

S5KC Modular Series On-Line Uninterruptible Power Systems (UPS)

The S5KC Modular UPS is scalable from 5 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 S5KC Modular UPS also has the ability to be easily upgraded in the field to either higher VA ratings (up to 20 kVA maximum), longer back-ups time or to add N+x parallel redundancy. Configurations can be cost-effectively upgraded keeping your S5KC Modular UPS 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 5 kVA power modules, LCD display, battery modules and system control modules, can be hot-swapped making it easy to increase power, extend your back-up time 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

With multiple standard options in a smaller footprint, providing more flexibility for capacity and communication both pre- and post-installation, the S5KC delivers the power protection needs in applications such as

- Oil and Gas (Pure OEMs)
- Pharmaceutical
- Automotive
- Food & Beverage

Features

- Module level redundancy provides multiple layers of protection to ensure your machine has the power it needs to run safely with no single point of failure, critical loads continue to run on conditioned battery power even if a system component malfunctions.
- An industry leading 0.9 power factor keeps machines performing flawlessly when running on battery power.
- Superior overload capabilities deliver conditioned power during temporary power anomalies without unnecessarily transferring to and from bypass power.



- Independently controlled maintenance bypass is designed to provide maximum system availability to critical equipment by allowing transfer of connected equipment to an alternate power path. The UPS can then be turned Off and removed from service with no interruption of power to connected equipment.
- True on-line double conversion with a large input voltage range (low line transfer down to 110 Vac) isolates sensitive equipment from power fluctuations while minimizing transfers to increase battery life.
- ENERGY STAR® qualified UPS models – UPS products meeting the EPA's requirements use an average of 35% less energy than their standard counterparts.
- To enhance the availability and trouble-free operation, every pre-configured S5KC UPS arrives standard with one IS-UNITY-DP communications card installed. Enabling you to take advantage of the remote monitoring and diagnostic service available with your system during your initial standard warranty period.
- Start-up services available, contact your local SolaHD sales representative for details.

Certifications and Compliances

All Models

- Energy Star models: S5KC-A, S5KC-B, S5KC-C (except 5 kVA), S5KC-D (except 5 kVA), S5KC-E, S5KC-F:
- Listed, UPS Equipment
 - UL 1778, Fourth Edition
 - CSA C22.2 No. 107.3
- ABS Type Approved
- RoHS Compliant

Series S5KCA, S5KCB, S5KCC, S5KCD

- (Low Voltage and EMC Directive)
 - EN62040-1, EN62040-2
- EAC: TR CU 004/2011 - Technical Regulation of Custom Union "On the safety of low-voltage equipment"

Chassis Selection

The S5KC Modular UPS system has multiple chassis available to build on:

Select the proper chassis based on your applications current and future need for expansion. Also consider if redundancy will be required for your application then consider your application power and location wiring needs. To help with selecting the appropriate chassis series, we have provided a useful selection flow chart to guide you to an appropriate chassis series for your needs.

Steps to Selection

1. Determine the maximum kVA you will need for future expansion.
2. Determine the kVA and run time value for your immediate need.
3. Using the flow chart to the right, determine the voltage, phase configuration and chassis requirements.
4. Determine if you need redundancy. If the exact run time is critical and you are not sure which unit is appropriate, please contact our technical support team to aid in selection.
5. Select the unit that meets both your immediate requirements, and is expandable to your future needs. Each chassis will have a "Maximum Upgrade" capacity. The Maximum Upgrade is the highest kVA expansion that particular configuration is capable of without removing any of the battery modules from the original configuration.
6. External Battery Cabinets (EBC). Depending on extended run-times desired or your location's spacing requirements, you may be able to add an optional EBC to extend your run-time.
7. Optional External Maintenance Bypass (EMB) or other available accessories. Review your application's current and future needs and consider all functional options including filters and spare modules if desired.

Which Product Do I Select?

