



Lithium Series Batteries provide superior performance, capacities and reliability. Using state of high power cell technology the lithium series is designed for environmentally sensitive areas that require enhanced cycle life capabilities in commercial, industrial, residential, and private applications. The maintenance free construction and advanced design features makes the lithium Series the definitive choice for a wide variety of markets; Solar and Renewable Energy Storage; Electric Vehicle and Golf cart; Industrial equipment, Floor Machines, Forklifts, Aerial lifts, and Robotics; Marine, RV, and no-idle solutions; Mobility and Medical Equipment; Telecom, Broadband and Cable TV; UPS systems.

#### Applications



## BATTERY SPECIFICATIONS

Battery Type - Chemistry	LiFePO <sub>4</sub>	Internal Resistance - Milliohms	< 6mΩ
Nominal Voltage	12.8 V	Efficiency - round trip	> 99.5%
Amp Hour Capacity	100 AH	Self Discharge per Month	< 3%
Energy Density	1280 Wh	Max 4 - series connections	12-48V
Dimensions (L*W*H)	258*166*215 mm	Parallel connections	No Limited
Weight	9.8 KG	Case IP Rating	IP65
Terminal Type	M6	Design Life	20 Years
Terminal Torque	8.5 NM	Cycle Life (1C, 25°C@80%DOD)	>4000 cycles
Case Material	ABS	Cycle Life (0.2C, 25°C@80%DOD)	>6000 cycles
BMS build-in	Yes	Discharge Temperature	(-23 to 65)°C
Recommend Charge Voltage	14.2 ± 0.20V	Charge Temperature	(-3 to 65)°C
Max Charge Voltage	14.8 ± 0.20V	Storage Temperature	(-20 to 45)°C
Recommend Charge current	20 A	Bluetooth(APP)	Optional
Max Charge Current	100 A	LCD Screen	Optional
Charge Current (0 to -10°C)	<0.1C	Heating functions -20°C	Optional By Charger
Charge Current (-20 to -10°C)	<0.05C	Batteryself heating function	Optional By Cell
Recommend Discharging voltage	10.8 ± 0.20V	Shipping Classification	UN3480, CLASS9
Max Discharging Voltage	8.8 ± 0.20V	Other Certifications	CB /CE
Max Discharge Current	100 A		
Pulse Discharge Current	300A/3S		

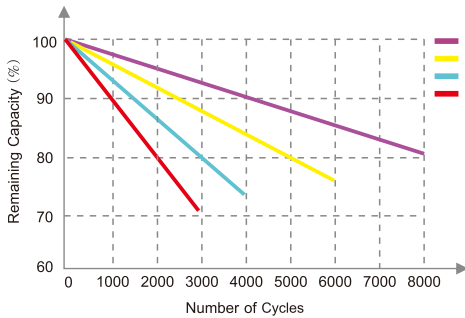
## BMS SPECIFICATIONS

BMS Version: SMTK

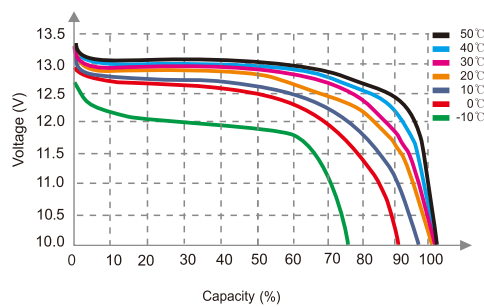
BMS Protections Range: Over (Voltage, Current, Temperature management) and cell balance

Over Charging Cell protection	$>3.75\pm0.05V$	Delay 2s
Over Charging Pack protection	$>14.8\pm0.20V$	Delay 2s
Over Charging Current 1	$130\pm10A$	Delay 2s
Over Charging Current 2	--	Delay 5mS-60mS
Over Charging Temp Protection 1	$0\pm3^{\circ}C$ or $60\pm3^{\circ}C$	Release $5\pm3^{\circ}C$ or $40\pm3^{\circ}C$ Delay:2s
Over Discharging Cell protection	$<2.30\pm0.10V$	Delay 2s
Over Discharging Pack protection	$<9.20\pm0.40V$	Delay 160ms
Over Discharging current 1	$200\pm20A$	Delay 5s
Over Discharging current 2	$500\pm30A$	Delay 160ms
Over Discharging Temp Protection 1	$-20\pm3^{\circ}C$ or $70\pm3^{\circ}C$	Release $-10\pm3^{\circ}C$ or $50\pm3^{\circ}C$ Delay:2S
PCB Temp protection	$95\pm3^{\circ}C$	Release $60\pm3^{\circ}C$ Delay: 2s
Cell Balance Start	$3.30\pm0.10V$	
Cell Balance Current	$50\pm5mA$	
Short circuit	$750A\pm30A$	Delay < 400us

Different DOD Discharge Cycle Life Curve 1C 25C



Different Temperature Discharge Curve(0.2C)



State of Charge Curve(0.5C, 25°C)

