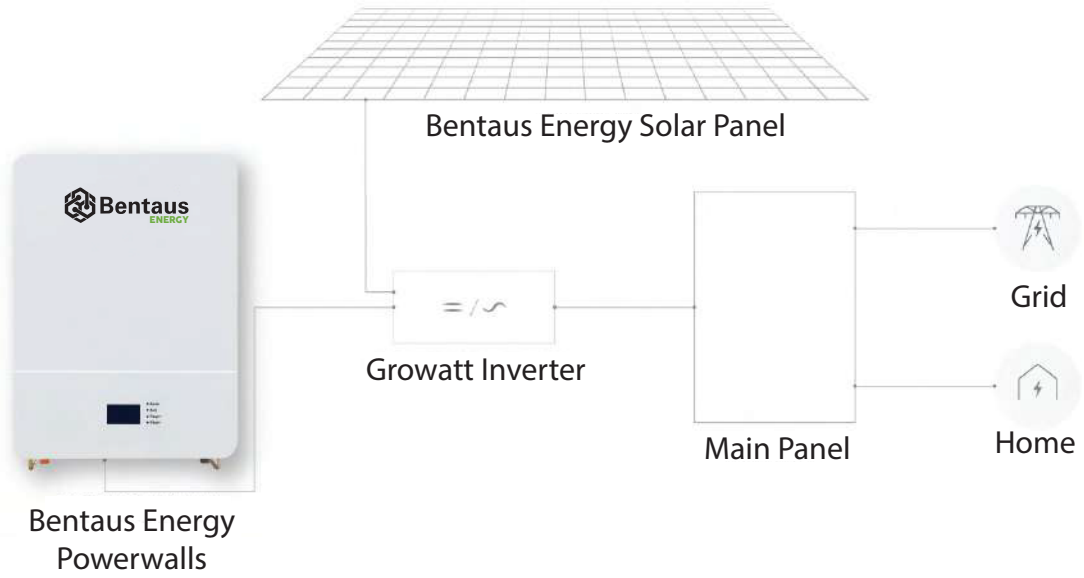
Bentaus Energy Powerwall

Specification

Model: AUM-PW-300AH48V



1. Application

48V series wall-mounted household energy storage lithium iron phosphate battery

2. General Information

48V300AH

This specification is suitable for the 48v300ah battery pack, and describes its dimensions, characteristics, technical requirements and precautions for use.

3. Basic Information

Description:	Rechargeable LiFePO4 battery pack
Cell Type:	150Ah
PCM：	15S
Chemistry:	LiFePO4
Cell configuration:	15S2P
Voltage Nominal:	48V
Capacity Nominal：	300Ah
Energy：	14400Wh
Additional Function:	
Protection:	

A. Over Charge Protection

B. Over Discharge Protection

C. Over Current Protection

D. Short Protection

4. Battery Specification（@ 25±5℃）

NO	Items		Characteristics
System specification			
2.1	Normal capacity		300AH
2.2	Nominal energy		14.4KWh
2.3	DC discharge nominal voltage		48Vdc (LFP-15S)
2.4	Range of DC discharge voltage		37.5V-54.75Vdc
2.5	Internal resistance		≤50mΩ @1kHz AC
2.6	DC normal charge voltage		54.75±1Vdc
2.7	DC float charge voltage		54.75±1Vdc
2.8	Compose method		15S2P
2.9	Allowed MAX charge current		150Adc
2.10	Recommended charge current		≤100Adc
2.11	Allowed MAX discharge current		150Adc
2.12	End of discharge voltage		37.5Vdc
2.13	Display method and language		English
2.14	Communication method		CAN
2.15	Cooling method		Natural cooling
2.16	Dimension		W232+5mm (9.1 inches approx)
			H1012+5 mm (39.9 inches approx)
			L500+5 mm (19.7 inches approx)
2.17	IP rating		IP55
2.18	Weight		About 165Kg (364 lbs approx)
2.19	Operation temperature	Charge	0～50℃
		Discharge	-20～60℃
2.20	Self-discharge rate	Residual capacity	≤3%/Month; ≤15%/ year
		Recover capacity	≤1.5%/Month; ≤8%/ year
2.21	Storage Environment	≤1month	-20～+60℃、5～75%RH

