

## S4K4U-C 6 kVA and S4K6U-C 10 kVA Industrial On-Line UPS

The new SolaHD S4K4U6000C and the S4K6U10KC Industrial UPS Series are the first true On-Line industrial UPS that provide higher output power factor, higher efficiency, flexible output voltage, an integrated maintenance bypass switch and internal batteries all in slim 4U (7.0") and 6U (10.5") enclosures respectively.

The S4K4UC and S4K6UC features true On-Line (double conversion) topology providing the ultimate in protection against a wide range of potential power problems. The S4K4UC 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. The standard maintenance bypass switch provides an additional level of protection.

The S4K4UC and S4K6UC 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.

### Applications

- Industrial Computers
- Robotics and Process Controls
- Industrial Automation Systems
- Network Servers
- Enterprise Telecommunication Systems
- Printing and Publishing Machinery
- Pharmaceutical and Medical Diagnosis Equipment
- Industrial and Commercial Machinery
- Micro-processor Controlled Equipment
- Mission Critical Devices

### Features

- True double conversion topology
- Higher power factor of 0.80 (6kVA) and 0.90 (10kVA)
- 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™ USB and terminal block communication ports
- Compatible with most standby generators
- Two year limited warranty

### Certifications and Compliances

- cULus Listed, UPS Equipment
  - UL 1778
  - CSA C22.2 No. 107.3
- IEEE/ANSI C62.41 Category A & B
- ISTA Procedure 1A

### Related Products

- Portable MCR Power Conditioners
- Surge Protective Devices
- Active Tracking® Filters

## S4K 6 and 10 kVA Specifications

**Table 1: UPS Specifications**

| Parameters                                      | Model Number   |  |
|---|--|--|
|   | S4K4U6000C   | S4K6U10KC  |
| <b>Rating</b>                                   | 4800 W/6000 VA   | 9000 W/10000 VA                                  |
| <b>Dimensions, W x D x H, in. (mm)</b>          |  |  |
| <b>Unit</b>                                     | 6.80 x 26.10 x 16.90 (173.0 x 662.0 x 430.0)   | 10.30 x 26.50 x 16.90<br>(261.0 x 672.0 x 430.0) |
| <b>Shipping</b>                                 | 13.20 x 33.10 x 26.10 (336.0 x 842.0 x 662.0)  | 16.70 x 32.80 x 24.10<br>(424.0 x 832.0 x 612.0) |
| <b>Weight, lbs. (kg)</b>                        |  |  |
| <b>Unit</b>                                     | 56.2 (25.50)   | 78.3 (35.50)                                     |
| <b>Shipping</b>                                 | 70.5 (32.00)   | 92.6 (42.00)                                     |
| <b>Input AC Parameters</b>                      |  |  |
| <b>Nominal Operating Frequency</b>              | 50 or 60 Hz (Factory default is 60 Hz)   |  |
| <b>Factory Default Vac</b>                      | 120/208 Vac @ 120°C  |  |
| <b>L1–L2 Factory Default Input Phase Angle</b>  | 120°C  |  |
| <b>Allowable Input Phase Angle</b>              | 120, 180, 240 degrees; auto-sensing on application of alternating current<br>(Restrictions for L–N voltage other than 120 Vac) |  |
| <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 (Can be modified with configuration program)   |  |
| <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>L1–N, L2–N Maximum Allowable Vac</b>         | 150 Vac  |  |
| <b>Output AC Parameters</b>                     |  |  |
| <b>Factory Default Vac</b>                      | 120/208 Vac @ 120°C  |  |
| <b>L1–L2 Factory Default Output Phase Angle</b> | 120°C  |  |
| <b>Allowable Output Phase Angle</b>             | 120, 180, 240 degrees; auto-sensing on initial application of input alternating current  |  |
| <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, ±2%   |  |
| <b>L1–N, L2–N Overload Rating</b>               |  |  |
| <b>105% to 130%</b>                             | 1 minute   |  |
| <b>131% to 150%</b>                             | 10 seconds   |  |
| <b>151% to 200%</b>                             | 1 second   |  |
| <b>&gt;200% (impact load)</b>                   | At least 5 cycles  |  |