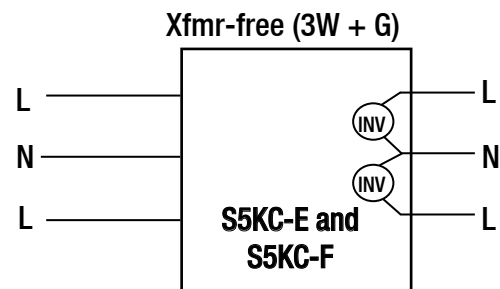
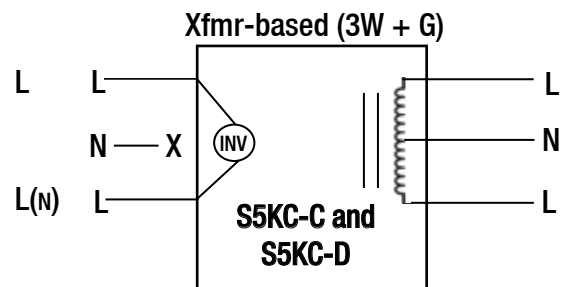
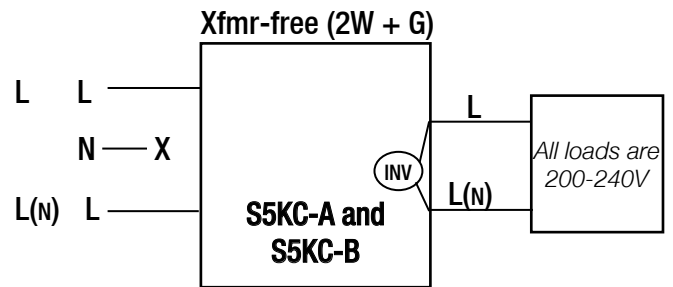
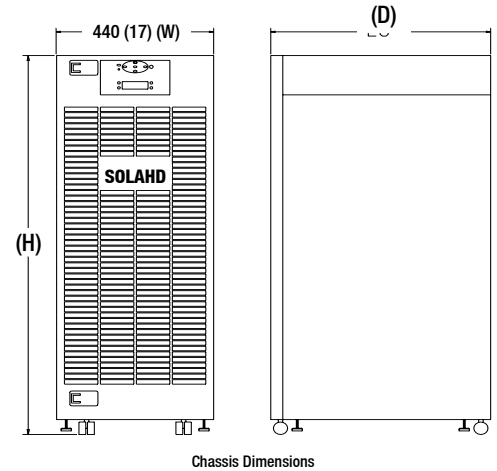


Table 16: Specifications

		10 Bay (A)	16 Bay (B)	12 Bay (C)	16 Bay (D)	10 Bay (E)	16 Bay (F)
		Xfmr-free		Xfmr-based		Xfmr-free dual inverter	
Capacity		15 kVA	20 kVA	15 kVA	20 kVA	15 kVA	20 kVA
		13.5 kW	18 kW	13.5 kW	18 kW	13.5 kW	18 kW
General and Environment							
Conducted and radiated EMC levels	IEC/EN/AS 62040-2 Cat 2, CISPR22 Class A, FCC Part 15 Class A						
Compliant immunity standards	IEC/EN/AS 61000-4-2, 3, 4, 5, 6						
Environmental	WEEE and ROHS2 (6 by 6), REACH Compliant						
ENERGY STAR® qualified	Yes All Models	Yes All Models	Yes 10, 15, 20 kVA	Yes 10, 15, 20 kVA	Yes All Models	Yes All Models	Yes All Models
Dimensions — mm (in) & Weight kg (lbs)							
Width		440 mm (17 in)	440 mm (17 in)	440 mm (17 in)	440 mm (17 in)	440 mm (17 in)	440 mm (17 in)
Depth		800 mm (32 in)	850 mm (34 in)	800 mm (32 in)	850 mm (34 in)	800 mm (32 in)	850 mm (34 in)
Height		695 mm (27 in)	970 mm (38 in)	1060 mm (42 in)	1240 mm (49 in)	695 mm (27 in)	970 mm (38 in)
Weight (frame rating populated)	Unit Weight	256 kg (565 lbs)	318 kg (700 lbs)	361 kg (795 lbs)	417 kg (920 lbs)	256 kg (565 lbs)	318 kg (700 lbs)
	Shipping Weight	274 kg (605 lbs)	336 kg (740 lbs)	379 kg (835 lbs)	435 kg (960 lbs)	274 kg (605 lbs)	336 kg (740 lbs)
Environmental							
Operating temperature	0 °C - 40 °C (32 °F - 104 °F)						
Relative humidity	0 - 95%, non-condensing						
Altitude	3000 m (10000 ft) @ 25°C (77°F)						
Efficiency (AC-AC)	91.8-92.0%	91.6-92.0%	88.5-89.9%	88.6-89.7%	90.4-91.0%	90.0-91.0%	90.0-91.0%
Heat dissipation	4208 BTU / Hr	5747 BTU / Hr	5528 BTU / Hr	7965 BTU / Hr	4904 BTU / Hr	6768 BTU / Hr	6768 BTU / Hr
Input Data							
Nominal input voltage	200/208/220/230/240 Vac; Single Phase				200/100, 208/120, 220/110, 230/115, 240/120 Vac; Single Phase		
	380/400/415 Vac; 3 Phase		Not Applicable				
Input Voltage Range	The input voltage range based on the output loading, refer to User Manual						
Power Factor	Single-phase input, > 0.99 Cos; three-phase input, > 0.95 Cos			Single-phase input, > 0.99 Cos			
Input Frequency Range	40 Hz to 70 Hz auto-sensing						
Battery Module							
Battery capacity	36W @ 15min-rate to 1.67V per cell @ 25°C (77°F)						
Battery Back-up Time (full load)	5 minutes (for non-redundant system which has equal number of battery strings and power modules)						
Maximum Charge current (full load)	Power module internal charger: 1.8A / Charger module: 10A						
Nominal Voltage	144 VDC						
Recharge time	< 5 hours to 90% capacity (PM internal charger with 1:1 ratio of PM to Battery Strings)						
Output Data							
Output voltage	200/208/220/230/240 Vac; Single Phase		100/100/173/200,110/110/190/220, 115/115/199/230, 120/120/208/240 Vac; Single Phase		200/100, 208/120, 220/110, 230/115, 240/120 Vac; Single Phase		
Voltage regulation	±3%						
Voltage stability (100% step load)	±7%						
Voltage Recovery time	≤ 60 minutes						
Voltage distortion	≤ 3%, linear load						
	≤ 5%, non-linear load		≤ 7%, non-linear load		≤ 5%, non-linear load		
Output frequency	50/60 Hz						
Output overload capability	< 104% continuous						
	105% - 130% for 1 min						
	131% - 150% for 10 sec						
	151% - 200% for 1 sec						
	> 201% for 250 msec						

