1 Scope

This specification describes the design and development of the 480V Lithium battery; to help user's to understand both the quality construction of the product and proper use and operation.

2 Product parameters

		Specification	Remark
Cell unit parameter			
1	Battery types and materials	LiFePO4	
2	Rated voltage/capacity	3.2V/100Ah	
3	Single battery voltage range	2.5V～3.65V	
4	Single battery weight	2.1Kg	
5	The battery internal resistance	≤ 0.4mΩ	
6	Module size	34 x 200 x 168m（D x W x H）	
Battery parameter			
1	Rated voltage	48V	
2	Rated capacity	100Ah	
3	Battery pack voltage range	37.5V～54V	
4	Total Power	48kWh	
5	Combination	16S1P	
6	Insulation resistance test value	≥20MΩ	
7	Operating temperature	Charging 0 ~ 55℃; Discharging -30 ~ 60℃	
8	Standard charging current	20A	1P: 100A
9	Quick charging current	60A	1P: 100A
10	Standard discharge current	100A	
11	Maximum continuous discharge current	180A	
12	Gross weight	Approx 50Kg	Approx 500Kg total
13	Ambient relative humidity	25-85%RH	
14	Box size	Customized	

3 BMS Specification

3.1 BMS parameter

			default parameters	Capability	Remark
1	Single section as the overcharge protection	overcharge the alarm voltage	3600mV	Y	
		overcharge the alarm recovery voltage	3650mV	Y	
		overcharge protection voltage	3700mV	Y	
		overcharge protection latency time	1.0S	Y	
	Single section as the overcharge protection remove	overcharge protection remove voltage	3380mV	Y	
		Capacity remove	SOC＜96%	Y	
		Discharge remove	Discharge current＞1A		
2	Single section as the over discharge protection	Over discharge the alarm voltage	2800mV	Y	After discharge protection for 30 seconds, still unable to recover, will enter low power mode
		Over discharge the alarm recovery voltage	2900mV	Y	
		Over discharge protection voltage	2500mV	Y	
		Over discharge protection latency time	1.0S	Y	
	Single section as the over discharge protection remove	over discharge protection remove voltage	2700mV	Y	
		charging remove	Connected to the charger can be activated		
3	Overall overcharge protection	Overall overcharge the alarm voltage	54V	Y	
		Overall overcharge recovery voltage	53.4V	Y	
		Overall overcharge protection voltage	54.75V	Y	
		Overall overcharge protection latency time	10.S	Y	
	Overall overcharge protection remove	Overall overcharge protection remove voltage	52.5V	Y	
		Capacity remove	SOC＜96%	Y	
		Discharge remove	Discharge current＞1A		
4	Overall discharge protection	Overall discharge the alarm voltage	42V	Y	After discharge protection for 30 seconds, still unable to recover, will enter low power mod
		Overall discharge recovery voltage	41.25V	Y	
		Overall discharge protection voltage	41.25V	Y	
		Overall discharge protection latency	1.0S	Y	
	Overall discharge protection remove	Overall discharge protection remove voltage	39.0V	Y	
		charging remove	Connected to the charger can be activated		

		Charging remove	Discharge current＞1A		
5	Discharge over-current 2 protection	Discharging current Over-current protection	150A	Y	In 10 consecutive will lock in the state, no longer remove automatically
		Discharging Over-current protection latency time	100±50mS	Y	
	Discharging over-current 2 protection remove	Automatic remove	Remove automatically after 1 minute		
		Charging remove	Discharge current＞1A		
		Short circuit protection latency time	≤300uS	Y	
		Short circuit protection remove	charging remove		
			Automatically remove after load disconnect		
6	MOSFET High temperature protection	High temperature alarm temperature	65℃	Y	
		Temperature alarm recovery temperature	60℃	Y	
		High temperature protection	75℃	Y	
		High temperature remove	70℃	Y	
7	Batteries temperature protection	Charging the alarm temperature at low temperature	0℃	Y	
		Charging low temperature alarm recovery temperature	0℃	Y	
		Charging protection temperature at low temperature	-5℃	Y	
		Charging protection recovery temperature at low temperature	0℃	Y	
		Charging high temperature alarm temperature	50℃	Y	
		Charging High temperature alarm recovery temperature	50℃	Y	
		Charging temperature high temperature protection	55℃	Y	
		Charging protection recovery temperature High temperature	50℃	Y	
		Discharge the alarm temperature at low temperature	-15℃	Y	
		Discharge low temperature alarm recovery temperature	-15℃	Y	
		Discharge protection temperature at low temperature	-20℃	Y	
		Discharge protection recovery temperature at low temperature	-15℃	Y	

		Discharge of high temperature alarm temperature	55℃	Y	
		Discharge of high temperature alarm recovery temperature	55℃	Y	
		Discharge protection temperature High temperature	60℃	Y	
		Discharge protection recovery temperature High temperature	55℃	Y	
8	The environment temperature alarm	Low temperature alarm temperature	-20℃	Y	
		Low temperature alarm recovery temperature	-20℃	Y	
		Low temperature protection	-25℃	Y	
		Protect remove temperature in low temperature	-20℃	Y	
		High temperature alarm temperature	65℃	Y	
		High temperature alarm recovery temperature	65℃	Y	
		High temperature protection temperature	70℃	Y	
		High temperature protection removing temperature	65℃	Y	
9	Current consumption	Current consumption at work	≤30mA （Have the screen）		
			≤20mA（No screen）		
		Low power mode	≤100μA		
10	Balance	Open the voltage balance	3550mV	Y	
		Open the voltage difference	30mV	Y	
11	**Display screen**	Display function	YES		
12	Storage	Storage function	YES		
13	Reverse connect protection	Reverse connect protection function	YES		