## S4K 6 and 10 kVA Specifications - continued

Table 2: UPS Specifications

| Parameters                        | Model Number  |           |
|-----------------------------------|---|-----------|
|                                   | S4K4U6000C  | S4K6U10KC |
| <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 nominal output voltage |           |
| <b>Disable Bypass Operation</b>   | When the input frequency prevents synchronous operation                 |           |
| <b>Environmental Requirements</b> |   |           |
| <b>Operating Temperature</b>      | 0°C to +40°C; see Table 11 for operating temperature parameters         |           |
| <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. [3,000 m]  |           |
| <b>Audible Noise</b>              | <55 dBA @ 3.2 ft. [1 m] rear; <50 dBA @ 3.2 ft. [1 m] front & sides     |           |
| <b>Standards</b>                  |   |           |
| <b>EMC</b>                        | FCC Part 15, Subpart B, Class A, FCC Class A                            |           |

Table 3: Operating Temperature Parameters

| Ambient Temperature             | Model Number |           |
|---------------------------------|--------------|-----------|
|                                 | S4K4U6000C   | S4K6U10KC |
| pf @ 30°C $\pm 3^\circ\text{C}$ | 0.8 pf       | 0.9 pf    |
| pf @ 40°C $\pm 3^\circ\text{C}$ | 0.8 pf       | 0.8 pf    |

Table 4: Internal Battery Specifications

| Parameters                             | Model Number  |  |
|--|---|--|
|  | S4K144INTBATC   | S4K288INTBATC                                |
| Used with UPS Models                   | S4K4U6000C  | S4K6U10KC                                    |
| <b>Dimensions, W x D x H, in. (mm)</b> |   |  |
| Unit                                   | 2.80 x 19.30 x 8.10 (70.0 x 490.0 x 206.0)                  | 5.30 x 19.70 x 8.10 (135.0 x 500.0 x 207.0)  |
| Shipping                               | 12.20 x 23.70 x 10.30 (310.0 x 602.0 x 262.0)               | 12.20 x 23.90 x 9.50 (310.0 x 607.0 x 242.0) |
| <b>Weight, lbs. (kg)</b>               |   |  |
| Unit                                   | 75.8 (34.40)  | 71.1 (32.30)                                 |
| Shipping                               | 81.1 (36.80)  | 76.4 (34.70)                                 |
| <b>Battery Parameters</b>              |   |  |
| Type                                   | Valve-regulated, non-spillable, flame retardant, lead acid  |  |
| Qty x V x Rating                       | 2 x 6 x 12 V x 8.5 Ah                                       | 2 x 12 x 12 V x 8.5 Ah                       |
| Battery Mfr./Part Number               | CSB type HR1234WF2  |  |
| Backup Time                            | See Table 8   |  |
| Recharge Time                          | 3 hours to 90% capacity after full discharge into 100% load |  |
| <b>Environmental Requirements</b>      |   |  |
| Operating Temperature                  | 0°C to +40°C  |  |
| Storage Temperature                    | -15°C to +50°C  |  |
| Relative Humidity                      | 0% to 95%, non-condensing                                   |  |
| Operating Elevation                    | Up to 10,000 ft. [3,000 m] at +40°C without derating        |  |

Table 5: External Battery Cabinet Specifications

| Parameters                             | Model Number   |   |
|--|--|---|
|  | S4K144BATC   | S4K288BATC                                    |
| Used with UPS Models                   | S4K4U6000C   | S4K6U10KC                                     |
| <b>Dimensions, W x D x H, in. (mm)</b> |  |   |
| Unit (with bezel)                      | 3.30 x 26.10 x 16.90 (85.0 x 662.0 x 430.0)                | 6.80 x 26.50 x 16.90 (173.0 x 672.0 x 430.0)  |
| Shipping                               | 25.80 x 34.30 x 12.30 (655.0 x 872.0 x 312.0)              | 13.20 x 33.10 x 24.50 (336.0 x 842.0 x 622.0) |
| <b>Weight, lbs. (kg)</b>               |  |   |
| Unit                                   | 99.9 (45.30)   | 29.8 (13.50)                                  |
| Shipping                               | 110.2 (50.00)  | 44.1 (20.00)                                  |
| <b>Battery Parameters</b>              |  |   |
| Type                                   | Valve-regulated, non-spillable, flame retardant, lead acid |   |
| Qty x V x Rating                       | 2 x 6 x 12 V x 8.5 Ah                                      | 2 x 12 x 12 V x 8.5 Ah                        |
| Battery Mfr./Part Number               | CSB type 1234WF2   |   |
| Backup Time                            | See Table 8  |   |
| <b>Environmental Requirements</b>      |  |   |
| Operating Temperature                  | 0°C to +40°C   |   |
| Storage Temperature                    | -15°C to +50°C   |   |
| Relative Humidity                      | 0% to 95%, non-condensing                                  |   |
| Operating Elevation                    | Up to 10,000 ft. [3,000 m] at +40°C without derating       |   |

