

LiFePO4 Lithium Iron Phosphate Batteries

12V20AH

Model:SL4551A



The latest generation in maintenance free batteries is here!

LiFePO4 batteries offer longer service life than traditional lead acid batteries, plus weigh less than HALF as much as SLA batteries.

LiFePO4 also provide more usable life per cycle, allowing for longer run times by holding a higher voltage until capacity is almost exhausted. These batteries will also maintain 80-90% charge when in storage - far higher than their lead acid counterparts.

Each battery is fitted with an internal battery management system to provide safe charging and discharging at all times. This system provides internal short circuit, over temperature and under/over voltage cut off. Can be wired in series and/or parallel.



Applications

**BATTERY SPECIFICATIONS**

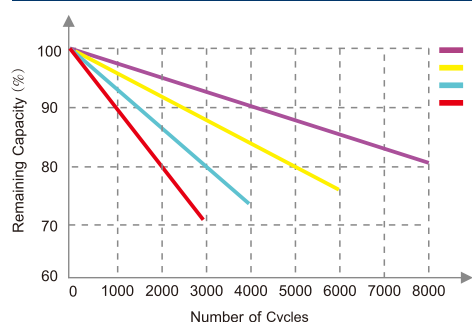
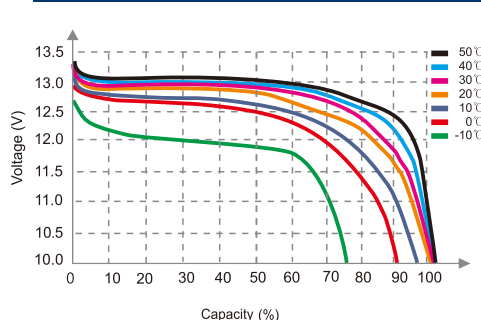
Battery Type - Chemistry	LiFePO ₄	Internal Resistance - Milliohms	< 25mΩ
Nominal Voltage	12.8 V	Efficiency - round trip	> 99.5%
Amp Hour Capacity	20 AH	Self Discharge per Month	< 3%
Energy Density	256 Wh	Max 4 - series connections	12-48V
Dimensions (L*W*H)	181*77*167 mm	Parallel connections	No Limited
Weight	2.0 KG	Case IP Rating	IP65
Terminal Type	M5	Design Life	20 Years
Terminal Torque	6.2 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	4 A	Bluetooth(APP)	Optional
Max Charge Current	20 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	20 A		
Pulse Discharge Current	60A/3S		

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BMS Version: JBD

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

Over Charging Cell protection	$>3.75\pm0.03V$	Delay 500ms-1500ms
Over Charging Pack protection	$>15.0\pm0.12V$	Delay 500ms-1500ms
Over Charging Current 1	$35\pm10A$	Delay 500ms-1500ms
Over Charging Current 2	--	Delay 500ms-1500ms
Over Charging Temp Protection 1	$-2\pm5^{\circ}C$ or $54\pm5^{\circ}C$	Release $2\pm5^{\circ}C$ or $49\pm5^{\circ}C$
Over Discharging Cell protection	$<2.2\pm0.08V$	Delay 500ms-1500ms
Over Discharging Pack protection	$<8.8\pm0.32V$	Delay 500ms-1500ms
Over Discharging current 1	$170\pm60A$	Delay 100ms-400ms
Over Discharging current 2	$340\pm100A$	Delay 10ms-40ms
Over Discharging Temp Protection 1	$75\pm5^{\circ}C$	Release $60\pm5^{\circ}C$
PCB Temp protection	$90\pm8^{\circ}C$	Release $65\pm15^{\circ}C$
Cell Balance Start	$3.50\pm0.05V$	
Cell Balance Current	$200\pm50mA$	
Short circuit	$680\pm200A$	Delay 200-800us

Different DOD Discharge Cycle Life Curve 1C 25C**Different Temperature Discharge Curve(0.2C)****State of Charge Curve(0.5C, 25°C)**