

## 5K Modular Series On-Line Uninterruptible Power Systems (UPS)

The 5K Modular is scalable from 4 to 20 kVA, offering many flexible options by adding a few standard modules. Designed to be fully configured, tested and shipped in the configuration you need, the 5K Modular also has the ability to be easily upgraded in the field to either higher VA ratings (up to 20 kVA maximum), longer back-ups or to add N+x parallel redundancy. Configurations can be cost-effectively upgraded keeping your 5K Modular current without a large reinvestment in a new system.

The optional N+x redundancy provides a fault-tolerant group of power modules and controls. The modular design is easy to upgrade so the UPS can grow with the needs of the system that is being protected.

Each of the modular components, including 4 kVA power modules, battery modules and system control modules, can be hot-swapped making it easy to increase power, extend your back-up or add redundancy while still providing power protection to the load.

This fault-tolerant system uses intelligent power and battery modules which take themselves off-line if there is a problem without interrupting power to the load. Self-diagnostic capabilities simplify maintenance and troubleshooting. Each unit incorporates an internal automatic bypass.

### Applications

- Network Servers
- Enterprise Telecommunications Systems
- LAN gateways, Bridges and Routers
- Mini-computers, Superservers and Server Clusters
- Clusters of PCs or Workstations and Peripherals
- RAID arrays and other large-scale Data Handling Systems

### Features

- Scalable for capacity, redundancy, or battery back-up offering unbelievable flexibility.
- Built-in intelligence is provided for each individual module using microprocessor controls, increasing functionality, communications and reliability.
- N+x parallel redundancy is easily achieved by adding extra control, power and battery modules.
- Any failed module will automatically take itself off-line while the other modules continue to support the connected equipment.



- Multiple and simultaneous communication ports
- Variable input voltage range minimizes battery operation to increase battery life.
- An automatic internal bypass for maximum availability of output power.
- Continuous sinewave output
- Power factor corrected input reduces reflected distortion and optimizes utility power.
- Two year limited warranty (Includes factory start up)

### Certifications and Compliances

- cUL US Listed, UPS Equipment
  - UL 1778
  - CSA C22.2 No. 107.3
- ANSI C62.41, Class A & B

## Chassis Options

The S5K Modular has three chassis available to build on:

- The “A” chassis can accommodate up to 8 modules.
- The “B” chassis can accommodate up to 12 modules and supplies 16 kVA of power, with N+1 redundancy.
- The “C” chassis can accommodate up to 12 modules and supplies a full 20 kVA of power, with N+1 redundancy.

System control modules are not included in module count. All chassis can accommodate up to two system control modules. Select the proper chassis based on your futures need for expansion or redundancy. In most standard (non-redundant) applications, the “A” chassis is the most popular.

## Selection Steps

1. Determine the maximum kVA you will need for future expansion.
2. Determine the kVA and run time value for your immediate need.
3. Determine if you need redundancy. If the exact run time is the critical need, use the fully redundant option (see Selection Charts on the following pages).
4. Select the unit that meets both your immediate requirements, and is expandable to your future needs in the “Maximum Upgrade” column in the enclosure selection charts. The Maximum Upgrade column shows the highest kVA expansion that particular configuration is capable of without removing any of the battery modules from the original configuration.

