

# Sun Star Series 1KVA - 3KVA

## Tower Online UPS 1K-3KVA Li-ion Battery

S - Li (Low Voltage) Series 1KVA - 3KVA (1ph in / 1ph out)

### Key Features:

- **Zero Transfer Time**  
True Double Conversion Online UPS (IEC62040-3: VFI-SS), providing the most comprehensive protection for mission-critical equipment from a wide range of power quality issues.
- **3-level Inverter for the Best Loading Capability**  
3 level inverter topology, supports with extensive range of load, including half-wave rectifier load (blow dryer, Solenoid valves, Laser printer etc.), Induction motors load.
- **High Efficiency**  
With up to 93% efficiency in double conversion online mode and 97% ECO mode.
- **Li-ion Battery Powered**  
Provide up to 3x backup time in 50% dimension, comparing with regular Lead-acid UPS product
- **Dry Contact Control Interface for BMS**  
Incorporated a Dry Contact interface for BMS-oriented control of charging and discharging based on in-depth BMS information.
- **ModBUS interface with BMS**  
Incorporated a ModBUS(RS485) interface with BMS to achieve precise battery information (voltage/soc soh, etc.) or rational UPS & battery pack behaviour coordination and backup time prediction. The ModBUS works with BMS Dry Contact as communication redundancy, avoiding the critical communication crashes caused by any single fault.
- **Li-ion Battery Charger**  
Constant current, Constant voltage, Floating, Turn-Off 4 state charger for Li-ion battery, open to customize the logical behavior for customer- specified battery pack
- **Ultra Wide Input Mains Range**  
Strong compatible with ultra wide electric environment, stay well with ultra wide range mains of 65V~145V, 40~70Hz, dramatically reduce battery discharge, prolong battery life.
- **Best Loading Capability**  
Up to 0.9 Output Power Factor, 50/60 Hz Automatically adapting, selectable voltage, perfectly match all kind of application
- **DSP Digital Control Based**  
Advanced DSP-based digital control brings high performance of high input Power factor, low distortion, supplying the load with perfect sine wave AC power supply.
- **High Input Power Factor**  
Thanks to digital controlled PFC Technology, >0.99 input power factor, effectively avoid power pollution, save energy expense for customer
- **Reliable Design**  
Made with strong Glass fiber base (FR4) double side PCB, company with large span component, greatly improve reliability in harsh environment, Well designed ventilation and conformal coating, avoid dust accumulation, improve resistant to corrosion.
- **Open to Customization**  
Based on powerful controller and open architecture, the product is able to be customized to match need of integration of automatic system or intelligent supervisory system.



# Technical Specification:

Model		S1K-Li (LV)	S1KL-Li (LV)	S2K-Li (LV)	S2KL-Li (LV)	S3K-Li (LV)	S3KL-Li (LV)
Power Rating (VA / W)		1KVA / 900W		2KVA / 1800W		3KVA / 2700W	
Topology		Double Conversion Online UPS					
Phase		Single Phase Input Single Phase Output					
Mains Input	Wiring	1 Phase 3wires ( L / N + PE)					
	Rated Voltage	110 / 115 / 120 / 127VAC					
	Voltage Range	Line-Neutral: 60~145VAC					
	Input Frequency Range	40Hz ~ 70Hz					
	Input Power Factor	≥0.99					
AC Output	Wiring	L / N + PE					
	Output Voltage	110 / 115 / 120 / 127VAC					
	Output Wiring	±1%					
	Output Frequency Range	50 / 60Hz ± 4Hz (Sync Mode) 50 / 60Hz ± 1% (Fix Freq.Mode)					
	Output Waveform	Pure Sine Wave					
	Output Distortion (THDV%)	<2% (Linear Load); <8% (Non-Linear Load)					
	Overload Capability	1 minutes @ 105%~125% Rated Load					
10Sec. @ 125%~150% Rated Load							
0.5Sec. @ >150% Rated Load							
Efficiency	AC / AC Mode	88%		89%		90%	
Battery and Charger	Rated Battery Voltage	51.2 / 48VDC (Default for 16 Cell of LiFePO4 )					
	Battery Capacity	615WH	External Battery Depends	920WH	External Battery Depends	1230WH	External Battery Depends
	Backup Time	>30mins @ Full Load		>20mins @ Full Load		>20mins @ Full Load	
	Backup Time 2 (External Battery Module)	51.2V30AH-90mins 51.2V50AH-150mins 51.2V100AH-300mins @ Full Load		51.2V30AH-45mins 51.2V50AH-75mins 51.2V100AH-150mins @ Full Load		51.2V30AH-30mins 51.2V50AH-50mins 51.2V100AH-10mins @ Full Load	
	Charging Current	1~3K Standard Model with Internal Battery: 4A 1~2K Long Backup Time Model: 4A / 8A(Optional)/ 12A(Optional) 3K Long Backup Time Model: 4A / 8A(Optional)/ 12A(Optional)					
	Charging Voltage	56.8V(default for 16cell of LiFePO4 ) / Customized according to battery request					
	Charger Behavior & Protection	CC./CV./Floating./Turn-Off 4 States 3 Over voltae protection loop, preserve interface for over temperature / over pressure switch off interface					
Machine Size-W*D*H(mm)		190*323*420	145*220*390	190*323*420	145*220*390	190*323*420	190*318*365
Net Weight(KG)		14.8	8.5	17.7	9.1	20.4	9.9
HMI	LCD Display	Mains / Battery Status, Load Level, Battery Level, Operation Mode					
	LCD Display with LED Indicator	Input Mains Voltage, Frequency, Load level, Operation Mode, Health Status, Battery SOC					
	Communication Interfaces	1. RS232 PORT/USB Card (Not HID) 2. Dry Contact Interface for BMS Control 3. ModBUS For BMS Interface					
	Optional Extension Card	1. Network Card: Support SNMP/TCP/IP for remote monitoring the UPS via Smart Phone APP, Web page, PC Monitor Software, Support Server / NAS shutdown 2. RS485-Modbus Card, LAN(TCP IP)-ModBUS Card 3. Mini AS400 Relay Card					
Environment	Temperature Range	-10~50℃					
	Relative Humidity	0~98% (Non Condensing)					
	Audible Noise	<55dB @ 1 meters					

\*Product Specifications are Subject to Change Without Notice.