LITHIUM LFP LiFePO4 OT48100 - 100AH/48V

48V100AH

SPECIFICATIONS

- Model: OT48100
- Lithium battery, cell technology: LFP LiFePO4
- Nominal voltage: 48VDC
- Full charge open voltage: 50.2V
- Number of Cells: 15
- Nominal capacity: 100Ah
- Nominal power: 4800 Wh
- Min discharge voltage: 42V
- Max charge voltage: 53V
- Max discharge current: 100A
- Max charge current: 50A
- Recommend charge/Discharge current: 50A
- Battery Internal resistance: ≤ 5.5m Ω ±15%/25˚C as normal condition
- Round trip efficiency (0.2Crt): ≥93%
- Self discharge (25°C): ≤ 3%/ month
- The cell temperature rising range during charge/discharge: ≤20°C
- Communications: RS485 or CAN
- Parallel unit: 15 modules
- Standard installation: 19”
- Dimensions: 480/440*443.5*133mm
- Weight: 42Kg
- Working environment:
  - Temperature 0˚C ÷ +55˚C charge, -10˚C ÷ +55˚C dischage
  - Humidity 5 ÷ 95%
- Shelf temperature: -20˚C ÷ +60˚C
- Protection standard: IP20
- Comply standards: CE, MSDS, UL1973, IEC62620, IEC62619, JIS C8714, IEC62133, UL2054, UN38.3, EN61000-6-1:2007

- Design life: +10 years
- Cycles life: >6000

Cell Specifications

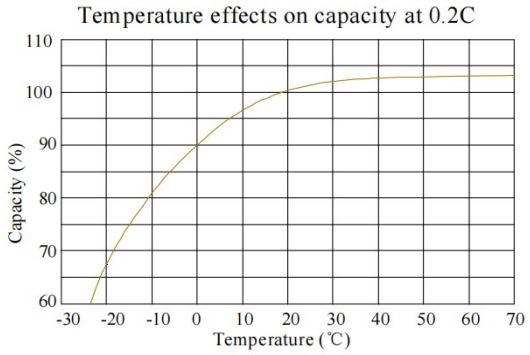
- Nominal capacity: 100Ah
- Nominal voltage: 3.2V
- Full charge open voltage: 3.35V
- Weight: 1985g ±100g
- Cell Internal resistance: ≤ 0.25mΩ ±15% (cell alone), 0.33mΩ ±15% (after welded with aluminum bar)
- Capacity tolerance: ±1%
- Internal resistance tolerance: ±15%
- Open voltage tolerance: ≤ 0.05V
- Final voltage tolerance: ≤ 0.3V
- Dimensions: Terminal Height 118.5 ±0.5mm * Shoulder height 115.7 ±0.5mm * Width 160 ±0.8mm * Thickness 50.1 ±0.5mm