## Specifications

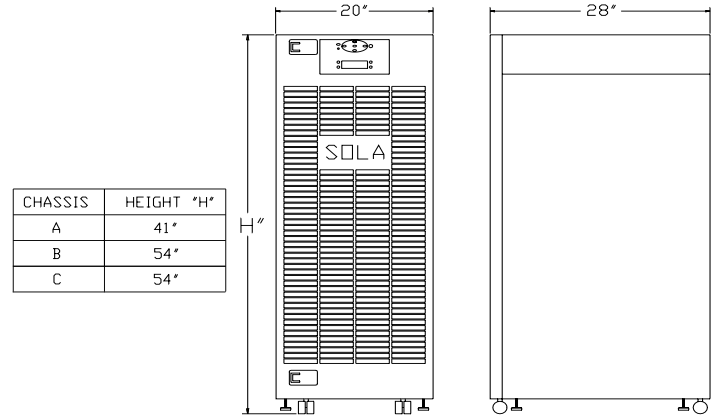
<b>Capacity (VA/Watts)</b>	4 kVA / 2.8 kW to 20 kVA / 14 kW in 4 kVA / 2.8 kW increments
<b>Dimensions – inches</b>	
<b>Unit (H x W x D)</b>	8 module capacity “A” Chassis 41” x 20” x 28” 12 module capacity “B” or “C” Chassis 54” x 20” x 28”
<b>Shipping (H x W x D)</b>	56 in x 32 in x 42 in
<b>Input AC Parameters</b>	
<b>Voltage Range (typical)</b>	170-276 Vac Low line limit variable with load 170 Vac from 80 to 100% load 144 Vac from 20 to 90% load 127 Vac from 20 to 70% load 100 Vac at less than 30% load
<b>Voltage Configuration and Connection</b>	Single phase, 2-wire plus ground (L1-L2-G)
<b>Frequency</b>	60 Hz nominal 40 - 70 Hz range without operating from battery
<b>Input Connector</b>	Hardwired only
<b>Power Factor</b>	.98 typical
<b>Output AC Parameters</b>	
<b>Voltage</b>	240, 208, 240/120 (120-0-120 ) or 208/120 (120-0-88)
<b>Receptacles</b>	Optional with use of external Maintenance Bypass
<b>Voltage Regulation</b>	±3 %
<b>Voltage Distortion</b>	Maximum 3% THD for linear loads, maximum 7% THD for full non-linear loads.
<b>Transient Response</b>	< 7% for 100% step load; recovery within 96 ms.
<b>Frequency</b>	60 Hz
<b>Frequency Slew Rate</b>	Selectable up to 5 Hz/sec
<b>Frequency Sync Range</b>	Selectable up to ±5 Hz
<b>Overload</b>	100 to 110% for 10 minutes minimum 111 to 150% 10 seconds 151 to 200% for 2 Cycles
<b>Battery Parameters</b>	
<b>Battery Type</b>	Sealed, lead acid
<b>Recharge Rate</b>	3 to 5 Hrs to 90% capacity
<b>Battery Back-up</b>	See Battery Selection Tables for specific configurations Autonomy time is 6 minutes with an equal number of battery & power modules in a non-redundant configuration at full load
<b>Battery Voltage</b>	120 Vdc Nominal
<b>Maximum charge current (full load)</b>	3A
<b>Environmental</b>	
<b>Operating Temperature</b>	0°C to +40°C
<b>Storage Temperature</b>	-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 40°C without derating
<b>Storage Elevation</b>	15,000m (50,000 ft.) maximum
<b>Heat Dissipation</b>	1062 BTU / Hour per fully loaded power module (4kVA / 2.8kW)
<b>Audible Noise</b>	< 62 dBA @ 1 meter
<b>Routine Maintenance</b>	Keep the UPS clean and cool to enhance system reliability. Occasionally clean or replace the fan intake filters and ensure proper airflow. Do not use liquid or aerosol cleaning fluids. Periodically review the UPS alarm logs

**Recommended Part Numbers**

(See enclosure selection charts for other options)

kVA / kW	Catalog Number		Back-up (Min@FL/HL)
	Standard	Redundant	
4/2.8	S5KA4N1A6	S5KA4R1A6	7/18
8/5.6	S5KA8N2A6	S5KA8R2A6	7/18
12/8.4	S5KA12N3A6	S5KA12R3A6	7/18
16/11.2	S5KA16N4A6	S5KB16R4A6	7/18
20/14	S5KC20N5A6	S5KC20R5A6	7/18

**Mechanical Diagram**



**Part Number Configuration**

The S5K modular is available in many combination. Use the part number template below to identify the description of any given part number.

Series Designation	Chassis Size	kVA Rating	Unit Type	Number of Battery Modules	Output Voltage	Frequency
	A = 8 Module, 16 kVA Capacity	4, 8, 12, 16 or 20 kVA  00 = External Battery	N = Standard (Not Redundant)	* Must be at least one per 4 kVA of capacity	A = 208/120	6 = 60 Hz
	B = 12 Module, 16 kVA Capacity		R = Redundant Power & Control			
	C = 12 Module, 20 kVA Capacity		X = Redundant Power, Battery & Control			
	D = External Battery Cabinet		B = Battery Cabinet			
<b>Example:</b> 4 kVA Load, Future Expandable to 16 kVA with 7 minutes of Back-up. What is the part number?						
S5K	A	4	N	1	A	6

## Enclosure Selection Chart: Chassis A: 8 Module, 4 kVA

System Model Number	Qty of Power Modules Included	Qty of Battery Modules Included	Qty of System Control Modules Included	Unit Weight lbs (kg)	Back-up Full/Half Load (minutes)	Maximum Upgrade <sup>2</sup>
<b>4 kVA / 2.8kW</b>						
S5KA4N1A6	1	1	1	441.0 (200.00)	7/18	16kVA
S5KA4N2A6	1	2	1	506.0 (229.52)	19/42	16kVA
S5KA4N3A6	1	3	1	571.0 (259.00)	30/61	16kVA
S5KA4N4A6	1	4	1	636.0 (288.48)	42/82	16kVA
S5KA4N5A6	1	5	1	701.0 (317.97)	52/98	12kVA
S5KA4N6A6	1	6	1	766.0 (347.45)	62/110	8kVA
S5KA4N7A6	1	7	1	831.0 (376.94)	75/140	N/A
<b>Redundant (power &amp; control only)</b>						
S5KA4R1A6	2	1	2	472.0 (214.10)	7/18	12kVA
S5KA4R2A6	2	2	2	537.0 (243.58)	19/42	12kVA
S5KA4R3A6	2	3	2	602.0 (273.06)	30/61	12kVA
S5KA4R4A6	2	4	2	667.0 (302.55)	42/82	12kVA
S5KA4R5A6	2	5	2	732.0 (332.03)	52/98	8kVA
S5KA4R6A6	2	6	2	797.0 (361.51)	62/110	N/A
<b>Full Redundant (battery, power &amp; control) <sup>1</sup></b>						
S5KA4X2A6	2	2	2	537.0 (243.58)	7/18	12kVA
S5KA4X3A6	2	3	2	602.0 (273.06)	19/42	12kVA
S5KA4X4A6	2	4	2	667.0 (302.55)	30/61	8kVA
S5KA4X5A6	2	5	2	732.0 (332.03)	42/82	N/A
S5KA4X6A6	2	6	2	797.0 (361.51)	52/98	N/A