Table 17: Mechanical Description

Dimension mm (In)		
Chassis	Height (H)	Depth (D)
S5KC-A SERIES	695 (27)	800 (32)
S5KC-B SERIES	970 (38)	850 (34)
S5KC-C SERIES	1060 (42)	800 (32)
S5KC-D SERIES	1240 (49)	850 (34)
S5KC-E SERIES	695 (27)	800 (32)
S5KC-F SERIES	970 (38)	850 (34)



Chassis Designation	Number of Bays	Description
S5KC-A	10 Bay	5-15 kVA, 1PH, Xfmr-free, 200-240 VAC input/output
S5KC-B	16 Bay	5-20 kVA, 1PH, Xfmr-free, 200-240 VAC input/output
S5KC-C	12 Bay	5-15 kVA, 1PH, Xfmr-based, 200-240 VAC input - 200/100-240/120 VAC output
S5KC-D	16 Bay	5-20 kVA, 1PH, Xfmr-based, 200-240 VAC input - 200/100-240/120 VAC output
S5KC-E	10 Bay	5-15 kVA, 2PH, Xfmr-free, 200/100-240/120 VAC input/output
S5KC-F	16 Bay	5-20 kVA, 2PH, Xfmr-free, 200/100-240/120 VAC input/output

S5KC Operating Modes

The S5KC UPS is a true online double-conversion system, having the following operating modes:

- Normal Mode
- Back-up Mode
- Auto Restart Mode
- Bypass Mode

Normal Mode

The power module rectifiers derive power from a utility AC source and supply regulated DC power to the inverter. The module's inverter regenerates precise AC power to supply the connected equipment. The battery charger is in the power module and maintains a float-charge on the batteries of the UPS; additionally, the optional charger module (S5KCCHRGRMOD) can also charge the batteries to maintain a quicker recharge time for long back-up time applications.

Back-up Mode

When AC utility fails, the connected equipment is supplied power by the inverter, which obtains energy from the battery modules. The output power will not be interrupted during the failure or restoration of the AC utility/mains source.

Auto Restart Mode

After a power outage and complete battery discharge, and once AC utility is restored, the UPS will automatically restart and resume supplying power to connected equipment. This feature is enabled at the factory, but can be disabled by the user. The user can also program two auto restart delay settings from the LCD:

- Battery capacity level (%)
- Countdown timer

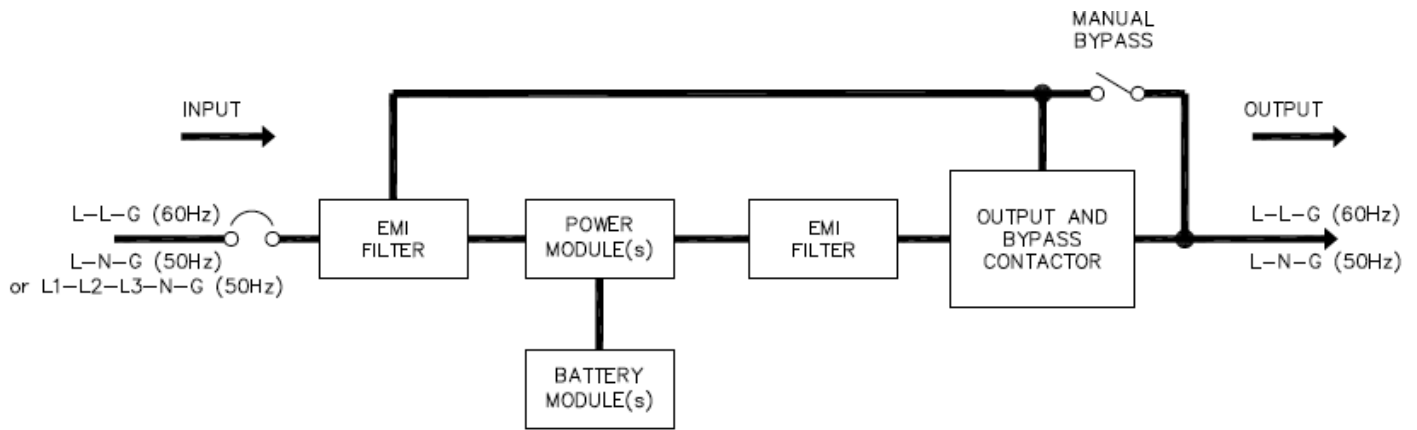
Bypass Mode

The bypass provides an alternate path for power to the connected equipment and operates in the following manner:

- **Automatic:** In the event of an internal fault or should the inverter overload capacity be exceeded, the UPS performs an automatic transfer of the connected equipment from the inverter to the bypass source.
- **Manual:** Should the UPS need to be taken out of service for limited maintenance or repair, manual activation of the bypass will cause an immediate transfer of the equipment from the inverter to the bypass source.

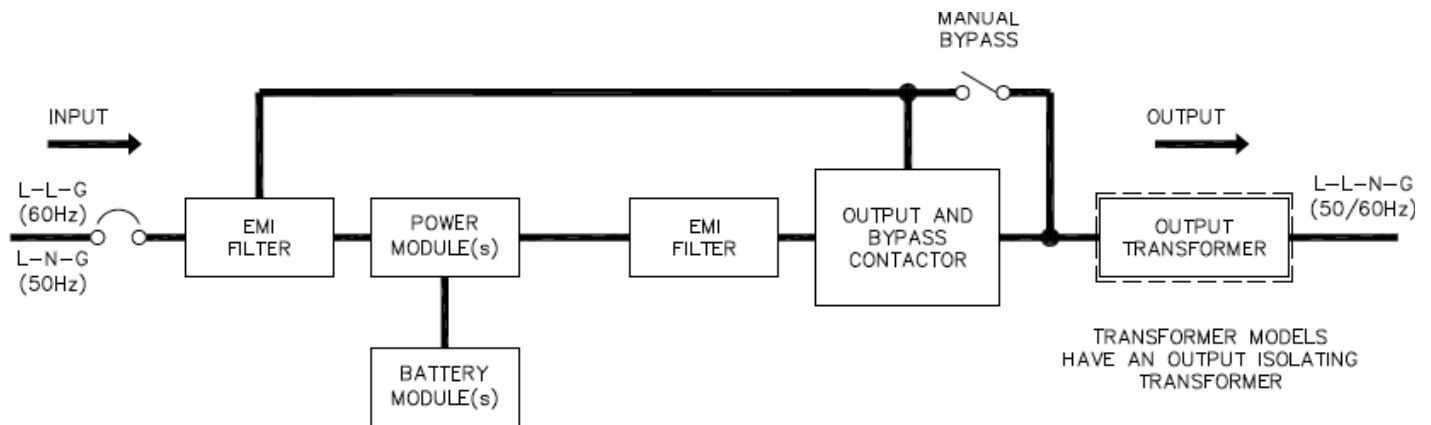
S5KC-A & S5KC-B Frames:

Xfmr-Free



S5KC-C & S5KC-D Frames:

Xfmr-Based



S5KC-E & S5KC-F Frames:

Xfmr-Free

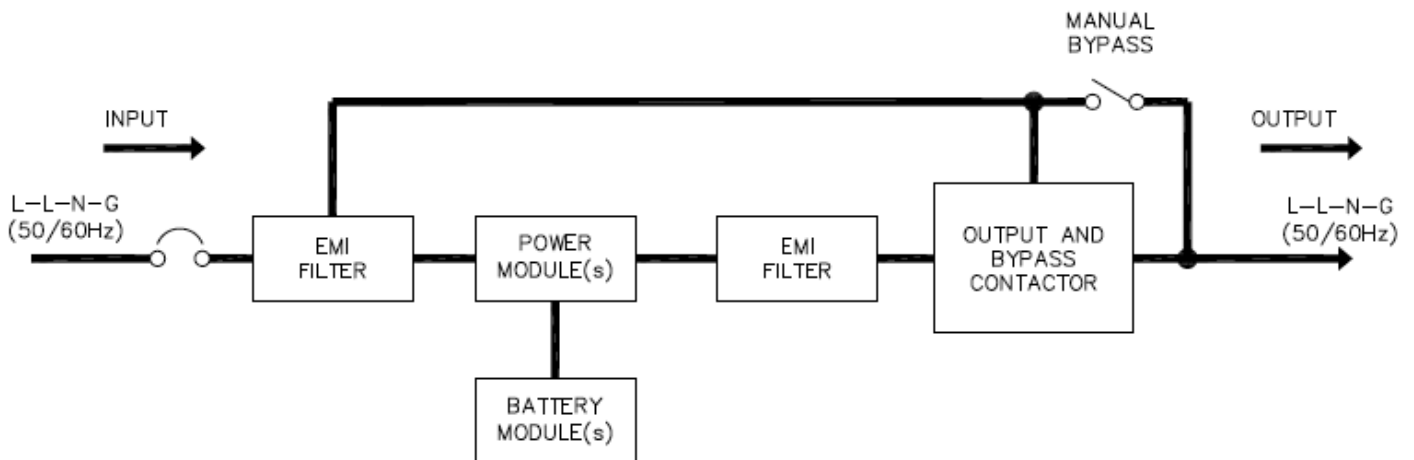


Table 18: Part Number Configuration

The S5KC modular is available in many combinations. Use the part number template below to identify the description of any given part number.

	Frame Configuration Type	System kVA / kW	Number of Charger Modules	System Type	Battery Type and Number Strings
Series Designation	A = 10 Bay, Xfmr Free, 1PH, cULus Listed, GS/CE/C-tick Marked	05A = 5 kVA / 4.5 kW	N = No charger module	N = Non-redundant	NN = None (allows for empty replacement frames to be shipped)
	B = 16 Bay, Xfmr Free, 1PH, cULus Listed, GS/CE/C-tick Marked	10A = 10 kVA / 9 kW	A = 1 charger module	R = Redundant Power and Controls	C1 = 1 String, CSB UPS 12460 F2 FR
	C = 12 Bay Xfmr Based, 1PH, cULus Listed, GS/CE/C-tick Marked	15A = 15 kVA / 13.5 kW		F = Redundant Power, Controls, and Battery	C2 = 2 Strings, CSB UPS 12460 F2 FR
	D = 16 Bay Xfmr Based, 1PH, cULus Listed, GS/CE/C-tick Marked	20A = 20 kVA / 18 kW			C3 = 3 Strings, CSB UPS 12460 F2 FR
	E = 10 Bay, Xfmr Free, 2PH, cULus Listed				C4 = 4 Strings, CSB UPS 12460 F2 FR
	F = 16 Bay Xfmr Free, 2PH, cULus Listed				C5 = 5 Strings, CSB UPS 12460 F2 FR
					C6 = 6 Strings, CSB UPS 12460 F2 FR
					C7 = 7 Strings, CSB UPS 12460 F2 FR

Example: 10 Bay, 1PH, 10 kVA/9 kW, No Charger Module, Non-Redundant, 2 strings, 208V, 60 Hz, L-L-G, No Distribution Slots, Standard Product

S5K	A	10A	A	N	C2
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Configuration Notes:

1. Every pre-configured S5KC UPS arrives standard with one IS-UNITY-DP communications card installed. This allows you to take advantage of the monitoring included with your system during your initial standard warranty period. Start-up services available, contact your local SolahD sales representative for details.
2. "Maximum Upgrade" capacity considerations. The Maximum Upgrade is the highest kVA expansion each configuration will provide without removing any of the battery modules from the original configuration. Please consider your future expansion and redundancy needs.

