KAPLAN POWER

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Kaplan Power

LIFEP O4 BATTERY SPECIFICATION

Model No.
KP48180F-T108

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LIFEPO4 BATTERY SPECIFICATION

MODEL: KP48180F-T108

GENERAL INFORMATION

This specification defines the performance of rechargeable LiFePO4 battery pack KP48150F-T108 describes the type, performance, technical characteristics, warning and caution of the battery pack.

BATTERY SPECIFICATION(@ 25±5Ć)

ITEMS	CHARACTERISTICS
Normal capacity	180Ah
Nominal energy	8.64KWh
Nominal voltage	48V (LFP-15S)
Internal resistance	<50m @ 1KhZ AC
Normal charge voltage	54.75 ± 0.2V
Float charge voltage(for Standby use)	51.75 ± 0.2V
Allowed MAX charge current	0.8C @20ć~45ć
Recommended charge current	0.5C
Allowed MAX discharge current	0.8C
Peak discharge current/time	160A/3S
Different port for charging & discharging	/
End of discharge voltage	37.5V @T˚10ć | 33.0V @0ć˚T~10ć | 30.0V @T~0ć

ITEMS	CHARACTERISTICS
IP rating	IP40
Communication mode	RS485
Display screen	Optional
Theft prevention function	Optional
Dimension	W 482.6(442) ±2mm, H 178±2mm (4U) | D 560±2mm
Weight (No accessories)	72kg
Operation temperature	Charge 0ć~55ć Discharge -20ć~65ć
Storage environment	Less than 1 month: -2~+60ć, 5~ -75%RH Less than 3 months: -10~+45ć, 5~ -75%RH Recommend environment: 15~35ć, 5~ -75%RH

ELECTRICAL CHARACTERISTICS & TEST CONDITION

Testing Conditions: Ambient Temperature: 25±5ć; Humidity:45%~75%.

Normal charge Charge battery under CC(0.5C)/CV(54.75V) mode until over charge protection or the charge current reduce to 0.05C, and then rest for 1h

ITEMS	CRITERION	CONDITION
Normal Capacity	180 Ah	After Normal charge, discharge @0.33C current to the end of discharge voltage.
Internal Impedance	<50P	@50% SOC @1kHz AC internal resistance test instrument.
Short circuit protection	Auto cutoff load when short circuit	Connect the positive and negative of this battery pack through a lead with 0.1 omega resistance
Cycle life @DOD100%	>5000 cycles	After Normal charge discharge @1C current to the end of discharge voltage. Repeat above process until discharge capacity reduce to 80% of initial valu
Dischargetemperature characteristic @0.2C	-20ć(6h) >= 60% 0ć(6h) >= 80% 25ć(6h) >= 100% 55ć(6h) >= 95%	$\frac{\text{Capacity @specified temperature}}{\text{Capacity @ 25ć}}$ the percentage accord with criterion
Capacity retention rate	remain capacity >=95%	After normal charge, store the battery @25±5ć for 28days, then discharge capacity @0.2C, the retention capacity accord with criterion.