## Notes:

- Full redundant units include one redundant battery module. Back-up given does not include this extra module, so actual achieved Back-up will be longer than published.
- The S5K modulars are easily upgraded by adding extra battery and/or power modules as long as the number of modules (battery plus power) does not exceed the number of modules the enclosure is designed to contain.
  - Control modules do not count toward the 8 module max. (2 max control modules per system).
  - There must be at least one battery module per power module installed.

## Enclosure Selection Chart: Chassis A: 8 Module

System Model Number	Qty of Power Modules Included	Qty of Battery Modules Included	Qty of System Control Modules Included	Unit Weight lbs (kg)	Back-up Full/Half Load (minutes)	Maximum Upgrade <sup>2</sup>
<b>8 kVA / 5.6kW</b>						
S5KA8N2A6	2	2	1	532.0 (241.31)	7 / 19	16kVA
S5KA8N3A6	2	3	1	597.0 (270.79)	13 / 30	16kVA
S5KA8N4A6	2	4	1	662.0 (300.28)	19 / 42	16kVA
S5KA8N5A6	2	5	1	727.0 (329.76)	25 / 52	12kVA
S5KA8N6A6	2	6	1	792.0 (359.25)	30 / 62	N/A
<b>Redundant (power &amp; control only)</b>						
S5KA8R2A6	3	2	2	563.0 (255.37)	7 / 19	12kVA
S5KA8R3A6	3	3	2	628.0 (284.86)	13 / 30	12kVA
S5KA8R4A6	3	4	2	693.0 (314.34)	19 / 42	12kVA
S5KA8R5A6	3	5	2	758.0 (343.82)	25 / 52	N/A
<b>Full Redundant (battery, power &amp; control)<sup>1</sup></b>						
S5KA8X3A6	3	3	2	628.0 (284.86)	7 / 19	12kVA
S5KA8X4A6	3	4	2	693.0 (314.34)	13 / 30	N/A
S5KA8X5A6	3	5	2	758.0 (343.82)	19 / 42	N/A
<b>12 kVA / 8.4kW</b>						
S5KA12N3A6	3	3	1	623.0 (282.59)	7 / 19	16kVA
S5KA12N4A6	3	4	1	688.0 (312.07)	11 / 27	16kVA
S5KA12N5A6	3	5	1	753.0 (341.56)	15 / 34	N/A
<b>Redundant (power &amp; control only)</b>						
S5KA12R3A6	4	3	2	654.0 (296.65)	7 / 19	N/A
S5KA12R4A6	4	4	2	719.0 (326.13)	11 / 27	N/A
<b>Full Redundant (battery, power &amp; control)<sup>1</sup></b>						
S5KA12X4A6	4	4	2	719.0 (326.13)	7 / 19	N/A
<b>16 kVA / 11.2kW</b>						
S5KA16N4A6	4	4	1	714.0 (323.87)	7 / 19	N/A

Notes:

- Full redundant units include one redundant battery module. Back-up given does not include this extra module, so actual achieved Back-up will be longer than published.
- The S5K modulars are easily upgraded by adding extra battery and/or power modules as long as the number of modules (battery plus power) does not exceed the number of modules the enclosure is designed to contain.
  - Control modules do not count toward the 8 module max. (2 max control modules per system).
  - There must be at least one battery module per power module installed.