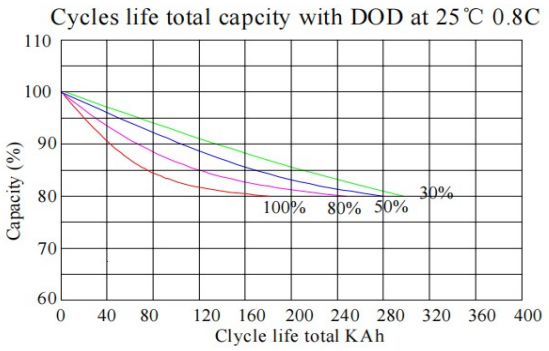
BMS Specifications

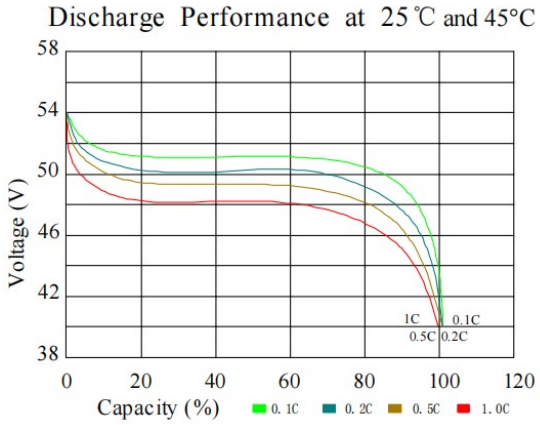
- Monitoring: battery voltage, cell voltage, temperature, SOC, SOH, current, Cycles times, Capacity
- Cell voltage resolution: ≤ 1mV
- Battery voltage resolution: ≤ 10mV
- Voltage tolerance: ≤0.5 %
- Current tolerance: ≤ 2%
- Temperature tolerance: ≤ 3°C
- SOC, SOH tolerance: ≤ 5%
- Capacity tolerance: < 5%
- Protections and alarm:
  - Cell and battery Over/lower voltage
  - Overcharge current
  - Over discharge current
  - High and low temperature
  - Short circuit, reverse polarity
- External alarm dry contact:
  - Low cell/module voltage
  - Overcharge current
  - Over discharge current
  - High cell temperature
  - Short circuit, reverse polarity
  - Battery is off
- Battery status, alarm status, error
- Data store upto 500 records and export to PC
- Management Software communicate to PC
- Temperature sensors and monitor

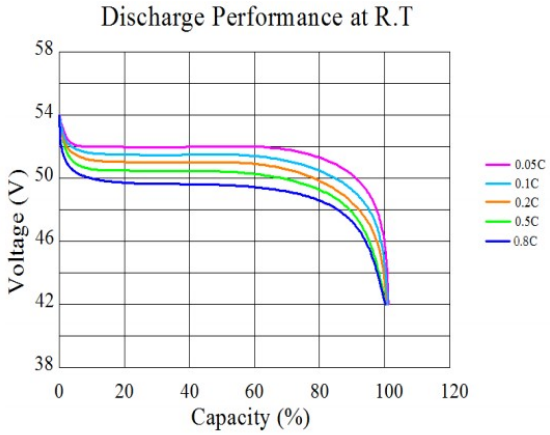
Capacity Table

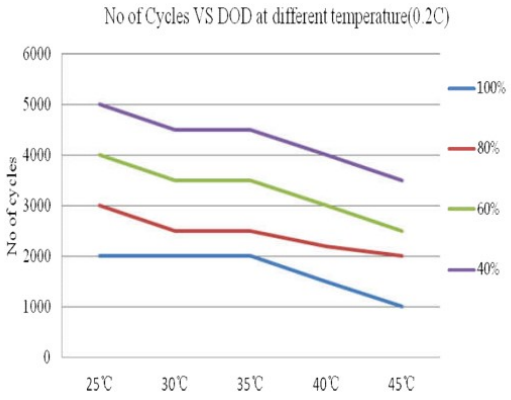
Capacity with DoD 100%	Discharge Current
≥ 99%Crt (25˚C)	0.2C
≥ 98%Crt (25˚C)	0.5C
≥ 96%Crt (25˚C)	0.8C
≥ 90%Crt (45˚C)	0.2C







