2.1 Before Connecting

Warning

1) After unpacking, please check product and packing list first, if product is damaged or lack of parts, please contact with the local retailer.
2) Before installation, be sure to cut off the grid power and make sure the battery is in the turned-off mode.
3) Wiring must be correct, do not mistake the positive and negative cables, and ensure no short circuit with the external device.
4) It is prohibited to connect the battery and AC power directly.
5) The embedded BMS in the battery is designed for 48VDC, please DO NOT connect battery in series.
6) Battery must connect to ground and the resistance must be less than 0.1Ω.
7) Please ensured the electrical parameters of battery system are compatible to related equipment.
8) Keep the battery away from water and fire.

2.2 In Using

1) If the battery system needs to be moved or repaired, the power must be cut off and the battery is completely shut down.
2) It is prohibited to connect the battery with different type of battery.
3) It is prohibited to connect batteries with faulty or incompatible inverter
4) It is prohibited to disassemble the battery (QC tab removed or damaged).
5) In case of fire, dry powder fire extinguisher or vast amount of water can be used.
6) Please do not open, repair or disassemble the battery except staffs from Pylontech or authorized by Pylontech. We do not undertake any consequences or related responsibility which because of violation of safety operation or violating of design, production and equipment safety standards.

3. Introduction

US5000 lithium iron phosphate battery is the new energy storage products developed and produced by Pylontech, it can be used to support reliable high power for various types of equipment and systems.

3.1 Features

1) Build-in soft-start function able to reduce current strike when inverter need to start from battery.
2) Dual active protection on BMS level.
3) Automatic address setting when connect in multi-group.
4) Support wakeup by 5~12V signal from RJ45 port.
5) Support upgrade battery module from upper controller via CAN or RS485 communication.
6) Enable 95% depth of discharge, available for the inverter which completely follow Pylontech latest protocol to operate.
7) The module is non-toxic, non-pollution and environmentally friendly.
8) Cathode material is made from LiFePO4 with safety performance and long cycle life.
9) Battery management system (BMS)has protection functions including over-discharge, over-charge, over-current and high/low temperature.
10) The system can automatically manage charge and discharge state and balance voltage of each cell.
11) Flexible configuration, multiple battery modules can be in parallel for expanding capacity and power.
12) Adopted self-cooling mode rapidly reduced system entire noise.
13) The module has less self-discharge, up to 6 months without charging it on shelf, no memory effect, excellent performance of shallow charge and discharge.

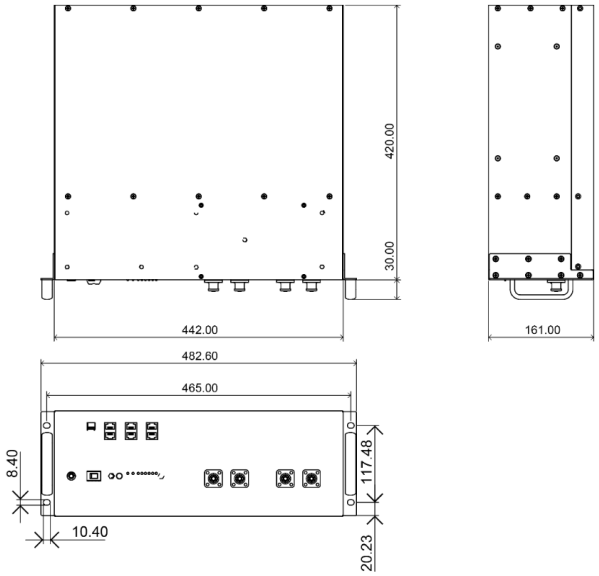
14) Small size and light weight, standard of 19-inch embedded designed module is comfortable for installation and maintenance.
15) Compatible with the 48V series battery of Pylontech.

*Mixture using master battery priority:
US5000>UP5000/US3000C/US2000C>U3000/US2000
For same type of module always use the latest production unit as master.

*Mixture using battery deployment option:

Master battery (1st)	US5000
Slave 2nd ~8th	US5000/UP5000/US3000C/US2000C/ US3000/US2000
Slave 9th ~16th	US5000/UP5000/US3000C/US2000C

3.2 Specifications



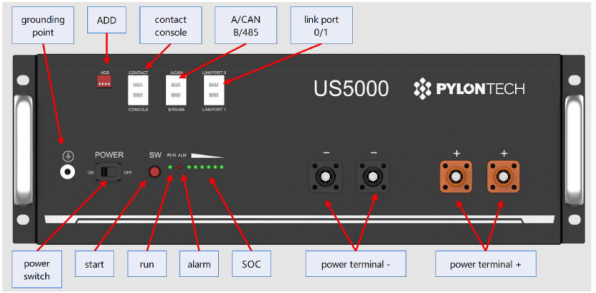
Basic Parameters	US5000	US5000-B
Nominal Voltage (VDC)	48	
Nominal Capacity (Wh)	4800	
Usable Capacity (Wh)	4560	
Depth of discharge (%)	95	
Dimension (mm)	442*420*161	
Weight (Kg)	39.7	40
Discharge Voltage (VDC)	43.5 ~ 53.5	
Charge Voltage (VDC)	52.5 ~ 53.5	
Recommended Charge/Discharge Current (A) *	80	
Max. continuous Charge/Discharge Current (A) *	100	
Peak Charge/Discharge Current (A)	101-120@15min	
	121~200@15sec	
Communication	RS485, CAN	
Configuration (max. in 1 battery group)	16pcs	
Working Temperature(°C)	0°C ~50°C Charge	
	-10°C ~50°C Discharge	
Shelf Temperature (°C)	-20°C~45°C	
Short current/duration time	<2000A/1ms	
Cooling type	Natural	
Breaker	No	Yes
Protective class	I	
IP rating of enclosure	IP20	
Humidity	5% ~ 95%(RH) No Condensation	
Altitude(m)	≤4000	
Certification	TÜV / CE / UL / UN38.3	
Design life (year)	15+ (25°C /77℉)	
Cycle Life (cycle) **	>8,000 25°C	
Reference standards	IEC62619, IEC63056, UL1973, UL9540A, IEC61000-6-2, IEC61000-6-3, UN38.3	

* The recommended and max. continuous operation current is for a battery cell temperature within 10~40°C to consider, out of such temp. range will cause a derating on operation current.

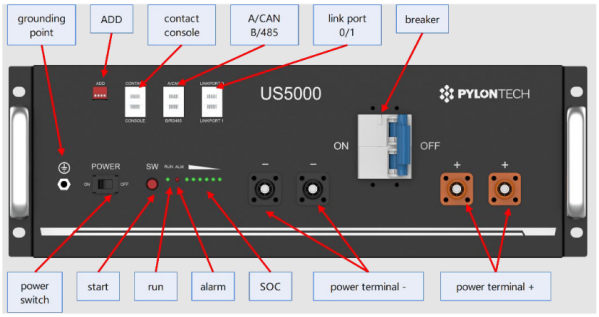
** Cycle Life is defined based on specific operation conditions, for more details please check with Pylontech service team.

3.3 Equipment interface instruction

US5000 front panel



US5000-B front panel



Breaker (for US5000-B)

Parameter: type C, rated voltage 60V/DC, rated current 125A, Icu: 10kA.
Standard reference: UL1077, IEC60947-2.
ON: power terminals connect with battery.
OFF: power terminals disconnect with battery.