## Enclosure Selection Chart: Chassis B: 12 Module, 4 kVA

System Model Number	Qty of Power Modules Included	Qty of Battery Modules Included	Qty of System Control Modules Included	Unit Weight lbs (Kg)	Back-up Full/Half Load (minutes)	Maximum Upgrade <sup>2</sup>
<b>4 kVA / 2.8 kW</b>						
S5KB4N1A6	1	1	1	496.0 (224.98)	7 / 18	16 kVA
S5KB4N2A6	1	2	1	561.0 (254.47)	19 / 42	16 kVA
S5KB4N3A6	1	3	1	626.0 (283.95)	30 / 61	16 kVA
S5KB4N4A6	1	4	1	691.0 (313.43)	42 / 82	16 kVA
S5KB4N5A6	1	5	1	756.0 (342.92)	52 / 98	16 kVA
S5KB4N6A6	1	6	1	821.0 (372.40)	62 / 110	16 kVA
S5KB4N7A6	1	7	1	886.0 (401.88)	75 / 140	16 kVA
S5KB4N8A6	1	8	1	951.0 (431.37)	92 / 170	16 kVA
S5KB4N9A6	1	9	1	1016.0 (460.85)	100 / 190	12 kVA
S5KB4N10A6	1	10	1	1081.0 (490.33)	110 / 220	8 kVA
S5KB4N11A6	1	11	1	1146.0 (519.82)	120 / 250	N/A
<b>Redundant (power &amp; control only)</b>						
S5KB4R1A6	2	1	2	527.0 (239.04)	7 / 18	16 kVA
S5KB4R2A6	2	2	2	592.0 (268.53)	19 / 42	16 kVA
S5KB4R3A6	2	3	2	657.0 (298.01)	30 / 61	16 kVA
S5KB4R4A6	2	4	2	722.0 (327.49)	42 / 82	16 kVA
S5KB4R5A6	2	5	2	787.0 (356.98)	52 / 98	16 kVA
S5KB4R6A6	2	6	2	852.0 (386.46)	62 / 110	16 kVA
S5KB4R7A6	2	7	1	917.0 (415.94)	75 / 140	16 kVA
S5KB4R8A6	2	8	1	982.0 (445.43)	92 / 170	12 kVA
S5KB4R9A6	2	9	1	1047.0 (474.91)	100 / 190	8 kVA
S5KB4R10A6	2	10	1	1112.0 (504.39)	110 / 220	N/A
<b>Full Redundant (battery, power &amp; control) <sup>1</sup></b>						
S5KB4X2A6	2	2	2	592.0 (268.53)	7 / 18	16 kVA
S5KB4X3A6	2	3	2	657.0 (298.01)	19 / 42	16 kVA
S5KB4X4A6	2	4	2	722.0 (327.49)	30 / 61	16 kVA
S5KB4X5A6	2	5	2	787.0 (356.98)	42 / 82	16 kVA
S5KB4X6A6	2	6	2	852.0 (386.46)	52 / 98	16 kVA
S5KB4X7A6	2	7	2	917.0 (415.94)	62 / 110	16 kVA
S5KB4X8A6	2	8	2	982.0 (445.43)	75 / 140	12 kVA
S5KB4X9A6	2	9	2	1047.0 (474.91)	92 / 170	8 kVA
S5KB4X10A6	2	10	2	1112.0 (504.39)	100 / 190	N/A

## Notes:

1. Full redundant units include one redundant battery module. Back-up given does not include this extra module, so actual achieved Back-up will be longer than published.
2. The S5K modulars are easily upgraded by adding extra battery and/or power modules as long as the number of modules (battery plus power) does not exceed the number of modules the enclosure is designed to contain.
  - Control modules do not count toward the 8 module max. (2 max control modules per system).
  - There must be at least one battery module per power module installed.

## Enclosure Selection Chart: Chassis B: 12 Module, 8 kVA

System Model Number	Qty of Power Modules Included	Qty of Battery Modules Included	Qty of System Control Modules Included	Unit Weight lbs (kg)	Back-up Full/Half Load (minutes)	Maximum Upgrade <sup>2</sup>
<b>8 kVA / 5.6kW</b>						
S5KB8N2A6	2	2	1	587.0 (266.26)	7 / 19	16kVA
S5KB8N3A6	2	3	1	652.0 (295.74)	13 / 30	16kVA
S5KB8N4A6	2	4	1	717.0 (325.23)	19 / 42	16kVA
S5KB8N5A6	2	5	1	782.0 (354.71)	25 / 52	16kVA
S5KB8N6A6	2	6	1	847.0 (384.19)	30 / 62	16kVA
S5KB8N7A6	2	7	1	912.0 (413.68)	38 / 75	16kVA
S5KB8N8A6	2	8	1	977.0 (443.16)	43 / 92	16kVA
S5KB8N9A6	2	9	1	1042.0 (472.64)	47 / 100	12kVA
S5KB8N10A6	2	10	1	1107.0 (502.13)	54 / 110	N/A
<b>Redundant (power &amp; control only)</b>						
S5KB8R2A6	3	2	2	618.0 (280.32)	7 / 19	16kVA
S5KB8R3A6	3	3	2	683.0 (309.80)	13 / 30	16kVA
S5KB8R4A6	3	4	2	748.0 (339.29)	19 / 42	16kVA
S5KB8R5A6	3	5	2	813.0 (368.77)	25 / 52	16kVA
S5KB8R6A6	3	6	2	878.0 (398.25)	30 / 62	16kVA
S5KB8R7A6	3	7	2	943.0 (427.74)	38 / 75	16kVA
S5KB8R8A6	3	8	2	1008.0 (457.22)	43 / 92	12kVA
S5KB8R9A6	3	9	2	1073.0 (486.70)	47 / 100	N/A
<b>Full Redundant (battery, power &amp; control) <sup>1</sup></b>						
S5KB8X3A6	3	3	2	628.0 (284.86)	7 / 19	16kVA
S5KB8X4A6	3	4	2	693.0 (314.34)	13 / 30	16kVA
S5KB8X5A6	3	5	2	758.0 (343.82)	19 / 42	16kVA
S5KB8X6A6	3	6	2	878.0 (398.25)	25 / 52	16kVA
S5KB8X7A6	3	7	2	943.0 (427.74)	30 / 62	16kVA
S5KB8X8A6	3	8	2	1008.0 (457.22)	38 / 75	12kVA
S5KB8X9A6	3	9	2	1073.0 (486.70)	43 / 92	N/A