Output Voltage/ Frequency/Wiring	Distribution Slot 1	Distribution Slot 2	Product Type
A = 200V, 60Hz, L-L-G	N = None	N = None	C = Standard product
B = 220V, 60Hz, L-L-G	1 = (2) L6-30R, (8) 5-15/20R [PD2-101]	1 = (2) L6-30R, (8) 5-15/20R [PD2-101]	
C = 208V, 60Hz, L-L-G	2 = (4) L6-20R, (4) 5-15/20R [PD2-102]	2 = (4) L6-20R, (4) 5-15/20R [PD2-102]	
D = 240V, 60Hz, L-L-G	3 = (4) L6-30R, (4) 5-15/20R [PD2-103]	3 = (4) L6-30R, (4) 5-15/20R [PD2-103]	
E = 200/100V, 60Hz, L-L-N-G	4 = (2) L6-30R, (2) L6-20R, (4) 5-15/20R [PD2-104]	4 = (2) L6-30R, (2) L6-20R, (4) 5-15/20R [PD2-104]	
F = 220/110V, 60Hz, L-L-N-G	5 = (2) L5-30R, (2) L5-20R, (4) 5-15/20R [PD2-105]	5 = (2) L5-30R, (2) L5-20R, (4) 5-15/20R [PD2-105]	
G = 208/120V, 60Hz, L-L-N-G	6 = (4) L6-20R, (4) L5- 20R [PD2-106]	6 = (4) L6-20R, (4) L5- 20R [PD2-106]	
H = 240/120V, 60Hz, L-L-N-G	7 = (4) L5-20R, (4) 5-15/20R [PD2-107]	7 = (4) L5-20R, (4) 5-15/20R [PD2-107]	
J = 220/127V, 60Hz, L-L-N-G	8 = (2) L6-30R, (2) L6- 20R [PD2-108]	8 = (2) L6-30R, (2) L6- 20R [PD2-108]	
	9 = (2) L14-30R [PD2- 109]	9 = (2) L14-30R [PD2- 109]	
	A = (4) IEC320-C19, (4) IEC320-C13 [PD2-200]	A = (4) IEC320-C19, (4) IEC320-C13 [PD2-200]	
	B = (2) IEC320-C19, (8) IEC320-C13 [PD2- 201]	B = (2) IEC320-C19, (8) IEC320-C13 [PD2- 201]	
	C = (12) IEC320-C13 [PD2-202]	C = (12) IEC320-C13 [PD2-202]	
	D = (2) IEC309-32A, (4) IEC320-C13 [PD2-204]	D = (2) IEC309-32A, (4) IEC320-C13 [PD2-204]	
C	N	N	C

Table 19: Basic Recommended Part Numbers (scalable for your application needs)

Back-up time: 5 minutes minimum at full load with 1-battery string per 5 kVA ①

kVA/kW	Non-Redundant Catalog Number	Available Expansion Bays (Total/Power)	Redundant Catalog Number	Available Expansion Bays (Total/Power)
S5KA Xfmr-Free (2W + G)				
5/4.5	S5KA05ANNC1C NNC	7/2	S5KA05ANRC1C NNC	6/2
10/9	S5KA10ANNC2C NNC	5/1	S5KA10ANRC2C NNC	3/1
15/13.5	S5KA15ANNC3C NNC	1/0	S5KA15ANRC3C NNC	0/0
S5KB Xfmr-Free (2W + G)				
5/4.5	S5KB05ANNC1C NNC	13/3	S5KB05ANRC1C NNC	12/3
10/9	S5KB10ANNC2C NNC	10/2	S5KB10ANRC2C NNC	9/2
15/13.5	S5KB15ANNC3C NNC	7/1	S5KB15ANRC3C NNC	6/1
20/18	S5KB20ANNC4C NNC	4/0	S5KB20ANRC4C NNC	3/0
S5KC Xfmr-Based (Input: 2W + G, Output: 3W + G)				
5/4.5	S5KC05ANNC1G NNC	9/2	S5KC05ANRC1G NNC	8/2
10/9	S5KC10ANNC2G NNC	6/1	S5KC10ANRC2G NNC	5/1
15/13.5	S5KC15ANNC3G NNC	3/0	S5KC15ANRC3G NNC	2/0
S5KD Xfmr-Based (Input: 2W + G, Output: 3W + G)				
5/4.5	S5KD05ANNC1G NNC	13/3	S5KD05ANRC1G NNC	12/3
10/9	S5KD10ANNC2G NNC	10/2	S5KD10ANRC2G NNC	9/2
15/13.5	S5KD15ANNC3G NNC	7/1	S5KD15ANRC3G NNC	6/1
20/18	S5KD20ANNC4G NNC	4/0	S5KD20ANRC4G NNC	3/0
S5KE Xfmr-Free (3W + G)				
5/4.5	S5KE05ANNC1G NNC	7/2	S5KE05ANRC1G NNC	6/2
10/9	S5KE10ANNC2G NNC	5/1	S5KE10ANRC2G NNC	3/1
15/13.5	S5KE15ANNC3G NNC	1/0	S5KE15ANRC3G NNC	0/0
S5KF Xfmr-Free (3W + G)				
5/4.5	S5KF05ANNC1G NNC	13/3	S5KF05ANRC1G NNC	12/3
10/9	S5KF10ANNC2G NNC	10/2	S5KF10ANRC2G NNC	9/2
15/13.5	S5KF15ANNC3G NNC	7/1	S5KF15ANRC3G NNC	6/1
20/18	S5KF20ANNC4G NNC	4/0	S5KF20ANRC4G NNC	3/0

Configuration Notes:

1. Voltage Options: Additional Output Voltage Configurations are available. Refer to Table 16 and 18, part number configuration template table. Example: D = 240V, 60Hz, L-L-G ; S5KC05ANN1DN**NNC** is a 240V configuration.
2. Every pre-configured S5KC UPS arrives standard with one IS-UNITY-DP communications card installed. This allows you to take advantage of the monitoring included with your system during your initial standard warranty period. Start-up services available, contact your local SolaHD sales representative for details.
3. Available Expansion Bays (Total/Power) equals the TOTAL available expansion bays still available and POWER is the number of bays that can be used for remaining POWER modules up to the maximum allowed for that configuration. For example: S5KA05ANNC1C**NNC**, has 7 total, 2 power so you can add either 6 battery modules, 1 charging module or 6 battery modules and 2 power modules.
4. Do you require an EBC or MBC? Please refer to configuration table 20 and 21 to build an appropriate part.

① Configurations with run-times in excess of 5 minutes are available, contact Technical Services.

Table 20: External Battery Cabinet (EBC) Part Number Configuration

The S5KC Modular UPS includes internal batteries. Optional, matching external battery cabinets, offer extended battery runtime. Use the part number template below to identify the description of any given part number.



Specifications

Mechanical	
Conducted and Radiated EMC Levels	IEC/EN/AS 62040-2—Class A, FCC Part 15 (Class A)
Safety Standards	IEC/EN/AS 62040-1:2008, UL 1778 4th Ed and CSA 22.2 No. 107.3
Immunity Standards	IEC/EN/AS 61000-4-2, 3, 4, 5, 6 (C-tick)
Transportation	ISTA-1E
Dimensions, WxDxH in (mm)	17x28x38 in (440x712x970 mm)
Unit Weight, lbs (kg)	148 lbs (67 kg)
Shipping Weight, lbs (kg)	209 lbs (95kg)
Environmental	
Operating Temperature °F (°C)	32 °F to 104 °F (0 °C to 40 °C)
Storage Temperature, °F (°C)	Without battery: -4 °F to 140 °F (-20 °C to 60 °C) With battery: 5 °F to 104 °F (-15 °C to 40 °C)
Relative Humidity, %	0 - 95%, non-condensing
Altitude, ft. (m)	10000 ft (3000 m)



Series Designation	Frame Configuration Type	Number of Battery Strings	Battery Manufacturer	Battery Model	Overcurrent Protection	Product Type
		1 = 1 String	C = CSB	XX = CSB UPS 12460 F2 FR	B = Circuit Breaker	C = Standard product
		2 = 2 Strings	N = None (allows for empty replacement frames to be shipped)	NN = None (allows for empty replacement frames to be shipped)		
		3 = 3 Strings				
		4 = 4 Strings				
		5 = 5 Strings				
		6 = 6 Strings				
		7 = 7 Strings				
		N = None (allows for empty replacement frames to be shipped)				
Example: 4 String, CSB, CSB UPS 12460 F2 FR, Circuit Breaker, Standard Product						
S5K	EBC	4	C	XX	B	C

Table 21: Maintenance Bypass Options

The S5KC Modular Series Maintenance Bypass provides maximum system availability to business critical equipment by allowing transfer of connected equipment to an alternate power path allowing full isolation of the UPS for maintenance. The UPS can then be turned Off and removed from service with no interruption of power to connected equipment.



Specifications

Mechanical	
Dimensions, W x D x H, mm (In)	440 x 862 355 mm (17.3 x 33.9 x 14.3 in)
Safety Standards	IEC/EN/AS 62040-1:2008, UL 1778 4th Ed and CSA 22.2 No. 107.3
Transportation	ISTA Procedure 1A
Weight, kg (lbs)	30 kg (66.1 lbs)
Environmental	
Operating Ambient Temperature	0°C to +40°C (32°F to 104°F)
Storage Ambient Temperature	-20°C to +60°C (-4°F to +140°F)
Humidity	0 to 95% non-condensing