3.2 LED

Form 1 LED Work status indicator

State	Normal /Alarm /Protection	RUN	ALM	Electricity lights LED				Instructions
		●	●	●	●	●	●	
Power off	Dormancy	OFF	OFF	OFF	OFF	OFF	OFF	All
Standby	Normal	Flashes 1	OFF	According to the power indicator				Standby mode
	Alarm	Flashes 1	Flashes 3					The module of low pressure
Charge	Normal	ON	OFF	According to the power indicator (highest power indicator LED flashes 2)				The high power LED flashing (2) flash alarm ALM not flicker
	Alarm	ON	3 Flashes					
	Overcharge protection	ON	OFF	ON	ON	ON	ON	If no ac, light is for standby

	Temperature/Over current/Failure Protection	OFF	ON	OFF	OFF	OFF	OFF	Stop charge
Discharge	Normal	Flashes		According to the power indicator				
	Alarm	3 Flashes	3 Flashes					
	Over voltage protection	OFF	OFF	OFF	OFF	OFF	OFF	Stop discharge
	Temperature/Over current/short circuit/Failure Protection	OFF	ON	OFF	OFF	OFF	OFF	Stop discharge
Failure		OFF	ON	OFF	OFF	OFF	OFF	Stop charge and discharge

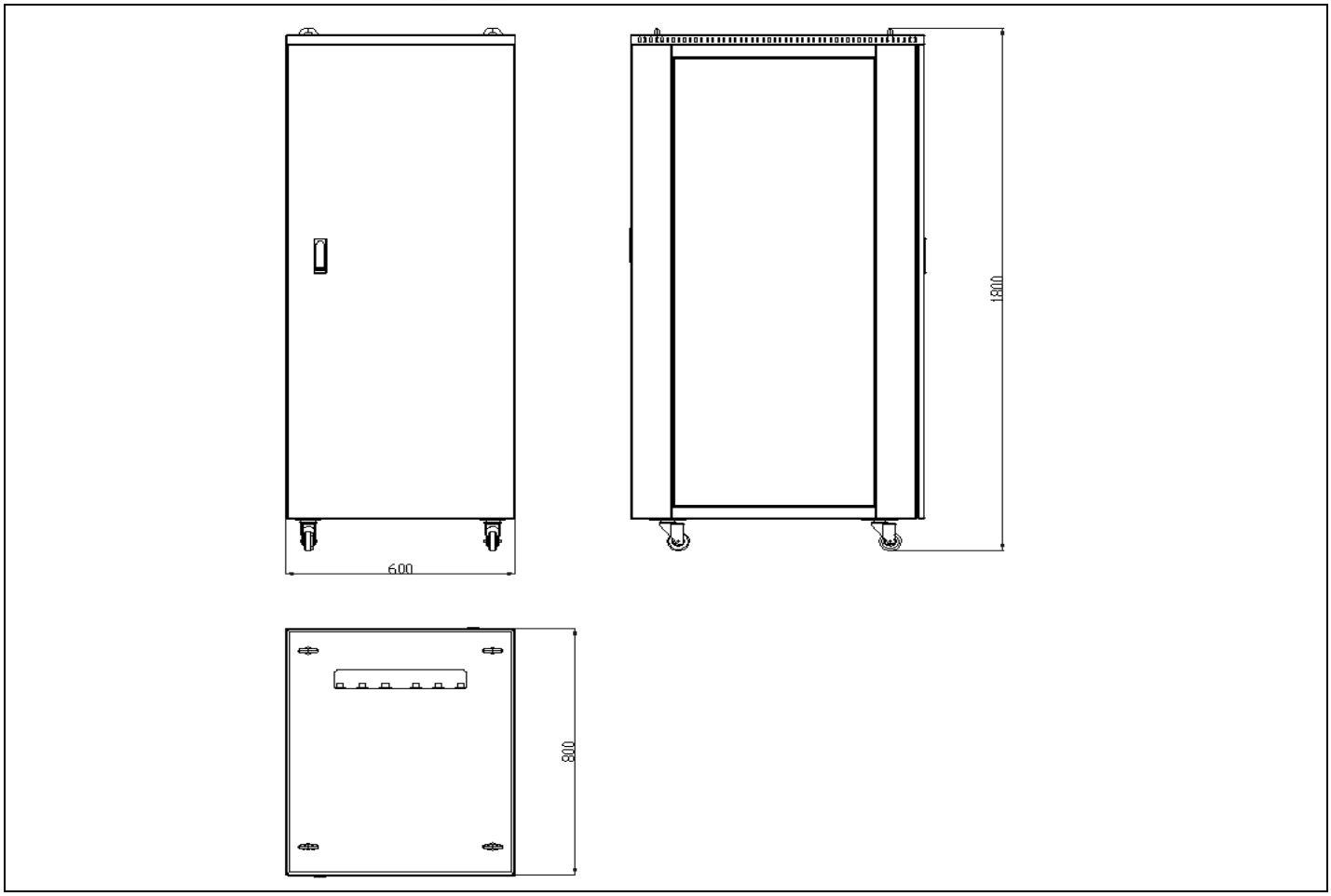
Form 2 LED Flashing instructions

Flashing way	ON	OFF
Flashing 1	0.25s	3.75s
Flashing 2	0.5s	0.5s
Flashing 3	0.5s	1.5s

Note: by PC enable or prohibit LED light alarm, factory as the default.

4 Product Dimension

4.1 Stock Image/Drawing Shown.


600
1800
800