Notes: (Apply to all 12 Module Tables)

- Full redundant units include one redundant battery module. Back-up given does not include this extra module, so actual achieved Back-up will be longer than published.
- The S5K modulars are easily upgraded by adding extra battery and/or power modules as long as the number of modules (battery plus power) does not exceed the number of modules the enclosure is designed to contain.
  - Control modules do not count toward the 8 module max. (2 max control modules per system).
  - There must be at least one battery module per power module installed.

## Enclosure Selection Chart: Chassis B: 12 Module, 12 and 16 kVA

System Model Number	Qty of Power Modules Included	Qty of Battery Modules Included	Qty of System Control Modules Included	Unit Weight lbs (kg)	Back-up Full/Half Load (minutes)	Maximum Upgrade <sup>2</sup>
<b>12 kVA / 8.4kW</b>						
S5KB12N3A6	3	3	1	678.0 (307.54)	7 / 19	16kVA
S5KB12N4A6	3	4	1	743.0 (337.02)	11 / 27	16kVA
S5KB12N5A6	3	5	1	808.0 (366.50)	15 / 34	16kVA
S5KB12N6A6	3	6	1	873.0 (396.00)	18 / 41	16kVA
S5KB12N7A6	3	7	1	938.0 (425.47)	24 / 50	16kVA
S5KB12N8A6	3	8	1	1003.0 (454.95)	27 / 58	16kVA
S5KB12N9A6	3	9	1	1068.0 (484.44)	29 / 63	N/A
<b>Redundant (power &amp; control only)</b>						
S5KB12R3A6	4	3	2	709.0 (321.60)	7 / 19	16kVA
S5KB12R4A6	4	4	2	774.0 (351.08)	11 / 27	16kVA
S5KB12R5A6	4	5	2	839.0 (380.56)	15 / 34	16kVA
S5KB12R6A6	4	6	2	904.0 (410.05)	18 / 41	16kVA
S5KB12R7A6	4	7	2	969.0 (439.53)	24 / 50	16kVA
S5KB12R8A6	4	8	2	1034.0 (469.01)	27 / 58	N/A
<b>Full Redundant (battery, power &amp; control)<sup>1</sup></b>						
S5KB12X4A6	4	4	2	719.0 (326.13)	7 / 19	16kVA
S5KB12X5A6	4	5	2	839.0 (380.56)	11 / 27	16kVA
S5KB12X6A6	4	6	2	904.0 (410.05)	15 / 34	16kVA
S5KB12X7A6	4	7	2	969.0 (439.53)	18 / 41	16kVA
S5KB12X8A6	4	8	2	1034.0 (469.01)	24 / 50	N/A
<b>16 kVA / 11.2kW</b>						
S5KB16N4A6	4	4	1	769.0 (348.81)	7 / 19	N/A
S5KB16N5A6	4	5	1	834.0 (378.30)	11 / 27	N/A
S5KB16N6A6	4	6	1	899.0 (407.78)	15 / 34	N/A
S5KB16N7A6	4	7	1	964.0 (437.26)	16 / 38	N/A
S5KB16N8A6	4	8	1	1029.0 (466.75)	19 / 43	N/A
<b>Redundant (power &amp; control only)</b>						
S5KB16R4A6	5	4	2	800.0 (362.87)	7 / 19	N/A
S5KB16R5A6	5	5	2	865.0 (392.36)	10 / 25	N/A
S5KB16R6A6	5	6	2	930.0 (421.84)	12 / 30	N/A
S5KB16R7A6	5	7	2	995.0 (451.32)	16 / 38	N/A
<b>Full Redundant (battery, power &amp; control)<sup>1</sup></b>						
S5KB16X5A6	5	5	2	865.0 (392.36)	7 / 19	N/A
S5KB16X6A6	5	6	2	930.0 (421.84)	10 / 25	N/A
S5KB16X7A6	5	7	2	995.0 (451.32)	12 / 30	N/A

Notes: (Apply to all 12 Module Tables)

1. Full redundant units include one redundant battery module. Back-up given does not include this extra module, so actual achieved Back-up will be longer than published.
2. The S5K modulars are easily upgraded by adding extra battery and/or power modules as long as the number of modules (battery plus power) does not exceed the number of modules the enclosure is designed to contain.
  - Control modules do not count toward the 8 module max. (2 max control modules per system).
  - There must be at least one battery module per power module installed.



