

PQ-LFP48100-4U 48V 100Ah LiFePO4 Battery



Brief Introduction:

- PaqPOWER batteries are assembled at ISO9001 certified factory, mainly focusing on the R&D of: 1) 12V to 48V LiFePO4 Batteries used for Industrial Applications, Energy storage, RV, Marine, Golf carts applications. 2) 48V LiFePO4 batteries for Energy storage system.

Key Benefits:

- Higher qualified cylindrical cell:**
UL1642, IEC62619, IEC62133 listed with Cycle life more than 3000times and excellent consistency .
- UL1973/IEC62619 certified battery:**
Certification means the battery was tested and certified against the applicable standards of Energy Storage Batteries.
- Easy to install without extral cost:**
The modules can be stacked one by one to achieve the desired capacity easily with our simple side plate design, while being compatible with most of inverter brands.
- More stable and firm internal structure:**
Cell holders protect and separate the cells to avoid any circuit short risk caused by vibration or impact or over current, and improves the heat dissipation .

Key Points for Quality control:

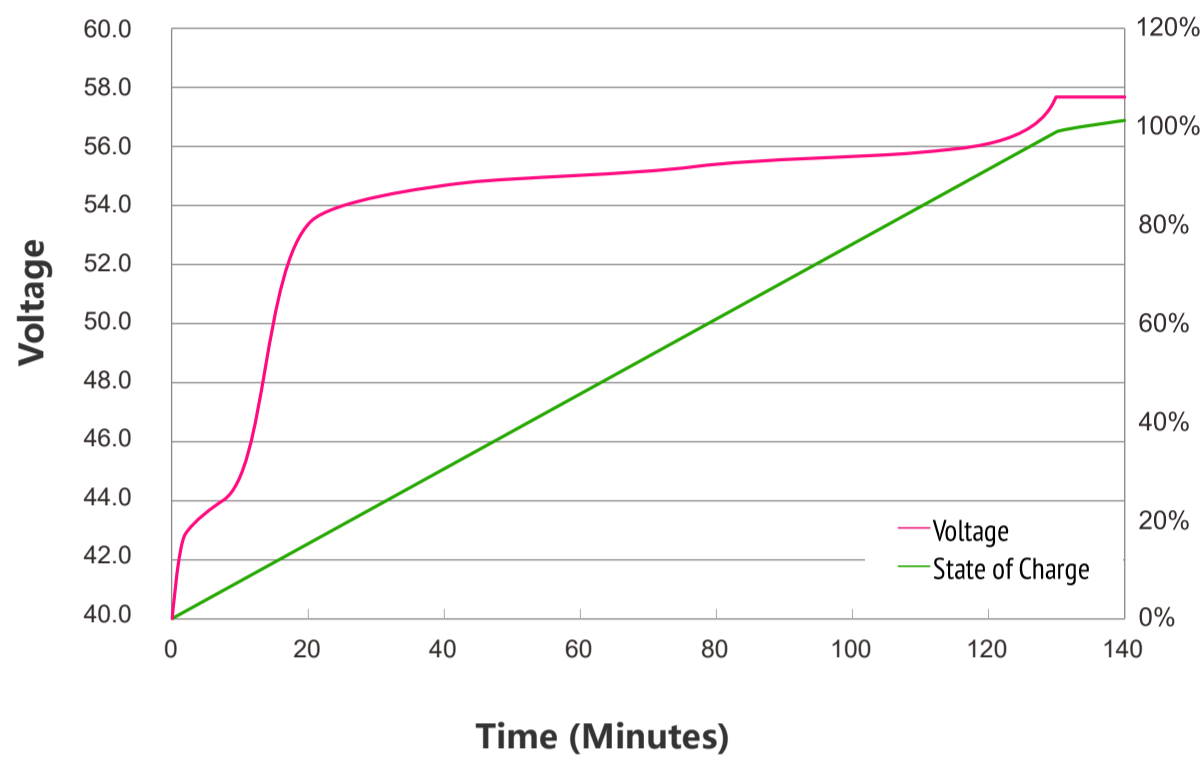
- Cell match:**
More strict cell matching standard, the difference of Internal resistance is 1mΩ and voltage is 5mV.
- Automatic cells welding:**
Cells are assembled by Automatic Welding Equipment to ensure the highest quality , reliability and excellent consistency .
- 100% Cycle test:**
All battery packs are 100% cycle tested (Fully Discharged → Fully Charged→ Fully Discharged→60% Charged) before packing and all test reports are stored.

