

48V 100Ah Solid state LiFePO4 Battery

Data sheet



HC48100SL-3U-V2 48V 100Ah Solid state LiFePO4 Battery

Solid state LiFePO4 Battery:

A solid-state battery deploys solid-state technology using a solid electrolyte, instead of the liquid or polymer gel electrolytes found in traditional lithium-ion batteries. Solid-state technology can significantly improve the safety, stability, cycle and performance at high & low temperature of lithium batteries.

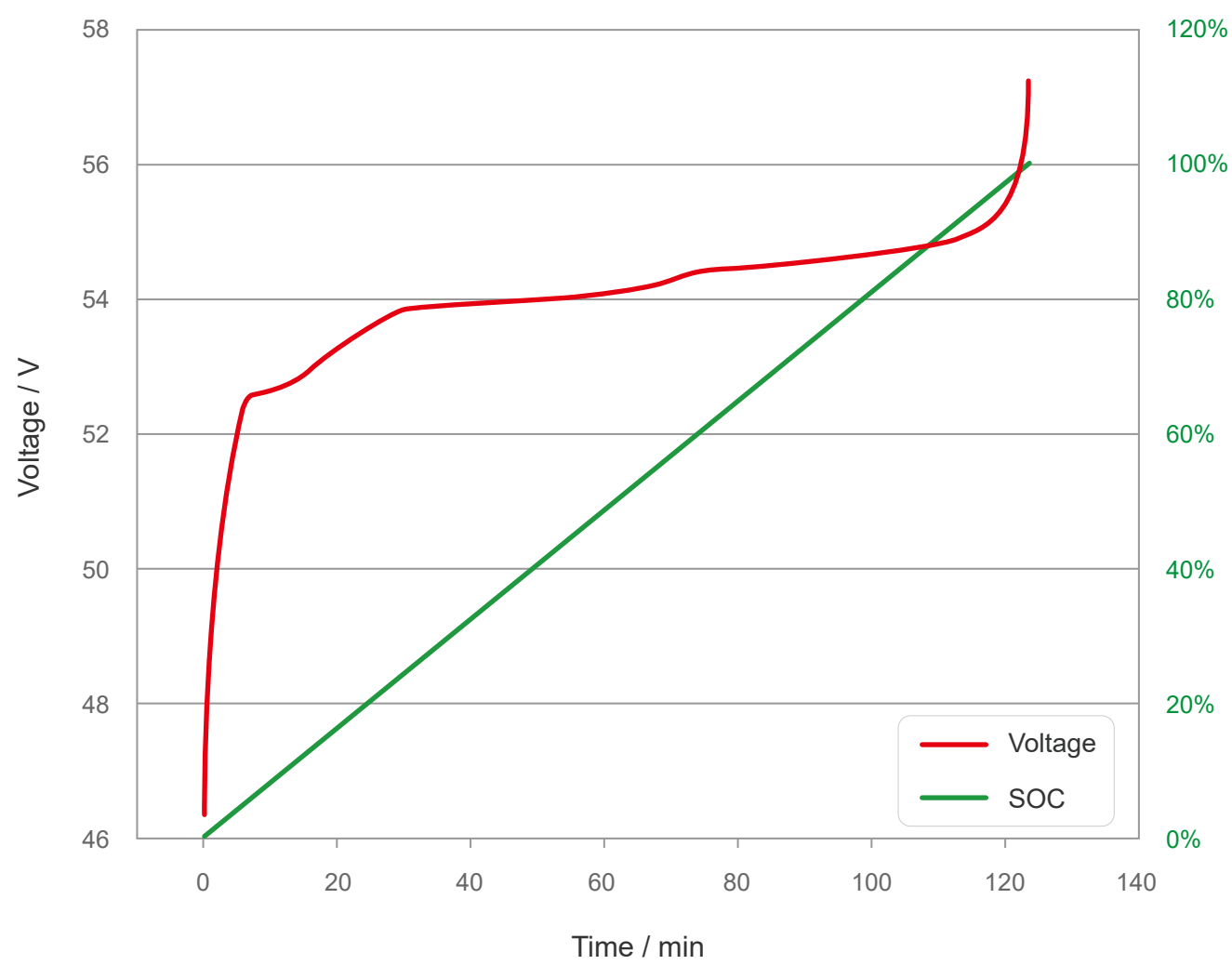


HC48100SL-3U-V2

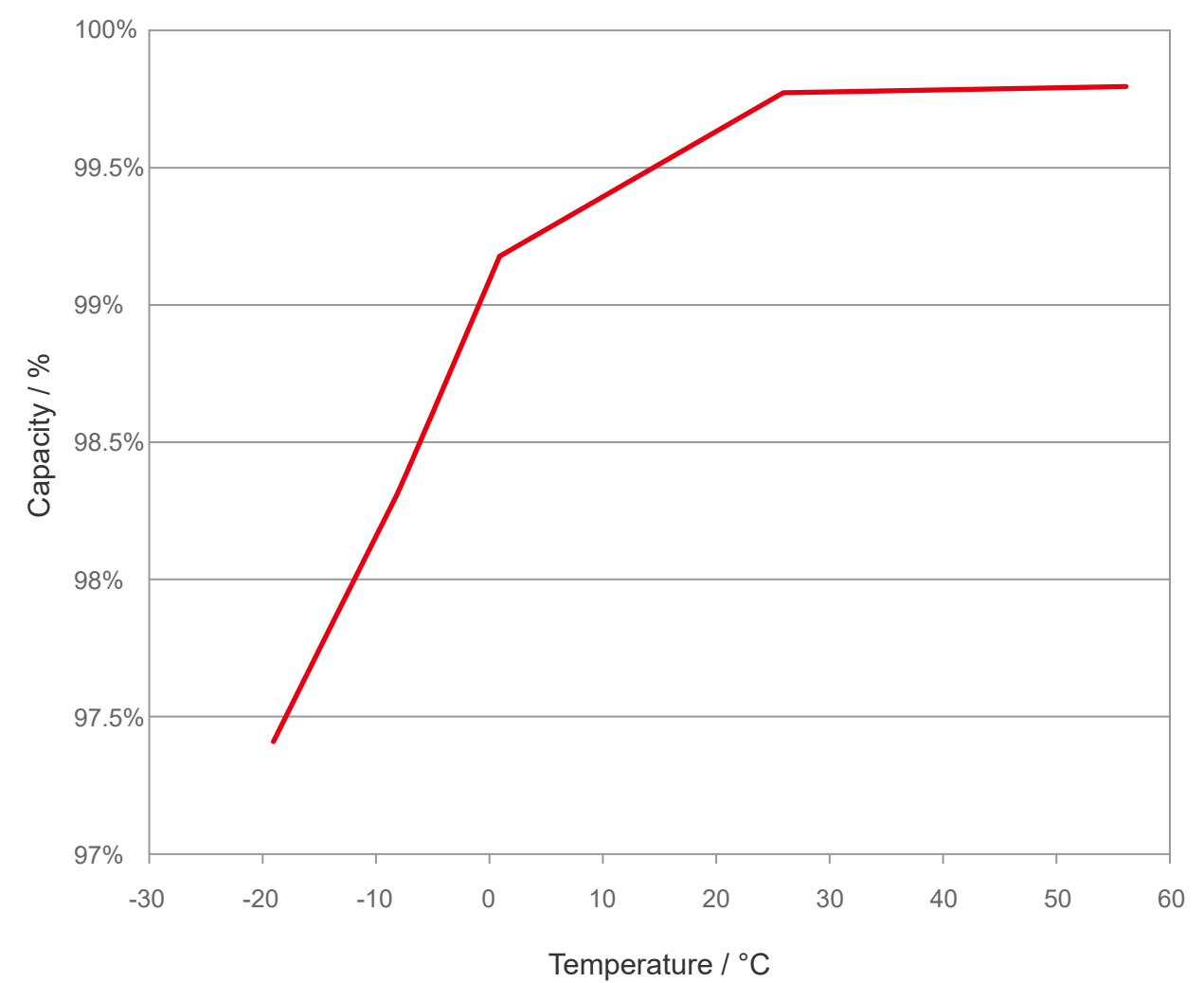
Electrical Specifications	Nominal Voltage	51.2V
	Nominal Capacity	100Ah
	Parallel Connection	Max. 16units
	Serial Connection	No
	BMS	16S100A
	Circuit Protection	Over charge, Over discharge, Over current, Over temp, Short, Balance
	Communication	2×RS485 and 1×CAN; LCD
	Cycle Life	5000times Cycles @100%DOD and 10000times @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	100A
	Peak Current	250A(2s)
	Cut-off Voltage	40V
Mechanical Specifications	Dimensions (mm)	517×442(482)×133.5mm
	Approx Weight(KG)	43
	Terminal Type	ES08 Energy Storage Quick Insert
	Case Color/material	Black Metal case
	IP Rating	IP54
	Cell Type	3.2V 50Ah solid state cell
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:

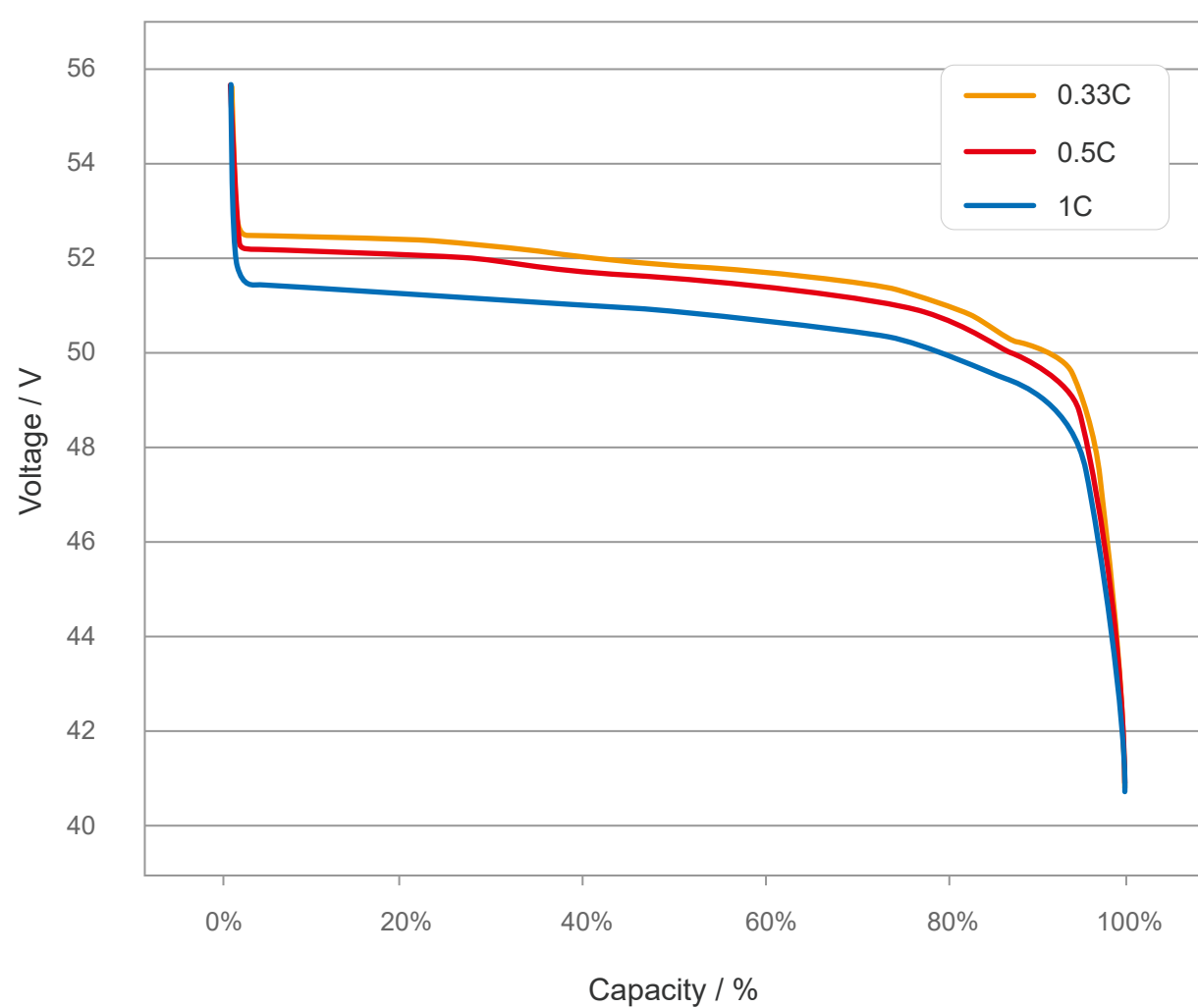
Charging characteristic curve-0.5C@25°C



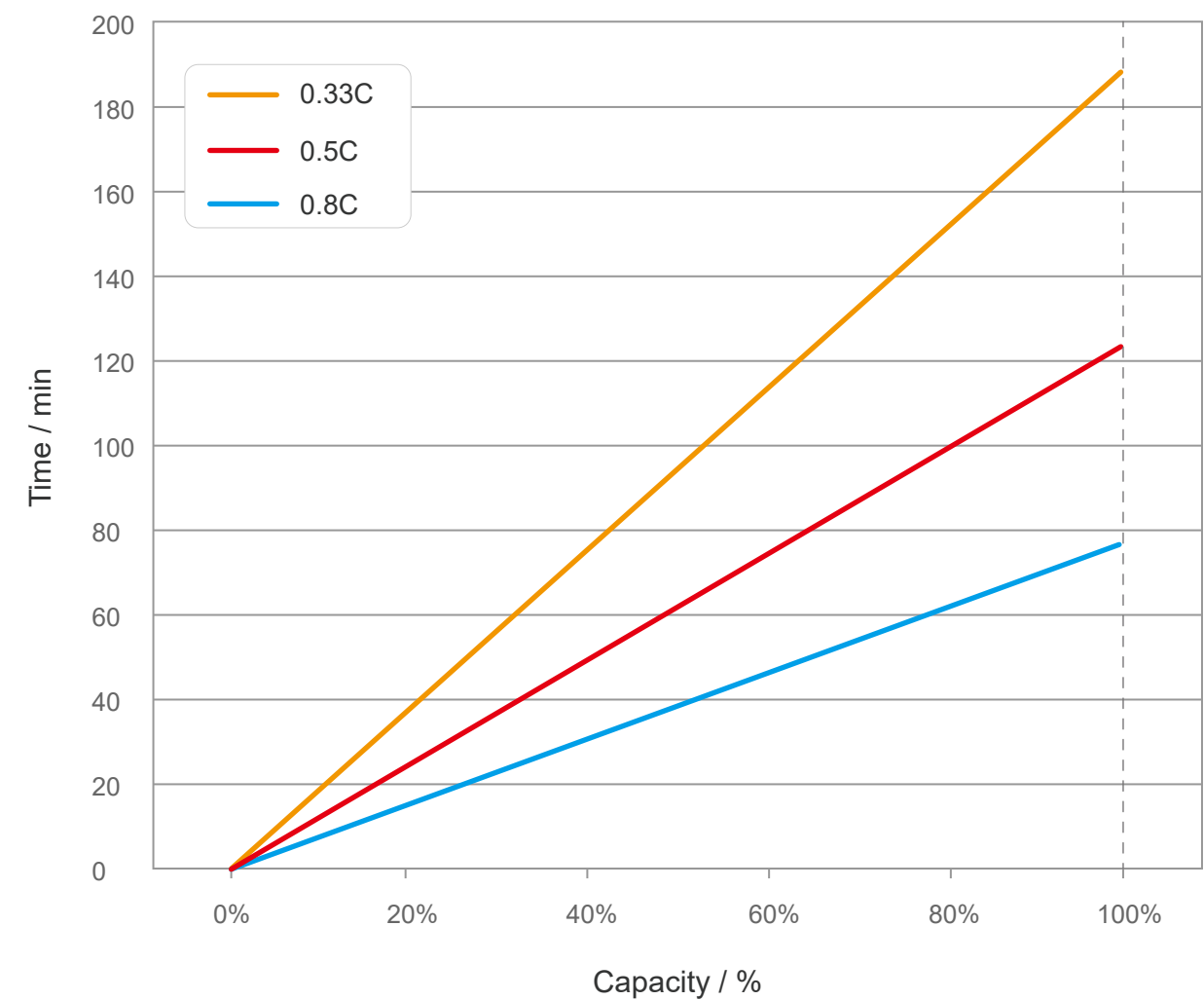