## Enclosure Selection Chart: Chassis C: 12 Module, 12, 16 and 20 kVA

System Model Number	Qty of Power Modules Included	Qty of Battery Modules Included	Qty of System Control Modules Included	Unit Weight lbs (kg)	Back-up Full/Half Load (minutes)	Maximum Upgrade <sup>2</sup>
<b>12 kVA / 8.4 kW</b>						
S5KC12N3A6	3	3	1	744.0 (337.47)	7 / 19	20 kVA
S5KC12N4A6	3	4	1	809.0 (366.96)	12 / 24	20 kVA
S5KC12N5A6	3	5	1	874.0 (396.44)	16 / 36	20 kVA
S5KC12N6A6	3	6	1	939.0 (425.92)	20 / 43	20 kVA
S5KC12N7A6	3	7	1	1004.0 (455.41)	24 / 51	20 kVA
S5KC12N8A6	3	8	1	1069.0 (484.89)	28 / 60	16 kVA
S5KC12N9A6	3	9	1	1134.0 (514.37)	32 / 68	N/A
<b>Redundant (power &amp; control only)</b>						
S5KC12R3A6	4	3	2	775.0 (351.53)	7 / 19	20 kVA
S5KC12R4A6	4	4	2	846.0 (383.74)	12 / 24	20 kVA
S5KC12R5A6	4	5	2	905.0 (410.50)	16 / 36	20 kVA
S5KC12R6A6	4	6	2	970.0 (439.98)	20 / 43	20 kVA
S5KC12R7A6	4	7	2	1035.0 (469.47)	24 / 51	16 kVA
S5KC12R8A6	4	8	2	1100.0 (498.95)	28 / 60	N/A
<b>Full Redundant (battery, power &amp; control)<sup>1</sup></b>						
S5KC12X4A6	4	4	2	840.0 (381.02)	7 / 19	20 kVA
S5KC12X5A6	4	5	2	905.0 (410.50)	12 / 24	20 kVA
S5KC12X6A6	4	6	2	970.0 (439.98)	16 / 36	20 kVA
S5KC12X7A6	4	7	2	1035.0 (469.47)	20 / 43	16 kVA
S5KC12X8A6	4	8	2	1100.0 (498.95)	24 / 51	N/A

Notes: (Apply to all 12 Module Tables)

- Full redundant units include one redundant battery module. Back-up given does not include this extra module, so actual achieved Back-up will be longer than published.
- The S5K modulars are easily upgraded by adding extra battery and/or power modules as long as the number of modules (battery plus power) does not exceed the number of modules the enclosure is designed to contain.
  - Control modules do not count toward the 8 module max. (2 max control modules per system).
  - There must be at least one battery module per power module installed.

## Enclosure Selection Chart: Chassis C: 12 Module, 12, 16 and 20 kVA

System Model Number	Qty of Power Modules Included	Qty of Battery Modules Included	Qty of System Control Modules Included	Unit Weight lbs (kg)	Back-up Full/Half Load (minutes)	Maximum Upgrade <sup>2</sup>
<b>16 kVA / 11.2 kW</b>						
S5KC16N4A6	4	4	1	835.0 (378.75)	7 / 19	20 kVA
S5KC16N5A6	4	5	1	900.0 (408.23)	9 / 25	20 kVA
S5KC16N6A6	4	6	1	965.0 (437.72)	13 / 31	20 kVA
S5KC16N7A6	4	7	1	1030.0 (467.20)	17 / 37	20 kVA
S5KC16N8A6	4	8	1	1095.0 (496.68)	19 / 43	N/A
<b>Redundant (power &amp; control only)</b>						
S5KC16R4A6	5	4	2	866.0 (392.81)	7 / 19	20 kVA
S5KC16R5A6	5	5	2	931.0 (422.29)	9 / 25	20 kVA
S5KC16R6A6	5	6	2	996.0 (451.78)	13 / 31	20 kVA
S5KC16R7A6	5	7	2	1061.0 (481.26)	17 / 37	N/A
<b>Full Redundant (battery, power &amp; control) <sup>1</sup></b>						
S5KC16X5A6	5	5	2	931.0 (422.29)	7 / 19	20 kVA
S5KC16X6A6	5	6	2	996.0 (451.78)	9 / 25	20 kVA
S5KC16X7A6	5	7	2	1061.0 (481.26)	13 / 31	N/A
<b>20 kVA / 13 kW</b>						
S5KC20N5A6	5	5	1	926.0 (420.03)	7 / 19	N/A
S5KC20N6A6	5	6	1	991.0 (449.51)	9 / 24	N/A
S5KC20N7A6	5	7	1	1056.0 (479.00)	12 / 29	N/A
<b>Redundant (power &amp; control only)</b>						
S5KC20R5A6	6	5	2	957.0 (434.09)	7 / 19	N/A
S5KC20R6A6	6	6	2	1033.0 (468.56)	9 / 24	N/A
<b>Full Redundant (battery, power &amp; control) <sup>1</sup></b>						
S5KC20X6A6	6	6	2	1022 (463.57)	7 / 19	N/A