PQ-LFP48100-4U / 5.12kWh Capacity

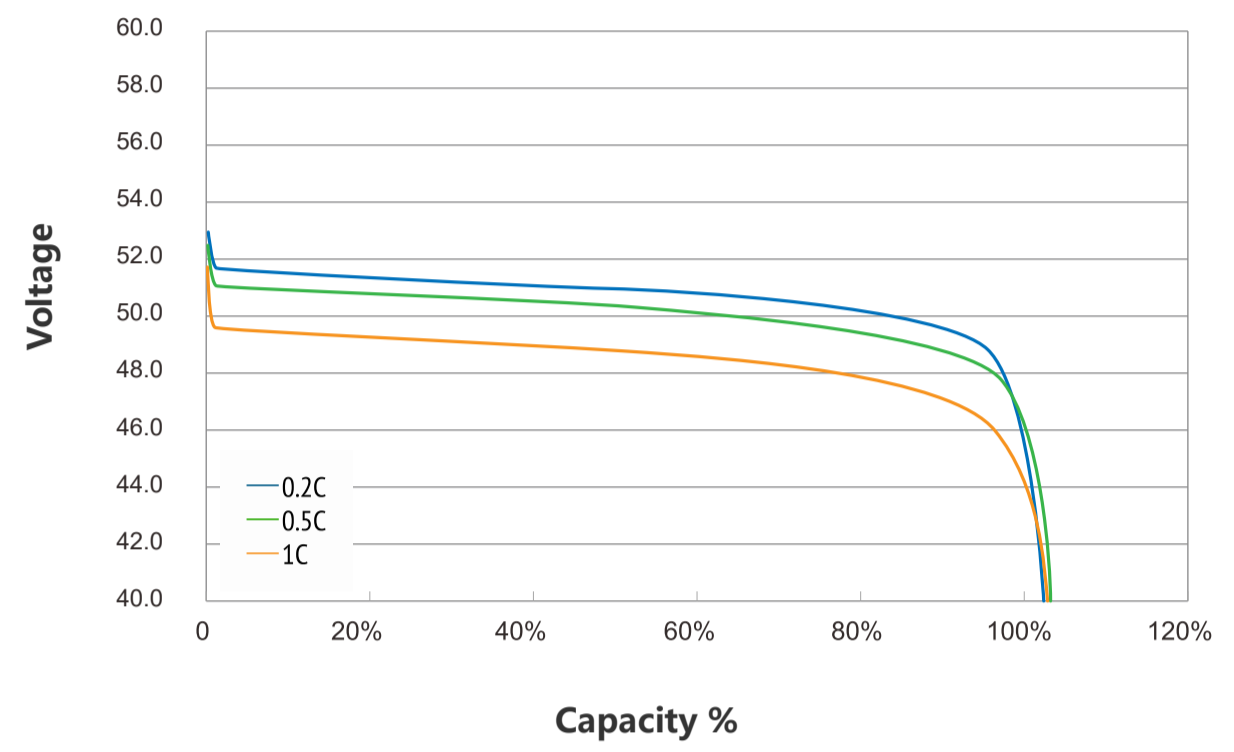
Electrical Specifications	Nominal Voltage	51.2V	
	Nominal Capacity	100Ah	
	Parallel Connection	Max. 8units	
	Serial Connection	No	
	BMS	16S75A	
	Circuit Protection	Over charge, Over discharge, Over current, Over temp, Short, Balance	
	Communication	2×RS485 and 1×CAN; LCD	
	Cycle Life	3000times Cycles @100%DOD and 6000times @80% DOD	
	Self Discharge	Less than 3% per month	
	Charge Efficiency	100% @0.2C	
	Discharge Efficiency	98-100% @1C	
Charge Specifications	Charge Voltage	57.6±0.8V	
	Standard Current	20A	
	Fast Current	50A	
Discharge Specifications	Standard Current	20A	
	Max. Con. Current	65A	
	Peak Current	150A(2s)	
	Cut-off Voltage	41.6V	
Mechanical Specifications	Dimensions (mm)	502×485×173.5mm(4U standard size)	
	Approx Weight(KG)	50	
	Terminal Type	4×M6	
	Case Color/material	Black Metal case	
	IP Rating	IP54	
	Cell Type	Cylindrical cell	
	Cell holder	Yes	
Temperature Specifications	Charge Temp	0°C to 55°C	(32°F to 131°F)
	Discharge Temp	-20°C to 60°C	(-4°F to 140°F)
	Storage Temp	-20°C to 45°C	(-4°F to 113°F)

Characteristics Curve:

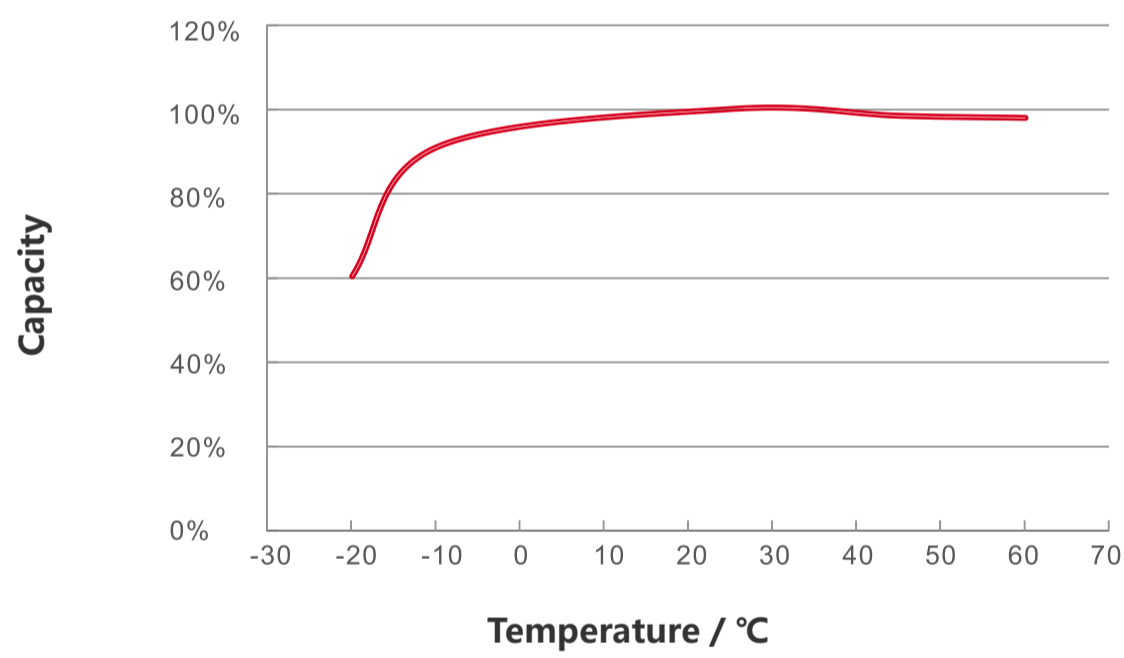
Charging Characteristics (0.5C @25°C)



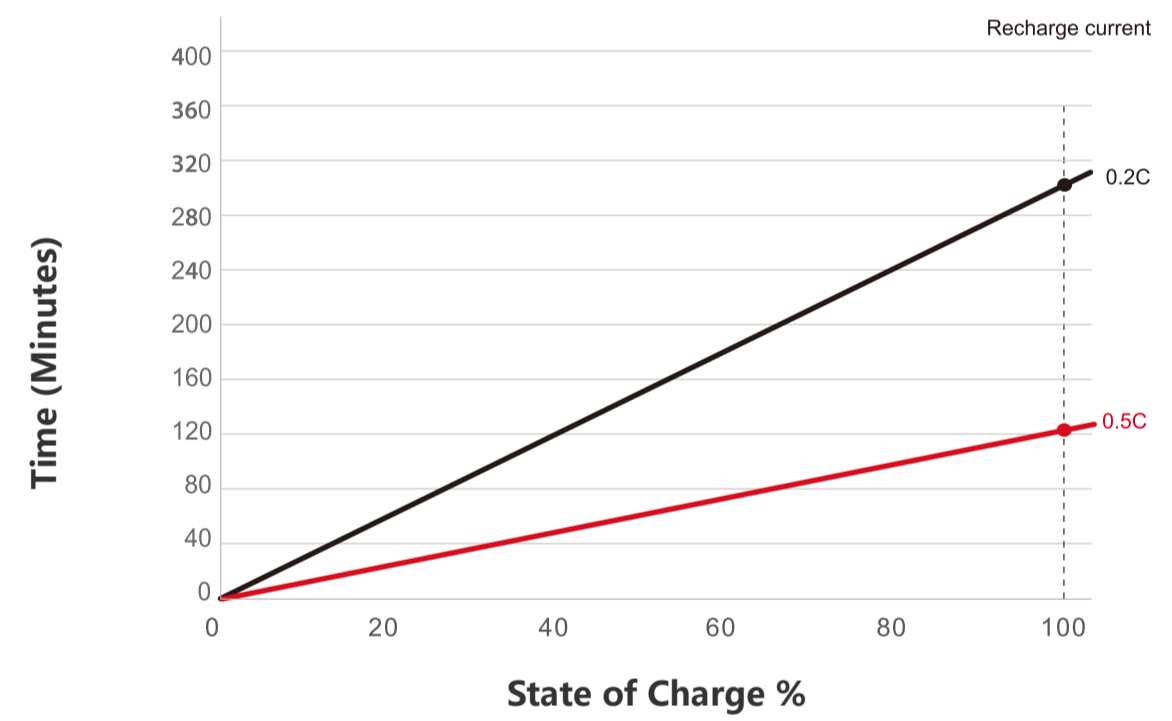
Discharging Characteristics (0.2C, 0.5C, 1C @25°C)