Different temperature capacity curves



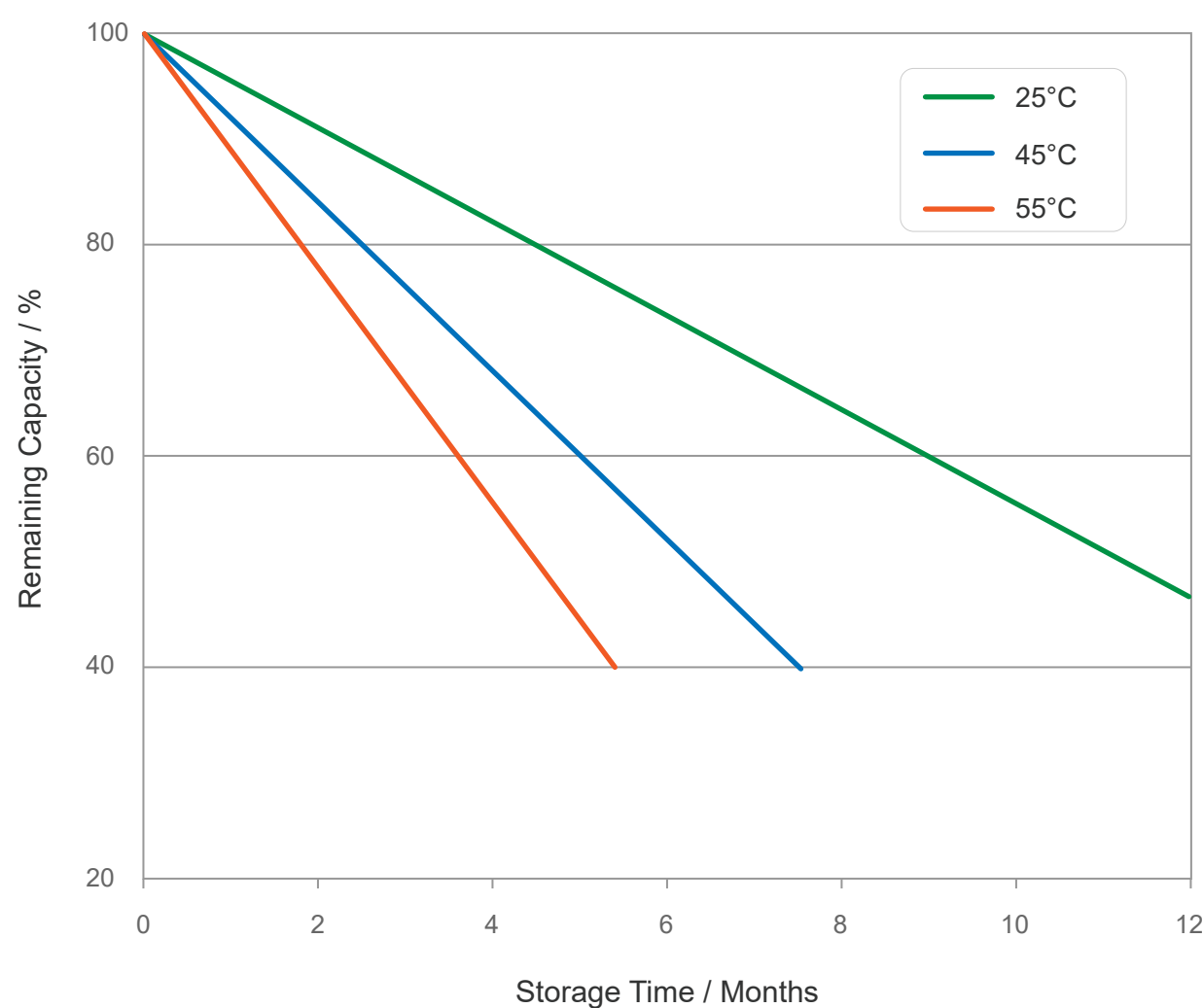
Discharging characteristic curve-0.33C,0.5C,1C@25°C



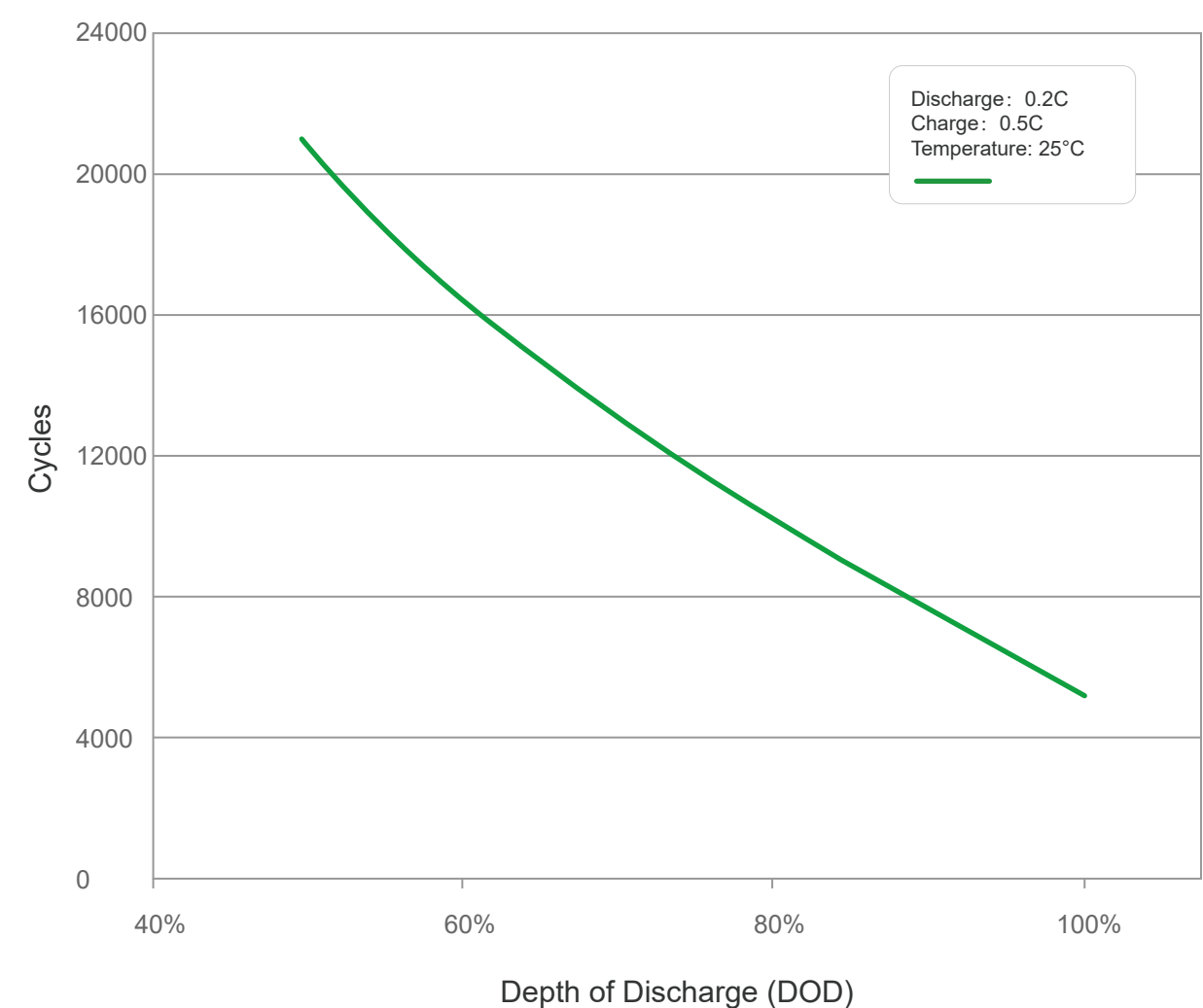
Charging time curve-0.33C,0.5C,0.8C@25°C



Different Temperature Self Discharge Curve

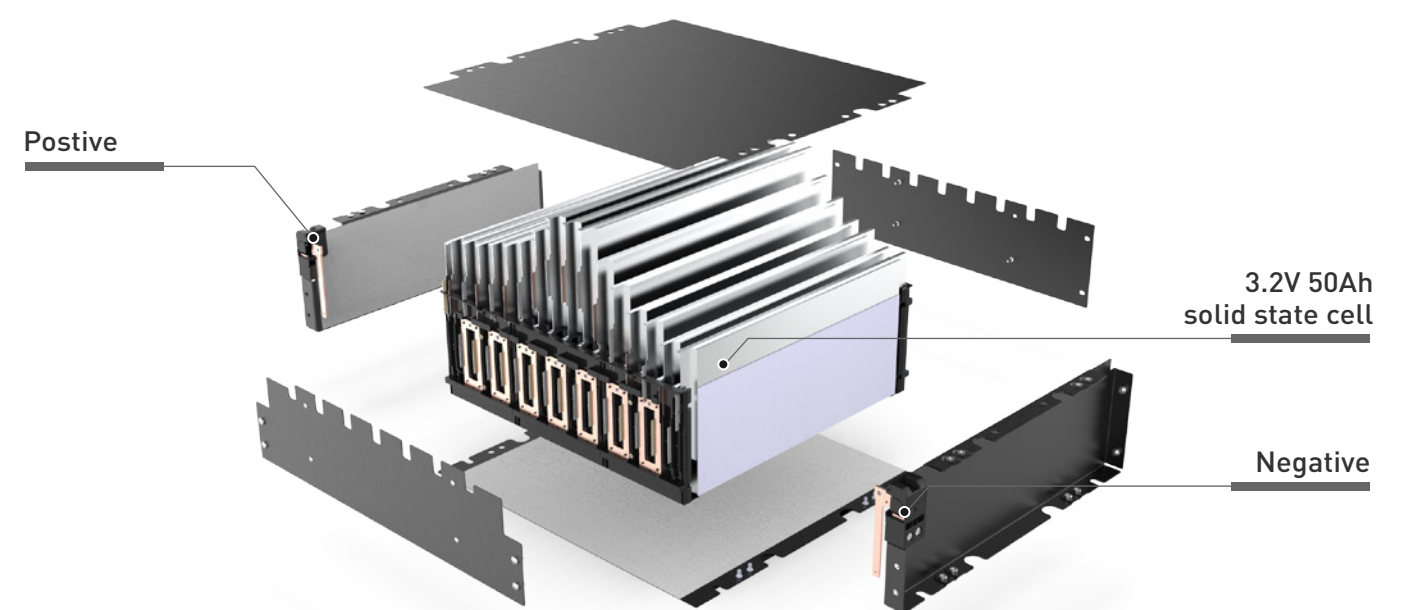


Different DOD Discharge Cycle Life Curve



Product advantages:

- Product advantages



Higher Safety: no fire and no smoke even if penetrated by nails.



Longer Cycle life: over 5000times at 100% DOD and over 10000times at 80% DOD.



