



SOLARESS



POWER WALL STORAGE SYSTEM

MANAGEMENT

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




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SolarESS SUN10KSG Series



Brief Introduce

-  100% unbalanced output, each phase; Max. output up to 50% rate power
-  DDC couple and AC couple to retrofit existing solar system
-  Max. 16pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
-  Max. charging/discharging current of 240A
-  48V low voltage battery, transfer Isolation design
-  6 time periods for battery charging/discharging
-  Support strong energy from diesel generator



- 3 phase DSP bidirectional inverter with IGBT Technology.
- Transformer less, High efficiency Inverter peak 97% Max.
- LCD display friendly & Easy user operate.
- Built in smart the Energy Management System.(EMS)
- Input power factor more >0.99, AC THDi <5%
- Smart battery charging AC for big battery capacity.
- Low harmonic distortion(THDv) less than 3%
- Output backup Output 220/380Vac, 230/400Vac +/-2% 50Hz +/-1%(EPS mode)
- Support Lithium, AGM, Deep solar cycle, OPzV, OPzS and Flood.
- Advance information and real data of Energy Storage System for analyzer.
- Provide uninterrupted backup load when utility grid is not available.(Stand alone)
- Smart counter battery capacity %SoC, kWh Chg. & Dis. function of Lithium, AGM, Deep cycle, OPzV and OPzS
- Slave PCS unit for configuration upto 14units and One Master
- Settable PCS working 3 mode by EMS2000
 1. Solar hybrid system
 2. Power conversion system(PCS)
 3. Energy Storage System.(ESS)
- Settable EMS operate working.
 1. AC battery charging when Solar or PV on grid large energy.
 2. Battery discharging when Solar or PV on grid small energy.
 3. Zero export battery discharging function. energy.
 4. AC charge and Battery discharge up to 4schedule time

SolarESS SUN10KSG Series

SPECIFICATION

MODEL	SUN06KSG04LP3L-EU	SUN10KSG04LP3L-EU
Power Rating(kVA/kW)	6kVA/6kW	10kVA/10kW
Battery		
Normal Voltage(V)	40-62Vdc	
Max. battery discharge current(A)	200A	210A
Low voltage alarm(V)	44-47Vdc	
High voltage alarm(V)	>60Vdc	
Battery cut off/Reconnect(V)	42Vdc/48Vdc	
AC Input		
Input voltage	380/400V(L-L)	
Input voltage range	285-480V +25/-20%	
Input Phase	3Ph 4wire+PE	
Input frequency	50/60Hz +/-3%	
Input current	220V 18A/230V 17A*3	220V 20A/230V 18.5A*3
Input AC current(THDi)	Grid Tied and AC charging mode<3%	
Adjustable reactive power	-100% to Normal 100%	
Power factor at normal power	Grid Tied and Grid charging	>0.99/1 Leading -1 Lagging
Output Voltage		
Output voltage	380/400V(L-L)	
Output voltage range	380/400V(L-L) +/-2%	
Output frequency	50/60Hz +/- 0.1	
Output current	220V 9.09A*3/230V 8.69A*3	220V:13.63A *3/230V:13.04A*3
Total harmonic distortion(THDv)	<3%	
Voltage response time	0-100% 20ms.	
Overload capability	100% for 30mins., 125% for 1min., 150% for 30sec,	
Transfer time utility to inverter(Backup)	2-10ms.	
Output waveform	Pure Sine Wave	
Standby power consumption	<30W under power supply	
Protection	PV/Battery reverse polarity, PV open circuit Over discharge, Overload, Over current	Anti islanding, AC/DC under/Over protection Over temperature, SPD and AC short circuit
Efficiency inverter peak max.	>97.6%	
Efficiency Mppt Controller max	>99.9%	
Solar PV input		
PV power	7.8kWp	13 kWp
PV open circuit voltage(Voc)	550(160-800Vdc)	
PV Mppt voltage range(Vmp)	200-655Vdc	
PV start voltage(V)	160Vdc	
MPPT/PV current Imp/Isc(A)	2/13A+13A/17A+17A	2/26A+13A/34A+17A
Display LED& LCD	AC, Inv., Chg. Fault, ACPV voltage, Current, kW, Input voltage, Frequency, Current, kW, Output voltage, Frequency, Current, kW, kVA	Output voltage, Frequency, Current, kW, kVA, Battery voltage, current, Overload, Fault status
Alarm	Low battery, Overload, Over Temp., Fault	
Cooling	Automatic smart cooling	
Temperature operation range	-45 to 60°C, >45°C derating	
Humidity	0-100%(Non condensing)	
Physical Dimension(WxHxD)mm	422x720x281	
IP protection	IP65	
Physical Weight (kg)	33.6	
Design regulation	IEC62040, IEE929:2000, IEE 1547:2003	IEC61727, IEC62116, PEA B.E.code 2559

KVLi 48/51.2 100A-LCD

LITHIUM ION PHOSPHATE BATTERY(LiFePO4)



High cycle life

4000 cycles @80% DoD for effectively lower total of ownership cost.