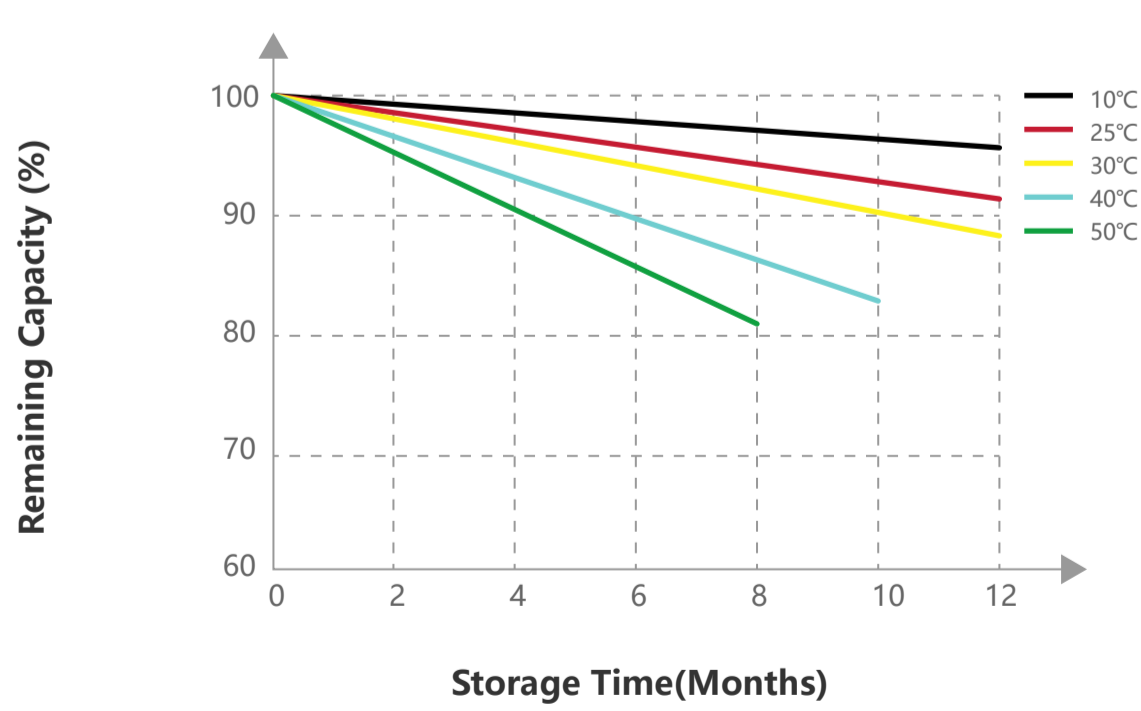
Different Temperature Capacity Curve



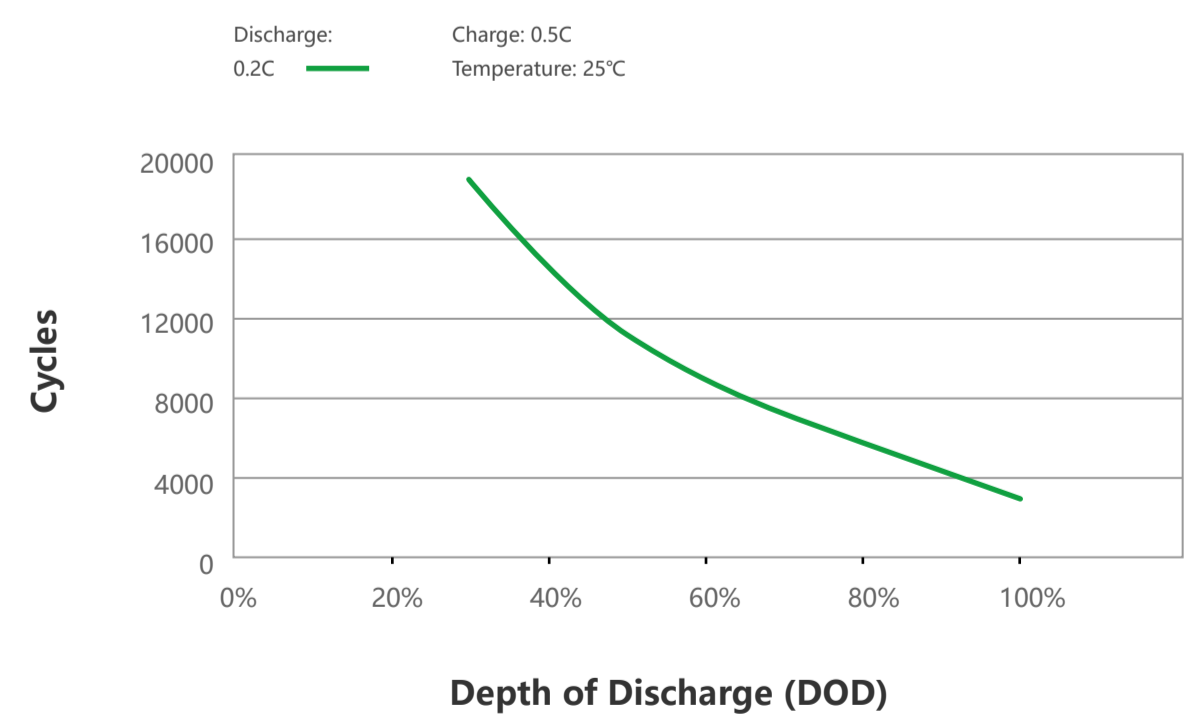
Typical Charge Time Curve



Different Temperature Self Discharge Curve



Different DOD Discharge Cycle Life Curve



Product advantages:

Product advantages



Adopt cylindrical cell, no swelling, no thermal runaway, no fire risk.