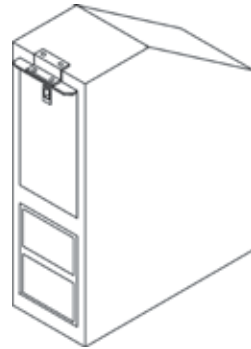
Notes: (Apply to all 12 Module Tables)

1. Full redundant units include one redundant battery module. Back-up given does not include this extra module, so actual achieved Back-up will be longer than published.
2. The S5K modulars are easily upgraded by adding extra battery and/or power modules as long as the number of modules (battery plus power) does not exceed the number of modules the enclosure is designed to contain.
  - Control modules do not count toward the 8 module max. (2 max control modules per system).
  - There must be at least one battery module per power module installed.

**Maintenance Bypass Options**

The S5K Modular Series Maintenance Bypass Cabinet provides complete "wrap around" protection and allows the UPS to be pulled from service without interrupting power to the loads.

The Maintenance Bypass Cabinet controls are located behind a lockable front panel to provide operation security. Controls include a manual bypass transfer switch, UPS input disconnect switch, and a branch rated output circuit breaker. Indicator lamps provide visual confirmation that the UPS input, UPS output, and bypass source are available. Models are available with and without an isolation transformer in the bypass path. The Maintenance Bypass with Transformer option provides isolation in the bypass path as well as flexibility with utility voltages. The transformer provides simultaneous output voltages of 120/120/208/240 V regardless of whether the input voltage is 208 or 240 V.



Front View

The Maintenance Bypass ships on a wooden pallet with a metal pull out ramp. The bypass cabinet includes casters and leveling feet as well as floor mounting brackets (brackets are used to secure bypass cabinet to pallet during shipping).

The Maintenance Bypass has a two year parts and labor warranty. Basic start-up is included, if the bypass cabinet is purchased at the same time as the S5K Modular UPS. Start-up of the Maintenance Bypass must occur at the same time as start-up of the UPS.

The S5KMBS-00-ISO hardwired Maintenance Bypass can be reconfigured by removing the provided plates and adding the Receptacle Kit options. The S5KMBS-00-ISO has 8 blank plates. Each plate can be removed and a Receptacle Kit option installed by a qualified electrician or electrical contractor. The hardwired output provision may also be removed adding slots for two (2) more Receptacle Kits (for a total of 10 Kits Maximum per MBS). Reassembled configurations are available for those who would prefer the MBS arrive with any needed receptacles already installed. Contact your local SolaHD Sales Representative for details.

**MBS Wiring Kit Options**

Optional wiring kits include all necessary conduit, wiring and conduit fittings to make the input and output connections between the UPS and the Maintenance Bypass.

Catalog Number	Description (right or left side as viewed from front)
S5KWKITR	Bypass without transformer, mounted on right of UPS
S5KWKITL	Bypass without transformer, mounted on left of UPS
S5KWKITR-ISO	Bypass with transformer, mounted on right of UPS
S5KWKITL-ISO	Bypass with transformer, mounted on left of UPS

**Maintenance Bypass Switch (MBS)**

Catalog Number	Description	Dimensions (H x W x D) – in (mm)	Weight (lbs/kg)
<b>Hardwired MBS</b>			
S5KMBS-00-ISO	Hardwired Bypass with 120/120/208/240 V output with isolation transformer	30.40 x 9.50 x 26.50 (772.0 x 241.0 x 673.1)	300.0 (136.00)
S5KMBS-00 *	Hardwired Bypass with 208 or 240 V output (does not support 120 V loads)		
S5KMBS-C0-ISO	Hardwired Bypass with 120/120/208/240 V output with 20 kVA isolation transformer		
S5KMBS-C0*	Hardwired Bypass with 208 or 240 V output		
<b>MBS with pre-configured distribution options</b>			
S5KMBS-01-ISO	Bypass with 120/120/240 V output with isolation transformer & the following receptacle options: (10) Duplex 5-15R	30.40 x 9.50 x 26.50 (772.0 x 241.0 x 673.1)	300.0 (136.00)
S5KMBS-02-ISO	Bypass with 120/120/240 V output with isolation transformer & the following receptacle options: (6) Duplex 5-15R (2) Duplex 5-20R (1)L14-30R 120/120/240 V		
S5KMBS-03-ISO	Bypass with 120/120/240V output with the following receptacle options: (4) Duplex 5-20R (2) L5-20R (2) L6-20R - 240 V (2) L6-30R - 240		

\* Note: Unit does not include an isolation transformer and does not support 120V loads.