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Longer service life

Low maintenance batteries with stable chemistry

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Built in circuit protection

Battery Management System (BMS) is incorporated against abuse

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Better storage

up to 6 months thanks to its extremely low self discharge (LSD) rate and no risk of sulphation

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Quickly recharge

Save time and increase productivity with less down time thanks to superior charge/discharge efficiency



Extreme heat tolerance

Suitable for use in a wider range of applications where ambient temperature is unusually high: up to +60°C

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Lightweight

Lithium batteries provide more Wh/Kg while also being up to 1/3 the weight of its SLA equivalent

APPLICATIONS

Lithium Iron Phosphate can be used in most applications that use Lead Acid, GEL or AGM type batteries. Suitable applications include:

- Solar Storage
- Switching applications and more
- Base transceiver station
- Communication equipments
- Central office
- Telecommunication systems
- Electronic cash registers
- Microprocessor based office machine
- UPS

CAUTIONS

- Do NOT short circuit, reverse polarity, crush or disassemble.
- Do NOT heat or incinerate.
- Do NOT immerse in any liquid.
- Store at 30~50% SOC. Recharging every 3 months is recommended. The storage area should be clean, cool, dry and ventilated

Performance may vary depending on application. All specifications are subject to change without prior notice to the user. This data is for evaluation purposes only. No guarantee is intended or implied by this data. For clarification and updated information, please contact us.

LITHIUM ION BATTERY KVLi-100A-LCD

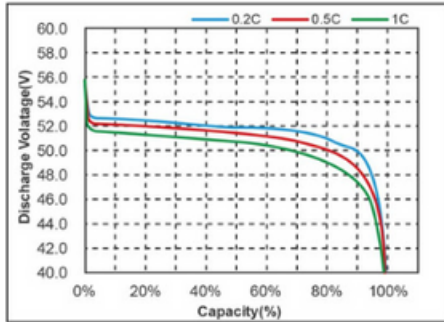
SPECIFICATION

Model/Parameters	KVLi-48100A-LCD	KVLi-51100A-LCD
Rated Voltage	48V	51.2V
Rated Capacity (0.2C, @25°C)	100Ah	
Rated Energy	4800Wh	5120Wh
Cell & Pack	LiFePO4, Prismatic, Aluminum shell	
Output voltage range	43.2V~58.4V	
Charging voltage	58.4V, CC-CV	
	43.2V	
Max. Constant Charging current	100 A	
Recommended charging current	<50A, best @ 20A	
Recommended charging type	CC-CV until current <0.02C	
Max.Constant Discharging current	≤100A	
Efficiency	≥98%	
Built-in BMS		
Over-charge protection	Module>58.4V or Cell>3.65V	
Over-discharge protection	Module<43.2V or cell<2.7V	
Over-current protection	Charging: >105A,delay 5S; >110A delay 3S;	
Short circuit protection	Discharging: >105A,delay 5S; >110A delay 3S; Short circuit: >350A	
Cell balance	Passive, 100mA	
Over temperature protection	Charging: <-5°C or >65°C Discharging: <-20°C or >65°C	
Case material	ABS	
Dimension L*W*H (mm) & Terminal	45.0±0.5	
Environment		
Humidity	5%~95% relative humidity	
Charging temperature	0°C~+45°C	
Discharging temperature	-20°C~+65°C	
Storage temperature	-20°C~45°C	
Cycle life	50%DOD>6000 times, @0.2C, 25°C 80%DOD>3500 times, @0.2C, 25°C	
Design life	12 Year	

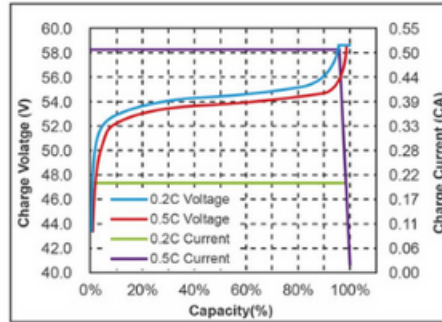
LITHIUM ION BATTERY KVLi-100A-LCD

ELECTRONIC PERFORMANCE DIAGRAM

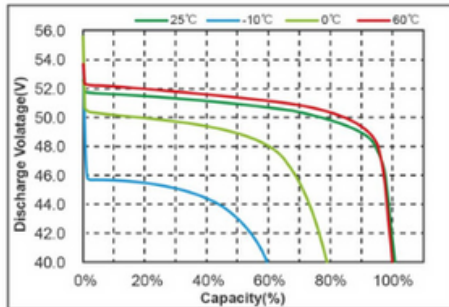
Different Rate Discharge Curve @25°C



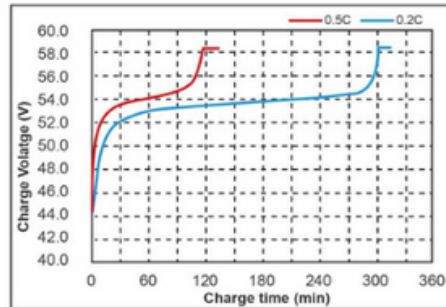
Different Rate Charge Curve @25°C



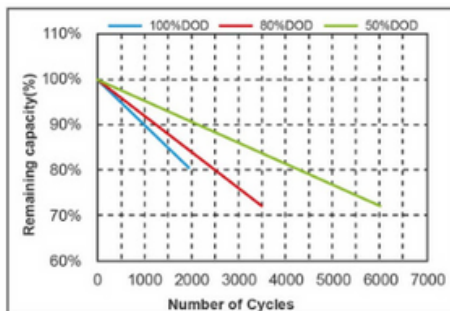
Different Temperature Discharge Curve @0.5C,25°C



Charge Characteristics of time-voltage @0.2C,0.5C,25°C



Different DOD Discharge Cycle Life Curve @0.2C,25°C



Open circuit voltage VS SOC @25°C