**Table 6: Power Distribution Specifications for S4K4U6000C**

| Parameters                             | Model Number                                |                     |                                       |                         |                        |                          |                          |              |   |  |
|--|---|---------------------|---------------------------------------|-------------------------|------------------------|--------------------------|--------------------------|--------------|---|--|
|  | S4KPAD2-HDWRC                               | S4KPAD2-HDWR-MBSC * | S4KPAD2-001C                          | S4KPAD2-002C            | S4KPAD2-003C           | S4KPAD2-004C             | S4KPAD2-005C             | S4KPAD2-006C | S4KPAD2-L630C                                   |  |
| <b>Dimensions, W x D x H, in. (mm)</b> |   |                     |                                       |                         |                        |                          |                          |              |   |  |
| Unit                                   | 5.20 x 15.50 x 3.50 (132.0 x 393.0 x 88.0)  |                     |                                       |                         |                        |                          |                          |              | 4.70 x 13.20 x 4.10<br>(119.0 x 335.0 x 105.0)  |  |
| Shipping                               | 9.50 x 20.70 x 9.10 (242.0 x 527.0 x 230.0) |                     |                                       |                         |                        |                          |                          |              | 10.20 x 18.40 x 8.70<br>(119.0 x 335.0 x 105.0) |  |
| <b>Weight, lbs. (kg)</b>               |   |                     |                                       |                         |                        |                          |                          |              |   |  |
| Unit                                   | 5.1 (2.30)                                  | 6.0 (2.70)          | 8.8 (4.00)                            | 8.6 (3.90)              | 8.6 (3.90)             | 9.9 (4.50)               | 10.6 (4.80)              | 9.5 (4.30)   | 8.8 (4.00)                                      |  |
| Shipping                               | 7.3 (3.30)                                  | 8.2 (3.70)          | 11.0 (5.00)                           | 10.8 (4.90)             | 10.8 (4.90)            | 12.1 (5.50)              | 12.8 (5.80)              | 11.7 (5.30)  | 11.0 (5.00)                                     |  |
| <b>Electrical Specifications</b>       |   |                     |                                       |                         |                        |                          |                          |              |   |  |
| Amp Rating                             | 30 A 2-pole input breaker                   |                     |                                       |                         |                        |                          |                          |              |   |  |
| Input Power Connections                | Hardwire terminal block 3W + G (L-L-N-G)    |                     | (1) L14-30R on a 300 mm cord          |                         |                        |                          |                          |              | (1) L6-30P                                      |  |
| Output Power Connections               | Hardwire terminal block 3W + G (L-L-N-G)    |                     | (4) 5-20R<br>(1) L14-30<br>(1) L6-30R | (2) 5-20R<br>(2) L6-20R | (4) 5-20R<br>(2) L6-30 | (4) L5-20R<br>(2) L5-30R | (4) L5-20R<br>(2) L6-30R | (4) L6-20R   | (2) L6-20R<br>(2) L6-30R                        |  |