		≥3month	3：-10～+45℃、5～75%RH
		Recommend environment	15～35℃、5～75%RH

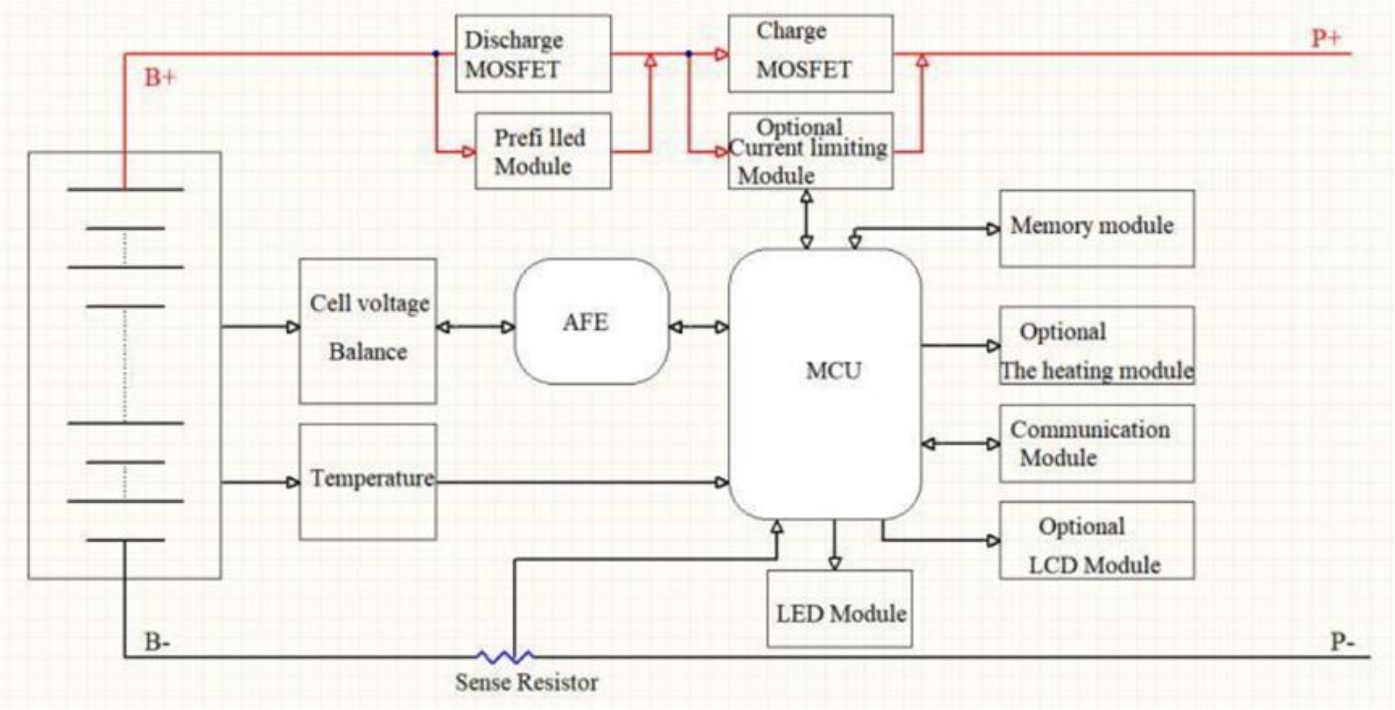
5. Circuit Protection

The batteries are supplied with a LiFePO4 Battery Management System (BMS)that can monitor and optimize each single prismatic cell during charge & discharge, to protect the battery pack from overcharging, over discharge, short circuit. Overall, the BMS helps ensure safe and accurate function.

No	Item	Content	Criterion
5.1	Over charge	Over-charge protection Alarm for each cell	3.55±0.05V
		Over-charge protection for each cell	3.65±0.05V
		Over-charge protection delay time	0.5~1.5s
		Over-charge release for each cell	3.5±0.05V
		Over-charge protection Alarm for system	53.25±1V
		Over-charge protection for system	54.75±1V
		Over-charge protection delay time	0.5~1.5s
		Over-charge release for each cell	52.5±1V
		Over-charge release method	60s Under the release voltage than 60s
5.2	Over discharge	Over-discharge alarm for each cell	2.80±0.05V
		Over-discharge protection each cell	2.50±0.05V
		Over-discharge protection delay time	0.5~1.5s
		Over-discharge release for each cell	3.00±0.05V
		Over-discharge alarm for system	42±1V
		Over-discharge protection system	37.5±1V
		Over-discharge protection delay time	0.5~1.5s

		Over-discharge release for each cell	45±1V
		Over-discharge release method	60s Higher the release voltage than 60s
5.3	Over current	Charge over current protection alarm	200±10A
		Charge over current protection	200±10A
		Charge over current protection delay time	18-30mS
		Charge over current release method	Auto release after 1min
		Discharge over current protection alarm	200±10A
		Discharge over current protection	200±10A
		Discharge over current protection delay time	18-30mS
		Discharge over current release	Auto release after 1min
		Short circuit protection	✓
		Short circuit protection release	cut-off download or exchange fuse
5.4	Temperature	Charge over temperature protection	55±3℃，50±3℃ Protect@55±3℃; Release@50±3℃;
		Charge under temperature protection	0±3℃，5±3℃ Protect@0±3℃; Release@5±3℃
		Discharge over temperature protection	65±3℃，60±3℃ Protect@65±3℃; Release@60±3℃;
		Discharge under temperature protection	-10±3℃，-5±3℃ Protect@-10±3℃; Release@-5±3℃;

6. System Block Diagram



7. Mechanical Information

7. 1. Packing

Pearl cotton on the front and the back, the left and the right, the top and the bottom: all 6 sides of the carton; fitting screws inside.

Carton packing neutral, without any company information.

Inventory of items:

Thoroughly inspect the packaging upon receipt of goods. If there is any item that is missing or if there is any damage to the external packaging or to the unit itself upon unpacking, please contact Bentaus Energy.

NO.	Item	Quantity	Specification
A	Battery Pack	1	48V300Ah
B	Communication cable	1	Length:1.0m cat 5;1.5m USB type A to RJ11
C	Power connector	2	125A/1000V
D	Instruction manual/Warranty Card	1	This document

8.

Caution and prohibition

Before using and handling the pack, see carefully attached “Handling Instruction for Rechargeable Lithium ion battery Pack”.

For safety reasons, rechargeable batteries are not shipped in a low remaining capacity state. Charge before using.

The battery need to be charged every 6 months if out of use.

No fall down, no pile up over 2 layers, and keep face up.

9. Warranty

Manufacturer will be responsible for replacing the battery pack against defects or poor workmanship for 10 years from the date of shipping. Any other problem caused by malfunction of the equipment or misuse of the battery is battery is not covered under this warranty.

10. Handling Instruction Guide for Li-ion Battery Pack

11. 1. General

Battery packs supplied by Bentaus Energy Ltd. have to be handled carefully according to the specification.

11. 2. Storage of pack

The packs are requested to be stored under the following conditions:：

a. Indoor storage in a cool circumstances without direct sun light on the packs or cartons.

b. Store batteries in a dry location with low humidity, and a temperature range of - 20°C to +30°C. In case of the long term storage.

c. As long-term storage can accelerate battery self-discharge and lead to the deactivation of the batteries. To minimize the deactivation effect, store battery packs in a temperature range of +10°C to +30°C.

d. When charging for the first time after long-term storage, deactivation of the packs may have led to decreased capacity. Recover such packs to original performance through repeating several cycles of full charging and discharging.

e. When store packs for more than 6 month, charge at least once charring require per 6 months to prevent leakage and deterioration in performance due to self-discharging.

11. 3. Charging pack

a. Use suitable charger with the specified voltage and current. We strongly recommend smart battery charger. We can recommend the usage or specification of the charger manufacturing. If you want to get the information about it, please contact us.

b. Never attempt reverse charging. Charring with polarity reversed can cause a reversal in battery polarity, causing gas pressure inside of the battery to rise, which can be lead to leakage of the batteries in the pack.

c. Avoid overcharging. Repeated overcharging can be lead to deterioration in pack performance. And Over-heat occurred.

d. Charging efficiency drops at temperatures above 40°C.

11. 4. Protection from unexpected damaged to pack

a. (+) and/or (-) terminals must not be connected in metal wire, necklace, chains.

b. Do not drop packs from height in order to prevent them from possible malfunction or damage.

c. Do not twist or bend packs in order to prevent possible damage.

11. 5. For Safety

a. Do not disassemble packs.
b. Do not use pack when something abnormal found such as smells, deformation, discoloration, and so on.

d. Do not re-use Li-ion cells or other parts after removing from the packs.

e. When the electrolyte leakage occurs, do not touch the liquid.

f. Once watered, packs may have potential malfunctions. Do not use those packs.

g. Do not have packs in the hot-temperature (60°C or more).

h. Do not put packs into fire.

i. Do not crush/nail pack.

j. Do not apply solder directly to packs.