Neata® Super energy

Lithium Battery Series

SY12-100-2(12V100AH)



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.

CE in Europe · RoHS in Europe · UL in US · UN38.3 in Europe · REACH in Europe · IEC Certificates

Applications



BATTERY SPECIFICATIONS

Battery Type - Chemistry	LiFePO4		Internal Resistance - Milliohms	< 50	mΩ
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	12-48	V
Dimensions(LxWxH)	600*275*65	mm	Parallel connections	No Limited	
Weight	15	KGS	Case IP Rating	IP50	
Terminal Type	Anderson		DesignLife	20	Years
Terminal Torque		NM	Cycle Life (1C, 25℃@80%DOD)	>4000	cycles
Case Material	Metal		Cycle Life (0.2C, 25℃@80%DOD)	>6000	cycles
BMS build-in	Yes				
			Discharge Temperature	(-23 to 65)	℃
Recommend Charge Voltage	14.2	±0.20V	Charge Temperature	(-3 to 65)	℃
Max Charge Voltage	14.8	±0.20V	Storage Temperature	(-20 to 45C)	℃
Recommend Charge current	25	A			
Max Charge Current	100	A	Bluetooth(APP)	Optional	
Charge Current (0 to -10℃)	<0.1	C	LCD Screen	Optional	
Charge Currrent (-20 to -10℃)	<0.05	C	Heating functions -20°C	Optional	By Charger
Recommend Discharging voltage	11.8	±0.20V	Batteryself heating function	Optional	BY Cell
Max Discharging Voltage	9.6	±0.20V			
Max Discharge Current	200	A	Shipping Classification	UN3480, CLASS 9	
Pulse Discharge Current	250	A±3S	Other Certifications	CB /CE	

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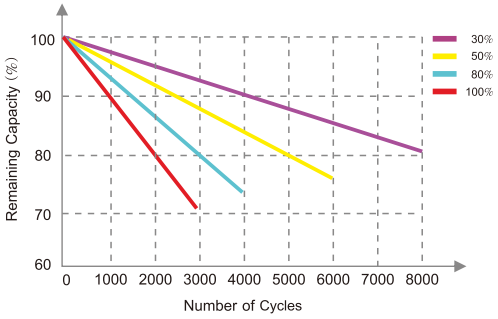
BMS SPECIFICATIONS

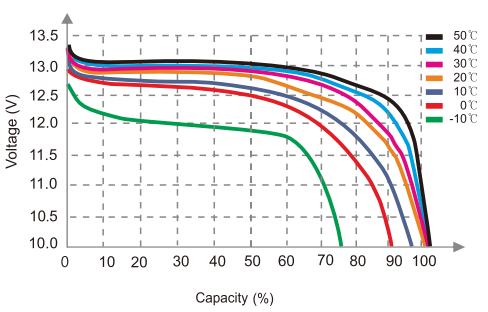
BMS Version :LL

BMS Protections Range:	Over (Voltage, Current, Temperaturemanagement) and cell balance					
Over Charging Cell protection	>3.80	±0.05V	Delay		2 ±0.5S	
Over Charging Pack protection	>14.8	±0.20V	Delay		2 ±0.5S	
Over Charging Current 1	>105.0	±2.0A	Delay		15 ±2.0S	
Over Charging Current 2	>125	±2.5A	Delay		2 ±1.0S	
OverCharging Temp Protection 1	<-0 or>65	±3℃	Release	>3 or < 60	±3℃	Delay:2±0.5S
Over Discharging Cell protection	<2.1	±0.05V	Delay		2 ±0.5S	
Over Discharging Pack protection	<9.6	±0.20V	Delay		2 ±0.5S	
Over Discharging current 1	>205	±2.5A	Delay		15 ±2.0S	
Over Discharging current 2	>250	±2.5A	Delay		2 ±1.0S	
Over Discharging current 3	NA					
Over Discharging Temp Protection 1	<-20 or>65	±3℃	Release	>-15 or < 60	±3℃	
PCB Temp protection	>95	±3℃	Release	< 75	±3℃	Delay:2±0.5S
Cell Balance Start	3.5	±0.05V				
Balance Current	100	±20mA				
Short circuit	Load Short circuit		Delay		1 ±0.5ms	
Power consumption	<300	uA	Switch-off mode		Storage & transportation	
	<500	uA	Sleep mode		Protection & stand-by	
	<15	mA	Operating mode		Operating	
	<28	mA	Operating mode		Low voltage to start Pre-charge	
Communication ports	Opitional for CAN/Bluetooth/RS485/Dryport/SNMP Can be customizeddevice					
Temperature accuracy	±2	℃	Measuring range -40~100℃			
Voltage accuracy	±20	mv	For cells and module			
Current accuracy	FSC	±5%	Measuring range -200~+200A			
SOC	±5%		Integral calculation			

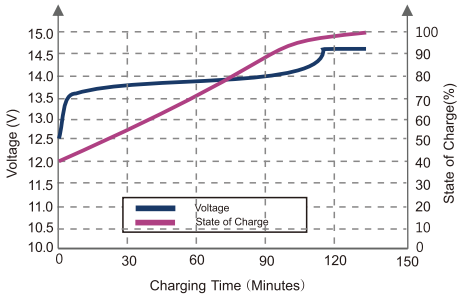
Different DOD Discharge Cycle Life Curve 1C 25C



Different Temperature Discharge Curve(0.2C)



State of Charge Curve(0.5C, 25℃)



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