Better performance at low temperature: over 97% capacity discharged at -20°C.



Lower temperature rising when working, less than 7°C rising at 0.5C.



Max. 16pcs in Parallel to get Max. 86kwh system.



Compatible with most Brands inverters.



Modular, Scalable & Proven Performance.



Maintenance Free.

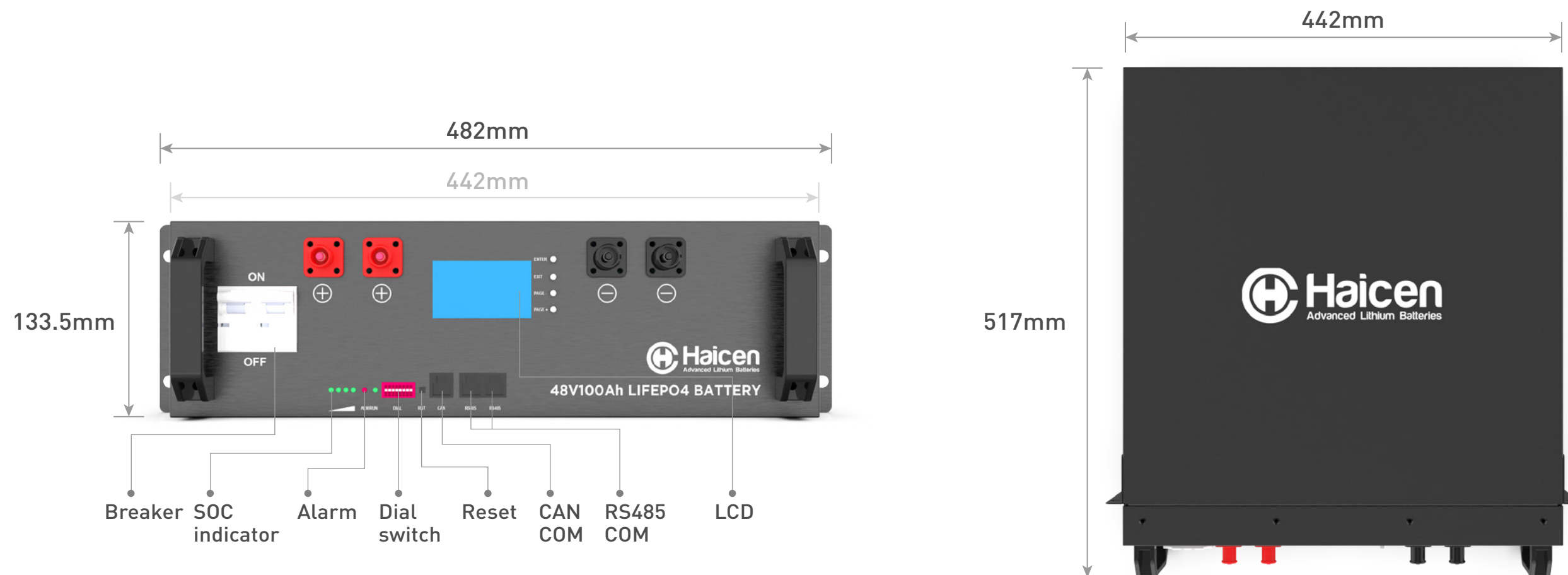


HC48100SL-3U module could be compatible with the inverters as below:

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 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:

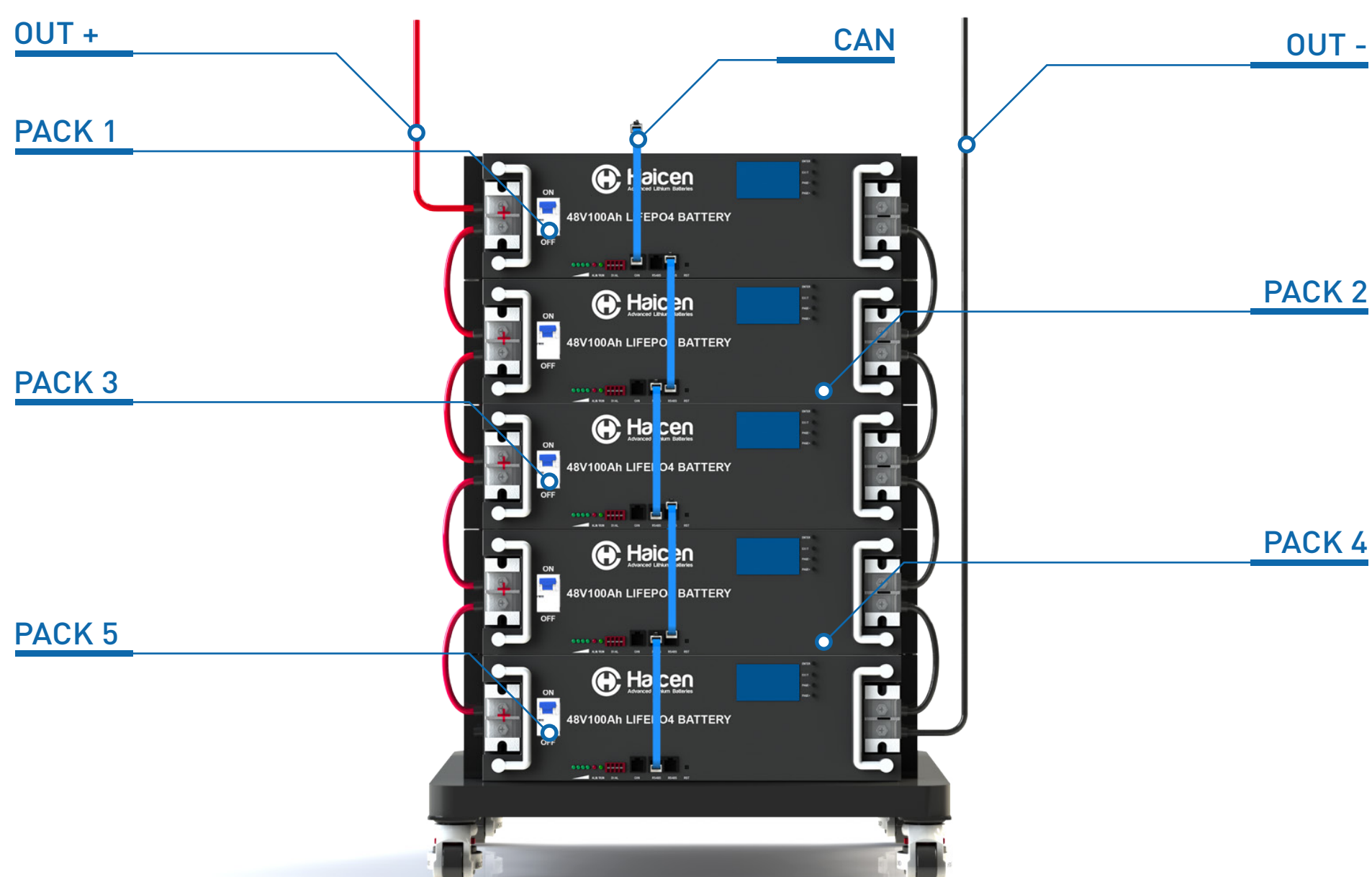
- Step 1: learn Interface Instruction and dimensions:



- Step 2: Installation the modules into 19' standard Cabinet or Rack.



- Step 3: Connect the modules in parallel one by one (only suitable for the load no more than 5kw) if suitable for large load, connect all modules to the Busbar.

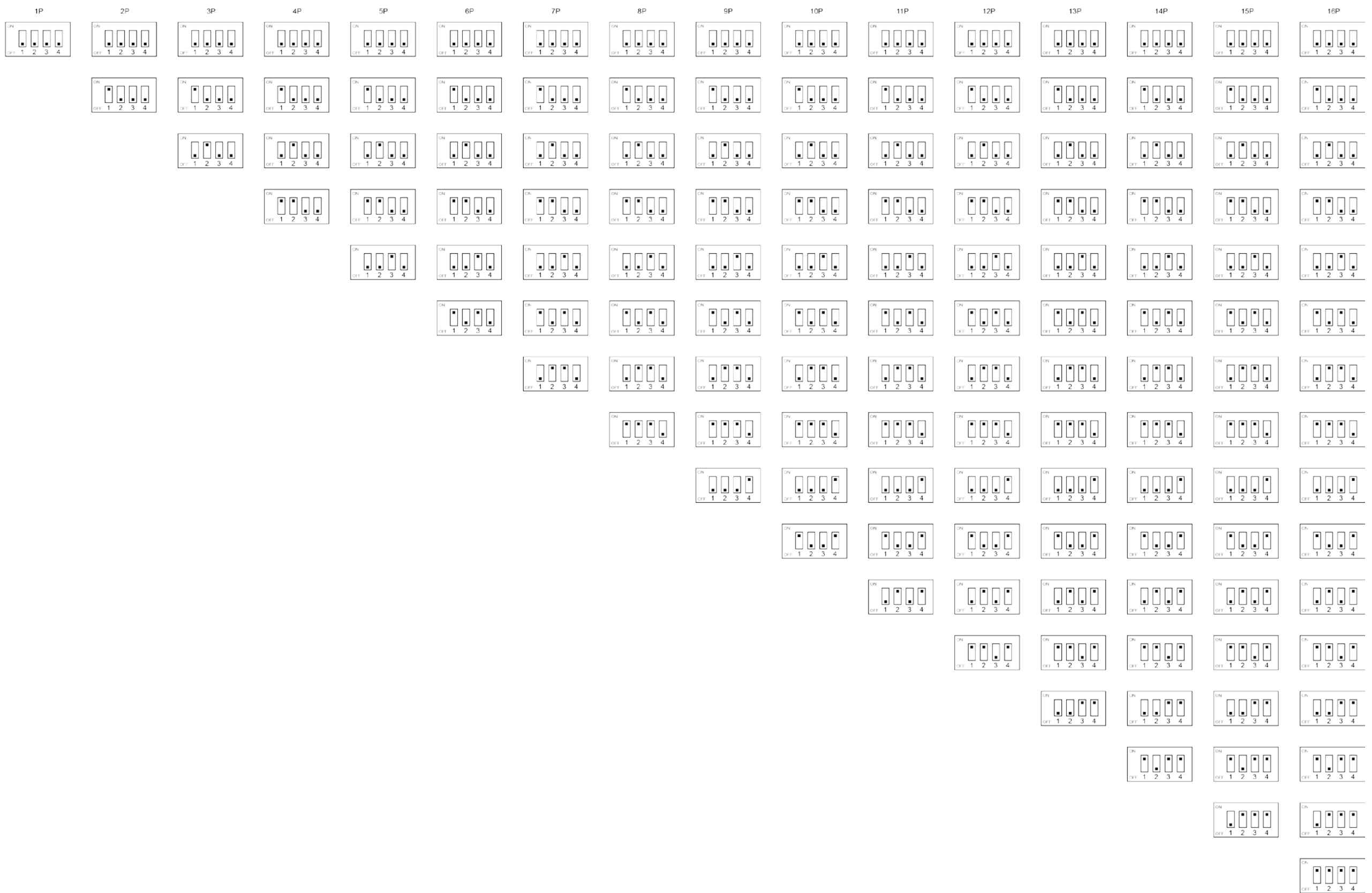


Step 4: Dialing address

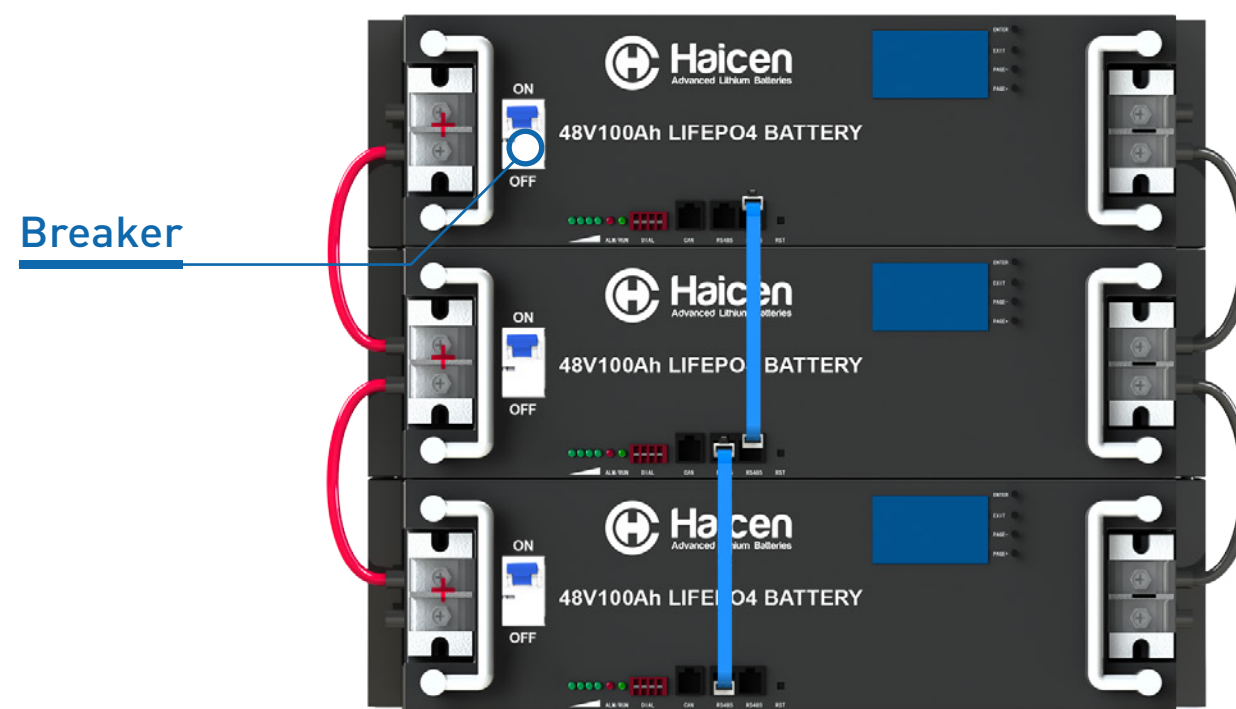
Automatic dialing. Manual dialing (optional)

Single machine address setting: 0000 0000

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



