [EPO]: Input for external EPO

### General

- Topology: True online, double conversion
- Diagnostics: Full-system self-test on power up
- Bypass: Automatic on overload or UPS failure
- Dimensions and weights: See Model Selection Guide

### Environmental and Safety

- Safety markings: UL, cUL, TUV
- EMC markings: FCC & CEM class A
- Surge suppression: IEEE/ANSI C62.41
- Audible noise: <50 dBA
- Storage temperature: -20°C to 40°C [60°C w/o battery], -4°F to 104°F [140°F w/o battery]
- Relative humidity: 50% to 90%, noncondensing
- REPO port: Meets NEC code 645-II intent and UL requirements
- Internal battery type: Sealed, lead-acid; maintenance free

### Battery

- Battery runtime: See Battery Runtimes
- Battery replacement: Hot-swappable
- Recharge time: <4 hours, standard

1. Due to continuing product improvement programs, specifications are subject to change without notice.



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