



SOLAR ESS



POWER CONVERSION SYSTEM

Transformer management

SOLAR ESS KV-PCSI0K Series

SPECIFICATION

MODEL	KV-PCSI0K
Power Rating(kVA/kW)	10kVA/10kW
Battery	
Normal Voltage(V)	40-62Vdc
Max. battery discharge current(A)	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 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	>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: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% for30sec,
Transfer time utility to inverter(Backup)	2-10ms.
Output waveform	Pure Sine Wave
Standby power consumption	<30W under power supply
Protection	Anti islanding, AC/DC under/Over protection Over temperature, SPD and AC short circuit
Efficiency inverter peak max	>95%
Efficiency Mppt Controller max	>98%
Solar PV input	
PV power	12kWp
PV open circuit voltage(Voc)	150Vdc
PV Mppt voltage range(Vmp)	72-145Vdc
PV start voltage(V)	75Vdc
PV current(A)	180A(60A*3Mppt)
Display LED& LCD	Output voltage, Frequency, Current, kW, kVA, Battery voltage, current, Overload, Fault status
Alarm	Low battery, Overload, Over Temp., Fault
Cooling	Automatic speed fan
Temperature operation range	0 -50°C
Humidity	0-100%(Non condensing)
Physical Dimension(WxHxD)mm	400x480x558
Physical Weight (kg)	130
Design regulation	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

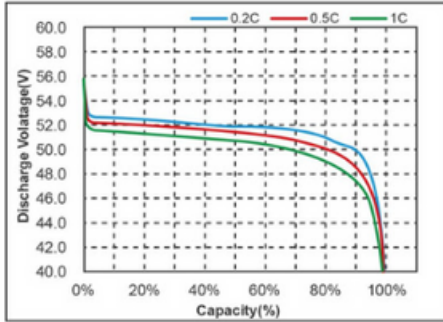
SPECIFICATION

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	

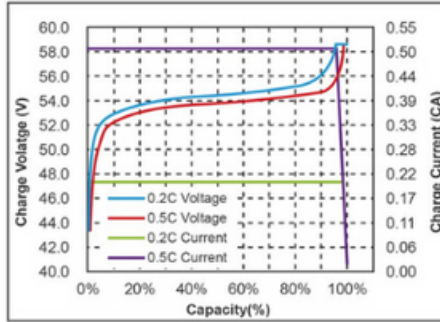
LITHIUM ION BATTERY KKVLi-48100A-LCD

ELECTRONIC PERFORMANCE DIAGRAM

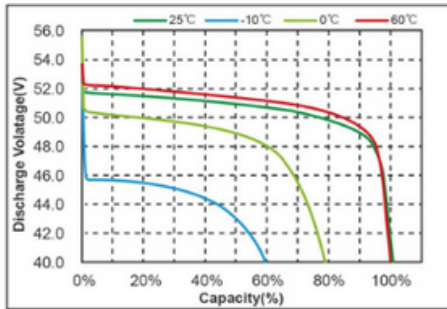
Different Rate Discharge Curve @25°C



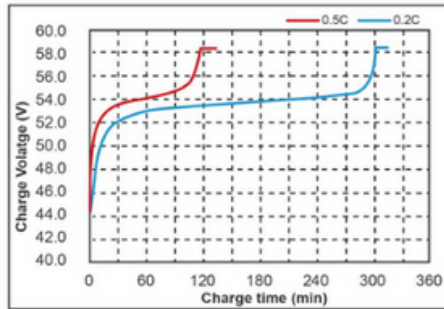
Different Rate Charge Curve @25°C



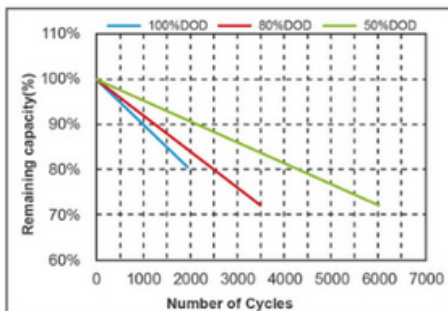
Different Temperature Discharge Curve @0.5C,25°C



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