\* Standard on S4K4U6000C units

**Table 7: Power Distribution Specifications for S4K6U10KC**

| Parameters                             | Model Number  |                         |                         |                                       |                                       |                          |
|--|---|-------------------------|-------------------------|---------------------------------------|---------------------------------------|--------------------------|
|  | S4KPAD2-101C  | S4KPAD2-102C            | S4KPAD2-103C            | S4KPAD2-104C                          | S4KPAD2-105C                          | S4KPAD2-106C             |
| <b>Dimensions, W x D x H, in. (mm)</b> |   |                         |                         |                                       |                                       |                          |
| Unit                                   | 7.40 x 5.70 (188.0 x 145.0)                         |                         |                         |                                       |                                       |                          |
| Shipping                               | 11.90 x 20.60 x 8.70 (302.0 x 522.0 x 220.0)        |                         |                         |                                       |                                       |                          |
| <b>Weight, lbs. (kg)</b>               |   |                         |                         |                                       |                                       |                          |
| Unit                                   | 4.4 (2.00)  | 6.6 (3.00)              |                         |                                       | 4.4 (2.00)                            | 6.6 (3.00)               |
| Shipping                               | 6.6 (3.00)  | 8.8 (4.00)              |                         |                                       | 6.6 (3.00)                            | 8.8 (4.00)               |
| <b>Electrical Specifications</b>       |   |                         |                         |                                       |                                       |                          |
| Amp Rating                             | 60 A 2-pole input breaker                           |                         |                         |                                       |                                       |                          |
| Input Power Connections                | Hardwire terminal block 3W + G (L-L-N-G) to chassis |                         |                         |                                       |                                       |                          |
| Output Power Connections               | (2) L6-30<br>(8) 5-20R                              | (4) L6-20R<br>(4) 5-20R | (4) 5-20R<br>(4) L6-30R | (4) 5-20R<br>(2) L6-30R<br>(2) L6-20R | (4) 5-20R<br>(2) L5-30R<br>(2) L5-20R | (4) L6-20R<br>(4) L5-20R |

## S4KC Accessories

## Hardware for Rack Mount (order part number separately)

| Catalog Number         | Description  | Approx. Ship Weight lbs (kg) |
|------------------------|--|------------------------------|
| <b>Rack Slide Kits</b> |  |                              |
| <b>SRS1832</b>         | Rack slide kit for racks with 18-32" deep support rails. | 8 (3.6)                      |

## Optional Equipment

| Catalog Number                | Description   |
|-------------------------------|---|
| <b>Communications Options</b> |   |
| <b>SNMPWEB CARD</b>           | Ethernet communications kit, (Supports SNMP, HTTP and OCP) includes SNMP hardware, MIB, configuration cable and installation manual.  |
| <b>IS-RELAY</b>               | Relay contact board, 2 relay contact signals each independently configured for "On Battery", "Low Battery", "On Bypass", "On UPS", "Summary Alarm" and "UPS Fault" (rated at 24V @ 1 Amp AC or DC). |

## Power A/C Distribution (PAD)

PADs provide output distribution, input connection and a rotary maintenance bypass switch.

The PAD is field installed by the customer and allows the UPS to be removed without interrupting power to the load.

| Catalog Number      | Description  | Series                         |
|---------------------|--|--------------------------------|
| <b>A2D115HW</b>     | 120 Volt, Hardwired for use with 15 Amp Input                                  | S4K2U-C (700 - 1500 VA Models) |
| <b>A2D120HW</b>     | 120 Volt, Hardwired for use with 20 Amp Input                                  | S4K2U-C (2000 VA Model)        |
| <b>A2D130HW</b>     | 120 Volt, Hardwired for use with 30 Amp input                                  | S4K2U-C (3000 VA Model)        |
| <b>A2D220HW5</b>    | 230 Volt, Hardwired for use with 10 Amp input                                  | S4K2U-C (1000-2000 VA Model)   |
| <b>A2D230HW5</b>    | 230 Volt, Hardwired for use with 15 Amp input                                  | S4K2U-C (3000 VA Model)        |
| <b>S4KPAD2-001C</b> | 208/120 V or 240/120 V, Plug-n-Play L14-30P, (4)5-20 (1) L14-30 (1) L6-30R     | S4K4U6000C                     |
| <b>S4KPAD2-002C</b> | 208/120 V or 240/120 V, Plug-n-Play L14-30P, (2) 5-20R, (2) L6-20R             | S4K4U6000C                     |
| <b>S4KPAD2-003C</b> | 208/120 V or 240/120 V, Plug-n-Play L14-30P, (4) 5-20R, (2) L6-30              | S4K4U6000C                     |
| <b>S4KPAD2-004C</b> | 208/120 V or 240/120 V, Plug-n-Play L14-30P, (4) L5-20R, (2) L5-30R            | S4K4U6000C                     |
| <b>S4KPAD2-005C</b> | 208/120 V or 240/120 V, Plug-n-Play L14-30P, (4) L5-20R, (2) L6-30R            | S4K4U6000C                     |
| <b>S4KPAD2-006C</b> | 208/120 V or 240/120 V, Plug-n-Play L14-30P, (4) L6-20R                        | S4K4U6000C                     |
| <b>S4KPAD2-101C</b> | 208/120 V or 240/120 V, Output Distribution, (2) L6-30 (8) 5-20R               | S4K6U10KC                      |
| <b>S4KPAD2-102C</b> | 208/120 V or 240/120 V, Output Distribution, (4) L6-20R, (4) 5-20R             | S4K6U10KC                      |
| <b>S4KPAD2-103C</b> | 208/120 V or 240/120 V, Output Distribution, (4) 5-20R, (4) L6-30R             | S4K6U10KC                      |
| <b>S4KPAD2-104C</b> | 208/120 V or 240/120 V, Output Distribution, (4) 5-20R, (2) L6-30R, (2) L6-20R | S4K6U10KC                      |
| <b>S4KPAD2-105C</b> | 208/120 V or 240/120 V, Output Distribution, (4) 5-20R, (2) L5-30R, (2) L5-20R | S4K6U10KC                      |
| <b>S4KPAD2-106C</b> | 208/120 V or 240/120 V, Output Distribution, (4) L6-20R, (4) L5-20R            | S4K6U10KC                      |