Series Designation	Frame Configuration Type	Mounting	Rating	Voltage/Frequency/Wiring	Agency	Distribution Slot 1	Distribution Slot 2	Product Type
		R = Rackmount	1 = 15 kVA, 100A	A = 200V, 60Hz, L-L-G	U = cULus	N = None	N = None	C = Standard product
			2 = 20 kVA, 125A	B = 220V, 60Hz, L-L-G		1 = (2) L6-30R, (8) 5-15/20R [PD2-101]	1 = (2) L6-30R, (8) 5-15/20R [PD2-101]	
				C = 208V, 60Hz, L-L-G		2 = (4) L6-20R, (4) 5-15/20R [PD2-102]	2 = (4) L6-20R, (4) 5-15/20R [PD2-102]	
				D = 240V, 60Hz, L-L-G		3 = (4) L6-30R, (4) 5-15/20R [PD2-103]	3 = (4) L6-30R, (4) 5-15/20R [PD2-103]	
				E = 200/100V, 60Hz, L-L-N-G		4 = (2) L6-30R, (2) L6-20R, (4) 5-15/20R [PD2-104]	4 = (2) L6-30R, (2) L6-20R, (4) 5-15/20R [PD2-104]	
				F = 220/110V, 60Hz, L-L-N-G		5 = (2) L5-30R, (2) L5-20R, (4) 5-15/20R [PD2-105]	5 = (2) L5-30R, (2) L5-20R, (4) 5-15/20R [PD2-105]	
				G = 208/120V, 60Hz, L-L-N-G		6 = (4) L6-20R, (4) L5-20R [PD2-106]	6 = (4) L6-20R, (4) L5-20R [PD2-106]	
				H = 240/120V, 60Hz, L-L-N-G		7 = (4) L5-20R, (4) 5-15/20R [PD2-107]	7 = (4) L5-20R, (4) 5-15/20R [PD2-107]	
				J = 220/127V, 60Hz, L-L-N-G		8 = (2) L6-30R, (2) L6-20R [PD2-108]	8 = (2) L6-30R, (2) L6-20R [PD2-108]	
						9 = (2) L14-30R [PD2-109]	9 = (2) L14-30R [PD2-109]	
						A = (4) IEC320-C19, (4) IEC320-C13 [PD2-200]	A = (4) IEC320-C19, (4) IEC320-C13 [PD2-200]	
						B = (2) IEC320-C19, (8) IEC320-C13 [PD2-201]	B = (2) IEC320-C19, (8) IEC320-C13 [PD2-201]	
						C = (12) IEC320-C13 [PD2-202]	C = (12) IEC320-C13 [PD2-202]	
				D = (2) IEC309-32A, (4) IEC320-C13 [PD2-204]	D = (2) IEC309-32A, (4) IEC320-C13 [PD2-204]			
Example: Rackmount, 15 kVA, 100A, 208V, 60Hz, L-L-G, UL, cUL Listed, No Distribution Slots, Standard Product								
S5K	MBC	R	1	C	U	N	N	C

NOTES:

RM-MBC (Rack Mount - Maintenance By-Pass Cabinet)

Optional Equipment

Catalog Number	Description
Communication Options	
IS-UNITY-DP	IS Communications Card for multiple protocols: BACnet, Modbus, SNMP, Web, YDN23
IS-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.

Optional Equipment

Model Number	Description
S5KCRACKKIT	Rackmount Kit
S5KCEBCCBL1M	EBC Cable 1 meter
S5KCEBCCBL3M	EBC Cable 3 meters
S5KCEBCCBL5M	EBC Cable 5 meters
S5KCLRTCONNKIT	LRT Connector Kit
S5KCLRTTEMPKIT	LRT Temperature Sensor Kit
S5KCCHRRMOD	Charger Module, 10 amps
S5KCEBCCARD	EBC Communication Card
S5KCBATMODCU	Expansion Battery to increase run time. Note: Each kit includes one string (2 modules)

Spare Equipment Parts

Model Number	Description
S5KC5KPWRMOD1	Power Module (PM1), 208/120 VAC, 5 kVA / 4.5kW (E & F Chassis)
S5KC5KPWRMOD2	Power Module (PM2), 230, 208 VAC, 5 kVA / 4.5kW (A, B, C & D Chassis)
S5KCBATMODCU	Replacement Battery Note: Each kit includes one string (2 modules)
S5KCBYPDSPMOD	Bypass DSP Module
S5KCBYPMCUMOD	Bypass MCU Module
S5KCLCDMOD	LCD module
S5KCAFLTRKIT	Air Filter Kit
S5KCAFLTRKIT-FD	Fine Dust Air Filter Kit
S5KCBEZELHMI	Metal HMI Bezel with Display Opening and Filter
S5KCBEZEL	Metal Bezel for Module Bays and Filter

S5KCCHRRMOD, Charger Module

In AC mains mode, the charger module charges the system battery modules or external battery cabinet. Each charger module is rated to deliver 10A charging current. The charger module has an independent control function and maintains real-time communication with the system and the battery modules to ensure stable charging and fault protection.

The charger module may be added or replaced on-line with no interruption or danger to the user, connected battery system or connected equipment.

Example: 10-Bay Configuration
(S5KC Chassis E and F)

S5KC5KPWRMOD1	(P, B, C) *
(P, B, C) *	(P, B, C) *
S5KCBATMODCU	= 2 Modules or 1 string
B **	B **
B **	B **

P = Power module

B = Battery module

C = Charger module

* Where you have an empty spot you can add a power, battery or charger.

** Battery module only.