## Receptacle Kit Options (max qty 10 per MBS)

Catalog Number	Description
S5K120HW15KIT	Hardwire kit, 120 V, 15A (1) Pole Breaker, ½" & ¾" knockout
S5K208HW15KIT	Hardwire kit, 208 V, 15A (2) Pole Breaker, ½" & ¾" knockout
S5K240HW15KIT	Hardwire kit, 240 V, 15A (2) Pole Breaker, ½" & ¾" knockout
S5K515R2KIT	Duplex NEMA 5-15R Receptacle Kit
S5KL515RKIT	Duplex NEMA L5-15R Receptacle Kit
S5K615R2KIT208	NEMA 6-15R 208 Vac Receptacle Kit
S5K615R2KIT240	NEMA 6-15R 240 Vac Receptacle Kit
S5KL615R2KIT208	NEMA L6-15R 208 Vac Receptacle Kit
S5KL615R2KIT240	NEMA L6-15R 240 Vac Receptacle Kit
S5K120HW20KIT	Hardwire kit, 120 V, 20A (1) Pole Breaker, ½" & ¾" knockout
S5K208HW20KIT	Hardwire kit, 208 V, 20A (2) Pole Breaker, ½" & ¾" knockout
S5K240HW20KIT	Hardwire kit, 240 V, 20A (2) Pole Breaker, ½" & ¾" knockout
S5K520R2KIT	Duplex NEMA 5-20R Receptacle Kit
S5KL520RKIT	NEMA L5-20R Receptacle Kit
S5KL620RKIT208	NEMA L6-20R 208 Vac Receptacle Kit
S5KL620RKIT240	NEMA L6-20R 240 Vac Receptacle Kit
S5KL1420RKIT	NEMA L14-20R 120/120/240 Receptacle Kit
S5K120HW30KIT	Hardwire kit, 120 V, 30A (1) Pole Breaker, ½" & ¾" knockout
S5K208HW30KIT	Hardwire kit, 208 V, 30A (2) Pole Breaker, ½" & ¾" knockout
S5K240HW30KIT	Hardwire kit, 240 V, 30A (2) Pole Breaker, ½" & ¾" knockout
S5KL530RKIT	NEMA L5-30R Receptacle Kit
S5KL630RKIT208	NEMA L6-30R 208 Vac Receptacle Kit
S5KL630RKIT240	NEMA L6-30R 240 Vac Receptacle Kit
S5KL1430RKIT	NEMA L14-30R 120/120/240 Receptacle Kit

## External Battery Options \*

Catalog Number	Number of Battery Modules	Shipping Weight – lbs (kg)
S5KD00B1200	12	1107.0 (502.13)
S5KD00B1100	11	1041.0 (472.19)
S5KD00B1000	10	975.0 (442.25)
S5KD00B0900	9	909.0 (412.32)
S5KD00B0800	8	843.0 (382.38)
S5KD00B0700	7	777.0 (352.44)
S5KD00B0600	6	711.0 (322.50)
S5KD00B0500	5	645.0 (292.57)
S5KD00B0400	4	579.0 (262.63)
S5KD00B0300	3	513.0 (232.69)
S5KD00B0200	2	447.0 (202.75)
S5KD00B0100	1	381.0 (172.82)
<b>Pluggable Cables for Extended Battery Options</b>		
S5KEXTBC3	3 ft. pluggable battery cable for connection between extended battery cabinet and UPS	
S5KEXTBC15	15 ft. pluggable battery cable for connection between extended battery cabinet and UPS	
S5KEXLBCKIT	External battery cable adapter (allows hardwire of up to 25 ft. of customer supplied battery cable and conduit, (2) required for use with extended battery cabinet	

\* Pluggable cables for external battery options.

## Optional Equipment

Expansion Module Options		
Catalog Number	Description	Approx. Ship Weight – lbs (kg)
S5K4KPWR	4 kVA / 2.8 kW Power Module	30.0 (13.61)
S5KBATT	Battery Module	70.0 (31.75)
S5KCNTRL	Control Module	7.0 (3.17)
Catalog Number	Description	
Communication Options		
S5KSNMP	Ethernet communications kit, (Supports SNMP, HTTP & OCP) includes SNMP hardware, MIB, configuration cable and installation manual.	
S5KIS-RELAY	Relay contact board, relay contact signals for "On Battery", "Low Battery", "On Bypass", "On UPS", "Summary Alarm" and "UPS Fault".	
S5KREPOKIT	Remote Emergency Power Off Kit includes 50' length of cable with connector to UPS and external push button switch.	
External Battery Connections		
S5KEXTBC3	3 ft. Battery Connection Cable	
S5KBATKIT	Battery Connection Kit allows up to 25' or customer supplied cable and conduit.	