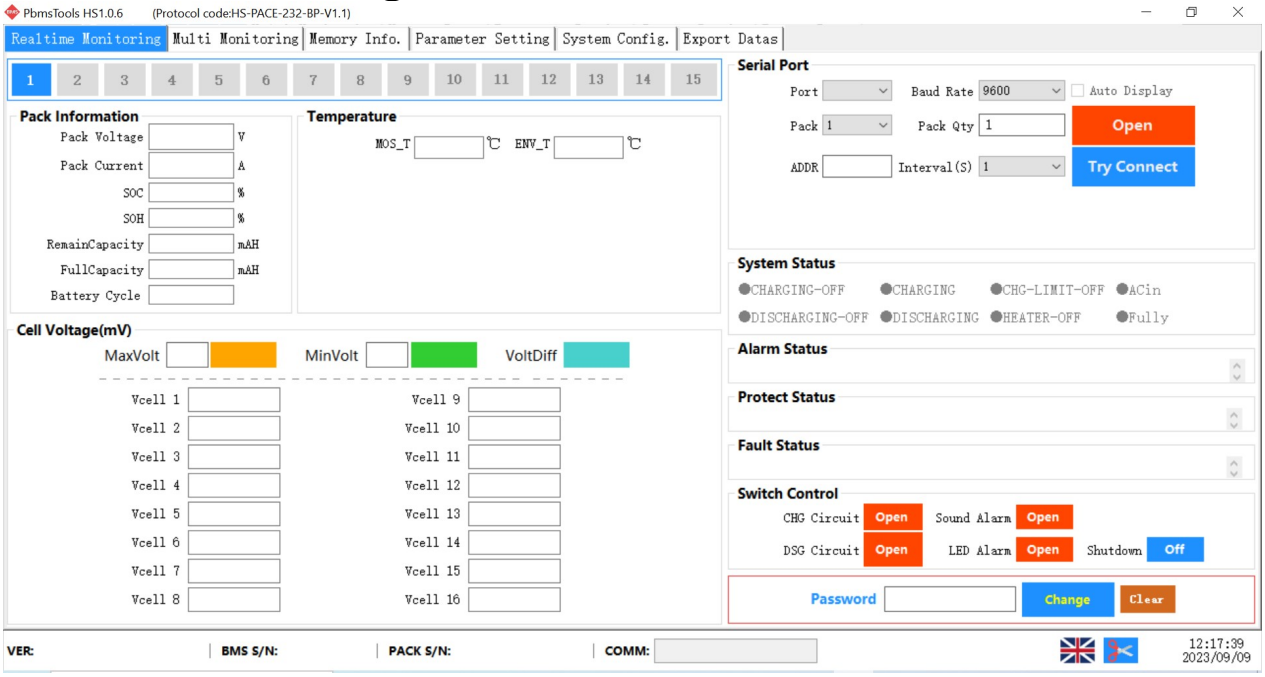




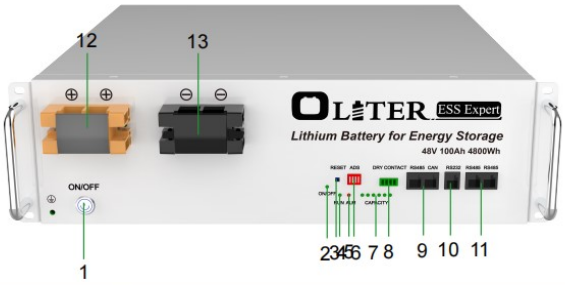
Discharge cycles time with discharge current 0.5C

DoD	Cycles times at 25˚C	Cycles times at 30˚C	Cycles times at 35˚C	Cycles times at 40˚C	Cycles times at 45˚C
100%	3000	3000	3000	2000	1500
80%	4500	4000	4200	3000	2500
60%	4700	4500	4300	3200	2700
40%	5000	4800	4600	4000	3500

BMS Software management



Interfaces Connections



Item	Name	Definition
1	Power switch	ON/ OFF, must be in the "ON" state when in use
2	Status indicator	The green light will stay on when the battery the battery starts
3	RESET	Keep pressing for more than 3 seconds, the battery will be restarted
4	RUN	Green light flashing during standby and charging mode. Green light always on when discharging.
5	ALM	Red light flashing when an alarm occurs, red light always on during protection status. After the condition of trigger protection is relieved, it can be automatically closed
6	ADD	DIP switch
7	SOC	The number of green lights shows the remaining power.
8	DRY CONTACT	/
9	CAN/RS485	Communication cascade port, support CAN/ RS485
10	RS232	Communication cascade port, support RS232
11	RS485/RS485	Communication cascade port, support RS485
12	Positive socket	Battery output positive or parallel positive line
13	Negative socket	Battery output negative or parallel negative line