



# SUPER SERIES



## Model KS-LT100 Lithium-ion Phosphate Battery with High Current BMS and Integral Low Temperature Charge Protection



### Guidance

Only use within manufacturers specifications set out below. Fitting M8 thread (14mm hex bolt head) It is vital to minimise charge/discharge resistance and avoid heat, use correct wired terminations only

### Integral Meter

The integral meter contains an accurate voltage and temperature gauge. LiFePo4 batteries return most of their energy at constant voltage, a highly desirable characteristic, but presents a challenge for voltage-

based gauging. As a result, please note there can be a 15% capacity error tolerance as it can only be an approximation. The correct method for accurately gauging lithium capacity is coulomb counting by use of a current shunt. Please refer to your dealer for more accurate metering solutions.

### Continuous current rating

Customers are reminded to pay attention to the maximum current rating of their selected battery and parallel accordingly for very high current inverters. (150A max continuous discharge per battery).

### Parallel

Where batteries are installed as a parallel pair. Ensure both batteries are fully charged before attempting to making a parallel electrical connection between batteries.

### Overload

In case of overload or accidental short circuit. **IMPORTANT:** ensure all loads are removed before pressing the reset trip button.

### Low Temperature Protection

To prevent internal battery damage during use, this battery features integral temperature monitors that detect if the cells fall below the safe charging parameters, integral of all lithium batteries (<0°C). When such an event is triggered the battery will not accept a charge. Normal charging is resumed when the battery cell temperature rises above zero. This feature is purely automatic, and will not affect the normal battery discharge operation which continues to operate safely (to -20°C).

KS-KT100 Constant Current Discharge Table (Amperes @ 25°C)

|                      | 1hr  | 2hr | 3hr   | 5hr | 10hr |
|----------------------|------|-----|-------|-----|------|
| Cut of voltage 10.8V | 100A | 50A | 33.3A | 20A | 10A  |

## Model KS-LT100 12V 100Ah Lithium-Ion Phosphate battery: -

### Specifications

Model: KS Energy Super Series KS-LT100

Battery Type: Lithium-ion Phosphate (LiFePo<sub>4</sub>) 32700 cylindrical type 3.2V 6000mAh

Cell combination: 4S \*17P

Cell management (BMS): High power internal controlled intelligent multi cell balanced system

BMS integral protection: Low temperature charge protection: (charge current cuts to zero <0°C); Short

Circuit electronic trip: (>320A 250μS); Over voltage: detect 15V <2S, release 14.2V; Over discharge

voltage: 8.8V <2S, release 10.8V; Over temperature shut down: 70°C

Battery voltage nominal: 12.8V, At rest: 13.3V

Capacity 103AH, nominal 100Ah, 1.32KWh @ 25°C

Size: (mm ±2) L\*W\*H 330\*170\*215 (inch 12.9\*6.7\*8.5)

Weight: 13.5KG (30 lbs)

Depth Discharge: 100% Efficiency: 98%

Internal resistance ( ±3% ) : 28.5mΩ, Self-discharge: 2.5% per month

Maximum recommended dry storage duration: (@95% capacity): 20 months

Max continuous discharge current: 150A

Peak surge discharge current: 250A for 30 seconds

Max continuous charge current: 100A, Charge voltage: 14.4 to 14.6V, Charge type: CC/CV

Operating temperature range: -20°C to +60°C

Terminals: F12 (M8), Case material: ABS, Ingress Rating: 64

Parallel configuration: No limit (ensure suitable fuse protection), Series: 4 batteries maximum

Life Span: >5000 cycles @80% - 30% DOD @ 0.5C, >2500 cycles DOD 95% @ 1C

Designed and manufactured in Great Britain by KS Energy Holdings (UK) Limited

