

SKANBATT

LiFePO4 Battery specifications - SKANBATT Model: HPU-100150BS
12V 100AH / 150A (300A peak) BMS

V: 210910



1. GENERAL INFORMATION:

The battery is developed by Skanbatt in cooperation with Shenzhen TopBand Battery CO., LTD.

The battery has built-in Bluetooth which gives a full overview of condition, consumption and temperature etc.

The batteries in the HEAT Pro ULTRA series have a built-in heating foil that tempers the battery at minus degrees, so that this can be used and charged all year round.



Skanbatt has in collaboration with the manufacturer adapted the batteries in this series to Nordic conditions.



The Bluetooth app can be downloaded by searching for Skanbatt in AppStore or Google Play

Google Play QR code (view the code through your mobile camera)

Apple QR-code

2. SPECIFICATIONS BATTERY PACK: (@25+-5)

12V LiFePO4 Battery pack

1	Nominal voltage	12,8V (13,2+-0,1V Nominal voltage fully charged)
2	Capacity	100Ah / 1280Wh (@0,33C)
3	Internal resistance	≤20mΩ @1kHz AC @50% SoC

Standard charging procedure

1	Recommended temperature range	-40 to 45 (* see additional info below)
2	Recommended charging voltage	14,2-14,4V
3	Maintenance voltage and during "standby" use	<13,9V (from 13,5 - 13,8V)
4	Maximum charging current	100A @temperature 25±5
5	Recommended charging current	≤60A

* At minus degrees in the battery, the built-in heating foil will be activated and temper the battery before charging.

The heating foil is activated by a charging source and does not draw power from the battery during charging or discharging.

If charging current <0.07C, the heating foil (approx. 60 watts) is not activated and the battery charges.

If charging current >0.07C, the heating foil is activated and the battery is heated to approx. 5 degrees before resuming charging

Standard discharge (in use)

1	Recommended temperature range	-20 to 60
2	Voltage range	Ca 10 - 13,3V
3	Maximum recommended load	100A
4	Max "peak" load	300A +-20A <3 sek @25
NB! The battery should not be used as a starter battery!		
5	Highest voltage where BMS closes	15V +-0,03V
6	Lowest voltage where BMS closes	ca. 10V +- 0,05V
7	Capacity at -20	>=70%
	Capacity at 55	>=95%
8	Overcharge protection	>110A +-5A >23-27s

Dimensions and weight

1	Dimensions (L + D + H)	318x165x225mm +-2mm
2	Weight	Ca 10kg

Recommended storage:

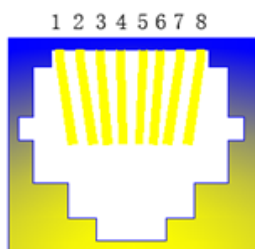
1	Temperature and humidity	Short-tern -40 til 60 C, 45% til 75% SoC <75% RF Longterm -30 til 30 , 45% til 75% SoC <75% RF
2	Self-discharge	1 month <5% 6.months <30%

In use, the battery can stand with a maintenance voltage below 13.9V over time.

If the battery is not in use for extended periods, it is recommended to store it between 50-70% SOC

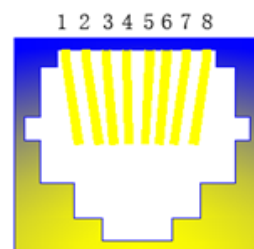
For long-term storage, a discharge and charging is recommended to keep the "mass" in the battery active. (every 6 months)

CANBUS



COM1 :

- 1 RS485-B
- 2 RS485-A
- 3 SPARE
- 4 GND
- 5 GND
- 6 Spare
- 7 CANH
- 8 CANL



COM2 :