Adaptable to most inverter brands for greater applicability to end customers.



Equip with active balancing module, which can make sure the battery pack always be in balance state and further ensure long cycle time.



Keep high performance at high temperature, cycle 2800 times at 55°C, 100%DOD, no worries in summer or hot area.



The UL489 certificated circuit breaker with SHT, form a strong double-protection to battery.



Cell holder, ensure stable internal structure and improve heat dissipation.



All key components are UL approved, such as cell, part of BMS, terminal, cable, circuit breaker, which bring better quality and higher safety to battery.



Easy to install and move for end customers.

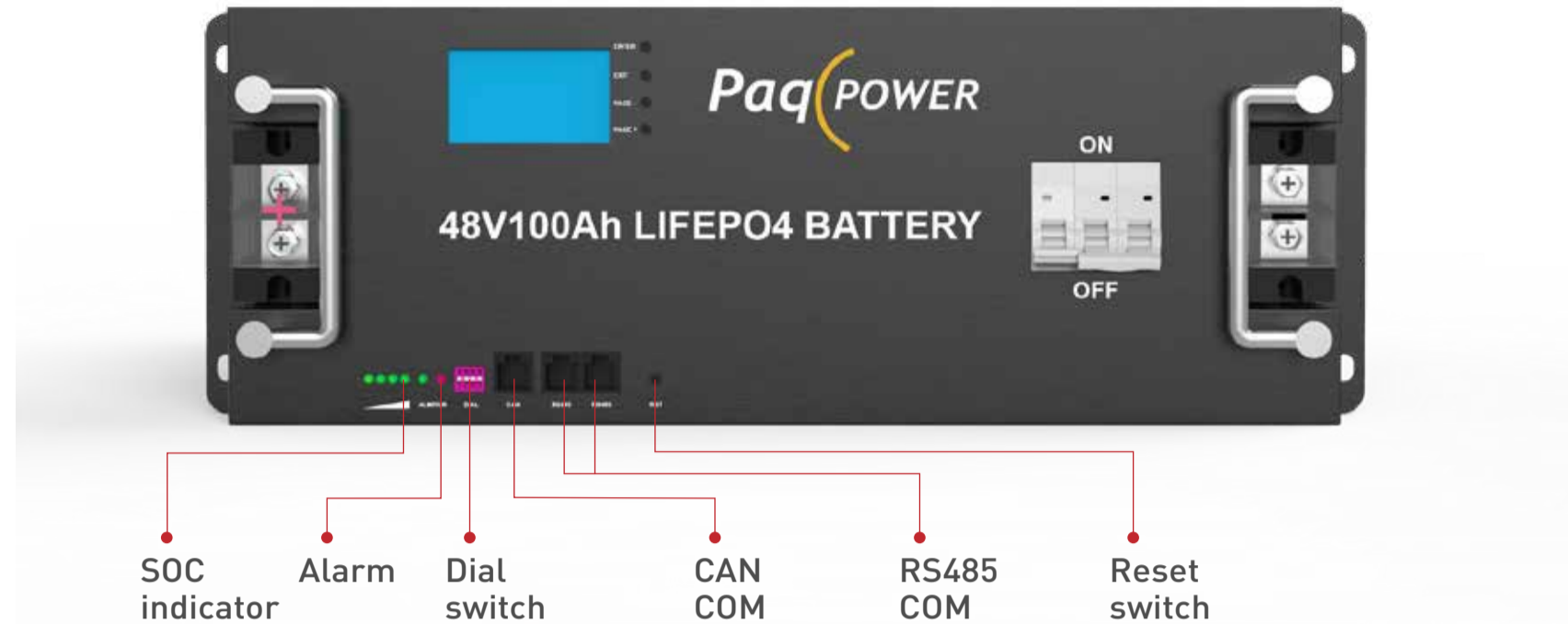


Could be compatible with the inverters as below:

Invert Brand	Communication Protocol	Communication type	Communication baud rate	Protocol version
派能	PYLONTECH CAN-Bus-protocol-PYLON	CAN	500K	V1.3
固德威	固德威 GOODWE Goodwe communication protocol	CAN	500K	V1.5
锦浪	锦浪 CAN communication protocol	CAN	500K	V1.0
首航	SOFAR 首航新能源 Sofar Inverter BMS-CAN protocol	CAN	500K	V1.0
古瑞瓦特-SPF	Growatt Growatt BMS CAN-Bus-protocol-low-voltage	CAN	500K	V1.05
古瑞瓦特-SPH	Growatt Growatt BMS communication protocol of growatt low voltage battery	CAN	500K	V1.01
SMA	SMA SMA-BMZ-Protocol-en	CAN	500K	
Victron	victron energy can-bus_bms_protocol	CAN	500K	V1.0
鹏城	LUPOWER™ Luxpowertek Battery CAN Protocol	CAN	500K	v1.0
Studer	STUDER Technical specification Studer BMS Protocol	CAN	500K	V1.03
TBB	TBB POWER TBB Lithium battery BMS-CAN communication protocol V1.02	CAN	500K	V1.02
德业	Deye 德业 Enjie CAN protocol V1.0	CAN	500K	V1.0
美世乐	MUST 美世乐 1_PV1800F-CAN communication Protocol1.04.04	CAN	100K	Apply to PV1800 inverter
派能	PYLONTECH RS485-protocol-pylon-low-voltage	485	9600	V3.5
日月元	Voltronic Power Voltronic Inverter and BMS 485 communication protocol	485	9600	V1.0
硕日	srne PACE BMS Modbus Protocol for RS485	485	9600	V1.3
古瑞瓦特-SPF	Growatt SPF BMS RS485 protocol	485	9600	V2.01

Operating instruction:

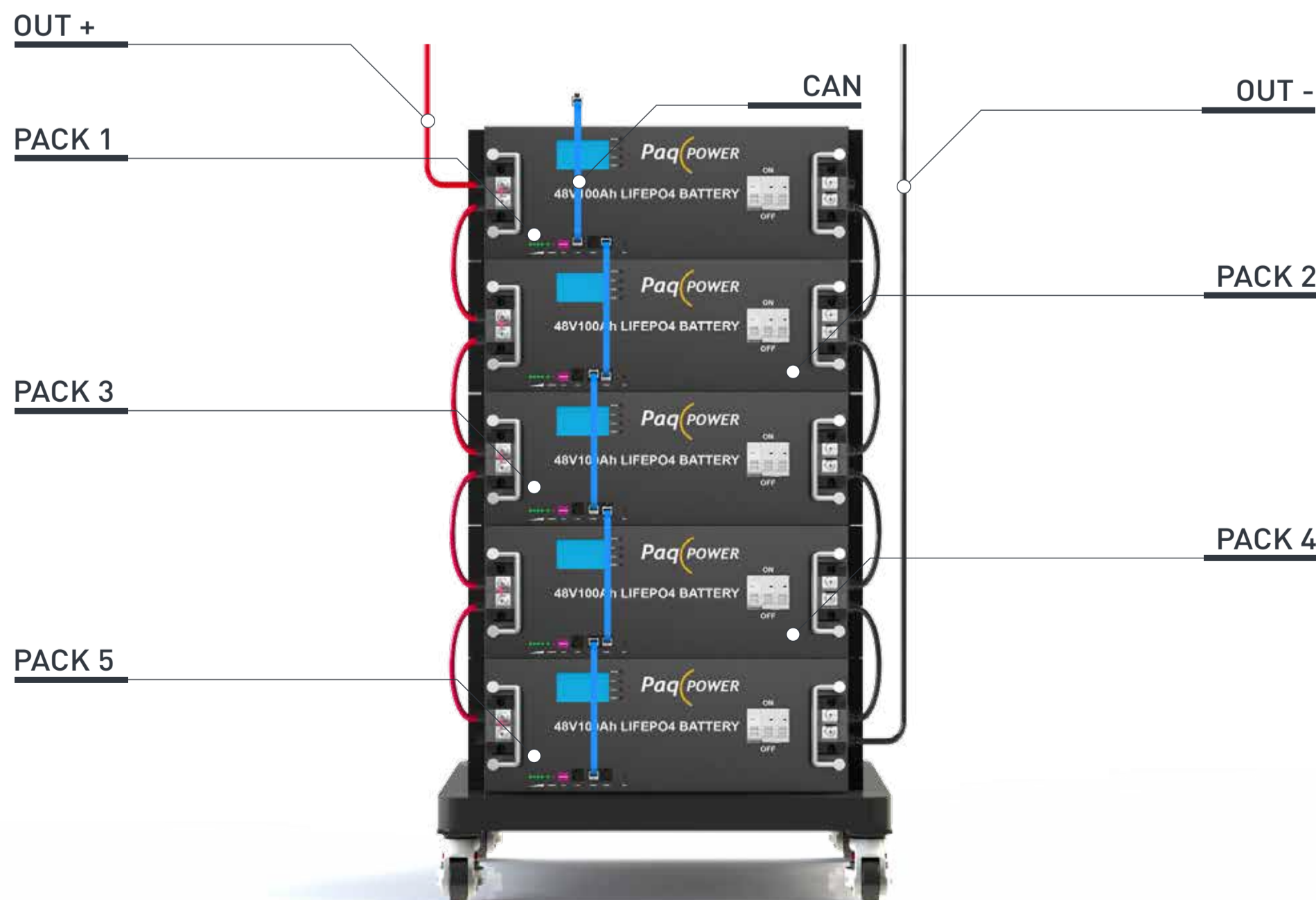
- Step 1: learn Interface Instruction:



- Step 2: Installation:



- Step 3: Connection:



■ Step 4: Dialing address

Single machine address setting: 0000

Address setting for parallel operation: the definition of dial switch is shown in the table below.

Parallel No.	Dipswitch position				Description
	#1	#2	#3	#4	
1	OFF	OFF	OFF	OFF	Single battery
2	ON	OFF	OFF	ON	2 Parallels
3	OFF	ON	OFF	ON	3 Parallels
4	ON	ON	OFF	ON	4 Parallels
5	OFF	OFF	ON	ON	5 Parallels
6	ON	OFF	ON	ON	6 Parallels
7	OFF	ON	ON	ON	7 Parallels
8	ON	ON	ON	ON	8 Parallels

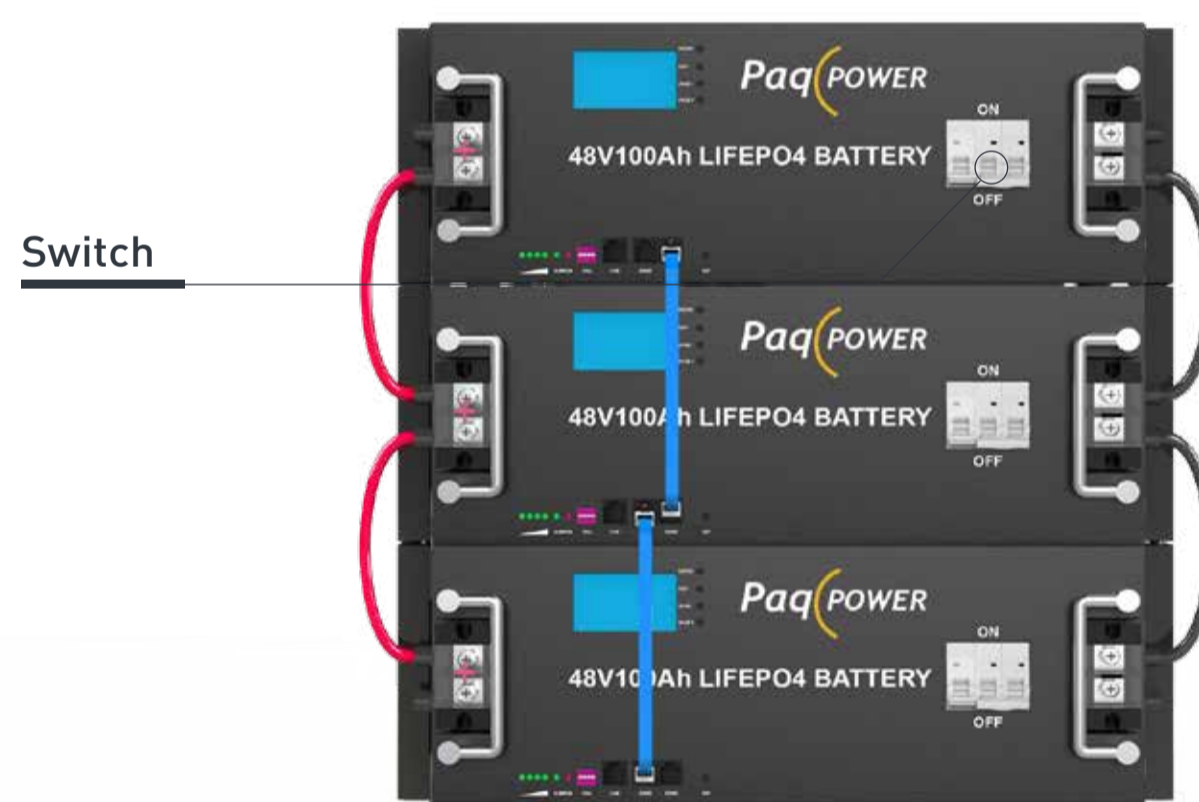
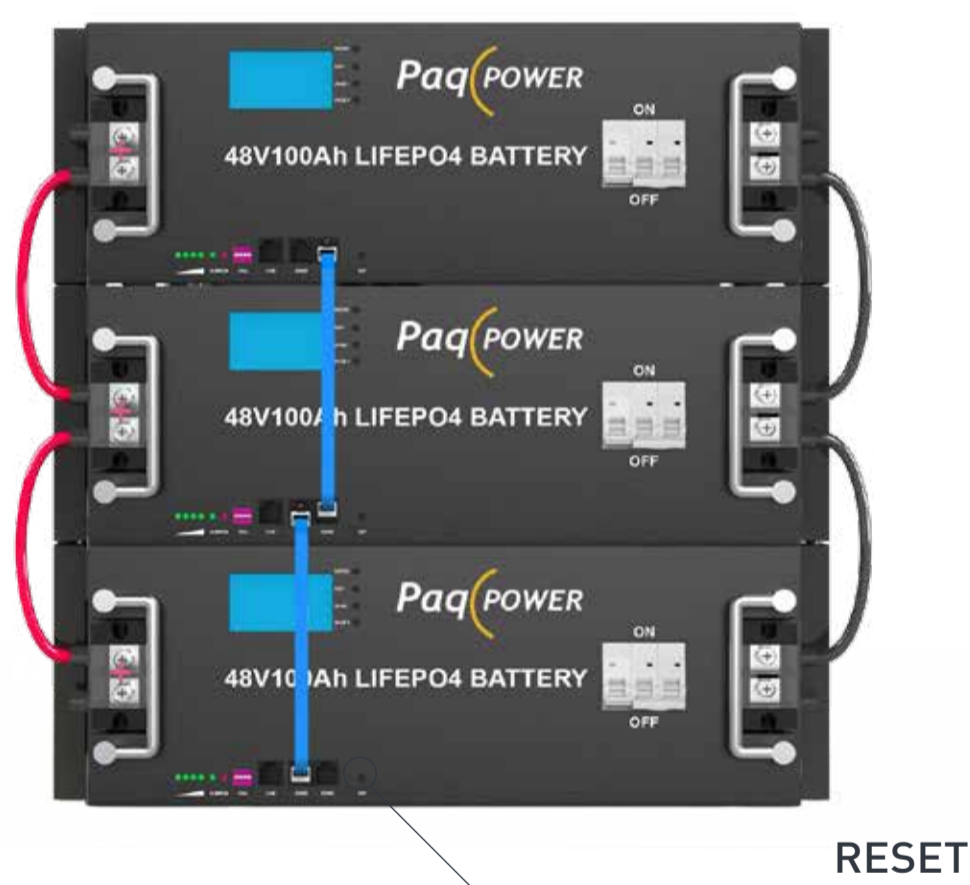
Host Settings

Address	Dipswitch position				Description
	#1	#2	#3	#4	
1	ON	OFF	OFF	OFF	Pack1
2	OFF	ON	OFF	OFF	Pack2
3	ON	ON	OFF	OFF	Pack3
4	OFF	OFF	ON	OFF	Pack4
5	ON	OFF	ON	OFF	Pack5
6	OFF	ON	ON	OFF	Pack6
7	ON	ON	ON	OFF	Pack7

Slave Settings

■ Step 5: Press the “RESET” button for over 3s separately, for wake up

■ Step:6 Turn on the switch separately



■ With a load/inverter, the energy storage system start to work!

Noted:

Sleep mode:

- a : The system will immediately go to Standby mode without load or charger, and RUN LED will flash (1s ON, 1s OFF). After 48h later, the system will automatically go to sleep mode. And then all LEDs in panel will turn off.
- b: With the standby state, the system can be forced into sleep mode through pressing the reset key for 3s.

Wake up:

The following operations can wake up the system from sleep mode:

- a. Automatically wake up when connecting a charger;
- b. Press on the “reset” key for 3s;

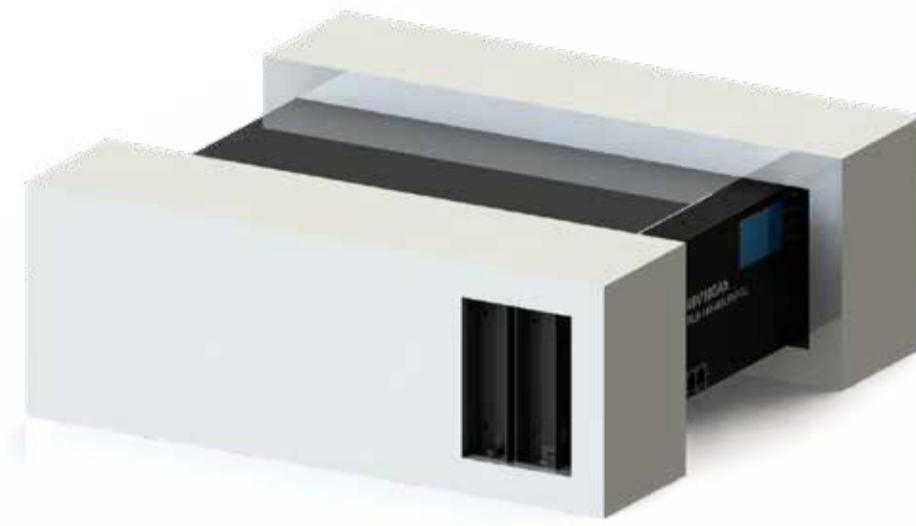
UL1973 Certified

IEC62619 Certified

Package:

20' Container=10Pallets=240Cartons=240Units;
40' Container=20Pallets=480Cartons=480Units;

Internal Package
Forming pearl foam



Weight: 51Kg/carton
Size(LxWxH): 570x512x240mm

1Carton=1Unit



Weight: 1239Kg/pallet
Size(LxWxH)=1.2x1x1.6m ≈ 1.9CBM

1Pallet=24Cartons