Step 5: Turn on the breaker 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 Switch.

Wake up:

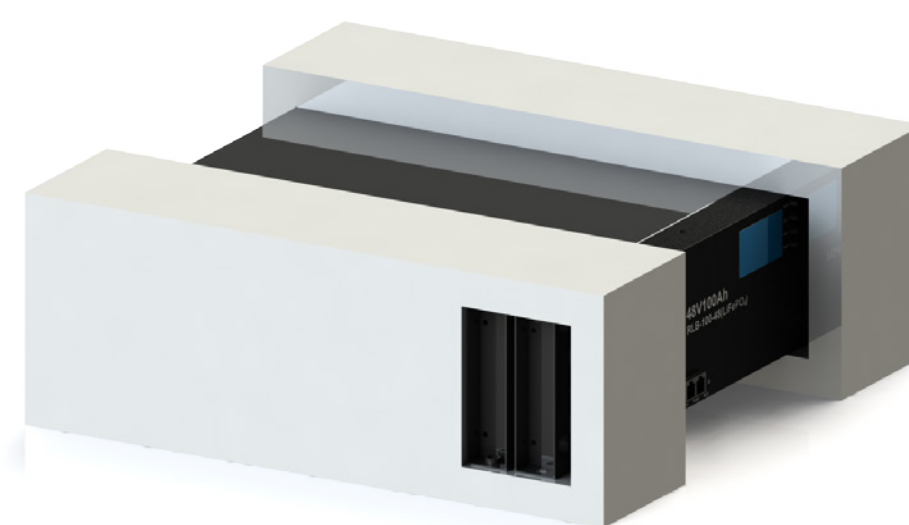
The following operations can wake up the system from sleep mode:

- a. Automatically wake up when connecting a charger;
- b. Press on the "Switch" key;

Package:

20' Container=10Pallets=280Cartons=280Units;
40' Container=20Pallets=560Cartons=560Units;

Internal Package
Forming pearl foam



Weight: 45Kg/carton
Size(L×W×H): 590×500×200mm

1Carton=1Unit



Weight: 1275Kg/pallet
Size(L×W×H)=1.2×1×1.6m ≈ 1.9CBM

1Pallet=28Cartons