Note: PADs can only be used with units having matching receptacles for the line cords provided.

Table 8: Battery Backup Times

| Number of Batteries/Cabinets                   | Load % of Capacity | Model Rating           |          |
|--|--------------------|------------------------|----------|
|  |                    | 6000 VA                | 10000 VA |
|  |                    | Backup Time in Minutes |          |
| Internal battery                               | 10%                | 94                     | 100      |
|  | 20%                | 43                     | 46       |
|  | 30%                | 26                     | 28       |
|  | 40%                | 17                     | 18       |
|  | 50%                | 13                     | 14       |
|  | 60%                | 10                     | 11       |
|  | 70%                | 8                      | 9        |
|  | 80%                | 6                      | 7        |
|  | 90%                | 5                      | 6        |
|  | 100%               | 4                      | 5        |
| Internal battery + 1 external battery cabinet  | 10%                | 154                    | 159      |
|  | 20%                | 96                     | 102      |
|  | 30%                | 53                     | 65       |
|  | 40%                | 44                     | 46       |
|  | 50%                | 34                     | 37       |
|  | 60%                | 26                     | 28       |
|  | 70%                | 21                     | 23       |
|  | 80%                | 17                     | 18       |
|  | 90%                | 15                     | 16       |
|  | 100%               | 13                     | 14       |
| Internal battery + 2 external battery cabinets | 10%                | 201                    | 210      |
|  | 20%                | 136                    | 141      |
|  | 30%                | 97                     | 103      |
|  | 40%                | 69                     | 74       |
|  | 50%                | 50                     | 52       |
|  | 60%                | 44                     | 46       |
|  | 70%                | 37                     | 40       |
|  | 80%                | 31                     | 34       |
|  | 90%                | 26                     | 28       |
|  | 100%               | 22                     | 25       |
| Internal battery + 3 external battery cabinets | 10%                | 304                    | 310      |
|  | 20%                | 156                    | 160      |
|  | 30%                | 127                    | 133      |
|  | 40%                | 97                     | 103      |
|  | 50%                | 74                     | 79       |
|  | 60%                | 60                     | 65       |
|  | 70%                | 49                     | 51       |
|  | 80%                | 44                     | 46       |
|  | 90%                | 39                     | 42       |
|  | 100%               | 34                     | 37       |



Table 8: Battery Backup Times cont.

| Number of Batteries/Cabinets                   | Load % of Capacity | Model Rating           |          |
|--|--------------------|------------------------|----------|
|  |                    | 6000 VA                | 10000 VA |
|  |                    | Backup Time in Minutes |          |
| Internal battery + 4 external battery cabinets | 10%                | 322                    | 327      |
|  | 20%                | 180                    | 190      |
|  | 30%                | 145                    | 149      |
|  | 40%                | 122                    | 128      |
|  | 50%                | 98                     | 103      |
|  | 60%                | 77                     | 82       |
|  | 70%                | 66                     | 71       |
|  | 80%                | 52                     | 60       |
|  | 90%                | 48                     | 50       |
|  | 100%               | 44                     | 46       |

The factory default is programmed for internal batteries only. Table 8 shows the estimated battery backup times at different loads. The user may specify the number of external battery cabinets attached to the UPS.

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9