- 1 RS485-B
- 2 RS485-A
- 3 SPARE
- 4 GND
- 5 GND
- 6 Spare
- 7 CANH
- 8 CANL

3. TECHNICAL INFORMATION AND TEST METHODS:

1	Internal resistance <i>Tested at 50% SOC with 1kHz AC testinstrument</i>	≤40mΩ
2	Kapacity <i>Let the battery "rest" for about 1 hour after it is fully charged. Use a load equivalent to 0.33C and load the battery until the BMS closes. Repeat the procedure at least 3 times. If the battery has 100% capacity, this procedure should take at least 180 min.</i>	Minimum 100Ah @/ 0,33C
3	Short circuit protection (BMS) <i>To ONLY be tested by authorized personnel</i>	
4	Lifespan (at 100% DOD) Lifespan (at 80% DOD) <i>Example of 1 cycle (discharge) Discharge the battery at 0.33C until the BMS closes. Let the battery rest for 1 hour before charging at 0.33C at 14.4V (CC / CV). Let it rest for 1 hour before discharge. For 2000 cycles @ 100% DoD, the battery should have 80% capacity left</i>	≥2000 cycles >80% kapasitas <5000 cycles >80% kapasitas

4. PROTECTION (Each cell):

The battery is equipped with a very advanced "Battery Management System" (BMS) that monitors each individual cell in the battery, prevents too low and too high voltage and balances the cells.

The BMS also protects the battery from overcharging, over- discharging, short-circuiting and overheating.

BMS 'task is to ensure that the battery is protected from external influences and that it is completely safe to use.

1	Overload protection (high voltage)	3.75±0.03V BMS closes 3.60±0.04V BMS opens
2	Discharge protection (low voltage)	2.5±0.04V BMS closes 2.8±0.04V (BMS opens when charging)
3	High current protection <i>BMS opens after about 30 seconds if load is removed from the battery</i>	>280-320A 2,5-5,5s
4	Protection at too high a temperature	@65±5 BMS closes @50±5 BMS opens

5. STORAGE AND TRANSPORT:

- * The battery must be packed and well protected during transport.
- * The plastic box that protects the cells can be crushed by hard shocks and careless handling.
- * Lithium batteries have their own rules for transport, these must always be observed (transport code UN3480 / UN38.3).
- * If the battery is to be stored for a long time, it should be in temperatures from -10 to +30 degrees.
- * The battery should be stored dry in clean and dirt-free environments with good ventilation.
- * During transport, the battery should be approximately 50-80% charged.
- * The battery should be charged every 6 months to keep it active so that it always performs to the maximum
- * The battery must be charged no later than 12 days after it is discharged.
- * If the battery is to be stored ex. over a winter season, the battery should be physically disconnected from potential consumers.
- * Do not expose the battery to water, high humidity or fire.
- * Do not open the battery.
- * If the battery shows faults or defects, stop use, and contact the supplier.
- * If the battery leaks and you get material on the body, rinse with water and consult a doctor.
- * Use an approved charger designed for lithium. If in doubt, contact your charger and battery supplier.

6. WARNINGS AND TIPS:

Please read and follow warnings and tips in this data sheet.

Skabatt is not responsible for errors due to careless use and / or consequential errors that occur due to incorrect use.

- * The battery should not be stored in extremely hot environments and should not be exposed to sunlight for extended periods.
- * Avoid water and dirt as this can lead to creeping current between the terminals and moisture damage to the battery.
- * Never short-circuit the battery with metal objects or the like
- * Never send the battery without protection together with metal objects or the like
- * Avoid incorrect connections and overloads
- * Do not dispose of the battery or subject it to shocks
- * If the battery is completely discharged, recharge it as soon as possible (within 12 days at the latest)
- * Lithium batteries are weakened if they are quickly charged in minus degrees, follow the instructions in the data sheet
(Does not apply to HEAT-Pro batteries as these have heating foil that tempers the battery)
- * Use only recommended chargers. Manual chargers should not be used as they may damage the battery
- * If there is an "odor" from the battery, do not use it (delivered for check)
- * If the battery leaks liquid, rinse immediately with water and consult a doctor
- * Keep out of reach of children and animals
- * Keep the battery away from open flames
- * Lithium batteries are special waste and must be disposed of in accordance with applicable laws and regulations
- * The battery can be connected in parallel for higher capacity - with a balanced connection.
Contact the importer if more than 4 are to be connected in parallel or in series.
- * Do not connect the battery to other battery types without first obtaining approval from your battery supplier.

All warranty is void if procedures and recommendations in the data sheet are not followed!

7. DIMENSIONS:

