

S4K5U-5D 6 kVA International On-Line UPS

Uninterruptible Power Supplies

Series
S4K5U-5D 6 kVA

The SolaHD S4K5U6U5D Industrial On-Line UPS Series is designed for international usage and provides flexible output voltage, an integrated maintenance bypass switch and internal batteries all in a slim 5U (8.7") enclosure. The S4K5U-5D features true On-Line (double conversion) topology providing the ultimate in protection against a wide range of potential power problems. Advanced diagnostics and configuration help to simplify maintenance and troubleshooting allowing the UPS to be serviced by the customer. The standard maintenance bypass switch provides an additional level of protection.

The S4K5U-5D also features 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
- Industrial and Commercial Machinery
- Pharmaceutical and Medical Diagnosis Equipment

Features

- True double conversion topology
- Higher power factor of 1.0
- Configurable as a tower or rack mount model
- High density, 6 kVA in only 5U of rack space
- Easily installed in 18" to 32" deep rack using rack mount kit # SRS1832
- User replaceable, hot-swappable internal battery module
- Matching 3U extended battery cabinets with auto-detection
- Includes both automatic and manual maintenance bypass switch
- Automatic frequency detection of either 60 or 50 Hz
- Power factor correction
- Advanced-diagnostics simplify maintenance and troubleshooting
- Remote Emergency Power Off (REPO)
- Intellislot™, USB, and terminal block communication ports
- Energy Star 2.0 Certified
- Optimized thermal management and variable speed fan for peak efficiency and noise reduction
- Battery health status and replacement date prediction
- Two year limited warranty



Certifications and Compliances

-  UL Recognized Component - IEC62040-1
- EAC: TR CU 004/2011 - Technical Regulation of Custom Union "On the safety of low-voltage equipment"
- ISTA Procedure 1A
- ABS PDA Approval

Related Products

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

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UPS Specifications

Parameters	Model Number: S4K5U6K5D
Rating	6000 VA/6000 W
Dimensions - D x W x H, in. (mm)	
Unit	24.8x16.9x8.5 (630x430x216)
Shipping	32.1x25.4x20.5 (816x646x520)
Weight - lbs. (kg)	
Unit	298 (135.2)
Shipping	325 (147.4)
Input AC Parameters	
Nominal Operating Frequency	50 or 60 Hz (Factory default is 50 Hz)
Factory Default Vac	230 Vac
User-configurable Vac	200/208/220/230/240 VAC (Can be modified using included configuration program)
Operating Voltage Range without Battery Operation	176–280 Vac
Maximum Allowable Vac	288 Vac
Input Frequency without Battery Operation	40–70 Hz
Input Power Connection	Hardwired (PD5-CE6HDWRMBS)
Output AC Parameters	
Factory Default Vac	230 Vac
Output Connections	Hardwired (PD5CE6HDWRMBS)
Frequency	50 or 60 Hz, nominal
Wave form	Sine wave
Main Mode Overload	>150% min 200ms; 125-150% for 60 seconds; 105-125% for 5 minutes; < 105% continuous
Bypass Protection Limits	
Disable Bypass Operation	If input voltage exceeds $\pm 15\%$ of the nominal voltage
Re-enable Bypass Operation	If input voltage returns to within $\pm 10\%$ of nominal output voltage
Disable Bypass Operation	When the input frequency prevents synchronous operation
Environmental Requirements	
Operating Temperature	0°C to +40°C; See Table 12 for Derating Parameters
Storage Temperature	-15°C to +50°C
Relative Humidity	0% to 95%, non-condensing
Operating Elevation	Up to 1,000 m (3,281 ft.) at +30°C without derating
Audible Noise	<55 dBA @ 1 m (3.2 ft.) rear; <50 dBA @ 1 m (3.2 ft.) front & sides
Standards	
EMC	IEC/EN/AS 62040-2 2nd Edition (Cat 2—Table 6); EN61000-4-2, Level 4, Criteria A, EN61000-4-3, Level 3, Criteria A, EN61000-4-4, Level 4, Criteria A, EN61000-4-5, Level 3, Criteria A

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UPS Specifications

Parameters	Model Number: S4K5U6K5D
Agency	
Safety	IEC62040-1:2008 Version
EMI/EMC	IEC/EN/AS 62040-2 2nd Edition (Cat 2—Table 6)
ESD	EN61000-4-2, Level 4, Criteria A
Radiated Susceptibility	EN61000-4-3, Level 3, Criteria A
Electrical Fast Transient	EN61000-4-4, Level 4, Criteria A
Surge Immunity	EN61000-4-5, Level 3, Criteria A
Transportation	ISTA Procedure 1E

Operating Temperature Parameters

Ambient Temperature	Model Number: S4K5U6K5D
32-122 F (0 to 50C)	Output derated by 1% per 1C above 40C

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Internal Battery Specifications

Parameters	Model Number: S4K192INTBATD
Used with UPS Model	S4K5U6K5D
Dimensions - D x W x H, in. (mm)	
Unit	14.0 x 23.0 x 7.0 (355.0 x 584.0 x 177.0)
Shipping	17.0 x 26.0 x 10.0 (431.0 x 660.0 x 254.0)
Weight - lbs. (kg)	
Unit	90.0 (40.8)
Shipping	101.0 (45.8)
Battery Parameters	
Type	Valve-regulated, non-spillable, lead acid
Qty x V x Rating	16 x 12 V x 9.0 Ah
Back-up Time	See Page 6
Recharge Time	3 hours to 90% capacity after full discharge into 100% load
Environmental Requirements	
Operating Temperature	0°C to +40°C; see Table 9
Storage Temperature	-15°C to +50°C
Relative Humidity	0% to 95%, non-condensing
Operating Elevation	Up to 3,000 m (10,000 ft.) at +40°C without derating

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External Battery Cabinet Specifications

Parameters	Model Number: S4K192BATD
Used with UPS Model	S4K5U6K5D
Dimensions - D x W x H, in. (mm)	
Unit (with bezel)	24.8 x 16.9 x 5.1 (630.0 x 430.0 x 130.0)
Shipping	26.4 x 33.0 x 18.3 (670.0 x 840.0 x 465.0)
Weight - lbs. (kg)	
Unit	127.0 (57.6)
Shipping	176.4 (80.0)
Battery Parameters	
Type	Valve-regulated, non-spillable, lead acid
Qty x V	16 x 12 V
Battery Mfr./Part Number	CSB/HR1221WF2 / Yuasa NPH5-12
Back-up Time	See Page 6
Environmental Requirements	
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 1,000 m (3,281 ft.) at +40°C

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Battery Run Time, 6 kVA Models

			Internal Battery Only	Number of External Battery Cabinets									
				1	2	3	4	5	6	7	8	9	10
Load % of Capacity	VA	W	Minutes										
10%	600	600	100	226	357.5	489	621	752.5	884.5	1016	1148	1279.5	1411.5
20%	1200	1200	48	107	172	242	312	382	452	522	592	661.5	731.5
30%	1800	1800	29	70	110	154	201.5	249.5	297.5	345.5	393	411	489
40%	2400	2400	19.5	50.5	81.5	112.5	145	181.5	218	254.5	291	327.5	364
50%	3000	3000	14.5	38.5	63.5	88	113	138.5	168	197	226.5	256	285.5
60%	3600	3600	11	30	51	72	92.5	113.5	134	158.5	183.5	208	232.5
70%	4200	4200	9	24	42	60.5	78	96	113.5	131.5	152.5	173.5	194.5
80%	4800	4800	7.5	20	35.5	51.5	67	82.5	98.5	114	129.5	147.5	166
90%	5400	5400	4	17	30.5	44.5	58.5	72.5	86.5	100.5	114	128	143.5
100%	6000	6000	5.5	14.5	26	39	51.5	64.5	77	89.5	102	114.5	127

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S4KD Accessories

30HWBP2U Power A/C Distribution (PAD)

The SolaHD 30HWBP2U provides an isolated path of power for the UPS system for preventive maintenance or service.

Certifications and Compliances

-  US Listed
 - UL 1778
 - CSA C22.2 No. 107.3
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 - IEC 62040-1
- ISTA Procedure 1A
- ABS Type Approved
- EAC: TR CU 004/2011 - Technical Regulation of Custom Union "On the safety of low-voltage equipment"



Catalog Number	Description	Series
30HWBP2U	120/208/230 Volt, 2U sized, Hardwired for use up to 30 Amp Input	S4K2U-D (120 Vac) and S4K2U-5D (230 Vac) (700-3000 VA Models were applicable) & S4K5U6K5D 6000 VA / 230 Vac

Hardware for Rack Mount (order part number separately)

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

Optional Equipment

Communications Options	
Catalog Number	Description
IS-RELAY	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 24 V @ 1 Amp AC or DC).
IS-UNITY-DP	UNITY card Web, SNMP, Modbus, BACnet (S4KC and S5KC compatible). Protocols: HTTP, HTTPS, Emerson, Remote service Delivery, Email, SMS, SNMP (v1,v2c, v3), BACnet IP / BACnet MSTP and Modbus TCP / Modbus RTU

Note: Additional PADs available on the following page. PADs can only be used with units having matching receptacles for the line cords provided.

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S4KD Accessories

Power A/C Distribution (PAD)

SolaHD 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
A2D115HW	120 Volt, Hardwired for use with 15 Amp Input	S4K2U-D (700 - 1500 VA Models)
A2D120HW	120 Volt, Hardwired for use with 20 Amp Input	S4K2U-D (2000 VA Model)
A2D130HW	120 Volt, Hardwired for use with 30 Amp input	S4K2U-D (3000 VA Model)
S4KPAD2-001C	208/120 V or 240/120 V, Plug-n-Play L14-30P, (4)5-20 (1) L14-30 (1) L6-30R	S4K4U6000D
S4KPAD2-002C	208/120 V or 240/120 V, Plug-n-Play L14-30P, (2) 5-20R, (2) L6-20R	S4K4U6000D
S4KPAD2-003C	208/120 V or 240/120 V, Plug-n-Play L14-30P, (4) 5-20R, (2) L6-30	S4K4U6000D
S4KPAD2-004C	208/120 V or 240/120 V, Plug-n-Play L14-30P, (4) L5-20R, (2) L5-30R	S4K4U6000D
S4KPAD2-005C	208/120 V or 240/120 V, Plug-n-Play L14-30P, (4) L5-20R, (2) L6-30R	S4K4U6000D
S4KPAD2-006C	208/120 V or 240/120 V, Plug-n-Play L14-30P, (4) L6-20R	S4K4U6000D
S4KPAD2-101C	208/120 V or 240/120 V, Output Distribution, (2) L6-30 (8) 5-20R	S4K6U10KD
S4KPAD2-102C	208/120 V or 240/120 V, Output Distribution, (4) L6-20R, (4) 5-20R	S4K6U10KD
S4KPAD2-103C	208/120 V or 240/120 V, Output Distribution, (4) 5-20R, (4) L6-30R	S4K6U10KD
S4KPAD2-104C	208/120 V or 240/120 V, Output Distribution, (4) 5-20R, (2) L6-30R, (2) L6-20R	S4K6U10KD
S4KPAD2-105C	208/120 V or 240/120 V, Output Distribution, (4) 5-20R, (2) L5-30R, (2) L5-20R	S4K6U10KD
S4KPAD2-106C	208/120 V or 240/120 V, Output Distribution, (4) L6-20R, (4) L5-20R	S4K6U10KD

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

Availability, design and specifications are subject to change without notice.
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