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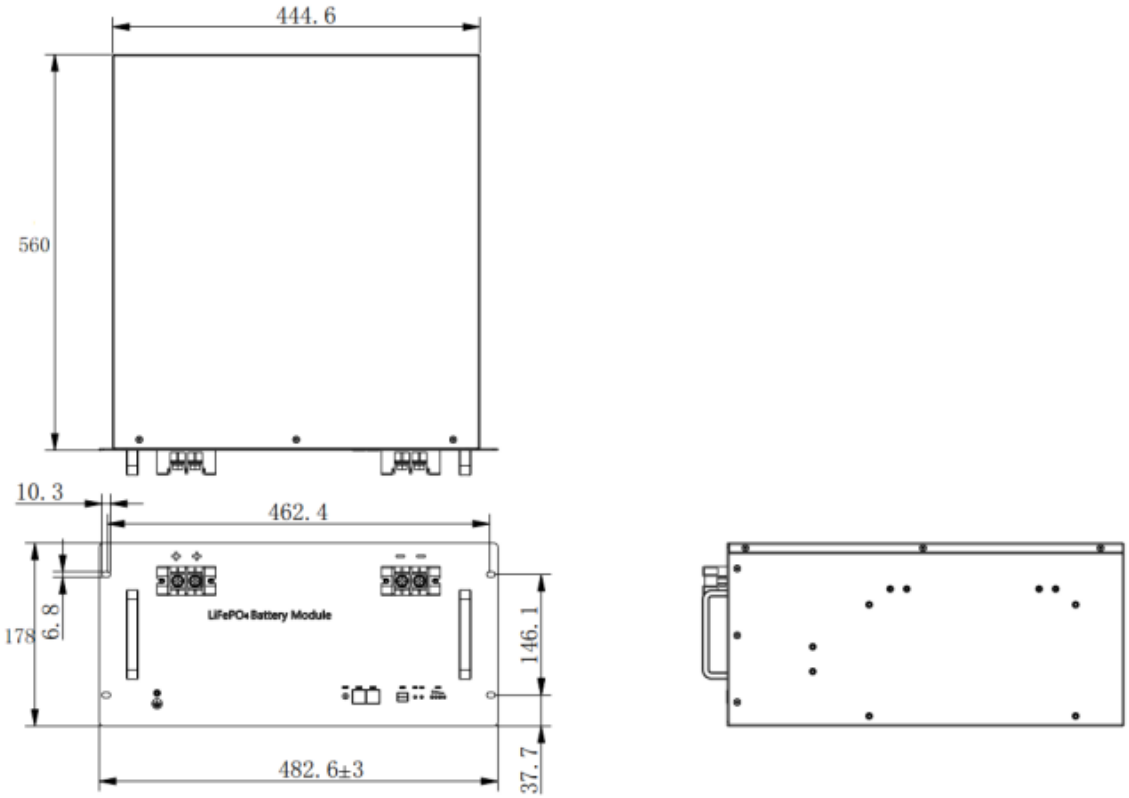
USET GUIDE: PRODUCT DIMENSION

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



TRANSPORT & STORE

The battery need to do a full charge & discharge cycle every 6 months if out of use No fall down, not stack over 6 layers, and keep upwards.

WARNING & TPS

Please read and follow the operation instructions before use. Improper operation may cause overheat, fire, rupture, damage or capacity deterioration of the battery. KAPLAN POWER is not responsible for any accidents caused by the action without following our instructions

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CIRCUIT PROTECTION

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

ITEMS	CONTENT	CRITERION
Over charge	Over-charge protection Alarm for each cell	3.6V±0.04V
	Over-charge protection for each cell	3.75±0.04V
	Over-charge protection delay time	1±0.5S
	Over-charge release for each cell	3.4±0.04 V
	Over-charge release method	Capacity recovery: SOC < 96% Discharge recovery: Discharge current >1A
Over discharge	Over-discharge protection alarm for each cell	2.8V±0.04V
	Over-discharge protection each cell	2.50±0.04V
	Over-discharge protection delay time	1±0.5S
	Over-discharge release for each cell	3.0±0.04V
	Over-discharge release method	recovery through chargin
Over current	Charge over current protection alarm	160A
	Charge over current protection	170±10A
	Charge over current protection delay time	1±0.5S
	Charge over current release method	Auto release: Auto release after 1min Discharge termination: Discharge current >1A
	Discharge over current protection alarm	160A
	Discharge over current protection1	170A±10A
	Discharge over current protection delay time1	1.0±0.5S
	Discharge over current release1	Auto release: Auto release after 1min Discharge: charging current >1A
	Discharge over current protection2	ı180A
	Discharge over current protection delay time2	100±50ms
	Discharge over current release2	Auto release: Auto release after 1min Discharge: charging current >1A
	Short circuit protection	Available
	Short circuit protection release	When charging: short circuit protection is lifted After load removal: Auto release
Temperature	Charge over temperature protection	Protect@55±5ć; Release@50±5ć;
	Charge under temperature protection	Protect@0±5ć; Release@5±5ć
	Discharge over temperature protection	Protect@65±5ć; Release@60±5ć;
	Discharge under temperature protection	Protect@-20±5ć; Release@-10±5ć;

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WARNINGS

- Battery must be far away from heat source, high voltage, and no exposed in sunshine for long time.
- Never throw the battery into water or fire;
- Never reverse connect the positive and negative when use the battery;
- Never short connect the positive and negative of battery with metal;
- Never over impact , throw or trample the battery;
- Never disassemble the battery without manufacturer's permission and guidance.
- Never use mixed with other type of battery

TPS

- Keep the battery against high temperature. Otherwise it will cause battery heat, get into fire or lose some function and reduce the life.
- When battery run out of power, please charge your battery timely (<=15day)
- Please use the matched or suggested charger for this battery.
- If battery emit peculiar smell, heating, distortion or appear any abnormity, please stop using.
  If the battery leaks and get into the eyes or skin,
- do not wipe, instead, rinse it with clean water and look for medical help immediately.
- Please far away from children or pets.